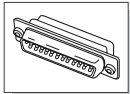


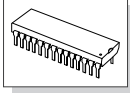
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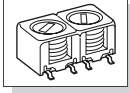
B



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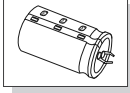
C



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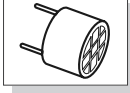
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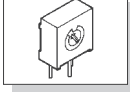


E



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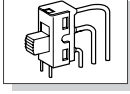
F



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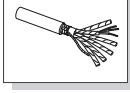
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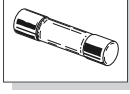
J



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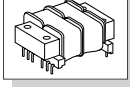


L



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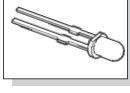
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O

1-800-344-4539

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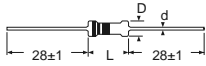
Standard Resistor Values																								
See below for complete part numbers when ordering.																								
1.0	2.0	3.9	7.5	15	30	56	110	220	430	820	1.6K	3.3K	6.2K	12K	24K	47K	91K	180K	360K	680K	1.3M	2.7M	5.1M	10M
1.1	2.2	4.3	8.2	16	33	62	120	240	470	910	1.8K	3.6K	6.8K	13K	27K	51K	100K	200K	390K	750K	1.5M	3.0M	5.6M	
1.2	2.4	4.7	9.1	18	36	68	130	270	510	1.0K	2.0K	3.9K	7.5K	15K	30K	56K	110K	220K	430K	820K	1.6M	3.3M	6.2M	
1.3	2.7	5.1	10	20	39	75	150	300	560	1.1K	2.2K	4.3K	8.2K	16K	33K	62K	120K	240K	470K	910K	1.8M	3.6M	6.8M	
1.5	3.0	5.6	11	22	43	82	160	330	620	1.2K	2.4K	4.7K	9.1K	18K	36K	68K	130K	270K	510K	1.0M	2.0M	3.9M	7.5M	
1.6	3.3	6.2	12	24	47	91	180	360	680	1.3K	2.7K	5.1K	10K	20K	39K	75K	150K	300K	560K	1.1M	2.2M	4.3M	8.2M	
1.8	3.6	6.8	13	27	51	100	200	390	750	1.5K	3.0K	5.6K	11K	22K	43K	82K	160K	330K	620K	1.2M	2.4M	4.7M	9.1M	

Characteristics

Terminal Strength	Soldering	Temperature Change	Vibration	Moisture Resistance	Load Life	Dielectric Strength	Insulation Resistance	Short-Time Overload	Voltage Coefficient	Solvents Resistance
0.6mm load 10N (1kg); 10s Δ Rmax. 0.25% + 0.05Ω	2s 230°C 0.5% activated flux Δ Rmax. 0.25% + 0.25Ω	½ hr. @ -55°C ½ hr. @ +155°C 5 cycles; Δ Rmax. 0.25% + 0.25Ω	1.5mm displacement @ 10 to 500 Hz; Δ Rmax. 0.25% + 0.05Ω	Δ Rmax. ±3%	Δ Rmax. ±2.5%	1000 hrs.: 70°C: Phom or V/mx. Δ Rmax. 1% + 0.05Ω	500Vrms appl. for 1 min.: No breakdown	Room temp., dissipation 6.25x Phom. 10 cycles, 5 sec. on, 45 sec. off; Δ Rmax. 0.25% + 0.05Ω	5 ppm	No damage

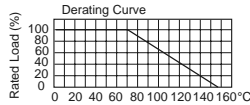
General Specifications

Type (Power Rating)	Dimensions (mm)			Max. Working Voltage	Max. Overload Voltage	Rated Ambient Temperature	Temperature Cycling	Resistance Range	Resistance Tolerance
	L	D	d						
1/8 Watt	3.8 ± 0.2	1.8 ± 0.2	0.45	200V	400V	70°C	-55°C to +155°C	1.0Ω to 10 MΩ	±5%
1/4 Watt	6.5 ± 0.5	2.3 ± 0.3	0.60	250V	500V	70°C	-55°C to +155°C	1.0Ω to 10MΩ	±5%
1/2 Watt	9.5 ± 0.5	3.2 ± 0.5	0.60	350V	700V	70°C	-55°C to +155°C	1.0Ω to 10MΩ	±5%



Features

- Industry's lowest cost!
- Available in 1/8, 1/4, 1/2 watt; packaged in bulk or tape/reel (except 1/2 watt)
- Exceeds carbon comp MIL-R-11 performance
- Standard tolerance: 65%
- Exceptional long-term stability



Description	Digi-Key Part No.	Pricing					
		5	200	1M	5M	10M	50M
1/8 Watt, 5% Carbon Film Resistors Bulk Package	(Value)EBK-ND (i.e. 1.0EBK-ND)	.28	4.70	13.63	12.22/M	11.28/M	10.34/M
1/8 Watt, 5% Carbon Film Resistors — Tape and Reel (5,000 pcs./reel — Order in multiples of 5,000)	(Value)ETR-ND (i.e. 1.0ETR-ND)	—	—	—	14.95/M	13.80/M	11.04/M
1/4 Watt, 5% Carbon Film Resistors Bulk Package	(Value)QBK-ND (i.e. 1.0QBK-ND)	.28	3.89	8.70	8.27/M	7.69/M	6.24/M
1/4 Watt, 5% Carbon Film Resistors — Tape and Reel (5,000 pcs./reel — Order in multiples of 5,000)	(Value)QTR-ND (i.e. 1.0QTR-ND)	—	—	—	8.94/M	8.25/M	6.60/M
1/2 Watt, 5% Carbon Film Resistors Bulk Package	(Value)H-ND (i.e. 1.0H-ND)	.27	3.96	12.87	11.88/M	10.89/M	9.90/M

"E" = Eighth Watt; "Q" = Quarter Watt; "H" = Half Watt. Please be sure to specify. Half watt available in bulk package only.

Digi-Key® 1/8 Watt Resistor Assortment

- RSE200-ND** 200 each of all std. values 5% 1/8 watt carbon film resistors in the series 1.0 - 4.7 megohms (32,200 total pcs.) **\$399.00**
- RS112-ND** Set of 5 each of 73 standard 5% 1/8 watt carbon film resistors in the series 1.0, 1.2, 1.5, 1.8, 2.2, etc., through 1.0 megohm (365 total pieces) **\$16.96**
- RS212-ND** Set of 5 each of the 72 standard 5% 1/8 watt carbon film resistors in the series 1.1, 1.3, 1.6, 2.0, 2.4, etc., through 910 kilohm (360 total pieces) **\$16.99**

Digi-Key® 1/4 Watt Resistor Assortment

- RSQ200-ND** 200 each of all std. values 5% 1/4 watt carbon film resistors in the series 1.0 - 4.7 megohms (32,200 total pcs.) **\$219.00**
- RS125-ND** Set of 5 each of 73 standard 5% 1/4 watt carbon film resistors in the series 1.0, 1.2, 1.5, 1.8, 2.2, etc., through 1.0 megohm (365 total pieces) **\$14.95**
- RS225-ND** Set of 5 each of the 72 standard 5% 1/4 watt carbon film resistors in the series 1.1, 1.3, 1.6, 2.0, 2.4, etc., through 910 kilohm (360 total pieces) **\$14.95**

Digi-Key® 1/2 Watt Resistor Assortment

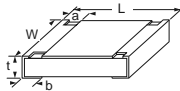
- RSH200-ND** 200 each of all std. values 5% 1/2 watt carbon film resistors in the series 1.0 - 4.7 megohms (32,200 total pcs.) **\$297.00**
- RS150-ND** Set of 5 each of 73 standard 5% 1/2 watt carbon film resistors in the series 1.0, 1.2, 1.5, 1.8, 2.2, etc., through 1.0 megohm (365 total pieces) **\$16.95**
- RS250-ND** Set of 5 each of the 72 standard 5% 1/2 watt carbon film resistors in the series 1.1, 1.3, 1.6, 2.0, 2.4, etc., through 910 kilohm (360 total pieces) **\$16.95**

PANASONIC® ERA 0603/0805 .1% Metal Film Chip Resistors
Surface Mount — Available In 1/16 and 1/10 Watt

Standard Resistor Values																		
See below for complete part numbers when ordering.																		
560	750	1.0K	1.3K	1.8K	2.4K	3.3K	4.3K	5.6K	7.5K	10K	13K	18K	24K	33K	43K	56K	75K	100K
620	820	1.1K	1.5K	2.0K	2.7K	3.6K	4.7K	6.2K	8.2K	11K	15K	20K	27K	36K	47K	62K	82K	
680	910	1.2K	1.6K	2.2K	3.0K	3.9K	5.1K	6.8K	9.1K	12K	16K	22K	30K	39K	51K	68K	91K	

Features:

- High reliability
- Low TCR and current noise
- Excellent non-linearity



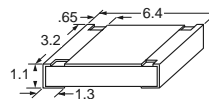
Type (Power Rating)	Type	Max. RCWV	Max. Overload Voltage	Dimensions (mm)				Temperature Coefficient	Panasonic Part No.
				L	W	t	a b		
1/16 Watt	0603	75V	150V	1.60	0.80	0.45	0.30 0.30	±25ppm/°C	ERA-3YE
1/10 Watt	0805	100V	200V	2.00	1.25	0.50	0.40 0.40	±25ppm/°C	ERA-6YE

Description	Value Range	Digi-Key Part No.	Pricing					Panasonic Part No.				
			10	50	200	1M	5M					
1/16 W, 0603, .1% Chip Resistors: Tape & Reel (5000/pkg.)	560 - 33K	P(Value)YTR-ND	—	—	—	—	184.94/M	147.96/M	124.84/M	115.59/M	110.97/M	ERA-3YEBxxxV
1/16 W, 0603, .1% Chip Resistors: Tape (200/pkg.)	560 - 33K	P(Value)YCT-ND	9.16	28.94	72.35	217.06	—	—	—	—	—	ERA-3YEBxxx
1/10 W, 0805, .1% Chip Resistors: Tape & Reel (5000/pkg.)	560 - 100K	P(Value)ZTR-ND	—	—	—	—	184.94/M	147.96/M	124.84/M	115.59/M	110.97/M	ERA-6YEBxxxV
1/10 W, 0805, .1% Chip Resistors: Tape (200/pkg.)	560 - 100K	P(Value)ZCT-ND	9.16	28.94	72.35	217.06	—	—	—	—	—	ERA-6YEBxxx

PANASONIC® NEW! Thick Film Chip Resistors / Low Resistance Type
For Current Sensing Applications

Features:

- 2512 Package (1 watt)
- Available in both 1% and 5% tolerance
- Operating temperature of -55°C to 125°C (derating required above 70°C)
- Resistance Range of 47-100mΩ
- Temperature Coefficient: ±100ppm



Standard Resistor Values (mΩ)		
See below for complete part numbers when ordering.		
47*	50	100
* not available in 1% tolerance		

Description	Value Range (mΩ)	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape & Reel Pricing	Panasonic Part No.
			10	50	200			
1 W, 2512, 5% Chip Resistors	47 - 100	P(Value)TCT-ND	19.45	61.43	153.56	P(Value)TTR-ND	409.50/M	ERJ-L1WKJxxxU
1 W, 2512, 1% Chip Resistors	50 - 100	P(Value)MCT-ND	23.34	73.71	184.28	P(Value)MTR-ND	491.40/M	ERJ-L1WKFxxxU

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PANASONIC® 0805/1206/1210/2512 5% & 0805/1206 1% Surface Mount Ultra Low Ohm Thick Film Chip Resistors — 1/10, 1/8, 1/4 and 1 Watt

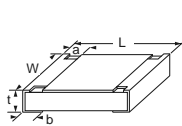
Standard Resistor Values
See below for complete part numbers when ordering.

.10	.18	.33	.56	1.0	1.8	3.3	5.6	9.1
.12	.22	.39	.68	1.2	2.2	3.9	6.8	
.15	.27	.47	.82	1.5	2.7	4.7	8.2	

Rated Continuous Working Voltage (RCWV): The rated voltage at each resistance should be calculated from the following equation: $RCWV = \sqrt{P \times R}$

$RCWV(V) = P(W) \cdot R(\Omega)$
Max. overload voltage = $RCWV \times 2.5$

Description	Value Range	Digi-Key Part No.	Pricing					Panasonic Part No.				
			10	50	200	1M	3M					
1/10 W, 0805, 5% Chip Resistors: Tape & Reel (5000/pkg.)	(1 - 18Ω) (.22 - 9.1Ω)	P + Value + "BTR-ND" P + Value + "BTR-ND"	—	—	—	—	225.27/M 96.55/M	—	200.24/M 85.82/M	—	150.18/M 64.37/M	ERJ-6RSJxxxV ERJ-6RQJxxxV
1/10 W, 0805, 5% Chip Resistors: Tape	(1 - 18Ω) (.22 - 9.1Ω)	P + Value + "BCT-ND" P + Value + "BCT-ND"	14.32	38.54	88.54	234.38	—	—	—	—	—	ERJ-6RSJxxx ERJ-6RQJxxx
1/10 W, 0805, 1% Chip Resistors: Tape & Reel (5000/pkg.)	(.22 - 9.1Ω) (.22 - 9.1Ω)	P + Value + "DTR-ND" P + Value + "DCT-ND"	9.89	26.62	61.15	161.87	—	152.87/M	—	135.88/M	—	101.91/M ERJ-6RQFxxxV ERJ-6ROFxxx
1/8 W, 1206, 5% Chip Resistors: Tape & Reel (5000/pkg.)	(1 - 18Ω) (.22 - 9.1Ω)	P + Value + "PTR-ND" P + Value + "PTR-ND"	—	—	—	—	213.19/M 84.47/M	—	189.50/M 75.08/M	—	142.13/M 56.31/M	ERJ-8RSJxxxV ERJ-8RQJxxxV
1/8 W, 1206, 5% Chip Resistors: Tape	(1 - 18Ω) (.22 - 9.1Ω)	P + Value + "PCT-ND" P + Value + "PCT-ND"	13.58	36.54	83.94	222.19	—	—	—	—	—	ERJ-8RSJxxx ERJ-8RQJxxx
1/8 W, 1206, 1% Chip Resistors: Tape & Reel (5000/pkg.)	(.22 - 9.1Ω) (.22 - 9.1Ω)	P + Value + "RTR-ND" P + Value + "RCT-ND"	9.15	24.63	56.58	149.78	—	140.79/M	—	125.14/M	—	93.86/M ERJ-8RQFxxxV ERJ-8ROFxxx
1/4 W, 1210, 5% Chip Resistors: Tape & Reel (5000/pkg.)	(1 - 18Ω) (.22 - 9.1Ω)	P + Value + "STR-ND" P + Value + "STR-ND"	—	—	—	—	223.45/M 134.08/M	—	178.76/M 107.26/M	—	134.07/M 80.45/M	ERJ-14RSJxxxU ERJ-14RQJxxxU
1/4 W, 1210, 5% Chip Resistors: Tape	(1 - 18Ω) (.22 - 9.1Ω)	P + Value + "SCT-ND" P + Value + "SCT-ND"	12.84	34.55	79.37	280.14	—	—	—	—	—	ERJ-14RSJxxx ERJ-14RQJxxx
1 W, 2512, 5% Chip Resistors: Tape & Reel (3000/pkg.)	(1 - 18Ω) (.22 - 9.1Ω)	P + Value + "UTR-ND" P + Value + "UCT-ND"	—	—	—	—	536.32/M 286.04/M	—	429.06/M 228.84/M	—	362.02/M 193.08/M	ERJ-1WR5JxxxU ERJ-1WRQJxxxU
1 W, 2512, 5% Chip Resistors: Tape	(1 - 18Ω) (.22 - 9.1Ω)	P + Value + "UTR-ND" P + Value + "UCT-ND"	25.86	81.65	204.12	612.36	—	—	—	—	—	ERJ-1WR5Jxxx ERJ-1WRQJxxx



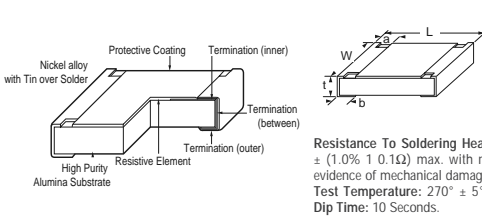
Type (Power Rating)	Type	L	W	Dimensions (mm)			Temperature Coefficient			Panasonic Part No.
				t	a	b				
1/10 Watt	0805	2.00	1.25	0.60	0.40	0.40	.1 - 91Ω ±250ppm/°C/1.0 - 9.1 Ohm ± ±200ppm/C			ERJ-6RS/Q
1/8 Watt	1206	3.20	1.60	0.60	0.50	0.50	.1 - 91Ω ±250ppm/°C/1.0 - 9.1 Ohm ± ±200ppm/C			ERJ-8RS/Q
1/4 Watt	1210	3.20	2.50	0.60	0.50	0.50	.1 - 91Ω ±200ppm/°C/1.0 - 9.1 Ohm ± ±100ppm/C			ERJ-14RS/Q
1 Watt	2512	6.40	3.20	1.10	0.65	1.30	.1 - 91Ω ±200ppm/°C/1.0 - 9.1 Ohm ± ±100ppm/C			ERJ-1WR5/Q

PANASONIC® 0402/0603/0805/1206/1210/2010/2512 Surface Mount 5% Thick Film Chip Resistors — 1/16, 1/10, 1/8, 1/4, 1/2 and 1 Watt

Standard Resistor Values
See below for complete part numbers when ordering.

10	18	33	56	100	180	330	560	1.0K	1.8K	3.3K	5.6K	10K	18K	33K	56K	100K	180K	330K	560K	1.0M	1.8M
11	20	36	62	110	200	360	620	1.1K	2.0K	3.6K	6.2K	11K	20K	36K	62K	110K	200K	360K	620K	1.1M	2.0M
12	22	39	68	120	220	390	680	1.2K	2.2K	3.9K	6.8K	12K	22K	39K	68K	120K	220K	390K	680K	1.2M	2.2M
13	24	43	75	130	240	430	750	1.3K	2.4K	4.3K	7.5K	13K	24K	43K	75K	130K	240K	430K	750K	1.3M	
15	27	47	82	150	270	470	820	1.5K	2.7K	4.7K	8.2K	15K	27K	47K	82K	150K	270K	470K	820K	1.5M	
16	30	51	91	160	300	510	910	1.6K	3.0K	5.1K	9.1K	16K	30K	51K	91K	160K	300K	510K	910K	1.6M	

Digi-Key® 1/8 W 1206 5% Chip Resistor Assortments	Digi-Key® 1/10 W 0805 5% Chip Resistor Assortments	Digi-Key® 1/16 W 0603 5% Chip Resistor Assortments	Digi-Key® 1/16 W 0402 5% Chip Resistor Assortments
CR1A-KIT-ND 50 ea. of every other value from 10, 12, 15, 18, etc. 1.0M (3,050) \$89.95	CR3A-KIT-ND 50 ea. of every other value from 10, 12, 15, 18, etc. 1.0M (3,050) \$89.95	CR5A-KIT-ND 50 ea. of every other value from 10, 12, 15, 18, etc. 1.0M (3,050) \$94.95	CR7A-KIT-ND 50 ea. of every other value from 10, 12, 15, 18, 22, 1.0M (3,050) \$99.95
CR1-KIT-ND 200 ea. (same values as kit above) ... \$329.00	CR3-KIT-ND 200 ea. (same values as kit above) ... \$349.00	CR5-KIT-ND 200 ea. (same values as kit above) ... \$379.00	CR7-KIT-ND 200 ea. (same values as kit above) ... \$399.00
CR2A-KIT-ND 50 ea. of every other value from 11, 13, 16, 20, etc. 910K (3,000) \$89.95	CR4A-KIT-ND 50 ea. of every other value from 11, 13, 16, 20, etc. 910K (3,000) \$89.95	CR6A-KIT-ND 50 ea. of every other value from 11, 13, 16, 20, etc. 910K (3,000) \$94.95	CR8A-KIT-ND 50 ea. of every other value from 11, 13, 16, 20, etc. 910K (3,000) \$99.95
CR2-KIT-ND 200 ea. (same values as kit above) ... \$329.00	CR4-KIT-ND 200 ea. (same values as kit above) ... \$349.00	CR6-KIT-ND 200 ea. (same values as kit above) ... \$379.00	CR8-KIT-ND 200 ea. (same values as kit above) ... \$399.00



Power Rating (Watt)	Type	Max. RCWV	Max. Overload Voltage	Dimensions (mm)			Temperature Coefficient	Panasonic Part No.		
				L	W	t				
1/16	0603	50V	100V	1.60	0.8	0.45	0.3	0.3	10Ω ~ 1MΩ: ±250ppm/°C, >1MΩ: ~ -300; +100	ERJ-3GSY
1/16	0402	50V	100V	1.00	0.5	0.35	0.2	0.25	10Ω ~ 1MΩ: ±200ppm/°C, >1MΩ: ~ -400; +150	ERJ-2GEJ
1/10	0805	150V	200V	2.00	1.25	0.6	0.4	0.4	10Ω ~ 1MΩ: ±200ppm/°C, >1MΩ: ~ -400; +150	ERJ-6GEY
1/8	1206	200V	400V	3.20	1.60	0.6	0.5	0.5	10Ω ~ 1MΩ: ±200ppm/°C, >1MΩ: ~ -400; +150	ERJ-8GEY
1/8	1206	200V	400V	3.20	1.60	0.6	0.5	0.3	10Ω ~ 1MΩ: ±200ppm/°C, >1MΩ: ~ -400; +150	ERJ-8GCY
1/4	1210	200V	400V	3.20	2.50	0.60	0.50	0.50	10Ω ~ 1MΩ: ±200ppm/°C	ERJ-14Y
1/2	2010	200V	400V	5.00	2.50	0.60	0.60	0.60	10Ω ~ 1MΩ: ±200ppm/°C	ERJ-12ZY
1	2512	250V	500V	6.40	3.20	1.10	0.65	1.30	10Ω ~ 1MΩ: ±200ppm/°C	ERJ-1WY

Description	Value Range	Digi-Key Part No.	10	50	200	1M	3M	Pricing			Panasonic Part No.	
								5M	9M	10M	24M	50M
1/16 W, 0603, 5% Chip Resistors: Tape & Reel (5000/pkg.)	(10-2.0MΩ) (10-2.0MΩ)	P + Value + "GTR-ND"† P + Value + "GCT-ND"†	—	—	—	—	—	7.50/M	—	6.75/M	—	5.63/M
1/16 W, 0603, 5% Chip Resistors: Bulk	(10-2.0MΩ)	P + Value + "GTR-ND"† P + Value + "GCT-ND"†	.89	2.41	5.53	14.63	—	—	—	—	—	—
1/16 W, 0402, 5% Chip Resistors: Tape & Reel (10000/pkg.)	(10-2.0MΩ) (10-2.0MΩ)	P + Value + "JTR-ND"† P + Value + "JCT-ND"†	1.50	4.04	9.29	24.59	—	—	—	18.72/M	—	15.60/M
1/16 W, 0402, 5% Chip Resistors: Tape	(10-2.0MΩ)	P + Value + "JTR-ND"† P + Value + "JCT-ND"†	—	—	—	—	—	—	—	—	—	—
1/10 W, 0805, 5% Chip Resistors: Tape & Reel (5000/pkg.)	(10-2.0MΩ) (10-2.0MΩ)	P + Value + "ATR-ND"† P + Value + "ACT-ND"†	.89	2.41	5.53	14.63	—	7.50/M	—	6.75/M	—	5.63/M
1/10 W, 0805, 5% Chip Resistors: Bulk	(10-2.0MΩ)	P + Value + "ATR-ND"† P + Value + "ACT-ND"†	—	—	—	—	—	—	—	—	—	—
1/8 W, 1206, 5% Chip Resistors: Tape & Reel (5000/pkg.)	(10-2.2MΩ) (10-2.2MΩ)	P + Value + "ETR-ND"† P + Value + "ECT-ND"†	.96	2.57	5.91	15.64	—	8.85/M	—	7.97/M	—	6.64/M
1/8 W, 1206, 5% Chip Resistors: Tape	(10-2.2MΩ)	P + Value + "ETR-ND"† P + Value + "ECT-ND"†	—	—	—	—	—	—	—	—	—	—
1/8 W, 1206, 5% Chip Resistors: Magazine Pack (200/pkg.)	(10-2.2MΩ) (10-2.2MΩ)	P + Value + "EMG-ND"*	—	—	—	—	—	—	—	—	—	—
1/4 W, 1210, 5% Chip Resistors: Tape & Reel (5000/pkg.)	(10-1.0MΩ) (10-1.0MΩ)	P + Value + "VTR-ND" P + Value + "VCT-ND"	2.70	7.27	16.70	58.95	—	39.13/M	—	31.30/M	—	23.48/M
1/4 W, 1210, 5% Chip Resistors: Tape	(10-1.0MΩ)	P + Value + "VTR-ND" P + Value + "VCT-ND"	—	—	—	—	—	—	—	—	—	—
1/2 W, 2010, 5% Chip Resistors: Tape & Reel (5000/pkg.)	(10-1.0MΩ) (10-1.0MΩ)	P + Value + "WTR-ND" P + Value + "WCT-ND"	3.93	10.59	24.32	85.83	—	61.53/M	—	49.22/M	—	36.92/M
1/2 W, 2010, 5% Chip Resistors: Tape	(10-1.0MΩ)	P + Value + "WTR-ND" P + Value + "WCT-ND"	—	—	—	—	—	—	—	—	—	—
1 W, 2512, 5% Chip Resistors: Tape & Reel (3000/pkg.)	(10-1.0MΩ) (10-1.0MΩ)	P + Value + "XTR-ND" P + Value + "XCT-ND"	8.77	23.59	54.19	143.44	—	119.50/M	—	95.60/M	—	80.67/M
1 W, 2512, 5% Chip Resistors: Tape	(10-1.0MΩ)	P + Value + "XTR-ND" P + Value + "XCT-ND"	—	—	—	—	—	—	—	—	—	—

† 0.0 (zerohm) value also available.

*Magazine pack for Type 1206 not for new design

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1206 / 0805 / 0603 / 0402 1% Precision Thick Film Chip Resistors

Surface Mount Available In 1/8, 1/10 & 1/16 Watt

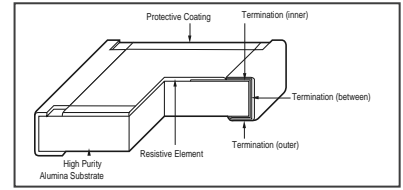
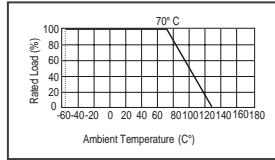
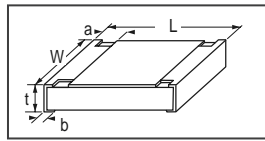
Panasonic

1206 0805 0603 0402
Available in 1/8 1/10 & 1/16

Size	Power Rating at 70°	Maximum RCWV*	Maximum Overload Voltage
0402	1/16 W	50 V	100 V
0603	1/16 W - (1/10 W)**	50 V	100 V
0805	1/10 W - (1/8 W)**	150V	200V
1206	1/8 W - (1/4 W)**	200 V	400V

Resistance to Soldering Heat: ± (1.0% ± 0.1Ω) max. with no evidence of mechanical damage. Dip Time: 270°C ± 5°C, 10 seconds. 100 PPM.

* Rated Continuous Working Voltage (RCWV) shall be determined from RCWV = √ Power Rating x Resistance Values, or max. RCWV listed above, whichever is less.
** Available for reduction of load of pulse characteristics (RCWV x 2.5 RCWV x 2.0, R≥1.1kΩ).



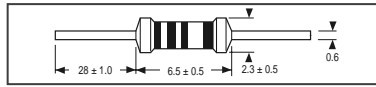
Description	Dimensions (mm)					Digi-Key Part No.	Pricing				Panasonic Part No.			
	L	W	a	b	t		10	50	200	1,000				
1/8 Watt, 1206 1% Chip Resistors (Tape & Reel) - (5000/ pkg.)	3.20	1.60	0.50	0.50	0.60	P + Value + "FTR-ND"	—	—	—	15.57/M	14.02/M	11.68/M	7.01/M	ERJ-BENFxxxxV
1/8 Watt, 1206 1% Chip Resistors - (200/ pkg.)	3.20	1.60	0.50	0.50	0.60	P + Value + "FCT-ND"	1.26	3.40	7.81	20.68	—	—	—	ERJ-BENFxxxx
1/10 Watt, 0805 1% Chip Resistors (Tape & Reel) - (5000/ pkg.)	2.00	1.25	0.40	0.40	0.60	P + Value + "CTR-ND"	—	—	—	14.52/M	13.07/M	10.89/M	6.54/M	ERJ-6ENFxxxxV
1/10 Watt, 0805 1% Chip Resistors - (200/ pkg.)	2.00	1.25	0.40	0.40	0.60	P + Value + "CCT-ND"	1.22	3.27	7.51	19.89	—	—	—	ERJ-6ENFxxxx
1/16 Watt 0603 1% Chip Resistors (Tape & Reel) - (5000/ pkg.)	1.60	.80	.30	.30	.45	P + Value + "HTR-ND"	—	—	—	10.62/M	9.44/M	7.08/M	6.38/M	ERJ-3EKFxxxxV
1/16 Watt 0603 1% Chip Resistors - (200/ pkg.)	1.60	.80	.30	.30	.45	P + Value + "HCT-ND"	1.20	3.23	7.41	19.62	—	—	—	ERJ-3EKFxxxx
1/16 Watt 0402 1% Chip Resistors (Tape & Reel) - (10,000/ Pkg.)	1.00	.50	.20	.25	.35	P + Value + "LTR-ND"	—	—	—	27.38/M	20.54/M	18.49/M	—	ERJ-2RKFxxxxV
1/16 Watt 0402 1% Chip Resistors - (200/ pkg.)	1.00	.50	.20	.25	.35	P + Value + "LCT-ND"	2.43	6.55	15.04	39.80	—	—	—	ERJ-2RKFxxxx

See below for values available

1% Metal Film Fixed Resistors 1/4 Watt

YAGEO

MF Series

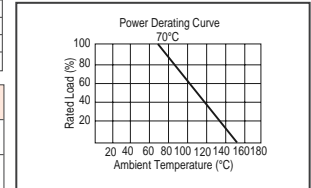
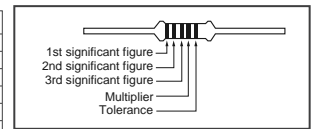


The MF series Metal Film Resistors are manufactured using vacuum sputtering system to deposit multiple layers of mixed metals and passivative materials onto a carefully treated high grade ceramic substrate, the resistors are coated with layers of light-blue lacquer.

General Specifications: Power Rating: 1/4 Watt. Max. Working Voltage: 250V. Max. Overload Voltage: 500V. Rated Ambient Temperature: 70°C. Temperature Cycling: -65°C to +150°C. Resistance Range: 10.0Ω to 1.00MΩ. Resistance Tolerance: ±1%. Electrical Specifications: (See "General Specifications" below). All measurements are taken at +25°C at 1KHz and 65% relative humidity, unless stated otherwise. Type: MF-25 Style: RN-55 Power Rating: 1/4 Watt Resistance Tolerance: ±1% Temperature Coefficient: ±100PPM/°C

Characteristics

Temperature Cycling, -65° to +150°C	(%)	±0.25
Low Temperature Operation, -65°C	(%)	±0.25
Short Time Overload	(%)	±0.20
Terminal Strength, 5 lb. pull	(%)	±0.20
Resistance to Soldering Heat, +350°C	(%)	±0.10
Moisture Resistance, Mil Std 202	(%)	±0.50
Life 1000 hrs. (Rated Power)	(%)	±0.50
Shock 50G, 11ms	(%)	±0.20
Vibration-High Frequency, 10-2000Hz	(%)	±0.20
Insulation Resistance	(%)	10 ¹²
Failure-Rate	(%)	10 ⁻⁷ /h



Description	Digi-Key Part No.	5	200	1M	Pricing 5M	10M	50M	100M	500M	1,000M
1/4 Watt, 1% Metal Film Resistors Bulk Package	Value + "X" + "BK-ND" (i.e. 10.0XBK-ND)	.54	8.27	21.38	18.24/M	15.68/M	12.54/M	—	—	—
1/4 Watt, 1% Metal Film Resistors Order in multiples of 5,000 (5,000 pcs./reel)	Value + "X" + "TR-ND" (i.e. 10.0XTR-ND)	—	—	—	20.63/M	17.60/M	14.30/M	12.10/M	9.90/M	8.80/M

See below for values available.

Standard Resistor Values (Panasonic and YAGEO)

10.0	19.1	36.5	69.8	133	255	487	931	1.78K	3.40K	6.49K	12.4K	23.7K	45.3K	84.5K	159K	294K	549K
10.2	19.6	37.4	71.5	137	261	499	953	1.82K	3.48K	6.65K	12.7K	24.3K	46.4K	86.6K	162K	301K	562K
10.5	20.0	38.3	73.2	140	267	511	976	1.87K	3.57K	6.81K	13.0K	24.9K	47.5K	88.7K	165K	309K	576K
10.7	20.5	39.2	75.0	143	274	523	1.00K	1.91K	3.65K	6.98K	13.3K	25.5K	48.7K	90.9K	169K	316K	590K
11.0	21.0	40.2	76.8	147	280	536	1.02K	1.96K	3.74K	7.15K	13.7K	26.1K	49.9K	93.1K	174K	324K	604K
11.3	21.5	41.2	78.7	150	287	549	1.05K	2.00K	3.83K	7.32K	14.0K	26.7K	51.1K	95.3K	178K	332K	619K
11.5	22.1	42.2	80.6	154	294	562	1.07K	2.05K	3.92K	7.50K	14.3K	27.4K	52.3K	97.6K	182K	340K	634K
11.8	22.6	43.2	82.5	158	301	576	1.10K	2.10K	4.02K	7.69K	14.7K	28.0K	53.6K	100K	187K	348K	649K
12.1	23.2	44.2	84.5	162	309	590	1.13K	2.15K	4.12K	7.87K	15.0K	28.7K	54.9K	102K	191K	357K	665K
12.4	23.7	45.3	86.6	165	316	604	1.15K	2.21K	4.22K	8.06K	15.4K	29.4K	56.2K	105K	196K	365K	681K
12.7	24.3	46.4	88.7	169	324	619	1.18K	2.26K	4.32K	8.25K	15.8K	30.1K	57.6K	107K	200K	374K	698K
13.0	24.9	47.5	90.9	174	332	634	1.21K	2.32K	4.42K	8.45K	16.2K	30.9K	59.0K	110K	205K	383K	715K
13.3	25.5	48.7	93.1	178	340	649	1.24K	2.37K	4.53K	8.66K	16.5K	31.6K	60.4K	113K	210K	392K	732K
13.7	26.1	49.9	95.3	182	348	665	1.27K	2.43K	4.64K	8.87K	16.9K	32.4K	61.9K	115K	215K	402K	750K
14.0	26.7	51.1	97.6	187	357	681	1.30K	2.49K	4.75K	9.09K	17.4K	33.2K	63.4K	118K	221K	412K	768K
14.3	27.4	52.3	100	191	365	698	1.33K	2.55K	4.87K	9.31K	17.8K	34.0K	64.9K	121K	226K	422K	787K
14.7	28.0	53.6	102	196	374	715	1.37K	2.61K	4.99K	9.53K	18.2K	34.8K	66.5K	124K	232K	432K	806K
15.0	28.7	54.9	105	200	383	732	1.40K	2.67K	5.11K	9.76K	18.7K	35.7K	68.1K	127K	237K	442K	825K
15.4	29.4	56.2	107	205	392	750	1.43K	2.74K	5.23K	10.0K	19.1K	36.5K	69.8K	130K	243K	453K	845K
15.8	30.1	57.6	110	210	402	768	1.47K	2.80K	5.36K	10.2K	19.6K	37.4K	71.5K	133K	249K	464K	865K
16.2	30.9	59.0	113	215	412	787	1.50K	2.87K	5.49K	10.5K	20.0K	38.3K	73.2K	137K	255K	475K	887K
16.5	31.6	60.4	115	221	422	806	1.54K	2.94K	5.62K	10.7K	20.5K	39.2K	75.0K	140K	261K	487K	909K
16.9	32.4	61.9	118	226	432	825	1.58K	3.01K	5.76K	11.0K	21.0K	40.2K	76.8K	143K	267K	499K	931K
17.4	33.2	63.4	121	232	442	845	1.62K	3.09K	5.90K	11.3K	21.5K	41.2K	78.7K	147K	274K	511K	953K
17.8	34.0	64.9	124	237	453	866	1.65K	3.16K	6.04K	11.5K	22.1K	42.2K	80.6K	150K	280K	523K	976K
18.2	34.8	66.5	127	243	464	887	1.69K	3.24K	6.19K	11.8K	22.6K	43.2K	82.5K	154K	287K	536K	1,000M
18.7	35.7	68.1	130	249	475	909	1.74K	3.32K	6.34K	12.1K	23.2K	44.2K	—	—	—	—	—

YAGEO 1% Metal Film Resistors

Digi-Key® Assortment Kits

35% SAVINGS
Over Parts Purchased Separately

RS1X-ND	5 Each of Values 10Ω to 97.6Ω	\$29.95
RS2X-ND	5 Each of Values 100Ω to 976Ω	\$29.95
RS3X-ND	5 Each of Values 1.00KΩ to 9.76KΩ	\$29.95
RS4X-ND	5 Each of Values 10.0KΩ to 97.6KΩ	\$29.95
RS5X-ND	5 Each of Values 100KΩ to 1.00MΩ	\$29.95

Panasonic 1% Chip Resistors

Digi-Key® Assortment Kits

RSM1H-ND	50 ea. of Values 10.0Ω to 97.6Ω	\$199.00
RSM2H-ND	50 ea. of Values 100Ω to 976Ω	\$199.00
RSM3H-ND	50 ea. of Values 1.00KΩ to 9.76KΩ	\$199.00
RSM4H-ND	50 ea. of Values 10.0KΩ to 97.6KΩ	\$199.00
RSM5H-ND	50 ea. of Values 100KΩ to 1.00MΩ	\$199.00
RSM1L-ND	50 ea. of Values 10.0Ω to 97.6Ω	\$349.00
RSM2L-ND	50 ea. of Values 100Ω to 976Ω	\$349.00
RSM3L-ND	50 ea. of Values 1.00KΩ to 9.76KΩ	\$349.00
RSM4L-ND	50 ea. of Values 10.0KΩ to 97.6KΩ	\$349.00
RSM5L-ND	50 ea. of Values 100KΩ to 1.00MΩ	\$349.00
RSM1M-ND	50 ea. of Values 10.0Ω to 97.6Ω	\$199.00
RSM2M-ND	50 ea. of Values 100Ω to 976Ω	\$199.00
RSM3M-ND	50 ea. of Values 1.00KΩ to 9.76KΩ	\$199.00
RSM4M-ND	50 ea. of Values 10.0KΩ to 97.6KΩ	\$199.00
RSM5M-ND	50 ea. of Values 100KΩ to 1.00MΩ	\$199.00

Digi-Key® 1206 1% Chip Resistor Kits

RSM1FA-ND	50 ea. of Values 10Ω to 97.6Ω	\$129.95
RSM1F-ND	200 ea. of Values 10Ω to 97.6Ω	\$495.00
RSM2FA-ND	50 ea. of Values 100Ω to 976Ω	\$129.95
RSM2F-ND	200 ea. of Values 100Ω to 976Ω	\$495.00
RSM3FA-ND	50 ea. of Values 1.00KΩ to 9.76KΩ	\$129.95
RSM3F-ND	200 ea. of Values 1.00KΩ to 9.76KΩ	\$495.00
RSM4FA-ND	50 ea. of Values 10.0KΩ to 97.6KΩ	\$129.95
RSM4F-ND	200 ea. of Values 10.0KΩ to 97.6KΩ	\$495.00
RSM5FA-ND	50 ea. of Values 100KΩ to 1.00MΩ	\$129.95
RSM5F-ND	200 ea. of Values 100KΩ to 1.00MΩ	\$495.00

Digi-Key® 0805 1% Chip Resistor Kits

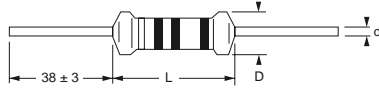
RSM1CA-ND	50 ea. of Values 10Ω to 97.6Ω	\$129.95
RSM1C-ND	200 ea. of Values 10Ω to 97.6Ω	\$495.00
RSM2CA-ND	50 ea. of Values 100Ω to 976Ω	\$129.95
RSM2C-ND	200 ea. of Values 100Ω to 976Ω	\$495.00
RSM3CA-ND	50 ea. of Values 1.00KΩ to 9.76KΩ	\$129.95
RSM3C-ND	200 ea. of Values 1.00KΩ to 9.76KΩ	\$495.00
RSM4CA-ND	50 ea. of Values 10.0KΩ to 97.6KΩ	\$129.95
RSM4C-ND	200 ea. of Values 10.0KΩ to 97.6KΩ	\$495.00
RSM5CA-ND	50 ea. of Values 100KΩ to 1.00MΩ	\$129.95
RSM5C-ND	200 ea. of Values 100KΩ to 1.00MΩ	\$495.00

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These Metal Oxide Resistors offer lower cost alternatives to Carbon Composition Resistors and General Purpose Metal Films. They can replace many low power General Purpose wirewound applications. These Metal Oxides meet overload tests in accordance with UL specification #1412 without producing a fire hazard. They withstand solvents in accordance with article Mil-Std-202E without producing mechanical or electrical damage. **Features:** High surge/overload capability. Non-inductive design. Coating and marking resist Trichloroethylene, Freon, and other cleaning agents.



Type	Max. Working Volt.	L	Dimensions (mm) D	d
1W	350	13.0	4.5	0.8
2W	350	17.0	5.5	0.8

Digi-Key® 1 and 2 Watt Resistor Assortment Kits

255 resistors per assortment. 5 each of the values in the ranges listed:

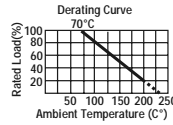
	0.47Ω - 56Ω	62Ω - 7.5KΩ	8.2KΩ - 1.0M	
1 Watt	RS101-ND	RS201-ND	RS301-ND	\$26.95
2 Watt	RS102-ND	RS202-ND	RS302-ND	\$29.95

Standard Resistor Values — See below for complete part numbers when ordering.

0.47	0.82	1.5	2.7	4.3	6.8	11	18	30	47	75	120	200	330	510	820	1.3K	2.2K	3.6K	5.6K	9.1K	15K	24K	39K	62K	100K	160K	270K	430K	680K	
0.51	0.91	1.6	3.0	4.7	7.5	12	20	33	51	82	130	220	360	560	910	1.5K	2.4K	3.9K	6.2K	10K	16K	27K	43K	68K	110K	180K	270K	430K	680K	
0.56	1.0	1.8	3.3	5.1	8.2	13	22	36	56	91	150	240	390	620	1.0K	1.6K	2.7K	4.3K	6.8K	11K	18K	30K	47K	75K	120K	200K	330K	510K	820K	
0.62	1.1	2.0	3.6	5.6	9.1	15	24	39	62	100	160	270	430	680	1.1K	1.8K	3.0K	4.7K	7.5K	12K	20K	33K	51K	82K	130K	220K	360K	560K	910K	
0.68	1.2	2.2	3.9	6.2	10	16	27	43	68	110	180	300	470	750	1.2K	2.0K	3.3K	5.1K	8.2K	13K	22K	36K	56K	91K	150K	240K	390K	620K	1.0M	
0.75	1.3	2.4																												

Characteristics:

Temperature Coefficient	±100 PPM Typ. ±200 Max
Insulation Resist.	10,000 MΩ Min
Load Life (1,000 hours)	◀1% Typ. ±3% Max
Short-Time Overload	±0.5% Max
Temp. Cycling	±0.5% Max
Moisture Resistance	±1.0% Max
Shock & Vibration	±0.2% Max
Effect of Soldering	±0.5% Max
Voltage Coefficient	.001%/V
Current Noise	◀1μV/V



Now Available In Tape and Reel

Matsumita fixed metal oxide film resistors feature small sized dimensions and have higher power rating at the same size as the conventional type. **Features:** Flame retardancy of the exclusively formulated inorganic insulative material exhibits an equivalent performance requirements of UL-94 (VE-O) and when operated at a potential less than 16 times RCWV. Matsushita metal (oxide) film resistors never flame nor arc. The coating and markings resist normal washing of solvents, such as Freon (TE, TMC, TF), trichloroethane.

Characteristics:

Temperature Coefficient	R. Wattle of 1, 2, 3 ±200ppm/°C
Voltage Coefficient	25ppm/V Max
Insulation Resist.	10,000 MΩ Min
Temp. Cycling	±(1% + 0.05%) Max
Short-Time Overload	±(2% + 0.05%) Max
Humidity (Steady State)	±(2% + 0.05%) Max
Load Life in Humidity	±(5% + 0.05%) Max
Load Life	±(5% + 0.05%) Max
Resistance to Soldering Heat	±(1% + 0.05%) Max
Vibration Low Freq	±(1% + 0.05%) Max
Thermal Shock	±(2% + 0.05%) Max
Noise	1.0μV/V Max

Type	Max. Working Volt.	L	Dimensions (mm) D	d
1W	350	9.0	2.8	0.65
2W	350	12.0	4.0	0.80
3W	350	15.0	5.5	0.80

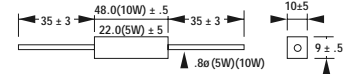
Description	Digi-Key Part Number	Pricing			
		1	10	100	10M
YAGEO					
1 Watt, 5% Metal Oxide Film Resistors Bulk Package (0.47-0.91Ω)	Value + "W-1-ND" (i.e. 0.47W-1-ND)	.27	1.96	12.60	77.00
1 Watt, 5% Metal Oxide Film Resistors Bulk Package (1.0-1.0MΩ)	Value + "W-1-ND" (i.e. 1.0W-1-ND)	.19	1.40	9.00	55.00
2 Watt, 5% Metal Oxide Film Resistors Bulk Package (0.47-0.91Ω)	Value + "W-2-ND" (i.e. 0.47W-2-ND)	.29	2.10	13.50	82.50
2 Watt, 5% Metal Oxide Film Resistors Bulk Package (1.0-1.0MΩ)	Value + "W-2-ND" (i.e. 1.0W-2-ND)	.23	1.68	10.80	66.00

Description	Digi-Key Part Number	Pricing			
		1	5	100	10M
PANASONIC					
1 Watt, 5% Metal Oxide Film Resistors Bulk Package (0.47-68KΩ)	"P" + Value + "W-1BK-ND" (i.e. P20W-1BK-ND)	.23	.84	9.49	65.47
1 Watt, 5% Metal Oxide Film Resistors Tape and Reel (0.47-68KΩ)	"P" + Value + "W-1TR-ND" (i.e. P1.0KW-1TR-ND)	—	—	—	61.20M
2 Watt, 5% Metal Oxide Film Resistors Bulk Package (0.47-100KΩ)	"P" + Value + "W-2BK-ND" (i.e. P20W-2BK-ND)	.27	1.00	12.86	78.78
2 Watt, 5% Metal Oxide Film Resistors Tape and Reel (0.47-100KΩ)	"P" + Value + "W-2TR-ND" (i.e. P1.0KW-2TR-ND)	266.94/3M	475.38/6M	854.20/12M	1661.05/27M
3 Watt, 5% Metal Oxide Film Resistors Bulk Package (0.47-100KΩ)	"P" + Value + "W-3BK-ND" (i.e. P20W-3BK-ND)	.49	2.30	29.58	177.50
3 Watt, 5% Metal Oxide Film Resistors Tape and Reel (0.47-100KΩ)	"P" + Value + "W-3TR-ND" (i.e. P1.0KW-3TR-ND)	297.27/1,500	1058.75/6M	1664.72/10,500	3494.06/25,500

Axial Lead Type

• Operating Temperature Range: -55° to +250°C

• Exceptionally small and sturdy; mechanically safe. Excellent electrical characteristics. • The materials used and the construction techniques ensure excellent flame resistance, arc resistance and moisture resistance as well as self-extinguishing capabilities. They will withstand the most rigorous loading test. • Applicable specifications: EIA RS-344 and EIA RC649.



5 Watt Standard Resistor Values — See below for complete part numbers when ordering.

0.30	0.62	1.2	2.2	3.9	6.8	12	22	39	68	120	220	390	680	1.2K
0.33	0.68	1.3	2.4	4.3	7.5	13	24	43	75	130	240	430	750	1.3K
0.39	0.75	1.5	2.7	4.7	8.2	15	27	47	82	150	270	470	820	1.5K
0.43	0.82	1.6	3.0	5.1	9.1	16	30	51	91	160	300	510	910	1.6K
0.47	0.91	1.8	3.3	5.6	10	18	33	56	100	180	330	560	1.0K	1.8K
0.51	1.0	2.0	3.6	6.2	11	20	36	62	110	200	360	620	1.1K	2.0K
0.56	1.1													

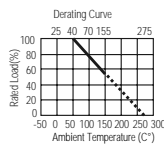
10 Watt Standard Resistor Values — See below for complete part numbers when ordering.

1.0	1.8	3.3	5.6	10	18	33	56	100	180	300	470	750	1.2K	2.0K
1.1	2.0	3.6	6.2	11	20	36	62	110	200	330	510	820	1.3K	2.2K
1.2	2.2	3.9	6.8	12	22	39	68	120	220	360	560	910	1.5K	2.4K
1.3	2.4	4.3	7.5	13	24	43	75	130	240	390	620	1.0K	1.6K	2.7K
1.5	2.7	4.7	8.2	15	27	47	82	150	270	430	680	1.1K	1.8K	3.0K
1.6	3.0	5.1	9.1	16	30	51	91	160						

Description	Digi-Key Part Number	Pricing			
		1	10	100	10M
5 Watt, 5% Metal Wirewound Rectangular Resistors, Bulk Package	Value + "W-5-ND" (i.e. 0.30W-5-ND)	.41	3.41	27.28	163.68
10 Watt, 5% Wirewound Rectangular Resistors, Bulk Package	Value + "W-10-ND" (i.e. 1.0W-10-ND)	.60	5.01	40.08	240.48

Characteristics

Temperature Coefficient	±300 PPM/°C
Insulation Resistance	100 MΩ
Load Life (1,000 hours)	±5% + 0.05Ω
Short-Time Overload	±2% + 0.05Ω
Dielectric Withstanding Volt	±2% + 0.05Ω
Moisture Resistance	±5% + 0.05Ω
Shock and Vibration	±1% + 0.05Ω
Effect of Soldering	±2% + 0.05Ω



Digi-Key® 5 Watt Resistor Assortment Kit

- RS105-ND 0.30Ω-0.91Ω — 5 each 60 Resistors\$23.95
- RS205-ND 1.0Ω-9.1Ω — 4 each 96 Resistors\$32.95
- RS305-ND 10Ω-91Ω — 4 each 96 Resistors\$32.95
- RS405-ND 100Ω-2.0KΩ — 3 each 96 Resistors\$32.95

Digi-Key® 10 Watt Resistor Assortment Kit

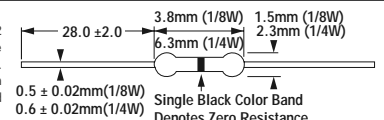
- 2 each of all 10 watt standard resistor values listed above. A total of 168 resistors.
- R110-ND\$72.95

Applications:

- Generally they are used for the following reasons:
 - Inability to connect two points on a P.C. Board due to other circuit paths which must be crossed over.
 - An After-the-Fact design change that requires new point connections.
 - Circuit tuning by changing point connections.

Specifications:

Maximum Resistance: 0.004 ohm on 1/8 watt, 0.003 ohm on 1/4 watt; Typical Resistance: 0.002 ohm on both; Lead Material: tin-plated copper; Body Material: electrical grade, high performance molding compound; Min. Insulation Resistance — Dry: 10,000 megΩ, Wet: 100 megΩ; Min. Dielectric Withstanding Voltage — Atmospheric: 500V RMS, Reduced: 325V RMS; Insulation Flammability: resistor-insulation is self extinguishing within 10 seconds after externally applied flame is removed; Current Rating: 25 Amps at 25°C, derating to 0 amps at 150°C.



Description	Digi-Key Part No.	Pricing			
		5	200	1M	50M
1/8 Watt, Zerohm Jumper, Bulk Package	0.0EBK-ND	.26	8.11	16.28	14.93/M
1/8 Watt, Zerohm Jumper, Tape/Reel (5M Pcs./Reel)	0.0ETR-ND	—	—	—	18.37/M
1/4 Watt, Zerohm Jumper, Bulk Package	0.0QBK-ND	.27	4.93	10.03	9.23/M
1/4 Watt, Zerohm Jumper, Tape/Reel (5M Pcs./Reel)	0.0QTR-ND	—	—	—	11.53/M

Silicone Coated Wirewound Resistors - 1, 3, 5 Watt, 1%

RESISTANCE VALUE CHART

	.10	.50	2.0	5.0	22	40	100	225	400	750	1.5K	3.5K	6.8K	20.0K
	.13	7.5	7.5	25	47	120	250	470	800	1.8K	3.9K	7.5K	25.0K	
	.15	10	10	27	50	125	270	500	820	2.0K	4.0K	8.0K		
	20	1.5	12	30	56	150	300	560	900	2.2K	4.7K	8.2K		
	25	2.0	15	33	68	180	330	600	1.0K	2.5K	5.0K	10.0K		
	30	3.0	18	35	75	200	350	680	1.1K	2.7K	5.6K	10.0K		
	33	4.0	20	39	82	220	390	700	1.2K	3.0K	6.0K	15.0K		

Series	A ±.81mm	B ±.81mm	C	D
ALSR-1	2.79	9.78	.51	38.10
ALSR-3	5.08	13.46	.81	38.10
ALSR-5	7.92	23.80	.81	38.10

Electrical Specifications:

Series	ALSR-1	ALSR-3, ALSR-5
Resistance Tolerance	±1%	±1%
Dielectric Withstanding Voltage	500 VAC	1000 VAC
Short Time Overload	5 X rated wattage for 5 seconds	

Resistance Range (Ohms)	Wattage	Digi-Key* Part No.	Price Each	Huntington Part No.
			1 10 25 50 100	
10-75	1	ALSR1F-(Value)-ND	1.92 1.72	ALSR-1-(Value)-1%
1.0-900	1	ALSR1F-(Value)-ND	1.89 1.69	ALSR-1-(Value)-1%
1.0K-3.0K	1	ALSR1F-(Value)-ND	2.02 1.80	ALSR-1-(Value)-1%
10-900	3	ALSR3F-(Value)-ND	1.23	ALSR-3-(Value)-1%
1.0K-2.7K	3	ALSR3F-(Value)-ND	1.18	ALSR-3-(Value)-1%
3.0K-4.7K	3	ALSR3F-(Value)-ND	1.23	ALSR-3-(Value)-1%
5.0K-10.0K	3	ALSR3F-(Value)-ND	1.25	ALSR-3-(Value)-1%
10-900	5	ALSR5F-(Value)-ND	1.25	ALSR-5-(Value)-1%
1.0K-4.7K	5	ALSR5F-(Value)-ND	1.23	ALSR-5-(Value)-1%
5.0K-8.2K	5	ALSR5F-(Value)-ND	1.20	ALSR-5-(Value)-1%
10.0K-20.0K	5	ALSR5F-(Value)-ND	1.25	ALSR-5-(Value)-1%
25.0K	5	ALSR5F-(Value)-ND	1.23	ALSR-5-(Value)-1%

* For complete part number, substitute Digi-Key value (from Resistance Value Chart) for (Value).

Silicone Coated Wirewound Resistors - 1, 3, 5, 10 Watt, 5%

RESISTANCE VALUE CHART

	.10	2.0	25	75	270	680	1.75K	4.0K	8.5K	20.0K
	.13	3.0	27	82	300	700	1.8K	4.5K	9.0K	22.0K
	.15	4.0	30	100	330	750	2.0K	4.7K	10.0K	22.5K
	20	5.0	33	120	350	800	2.2K	5.0K	11.0K	25.0K
	25	7.5	35	125	390	820	2.25K	5.6K	12.0K	
	30	10	39	150	400	900	2.5K	6.0K	12.5K	
	33	12	40	180	450	1.0K	2.7K	6.8K	13.5K	
	50	15	47	200	470	1.1K	3.0K	7.0K	15.0K	
	75	18	50	220	500	1.2K	3.3K	7.5K	16.0K	
	1.0	20	56	225	560	1.25K	3.5K	8.0K	17.5K	
	1.5	22	68	250	600	1.5K	3.9K	8.2K	18.0K	

Series	A ±.81mm	B ±.81mm	C	D
ALSR-1	2.79	9.78	.51	38.10
ALSR-3	5.08	13.46	.81	38.10
ALSR-5	7.92	23.80	.81	38.10
ALSR-10	7.92	45.72	.81	38.10

Electrical Specifications:

Series	ALSR-1	ALSR-3	ALSR-5	ALSR-10
Resistance Tolerance	±5%	±3%	±5%	±5%
Power Rating	1 Watts at 25°C	3 Watts at 25°C	5 Watts at 25°C	10 Watts at 25°C
Dielectric Withstanding Voltage	500 VAC	1000 VAC	1000 VAC	1000 VAC
Short Time Overload	5 X rated wattage for 5 seconds			

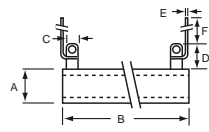
Resistance Range (Ohms)	Wattage	Digi-Key* Part No.	Price Each	Huntington Part No.
			1 10 25 50 100	
10-75	1	ALSR1J-(Value)-ND	1.59 1.43	ALSR-1-(Value)
1.0-900	1	ALSR1J-(Value)-ND	1.56 1.40	ALSR-1-(Value)
1.0K-5.6K	1	ALSR1J-(Value)-ND	1.79 1.60	ALSR-1-(Value)
6.0K-10.0K	1	ALSR1J-(Value)-ND	1.89 1.69	ALSR-1-(Value)
10-900	3	ALSR3J-(Value)-ND	1.24 1.11	ALSR-3-(Value)
1.0K-4.7K	3	ALSR3J-(Value)-ND	1.11 .99	ALSR-3-(Value)
5.0K-10.0K	3	ALSR3J-(Value)-ND	1.37 1.22	ALSR-3-(Value)
10-75	5	ALSR5J-(Value)-ND	1.46 1.31	ALSR-5-(Value)
1.0-7.5	5	ALSR5J-(Value)-ND	1.46 1.31	ALSR-5-(Value)
10-2.7K	5	ALSR5J-(Value)-ND	1.46 1.31	ALSR-5-(Value)
3.0K-4.7K	5	ALSR5J-(Value)-ND	1.46 1.31	ALSR-5-(Value)
5.0K-9.0K	5	ALSR5J-(Value)-ND	1.46 1.31	ALSR-5-(Value)
10.0K-22.5K	5	ALSR5J-(Value)-ND	1.46 1.31	ALSR-5-(Value)
25.0K	5	ALSR5J-(Value)-ND	1.43 1.28	ALSR-5-(Value)
10-75	10	ALSR10J-(Value)-ND	1.92 1.72	ALSR-10-(Value)
10-680, 750-900	10	ALSR10J-(Value)-ND	1.63 1.45	ALSR-10-(Value)
1.0K-2.7K	10	ALSR10J-(Value)-ND	1.76 1.57	ALSR-10-(Value)
3.0K-9.0K	10	ALSR10J-(Value)-ND	2.05 1.83	ALSR-10-(Value)
10.0K-22.5K	10	ALSR10J-(Value)-ND	2.24 2.01	ALSR-10-(Value)
25.0K	10	ALSR10J-(Value)-ND	2.54 2.27	ALSR-10-(Value)

* For complete part number, substitute Digi-Key value (from Resistance Value Chart) for (Value).

Vitreous Enamel Wirewound Power Resistors - 8, 12 Watt

Electrical Specifications:

Series	FVTS-5	FVTS-10
Resistance Tolerance	±5% 1Ω & above ±10% 1Ω & below	±5% 1Ω & above ±10% 1Ω & below
Power Rating	8 Watts at 25°C	12 Watts at 25°C
Dielectric Withstanding Voltage	1000 VAC	1000 VAC
Short Time Overload	10 X rated wattage for 5 seconds	



Series	A	B	C	D	E	F
FVTS-5	7.94	25.40	4.76	11.11	.81	50.80
FVTS-10	7.94	44.45	4.76	11.11	.81	50.80

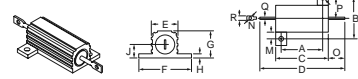
2.0	7.5	20	50	125	250	450	750	1.2K	2.0K	3.5K	5.0K	7.5K	10.0K	20.0K	50.0K
3.0	10	25	75	150	300	500	900	1.25K	2.5K	4.0K	6.0K	8.0K	12.0K	25.0K	
5.0	15	35	100	200	400	600	1.0K	1.5K	3.0K	4.5K	7.0K	9.0K	15.0K	40.0K	

Resistance Range (Ohms)	Wattage	Digi-Key* Part No.	Price Each	Huntington Part No.
			1 10 25 100 250	
5.0-900	8	FVTS5-(Value)-ND	1.79 1.53	FVTS-5-(Value)
1.0K-4.5K	8	FVTS5-(Value)-ND	1.93 1.65	FVTS-5-(Value)
5.0K-9.0K	8	FVTS5-(Value)-ND	2.06 1.77	FVTS-5-(Value)
10.0K	8	FVTS5-(Value)-ND	1.90 1.63	FVTS-5-(Value)
2.0-450	12	FVTS10-(Value)-ND	2.04 1.74	FVTS-10-(Value)
500-900	12	FVTS10-(Value)-ND	2.26 1.93	FVTS-10-(Value)
1.0K-5.0K, 7.5K-9.0K	12	FVTS10-(Value)-ND	2.48 2.12	FVTS-10-(Value)
10.0K-20.0K	12	FVTS10-(Value)-ND	2.75 2.35	FVTS-10-(Value)
25.0K	12	FVTS10-(Value)-ND	3.11 2.66	FVTS-10-(Value)
40.0K, 50.0K	12	FVTS10-(Value)-ND	4.13 3.53	FVTS-10-(Value)

* For complete part number, substitute Digi-Key value (from Resistance Value Chart) for (Value).

Aluminum Housed Chassis Mount Resistors - 5, 10, 25, 50 Watt, 1% (Precision Power Wirewound)

HEI's high power aluminum housed resistors use centerless ground ceramic cores for uniform heat distribution. Molded in a special high temperature material and mounted in an extruded aluminum finned housing, these designs provide maximum power dissipation and reliability. They have tinned copper leads for solderability and meet or exceed MIL-R-18546, including "N" characteristic, and MIL-R-39009. Specifications: • Power Rating: Based on full power operation at 25°C, and maximum hotspot 275°C. • Mounting on proper heat sink as follows: For 5 and 10 Watt - use 4" x 6" x 2" x .040" (101.60 x 152.40 x 50.80 x 1.02mm) aluminum chassis; For 25 and 50 Watt - use 5" x 7" x 2" x .040" (127.00 x 177.80 x 50.80 x 1.02mm) aluminum chassis.



RESISTANCE VALUE CHART

Series	TMC-5	TMC-10	TMC-25	TMC-50
10-100	20	35	20.0	10
50-150	10	50	25.0	10
1.0-300	20	75	10.0K	20
5.0-390	2.5	100	2.0	300
10-2.0K	10	300	12	500
12-10.0K	25	330	15	1.0K
25-15.0K	33	1.0K	20	1.5
30			25	3.0K
			2.0	16
			2.0	16
			2.0	16

Electrical Specifications:

Series	TMC-5	TMC-10	TMC-25	TMC-50
MIL-R-39009/MIL-R-18546	RE-60/RE-60	RE-65/RE-65	RE-70/RE-70	RE-75/RE-75
HEI Power	7.5 Watts	12.5 Watts	25 Watts	50 Watts
MIL Power	5 Watts	10 Watts	20 Watts	30 Watts
Working Voltage	160	265	550	1250
Dielectric Strength	1000 VAC	1000 VAC	2500 VAC	2500 VAC

Series	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	W	R
TMC-5	11.40	12.57	16.03	30.15	8.96	16.79	8.51	1.91	3.81	2.24	2.49	2.36	1.40	8.33	7.01	16	2.97	
TMC-10	14.40	16.00	19.84	36.50	11.30	20.10	10.54	2.16	5.08	2.62	2.49	2.97	2.31	9.50	8.71	12	4.37	
TMC-25	18.39	19.96	27.76	50.80	13.84	27.81	14.61	2.41	6.86	4.62	3.30	3.56	2.31	12.70	10.72	12	4.37	
TMC-50	39.83	21.56	50.77	72.21	16.00	29.34	16.00	2.41	7.87	5.23	3.30	3.56	2.31	12.70	11.51	12	4.37	

Resistance Range (Ohms)	Wattage	Digi-Key* Part No.	Price Each	Huntington* Part No.
			1 10 50 100 250	
10-15.0K	5	TMC5-(Value)-ND	3.02 2.58	TMC-5-(Value)-1%
20-10.0K	10	TMC10-(Value)-ND	3.20 2.73	TMC-10-(Value)-1%
10-3.0K	25	TMC25-(Value)-ND	4.54 3.88	TMC-25-(Value)-1%
15-5.0K	50	TMC50-(Value)-ND	4.74 4.04	TMC-50-(Value)-1%

* For complete part number, substitute Digi-Key value (from Resistance Value Chart) for (Value).

Edgewound Resistors - 300, 1000 Watt

HEI Edgewound Resistors are designed for applications demanding maximum power dissipation in minimum space. Edgewounds are constructed of special alloy resistance wire, crimped, and wound on edge. High quality ceramic cores are used with a coating of either vitreous enamel or silicone to provide heat sink for short term overloads and maximum dissipation. Specifications: • Dielectric Withstanding Voltage: Measured from terminals to brackets, 1000 VAC • Overload: 10 X rated power for 5 seconds • Tolerance: ±10% • Temperature is based on 25°C free air rating.

Series	A	(Core) B	C	D	(Terminal) E	F
FVE-300	28.58	19.05	215.90	7.94	15.88	254.00 - 812.80
AVE-300	28.58	19.05	215.90	7.94	15.88	254.00 - 812.80
FSE-1000	63.50	44.45	381.00	12.70	15.88	6.35 - 508.00

RESISTANCE VALUE CHART

Series	A	B	C	D	E	F
FVE-300	28.58	19.05	215.90	7.94	15.88	254.00 - 812.80
AVE-300	28.58	19.05	215.90	7.94	15.88	254.00 - 812.80
FSE-1000	63.50	44.45	381.00	12.70	15.88	6.35 - 508.00

Resistance Range (Ω)	Wattage	Digi-Key* Part No.	Price Each	Huntington* Part No.
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10% Tolerance

The OX/OY Series of fixed ceramic resistors are ideal for circuitry associated with surges, high peak power or high energy. They offer enhanced performance in high voltage power supplies, R-C snubber circuits, and inrush limiters. The OX/OY resistors can often replace carbon composition resistors which can be difficult to source.

Features:

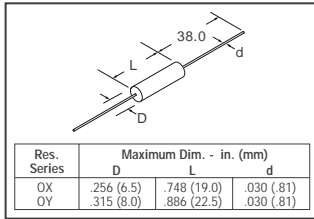
- Replaces 1 and 2 watt carbon composition resistors
- Meets high energy density demands
- High peak power
- 10% Tolerance

Material:

- Terminals: Solder-coated axial leads
- Coating: UL-94 V0 approved silicone

Derating:

- Linear from 100% @ +70°C to 0% @ +200°C



Res. Series	Maximum Dim. - in. (mm)		
	D	L	d
OX	.256 (6.5)	.748 (19.0)	.030 (.81)
OY	.315 (8.0)	.886 (22.5)	.030 (.81)

Electrical Specifications

	OX Series	OY Series
Resistance Tol.	±10% standard	
Power Rating	Based on 70°C free air rating	
Temperature Coefficient	-1300 ±300ppm/°C	
Dielectric With-standing Voltage	500VAC	750VAC
	Joules Max. *	50

* For a single impulse

RESISTANCE VALUE CHART

Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)
3.3 (33GK)	33 (330K)	330 (331K)	3.3K (332K)	33K (333K)	330K (334K)
3.9 (39GK)	39 (390K)	390 (391K)	3.9K (392K)	39K (393K)	390K (394K)
4.7 (47GK)	47 (470K)	470 (471K)	4.7K (472K)	47K (473K)	470K (474K)
5.6 (56GK)	56 (560K)	560 (561K)	5.6K (562K)	56K (563K)	560K (564K)
6.8 (68GK)	68 (680K)	680 (681K)	6.8K (682K)	68K (683K)	680K (684K)
8.2 (82GK)	82 (820K)	820 (821K)	8.2K (822K)	82K (823K)	820K (824K)
10 (100K)	100 (101K)	1K (102K)	10K (103K)	100K (104K)	1MEG (105K)
12 (120K)	120 (121K)	1.2K (122K)	12K (123K)	120K (124K)	
15 (150K)	150 (151K)	1.5K (152K)	15K (153K)	150K (154K)	
18 (180K)	180 (181K)	1.8K (182K)	18K (183K)	180K (184K)	
22 (220K)	220 (221K)	2.2K (222K)	22K (223K)	220K (224K)	
27 (270K)	270 (271K)	2.7K (272K)	27K (273K)	270K (274K)	

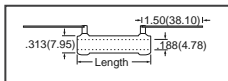
Resistance Range (Ohms)	Wattage	Digi-Key* Part No.	Pricing			
			1	100	1,000	2,500
3.3-100	1	OX(Code)-ND	.75	56.00	450.00	380.00/M
120-100K	1	OX(Code)-ND	.70	53.00	420.00	350.00/M
3.3-100	2	OY(Code)-ND	.98	73.00	590.00	490.00/M
120-100K	2	OY(Code)-ND	.91	68.00	550.00	460.00/M
120K-1MEG	2	OY(Code)-ND	1.05	79.00	630.00	520.01/M

*For complete part number, substitute the corresponding code from the Resistance Value Chart for (Code).

Vitreous Enamel Power Resistors

8 and 12 Watt

The 200 Type by Ohmite is a small but durable power resistor. They feature all-welded construction and rugged, flame resistant conformal vitreous enamel coating to ensure successful performance under high temperatures. The 200 Type has a resistance tolerance of ±5%.



Series	B8J	B12J
Wattage	8	12
Max. Voltage	250	625
Overload	10 times rated wattage for 5 seconds	
Length	1.000"	1.750"
	(25.40mm)	(44.45mm)

RESISTANCE VALUE CHART

Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	
2.0 (2R0)	25 (25R)	200 (200)	750 (750)	2.5K (2K5)	7.0K (7K0)	20.0K (20K)
3.0 (3R0)	35 (35R)	250 (250)	900 (900)	3.0K (3K0)	7.5K (7K5)	25.0K (25K)
5.0 (5R0)	50 (50R)	300 (300)	1.0K (1K0)	3.5K (3K5)	8.0K (8K0)	40.0K (40K)
7.5 (7R5)	75 (75R)	400 (400)	1.2K (1K2)	4.0K (4K0)	9.0K (9K0)	50.0K (50K)
10 (10R)	100 (100)	450 (450)	1.25K (1K25)	4.5K (4K5)	10.0K (10K)	
15 (15R)	125 (125)	500 (500)	1.5K (1K5)	5.0K (5K0)	12.0K (12K)	
20 (20R)	150 (150)	600 (600)	2.0K (2K0)	6.0K (6K0)	15.0K (15K)	

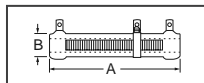
Resistance Range (Ohms)	Wattage	Digi-Key* Part No.	Pricing			
			1	25	100	250
5.0-7.5	8	B8J(Code)-ND	2.21	47.00	177.00	360.00
10-500	8	B8J(Code)-ND	1.96	41.75	157.00	320.00
600-1.0K	8	B8J(Code)-ND	2.02	43.00	162.00	327.50
2.0K-9.0K	8	B8J(Code)-ND	2.06	43.75	165.00	335.00
10.0K	8	B8J(Code)-ND	2.16	46.00	173.00	352.50
2.0-7.5	12	B12J(Code)-ND	2.53	53.75	203.00	412.50
10-900	12	B12J(Code)-ND	2.24	47.50	180.00	365.00
1.0K-1.5K	12	B12J(Code)-ND	2.42	51.50	194.00	395.00
2.0K-4.0K	12	B12J(Code)-ND	2.49	53.00	200.00	405.00
4.5K-9.0K	12	B12J(Code)-ND	2.63	56.00	210.00	427.50
10.0K-15.0K	12	B12J(Code)-ND	2.68	57.00	214.00	435.00
20.0K-40.0K	12	B12J(Code)-ND	2.78	59.25	222.00	452.50
50.0K	12	B12J(Code)-ND	3.50	74.50	280.00	570.00

*For complete part number, substitute the corresponding code from the Resistance Value Chart for (Code).

25, 50, 100, and 225 Watt

Adjustable with Tabs — Type 210
D25K, D50K, D100K, D225K

Type 210 adjustable power resistors are used in applications requiring settings at different resistance values. They are equipped with a screwdriver adjustable lug, which makes them ideal for obtaining odd resistance values, and setting up equipment to meet various line voltages. The 210 type resistors have a vitreous enamel coating with a strip of uncovered wire that makes contact with the adjustment lug. The slatted wattage rating applies only when the entire resistance is in the circuit. Setting the lug at an intermediate point reduces the wattage by the approximate same proportion. The 210 type has a ±10% tolerance.

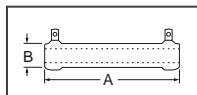


RESISTANCE VALUE CHART

Value (Code)	Value (Code)
1.0 (1R0)	500 (500)
2.0 (2R0)	750 (750)
3.0 (3R0)	1.0K (1K0)
5.0 (5R0)	2.5K (2K5)
10 (10R)	4.0K (4K0)
25 (25R)	5.0K (5K0)
50 (50R)	10.0K (10K)
100 (100)	12.0K (12K)
150 (150)	25.0K (25K)
200 (200)	50.0K (50K)
250 (250)	

Fixed with Tabs — Type 270
L25J, L50J, L100J, L225J

Suitable for applications requiring higher wattage ratings from 25 to 225 watts. The 270 type resistors are equipped with lug terminals suitable for soldering or sturdy bolt connection. The hollow core of these resistors permit fastening with spring-type brackets. The 270 type resistors feature an all-welded construction and durable vitreous enamel coating. The 270 type has a ±5% tolerance.



Series	L25J/D25K	L50J/D50K	L100J/D100K	L225J/D225K
Wattage	25	50	100	225
Max. Volt.	625	1625	2845	4595
Overload	10 times rated wattage for 5 seconds			
DWV	1000VAC	1000VAC	1000VAC	3000VAC
Length A	2" (50.80mm)	4" (101.60mm)	6.5" (165.10mm)	10.5" (266.70mm)
Diameter B	.5625" (14.29mm)	.5625" (14.29mm)	.750" (19.05mm)	1.125" (28.58mm)
Memcor-Truohm Equivalent	FR25/AR25	FR50/AR50	FR100/AR100	FR200/AR200

Resistance Range (Ohms)	Wattage	Digi-Key* Part No.	Pricing			
			1	10	25	100
2.0-3.0	25	L25J(Code)-ND	4.08	—	86.75	285.00
10, 25, 100, 500, 750	25	L25J(Code)-ND	4.01	—	85.25	280.00
1.0K, 2.5K	25	L25J(Code)-ND	4.19	—	89.00	293.00
4.0K, 5.0K	25	L25J(Code)-ND	4.25	—	90.25	297.00
10.0K-12.0K	25	L25J(Code)-ND	5.08	—	108.00	355.00
25.0K	25	L25J(Code)-ND	5.26	—	111.75	369.00
50.0K	25	L25J(Code)-ND	5.46	—	116.25	382.00
Mtg. Bracket 25/50W±	25	9-100-ND	.57	3.83	—	18.24
1.0	25	D25K(Code)-ND	7.81	—	165.75	547.00
3.0, 5.0, 10, 25, 50, 100, 250, 500	25	D25K(Code)-ND	6.47	—	137.50	452.00
1.0	50	L50J(Code)-ND	6.29	—	133.50	441.00
2.0-5.0	50	L50J(Code)-ND	5.90	—	125.25	413.00
10, 25, 50, 100, 500	50	L50J(Code)-ND	5.79	—	123.00	405.00
1.0K, 5.0K	50	L50J(Code)-ND	5.73	—	121.75	401.00
1.0-3.0	50	D50K(Code)-ND	11.10	—	236.00	777.00
5.0	50	D50K(Code)-ND	10.86	—	230.75	760.00
10, 25, 50	50	D50K(Code)-ND	9.47	—	201.25	663.00
100, 500	50	D50K(Code)-ND	9.25	—	196.75	647.00
1.0K	50	D50K(Code)-ND	9.94	—	211.25	696.00
1.0-2.0	100	L100J(Code)-ND	8.90	—	189.00	668.00
5.0	100	L100J(Code)-ND	8.55	—	181.75	642.00
10, 50	100	L100J(Code)-ND	8.05	—	171.25	604.00
100, 250	100	L100J(Code)-ND	7.94	—	168.75	595.00
1.0K	100	L100J(Code)-ND	7.58	—	161.25	569.00
1.0	100	D100K(Code)-ND	13.86	—	312.00	1108.00
2.0, 10	100	D100K(Code)-ND	13.48	—	303.25	1079.00
50, 100, 250	100	D100K(Code)-ND	12.11	—	272.50	969.00
1.0K	100	D100K(Code)-ND	11.63	—	261.50	930.00
1.0	225	L225J(Code)-ND	25.36	—	570.75	2029.00
5.0	225	L225J(Code)-ND	14.67	—	330.25	1173.00
10, 50, 100	225	L225J(Code)-ND	12.79	—	287.75	1024.00
250, 500	225	L225J(Code)-ND	12.18	—	274.25	974.00
1.0K	225	L225J(Code)-ND	11.51	—	259.00	921.00
2.0-3.0	225	D225K(Code)-ND	28.60	257.40	570.00	—
5.0	225	D225K(Code)-ND	24.26	218.40	485.00	—
10, 25, 50	225	D225K(Code)-ND	21.89	197.10	437.75	—
100, 150, 200, 250, 500, 1.0K	225	D225K(Code)-ND	19.50	175.60	390.00	—
	225	D225K(Code)-ND	16.46	148.20	329.00	—
Mtg. Bracket 100W±	100	12-100-ND	1.26	8.37	—	39.85
Mtg. Bracket 200W±	200	18-100-ND	1.32	8.77	—	41.77

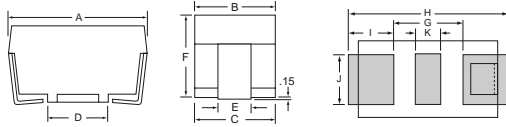
*For complete part number, substitute the corresponding code from the Resistance Value Chart for (Code). † Requires 2 brackets per resistor. NOTE: Not all values are stocked at all wattages. Please see chart.

OHMITE SMD Power Resistors

1, 1.5, 2, 3 and 3.5 Watt

Electrical Specifications

	RW1S0BA	RW1S5CA	RW2S0CB	RW2R0DA	RW3R0DB	RW3R5EA
Power at 25°C Ambient	1 watt	1.5 watt	2 watt	2 watt	3 watt	3.5 watt
Max. Voltage	50	75	100	100	200	350
Temperature Coefficient	0.1 to 1 ohm — ±90 ppm/°C 1 to 10 ohms — ±50 ppm/°C 10 ohms and over — ±20 ppm/°C					
Dielectric Withstanding Voltage	1000 V					



Series	Max. Dimensions (mm)										
	A	B	C	D	E	F	G	H	I	J	K
RW1S0BA	6.76	3.58	3.38 Ref.	3.05	1.63	3.58	3.81	8.79	2.49	3.20	1.27
RW1S5CA	10.52	4.17	3.96 Ref.	5.84	2.24	4.17	6.50	13.31	3.40	3.20	1.52
RW2S0CB	10.85	5.87	5.64 Ref.	6.86	2.46	5.77	7.01	13.64	3.33	3.20	2.36
RW2R0DA	12.06	6.22	5.99 Ref.	6.86	3.94	5.87	8.05	14.86	3.40	3.94	2.36
RW3R0DB	16.05	7.06	6.81 Ref.	10.85	3.94	5.87	12.04	18.85	3.40	3.94	2.36
RW3R5EA	21.11	7.06	6.81 Ref.	14.78	3.94	6.98	15.52	25.40	4.95	3.94	2.36

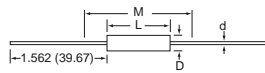
Resistance Range (Ohms)	Wattage	Tolerance	Digi-Key* Part No.	Bulk Pricing		Digi-Key* Part No.	Tape & Reel Pricing				
				100	500		750	1,000	1,500	2,000	
.010 - .050	1	1%	RW1S0BA(Code)FBK-ND	1.26	113.00	475.00	RW1S0BA(Code)FTTR-ND	—	—	—	940.00/M
			RW1S0BA(Code)FBK-ND	2.10	189.00	790.00	RW1S0BA(Code)FTTR-ND	—	—	—	1640.00/M
.005 - .050	1	5%	RW1S0BA(Code)JBK-ND	1.05	95.00	395.00	RW1S0BA(Code)JTTR-ND	—	—	—	800.00/M
			RW1S0BA(Code)JBK-ND	1.89	170.00	710.00	RW1S0BA(Code)JTTR-ND	—	—	—	1340.00/M
.005 - .040	1.5	5%	RW1S5CA(Code)JBK-ND	1.26	114.00	475.00	RW1S5CA(Code)JTTR-ND	—	1020.00/M	—	—
			RW1S5CA(Code)JBK-ND	1.33	119.00	500.00	RW1S5CA(Code)JTTR-ND	—	1070.00/M	—	—
.050	2	1%	RW2R0DA(050)FBK-ND	1.80	162.00	675.00	RW2R0DA(050)FTTR-ND	—	1300.00	—	—
			RW2R0DA(050)JBK-ND	1.58	142.00	595.00	RW2R0DA(050)JTTR-ND	—	1140.00	—	—
.100 - 1.00	2	5%	RW2R0DA(050)JBK-ND	1.89	170.00	710.00	RW2R0DA(050)JTTR-ND	—	1360.00	—	—
			RW2S0CB(Code)JBK-ND	1.51	136.00	565.00	RW2S0CB(Code)JTTR-ND	—	1130.00	—	—
.005 - .050	2	5%	RW2S0CB(Code)JBK-ND	1.92	173.00	720.00	RW2S0CB(Code)JTTR-ND	—	1390.00	—	—
			RW2S0CB(Code)JBK-ND	1.80	162.00	675.00	RW2S0CB(Code)JTTR-ND	—	1270.00	—	—
.075 - 1.00	3	5%	RW3R0DB(Code)JBK-ND	2.05	184.00	770.00	RW3R0DB(Code)JTTR-ND	—	1460.00	—	—
			RW3R0DB(Code)JBK-ND	1.92	173.00	720.00	RW3R0DB(Code)JTTR-ND	—	1460.00	—	—
.010 - .050	3.5	5%	RW3R5EA(Code)JBK-ND	1.92	173.00	720.00	RW3R5EA(Code)JTTR-ND	997.50	—	—	—
			RW3R5EA(Code)JBK-ND	2.16	194.00	810.00	RW3R5EA(Code)JTTR-ND	1147.50	—	—	—

*For complete part number, substitute the corresponding code from the Resistance Value Chart for (Code).

10 Series - Molded Silicone Axial Lead Wire Element Resistors

Ideal for Current Sensing

Electrical Specifications: • Resistance Tolerance: ±1% (F Type) • Power Rating: Based on 25°C free air rating • Overload: 5x rated power for 5 seconds • Dielectric Withstanding Volt.: 2 watt - 500 VRMS, 3 and 5 watt - 1000 VRMS • Insulation Resistance: Not less than 1000MΩ • Temp. Range: -55°C to 275°C



Watts	Maximum Dim. - mm			
	D	L	d	M
2	2.64	10.57	.86	29.36
3	5.46	14.48	.86	33.27
5	8.64	23.50	1.07	42.55

RESISTANCE VALUE CHART

12F Series	13F Series	15F Series
Value (Code)	Value (Code)	Value (Code)
.005 (R005)	.005 (R005)	.005 (R005)
.010 (R010)	.010 (R010)	.010 (R010)
.015 (R015)	.015 (R015)	.015 (R015)
.020 (R020)	.020 (R020)	.020 (R020)
.025 (R025)	.025 (R025)	.025 (R025)
.030 (R030)	.030 (R030)	.030 (R030)
.040 (R040)	.040 (R040)	.040 (R040)
.050 (R050)	.050 (R050)	.050 (R050)
.070 (R070)	.070 (R070)	.070 (R070)
.100 (R100)	.100 (R100)	.100 (R100)
	.150 (R150)	.150 (R150)
	.200 (R200)	.200 (R200)
	.250 (R250)	.250 (R250)
	.300 (R300)	.300 (R300)

Resistance Range (Ohms)	Wattage	Digi-Key* Part No.	Pricing			
			1	10	100	250
.005 - .020	2	12F(Code)-ND	1.45	13.10	116.00	255.00
		12F(Code)-ND	1.43	12.90	114.00	250.00
		12F(Code)-ND	1.35	12.20	108.00	237.50
		12F(Code)-ND	1.45	13.10	116.00	255.00
		12F(Code)-ND	1.58	14.20	126.00	277.50
.005	3	13F(Code)-ND	1.44	13.00	115.00	252.50
		13F(Code)-ND	1.36	12.20	109.00	237.50
		13F(Code)-ND	1.30	11.70	104.00	227.50
		13F(Code)-ND	1.28	11.50	102.00	225.00
		13F(Code)-ND	1.44	13.00	115.00	252.50
.005	5	15F(Code)-ND	1.72	15.50	138.00	300.00
		15F(Code)-ND	1.66	14.90	133.00	290.00
		15F(Code)-ND	1.62	14.60	130.00	282.50
		15F(Code)-ND	1.60	14.40	128.00	280.00
		15F(Code)-ND	1.60	14.40	128.00	280.00

*For complete part number, substitute the corresponding code from Resistance Value Chart for (Code).

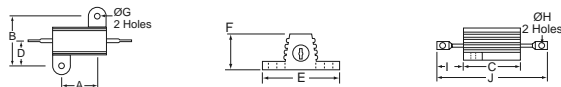
89 Type - Aluminum Housed Axial Lead Wirewound Resistors

The 89 Type are high performance axial-lead-type resistors. They are better suited to withstand vibration, shock and harsh environmental conditions than standard axial-lead resistors. The 89 Type are aluminum housed to maintain high stability during operation and to permit secure mounting to chassis surfaces. The housing also provides heat-sinking capabilities. The 89 Type resistors meet or exceed MIL-R-18546 specifications.

Electrical Specifications

	5 Watt	10 Watt	25 Watt	50 Watt
Resistance Tolerance	±1%	±1%	±1%	±1%
Power Rating* (mm) Proper Heat	101.60 x 152.40 x 50.80 x 1.02 aluminum chassis	127.00 x 177.80 x 50.80 x 1.02 aluminum chassis	304.80 x 304.80 x 1.50 aluminum panel	
Max. Operating Voltage	210	320	520	1170
Overload	5 times rated power for 5 seconds			
Temperature Coefficient	Under 1 ohm — ±90 ppm/°C 1 to 9.99 ohms — ±50 ppm/°C 10 ohms and over — ±20 ppm/°C			
Dielectric Withstanding Voltage	1000VAC	1000VAC	2500VAC	2500VAC

*Based on chassis mounting area and temperature stability.



Watts	Max. Dimensions (mm)									
	A	B	C	D	E	F	G	H	I	J
5	11.40	12.57	16.03	6.30	16.79	8.51	2.49	1.40	8.33	30.15
10	14.40	16.00	19.84	8.00	20.70	10.29	2.49	2.31	9.50	36.50
25	18.39	19.96	27.76	10.01	27.61	14.25	3.30	3.31	12.70	50.80
50	39.83	21.56	50.77	10.79	29.34	15.88	3.30	2.31	12.70	72.21

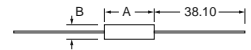
RESISTANCE VALUE CHART

5 Watt		10 Watt		25 Watt		50 Watt	
Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)
1.0 (1R0)	75 (75R)	1.0 (1R0)	250 (250)	1.0 (1R0)	100 (100)	1.0 (1R0)	150 (150)
2.0 (2R0)	100 (100)	2.0 (2R0)	500 (500)	1.0 (1R0)	150 (150)	1.0 (1R0)	250 (250)
5.0 (5R0)	150 (150)	5.0 (5R0)	750 (750)	2.0 (2R0)	250 (250)	2.0 (2R0)	500 (500)
7.5 (7R5)	250 (250)	10 (10R)	1.0K (1K)	5.0 (5R0)	500 (500)	5.0 (5R0)	750 (750)
10 (10R)	500 (500)	15 (15R)	2.5K (2K5)	7.5 (7R5)	750 (750)	10 (10R)	1.0K (1K)
15 (15R)	750 (750)	20 (20R)	5.0K (5K)	10 (10R)	1.0K (1K)	15 (15R)	2.5K (2K5)
25 (25R)	1.0K (1K)	50 (50R)	10.0K 10K	20 (20R)	2.5K (2K5)	25 (25R)	5.0K (5K)
40 (40R)	2.5K (2K5)	75 (75R)	25.0K 25K	25 (25R)	5.0K (5K)	40 (40R)	10.0K (10K)
50 (50R)	5.0K (5K)	100 (100)		50 (50R)	10.0K (10K)	50 (50R)	25.0K (25K)
				75 (75R)	25.0K (25K)	75 (75R)	100K (100K)
				100 (100)		100 (100)	

*For complete part number, substitute the corresponding code from the Resistance Value Chart for (Code).

1-800-344-4539

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Electrical Specifications:

	41F Series	43F Series	45F Series
Resistance Range	.33 Ohm to 3K Ohms	0.1 Ohm to 10K Ohms	0.1 Ohm to 25K Ohms
Resistance Tolerance	±1%	±1%	±1%
Power Rating	1 watt at 25°C ambient temperature	3 watts at 25°C ambient temperature	5 watts at 25°C ambient temperature
Temperature Coefficient of Resistance	Under 1 ohm — ±90 ppm/°C 1 to 9.99 ohms — ±50ppm/°C 10 ohms and over — ±20ppm/°C		
Dielectric Withstanding Voltage	500 VAC	1000 VAC	1000 VAC
Short Time Overload	5 times rated wattage for 5 seconds	5 times rated wattage for 5 seconds	10 times rated wattage for 5 seconds

RESISTANCE VALUE CHART

Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)
.10 (R10)	2.0 (2R0)	25 (25R)	75 (75R)	270 (270)	700 (700)	2.2K (2K2)	6.8K (6K8)
.13 (R13)	3.0 (3R0)	27 (27R)	82 (82R)	300 (300)	750 (750)	2.5K (2K5)	7.5K (7K5)
.15 (R15)	4.0 (4R0)	30 (30R)	100 (100)	330 (330)	800 (800)	2.7K (2K7)	8.0K (8K0)
.20 (R20)	5.0 (5R0)	33 (33R)	120 (120)	350 (350)	820 (820)	3.0K (3K0)	8.2K (8K2)
25 (R25)	7.5 (7R5)	35 (35R)	125 (125)	390 (390)	900 (900)	3.5K (3K5)	10.0K (10K)
.30 (R30)	10 (10R)	39 (39R)	150 (150)	400 (400)	1.0K (1K0)	3.9K (3K9)	12.5K (12K5)
.33 (R33)	12 (12R)	40 (40R)	180 (180)	470 (470)	1.1K (1K1)	4.0K (4K0)	15.0K (15K)
.50 (R50)	15 (15R)	47 (47R)	200 (200)	500 (500)	1.2K (1K2)	4.7K (4K7)	20.0K (20K)
.75 (R75)	18 (18R)	50 (50R)	220 (220)	560 (560)	1.5K (1K5)	5.0K (5K0)	25.0K (25K)
1.0 (1R0)	20 (20R)	56 (56R)	225 (225)	600 (600)	1.8K (1K8)	5.6K (5K6)	
1.5 (1R5)	22 (22R)	68 (68R)	250 (250)	680 (680)	2.0K (2K0)	6.0K (6K0)	

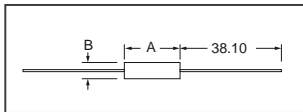
Res. Series	Power Rating	Max. Length A (mm)	Max. Dia. B (mm)	Lead Dia. C (mm)
41F	1W	11.10	3.18	.51
43F	3W	15.06	5.54	.81
45F	5W	23.80	8.71	1.02

Resistance Range (Ω)	Wattage	Digi-Key* Part No.	Pricing			
			1	25	125	250
.33	1	41F(Code)-ND	2.08	44.25	195.00	337.50
1.0-5.0	1	41F(Code)-ND	2.02	42.75	188.75	327.50
10-68	1	41F(Code)-ND	1.74	37.00	163.75	282.50
100-470	1	41F(Code)-ND	1.95	41.50	182.50	317.50
500-900	1	41F(Code)-ND	2.15	45.75	201.25	350.00
1.0K-1.2K	1	41F(Code)-ND	2.46	52.25	231.25	400.00
2.0K-3.0K	1	41F(Code)-ND	2.96	63.00	277.50	480.00
.10-.75	3	43F(Code)-ND	1.62	34.50	152.50	262.50
1.0-5.0	3	43F(Code)-ND	1.28	27.25	120.00	207.50
10-82	3	43F(Code)-ND	1.05	22.25	97.50	170.00
100-900	3	43F(Code)-ND	.89	19.00	83.75	145.00
1.0K-1.8K	3	43F(Code)-ND	1.10	23.25	102.50	177.50
2.2K-2.7K	3	43F(Code)-ND	1.44	30.50	135.00	235.00
3.5K-4.7K	3	43F(Code)-ND	1.75	37.25	163.75	285.00
5.0K-6.8K	3	43F(Code)-ND	2.10	44.75	197.50	342.50
7.5K-10.0K	3	43F(Code)-ND	2.17	46.00	203.75	352.50
.10-.50	5	45F(Code)-ND	1.80	38.25	168.75	292.50
1.0-7.5	5	45F(Code)-ND	1.25	26.50	117.50	202.50
10-50	5	45F(Code)-ND	1.10	23.50	103.75	180.00
100-900	5	45F(Code)-ND	1.05	22.25	97.50	170.00
1.0K-2.7K	5	45F(Code)-ND	1.20	25.50	112.50	195.00
3.0K-6.8K	5	45F(Code)-ND	1.41	30.00	132.50	230.00
7.5K-8.0K	5	45F(Code)-ND	1.85	39.25	173.75	300.00
10.0K-15.0K	5	45F(Code)-ND	1.96	41.75	183.75	317.50
20.0K-25.0K	5	45F(Code)-ND	2.42	51.50	227.50	392.50

* For complete part number, substitute the corresponding code from the Resistance Value Chart for (Code).

Vitreous Enamel Conformal Wirewound Resistors

The 20 Series axial lead resistors are rugged, and the flame resistant vitreous enamel coating withstands high humidity and temperature cycling. The durable all welded construction is ideal for industrial applications.



Res. Series	Power Rating	Max. Length A (mm)	Max. Diameter B (mm)	Lead Diameter C (mm)
23J	3W	12.70	5.59	.81
25J	5W	23.01	7.01	.81
20J	10W	46.84	10.01	.81

	23J Series	25J Series	20J Series
Resistance Range	.15 to 10K ohm	.15 to 25K ohm	0.1 to 25K ohm
Resistance Tolerance	±5%	±5%	±5%
Power Rating	3W	5W	10W
Dielectric Withstanding Voltage	1000V	1000V	1000V
Short time Overload	5 times rated wattage for 5 seconds	10 times rated wattage for 5 seconds	10 times rated wattage for 5 seconds

RESISTANCE VALUE CHART

Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)
.10 (R10)	4.0 (4R0)	35 (35R)	180 (180)	500 (500)	1.5K (1K5)	4.5K (4K5)	11.0K (11K)
.13 (R13)	5.0 (5R0)	39 (39R)	200 (200)	560 (560)	1.75K (1K75)	4.7K (4K7)	12.0K (12K)
.15 (R15)	7.5 (7R5)	40 (40R)	220 (220)	600 (600)	1.8K (1K8)	5.0K (5K0)	12.5K (12K5)
.20 (R20)	10 (10R)	47 (47R)	225 (225)	680 (680)	2.0K (2K0)	5.6K (5K6)	13.5K (13K5)
.25 (R25)	12 (12R)	50 (50R)	250 (250)	700 (700)	2.2K (2K2)	6.0K (6K0)	15.0K (15K)
.30 (R30)	15 (15R)	56 (56R)	270 (270)	750 (750)	2.25K (2K25)	6.8K (6K8)	16.0K (16K)
.33 (R33)	18 (18R)	68 (68R)	300 (300)	800 (800)	2.5K (2K5)	7.0K (7K0)	17.5K (17K5)
.50 (R50)	20 (20R)	75 (75R)	330 (330)	820 (820)	2.7K (2K7)	7.5K (7K5)	18.0K (18K)
.75 (R75)	22 (22R)	82 (82R)	350 (350)	900 (900)	3.0K (3K0)	8.0K (8K0)	20.0K (20K)
1.0 (1R0)	25 (25R)	100 (100)	390 (390)	1.0K (1K0)	3.3K (3K3)	8.2K (8K2)	22.0K (22K)
1.5 (1R5)	27 (27R)	120 (120)	400 (400)	1.1K (1K1)	3.5K (3K5)	8.5K (8K5)	22.5K (22K5)
2.0 (2R0)	30 (30R)	125 (125)	450 (450)	1.2K (1K2)	3.9K (3K9)	9.0K (9K0)	25.0K (25K)
3.0 (3R0)	33 (33R)	150 (150)	470 (470)	1.25K (1K25)	4.0K (4K0)	10.0K (10K)	

Resistance Range (Ohms)	Wattage	Digi-Key* Part No.	Pricing			
			1	50	125	250
15-.75	3	23J(Code)-ND	1.06	45.00	100.00	172.50
1.0-7.5	3	23J(Code)-ND	1.01	43.00	95.00	165.00
10-82	3	23J(Code)-ND	.90	38.50	83.75	147.50
100-450	3	23J(Code)-ND	.83	35.50	78.75	135.00
470-900	3	23J(Code)-ND	.90	38.50	83.75	147.50
1.0K-4.7K	3	23J(Code)-ND	1.23	52.00	115.00	200.00
5.0K-7.0K	3	23J(Code)-ND	1.61	68.50	151.25	260.00
7.5K-10.0K	3	23J(Code)-ND	1.84	78.00	172.50	297.50
.15-.75	5	25J(Code)-ND	1.29	55.00	121.25	210.00
1.0-7.5	5	25J(Code)-ND	1.24	52.50	116.25	202.50
10-82	5	25J(Code)-ND	1.18	50.50	110.00	192.50
100-470	5	25J(Code)-ND	.98	42.00	91.25	160.00
500-900	5	25J(Code)-ND	1.13	48.50	106.25	185.00
1.0K-4.7K	5	25J(Code)-ND	1.36	57.50	127.50	222.50
5.0K-9.0K	5	25J(Code)-ND	1.74	74.00	163.75	282.50
10.0K-15.0K	5	25J(Code)-ND	1.92	81.50	181.25	312.50
16.0K-25.0K	5	25J(Code)-ND	2.27	96.50	212.50	370.00
.10-.75	10	20J(Code)-ND	1.69	72.00	158.75	275.00
1.0-5.0	10	20J(Code)-ND	1.64	69.50	153.75	265.00
10-82	10	20J(Code)-ND	1.53	65.00	142.50	247.50
100-680	10	20J(Code)-ND	1.39	59.00	130.00	227.50
1.0K-2.7K	10	20J(Code)-ND	1.67	71.00	157.50	270.00
3.0K-4.7K	10	20J(Code)-ND	1.90	80.50	178.75	310.00
5.0K-8.5K	10	20J(Code)-ND	2.18	92.50	205.00	355.00
10.0K-22.5K	10	20J(Code)-ND	2.47	105.00	231.25	402.50
25.0K	10	20J(Code)-ND	2.78	118.50	261.25	452.50

* For complete part number, substitute corresponding code from the Resistance Value Chart for (Code).

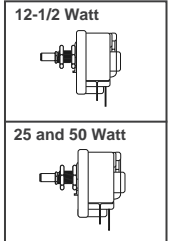
Wirewound Rheostats

Features:

Ohmite rheostats are designed and manufactured to operate smoothly and reliably over long periods of use. All models are constructed with metal and ceramic and are coated with protective vitreous enamel. Used for motor speed controls, light dimmers and for equipment requiring convenient variable resistance settings. Windings are linear taper.

Construction:

Ceramic body, high grade resistance alloy windings, vitreous enamel coating, metal spring contact arm, metal graphite composition and solder coated terminals.



Series	RES	RHS	RJS
Wattage	12-1/2 W*	25W†	50W†
Res. Tolerance	±10%	±10%	±10%
Core Diameter (mm)	22.23	39.69	58.74
Shaft Diameter (mm)	3.18	6.35	6.35
Running Torque	1 to 6 in. oz.	.25 to 5 in. lb.	.25 to 2 in. lb.
Weight	.6 oz.	.19 lbs.	.32 lbs.
Rotation	300° ±5%	300° ±5%	300° ±5%
Memcor-Truohm Equivalent	RH12	RH25	RH50

* 12-1/2 watt uses knob 5151-ND. † 25 & 50 watt used knob 5150-ND

RESISTANCE VALUE CHARTS

12.5 / 25 Watt

Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)
1.0 (1R0)	8.0 (8R0)	50 (50R)	175 (175)	750 (750)	3.5K (3K5)
2.0 (2R0)	10 (10R)	75 (75R)	250 (250)	1.0K (1K0)	5.0K (5K0)
3.0 (3R0)	15 (15R)	100 (100)	350 (350)	1.5K (1K5)	10.0K (10K)
6.0 (6R0)	25 (25R)	125 (125)	500 (500)	2.5K (2K5)	

50Watt

Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)
50 (R50)	6.0 (6R0)	50 (50R)	225 (225)	5.0K (5K0)	500 (500)
1.0 (1R0)	35 (35R)	125 (125)	1.0K (1K0)	150 (150)	2.5K (2K5)

Resistance Range (ohms)	Wattage	Digi-Key* Part No.	Pricing			
			1	10	100	250
1.0-8.0	12.5	RES(Code)-ND†	18.81	169.30	1317.00	3057.49
10-350	12.5	RES(Code)-ND†	17.73	159.60	1241.00	2879.99
500-1.5K	12.5	RES(Code)-ND†	18.37	165.30	1286.00	2985.01
2.5K-5.0K	12.5	RES(Code)-ND†	19.02	171.20	1331.00	3090.00
10.0K	12.5	RES(Code)-ND†	20.19	181.70	1413.00	3280.00
1.0-8.0	25	RHS(Code)-ND††	21.82	141.80	1309.00	—
10-750	25	RHS(Code)-ND††	20.85	135.50	1251.00	—
1.0K-5.0K	25	RHS(Code)-ND††	21.56	140.10	1294.00	—
10.0K	25	RHS(Code)-ND††	23.40	152.10	1404.00	—
.50	50	RJS(Code)-ND††	31.28	281.50	2190.01	5082.49
1.0-6.0	50	RJS(Code)-ND††	27.94	251.50	1956.00	4539.99
35-150	50	RJS(Code)-ND††	24.45	220.10	1712.00	3972.50
225-500	50	RJS(Code)-ND††	23.49	211.40	1644.00	3817.49
1.0K-10.0K	50	RJS(Code)-ND††	25.69	231.20	1798.00	4175.01
Knob for 25/50W Rheostat		5150-ND	5.15	36.00	—	—
Knob for 12.5W Rheostat		5151-ND	3.75	26.30	—	—

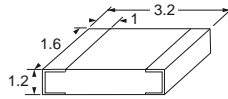
* For complete part number, substitute the corresponding code from the Resistance Value Chart for (Code).

† 12.5 watt use knob *5151* †† 25 & 50 watt use knob *5150*

NEW! NTC Thermistors

NHQ SERIES

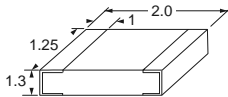
These devices are ceramic chip thermistors with a negative temperature coefficient of resistance intended for surface mount applications. The electrode material is palladium silver, nickel-plated with a solder-plated covering. The ceramic between the electrodes is glass covered.



Res. @ 25°C. Ω	Digi-Key Part No.	Pricing			Thermometrics Part No.
		1	10	100	
3K	235-1016-ND	2.40	18.90	150.00	NHQ302R10
10K	235-1017-ND	2.40	18.90	150.00	NHQ103R10
15K	235-1018-ND	2.40	18.90	150.00	NHQ153R10
50K	235-1019-ND	2.40	18.90	150.00	NHQ503R10
100K	235-1020-ND	2.40	18.90	150.00	NHQ104R10
150K	235-1021-ND	2.40	18.90	150.00	NHQ154R10
500K	235-1022-ND	2.40	18.90	150.00	NHQ504R10

NHQM SERIES

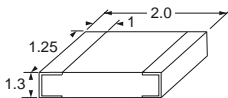
These devices are ceramic chip thermistors with a negative temperature coefficient of resistance intended for surface mount applications. The electrode material is palladium silver, nickel-plated with a solder-plated covering. The ceramic between the electrodes is glass covered.



Res. @ 25°C. Ω	Digi-Key Part No.	Pricing			Thermometrics Part No.
		1	10	100	
3K	235-1023-ND	2.40	18.90	150.00	NHQM302R10
10K	235-1024-ND	2.40	18.90	150.00	NHQM103R10
15K	235-1025-ND	2.40	18.90	150.00	NHQM153R10
50K	235-1026-ND	2.40	18.90	150.00	NHQM503R10
100K	235-1027-ND	2.40	18.90	150.00	NHQM104R10

NC0805 SERIES

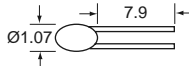
This series of ceramic chip thermistors offer an EIA "0805" case style in a variety of resistance values with a resistance tolerance of ±10% at 25°C. The electrode material is palladium silver. Temperature range is -40°C to 125°C.



Res. @ 25°C. Ω	Digi-Key Part No.	Pricing			Thermometrics Part No.
		1	10	100	
5K	235-1028-ND	1.79	14.11	112.00	NC0805R502K
10K	235-1029-ND	1.79	14.11	112.00	NC0805R103K
22K	235-1030-ND	1.79	14.11	112.00	NC0805R223K
50K	235-1031-ND	1.79	14.11	112.00	NC0805R503K
100K	235-1032-ND	1.79	14.11	112.00	NC0805R104K
150K	235-1033-ND	1.79	14.11	112.00	NC0805R154K

BR42 SERIES

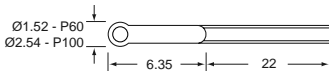
These Thermobeads are ruggedized versions of the large glass coated bead thermistors. They have a thick glass coating which provides for a superior hermetic seal, improved strain relief and greater stability than their conventional glass coated counterparts.



Res. @ 25°C. Ω	Digi-Key Part No.	Pricing			Thermometrics Part No.
		1	10	100	
1K	235-1034-ND	8.68	75.95	589.00	BR42KA102M
2K	235-1035-ND	8.68	75.95	589.00	BR42KA202M
5K	235-1036-ND	8.68	75.95	589.00	BR42KA502M
10K	235-1037-ND	8.68	75.95	589.00	BR42KB103M
20K	235-1038-ND	8.68	75.95	589.00	BR42KB203M
50K	235-1039-ND	8.68	75.95	589.00	BR42KB503M
100K	235-1040-ND	8.68	75.95	589.00	BR42KB104M
200K	235-1041-ND	8.68	75.95	589.00	BR42KB204M
500K	235-1042-ND	8.68	75.95	589.00	BR42KB504M
1 Meg.	235-1043-ND	8.68	75.95	589.00	BR42KB105M

P60/100 SERIES

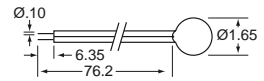
These Thermoprobes consist of a large bead thermistor which is hermetically sealed in the tip of a shock resistant solid glass rod. They have excellent long term stability.



Res. @ 25°C. Ω	Digi-Key Part No.	Pricing			Thermometrics Part No.
		1	10	100	
1K	235-1044-ND	8.68	75.95	589.00	P60BA102M
2K	235-1045-ND	8.68	75.95	589.00	P60BA202M
5K	235-1046-ND	8.68	75.95	589.00	P60BA502M
10K	235-1047-ND	8.68	75.95	589.00	P60BB103M
1K	235-1048-ND	8.68	75.95	589.00	P100BA102M
2K	235-1049-ND	8.68	75.95	589.00	P100BA202M
5K	235-1050-ND	8.68	75.95	589.00	P100BA502M
10K	235-1051-ND	8.68	75.95	589.00	P100BB103M
50K	235-1052-ND	8.68	75.95	589.00	P100BB503M
100K	235-1053-ND	8.68	75.95	589.00	P100BB104M
200K	235-1054-ND	8.68	75.95	589.00	P100BB204M
500K	235-1055-ND	8.68	75.95	589.00	P100BB504M
1 Meg.	235-1056-ND	8.68	75.95	589.00	P100BB105M

MC65 SERIES

These thermistors are epoxy-coated for stability and have a maximum diameter of .065 inch (1.65mm). Standard leads are 3 inches (76.20mm) of 38 gauge, nickel alloy, bifilar, heavy isomid insulated wire. Each unit tracks a specified curve over the temperature range of 0°C to 50°C (see table).

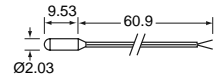


Res. @ 25°C. Ω	Digi-Key Part No.	Pricing			Thermometrics Part No.
		1	10	100	
10K	235-1057-ND	8.24	64.89	515.00	MC65F103A
10K	235-1058-ND	5.88	46.31	367.50	MC65F103B
10K	235-1059-ND	5.28	41.58	330.00	MC65F103C

Temperature Range	Tolerance Code (±%)		
	235-1057-ND	235-1058-ND	235-1059-ND
0°C - 20°C	±.15	±.2	±.25
20°C - 35°C	±.1	±.15	±.2
35°C - 39°C	±.05	±.1	±.15
39°C - 42°C	±.075	±.15	±.2
42°C - 45°C	±.1	±.15	±.2
45°C - 50°C	±.15	±.2	±.25

MA100 SERIES

These biomedical thermistor chips and subassemblies are designed to be interchangeable over a 0°C to 50°C range (see table). Best overall stability is maintained when exposure and storage temperatures remain below 70°C.

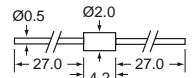


Res. @ 25°C. Ω	Digi-Key Part No.	Pricing			Thermometrics Part No.
		1	10	100	
10K	235-1060-ND	11.68	91.98	730.00	MA100GG103A
10K	235-1061-ND	8.32	65.52	520.00	MA100GG103B
10K	235-1062-ND	7.52	59.22	470.00	MA100GG103C
2252	235-1063-ND	7.52	59.22	470.00	MA100GG232C
10K	235-1064-ND	11.68	91.98	730.00	MA100BF103A
10K	235-1065-ND	8.32	65.52	520.00	MA100BF103B

Temperature Range	Tolerance Code (±%)		
	235-1060/1064-ND	235-1061/1065-ND	235-1062/1063-ND
0°C - 20°C	±.15	±.2	±.25
20°C - 35°C	±.1	±.15	±.2
35°C - 39°C	±.05	±.1	±.15
39°C - 42°C	±.075	±.15	±.2
42°C - 45°C	±.1	±.15	±.2
45°C - 50°C	±.15	±.2	±.25

DK SERIES

The DK range of DO-35 packaged NTC thermistors is designed for temperature measurement and control in applications which demand cost effective reliability. Typical applications include domestic appliances, automotive systems, data processing equipment and heating/ventilating/air conditioning control.

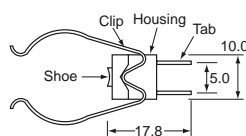


The hermetically-sealed construction combines the advantages of high temperature operation and high reliability of glass bead types with the closer tolerances associated with chip devices. The glass encapsulation offers the additional benefit of high voltage insulation.

Res. @ 25°C. Ω	Digi-Key Part No.	Pricing			Thermometrics Part No.
		1	10	100	
5K	235-1103-ND	2.58	22.54	174.80	DKA502N5
10K	235-1104-ND	2.58	22.54	174.80	DKF103N5
20K	235-1105-ND	2.58	22.54	174.80	DKF203N5
30K	235-1106-ND	2.58	22.54	174.80	DKF303N5
50K	235-1107-ND	2.58	22.54	174.80	DKF503N5

JC SERIES - Clip-On Pipe Sensor

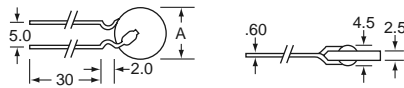
NTC chip thermistor on a ceramic/metal shoe assembly and held in a polymer housing with connector tabs. The housing is fitted with a spring metal clip for pipe attachment.



Features: • Fast time response (≤1.5s typical) • Low temperature gradient (<1°C at 60°C) • Sensing element electrically isolated from shoe (isolation >2MΩ at 500V) • Range of clips for pipe diameters 13 to 22mm • Self-adjusts to irregular pipes • Offers cost benefits over traditional immersion probes • Typical applications include gas boiler control, domestic water systems, air conditioners, radiator inlet-outlet, electric showers, vending machines

Nom. Res. (Ω) @ 25°C.	60°C.	85°C.	Pipe Dia. (mm)	Digi-Key Part No.	Pricing			Thermometrics Part No.
					1	10	100	
			13-14	235-1066-ND	10.78	94.33	731.50	JC502C3R513M
			17-18.5	235-1067-ND	10.78	94.33	731.50	JC502C3R5/17M
4990	1250	540	20-22	235-1068-ND	10.78	94.33	731.50	JC502C3R5/20M
			13-14	235-1069-ND	10.78	94.33	731.50	JC103C3R513M
9983	2500	1079	17-18.5	235-1070-ND	10.78	94.33	731.50	JC103C3R517M
			20-22	235-1071-ND	10.78	94.33	731.50	JC103C3R520M

YM120 SERIES



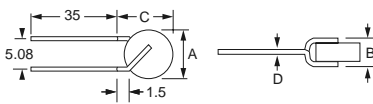
This range of PTC thermistors is designed to operate at main voltages and is intended for general purpose usage in over-current, over-voltage and direct over-temperature protection.

Each device in the range consists of a disc of barium titanate thermistor material with silvered faces and solder coated copper lead wires. A painted finish is applied which is not intended to confer insulating properties.

R25	Resistance at 25°C
20%	Tolerance on resistance at 25°C
Int(25°C)	Current which will not trip thermistor (25°C ambient)
It(25°C)	Current which will trip thermistor (25°C ambient)
Int(55°C)	Current which will not trip thermistor (55°C ambient)
It(10°C)	Current which will trip thermistor (10°C ambient)
I mo	Maximum overload current at 265V rms (10° ambient)
V max	Maximum voltage V rms
D max	Maximum disc diameter
T max	Maximum overall thickness

Electrical Specifications							Dim. A max	Digi-Key Part No.	Pricing			Thermometrics Part No.
Res. @ 25°C Ω	Int(25°C) mA	It(25°C) mA	Int(55°C) mA	It(10°C) mA	I mo A	Vmax Vrms			1	10	100	
1800	16	23	12	25	0.1	730	4.0mm	235-1072-ND	2.41	21.07	163.40	YM120C15N182
1200	20	28	16	31	0.1	610	4.0mm	235-1073-ND	2.41	21.07	163.40	YM120C20N122
600	28	40	22	44	0.2	540	4.0mm	235-1074-ND	2.41	21.07	163.40	YM120C30N601
300	39	55	30	60	0.2	450	4.0mm	235-1075-ND	2.41	21.07	163.40	YM120C45N301
150	57	80	44	88	0.2	265	4.0mm	235-1076-ND	2.41	21.07	163.40	YM120C60N151
100	70	98	54	108	0.4	265	4.5mm	235-1077-ND	1.46	12.74	98.80	YM120C80N101
60	93	131	72	144	0.6	265	6.0mm	235-1078-ND	1.46	12.74	98.80	YM120D105N600
45	110	155	85	170	0.7	265	7.0mm	235-1079-ND	1.46	12.74	98.80	YM120D125N450
33	128	181	99	198	0.9	265	7.5mm	235-1080-ND	1.46	12.74	98.80	YM120D150N330
25	161	228	125	250	1.1	265	8.5mm	235-1081-ND	2.07	18.13	140.60	YM120D170N250
20	192	265	149	298	1.3	265	9.5mm	235-1082-ND	2.07	18.13	140.60	YM120D200N200
15	234	330	181	362	1.7	265	11.5mm	235-1083-ND	2.88	25.24	195.70	YM120D260N150
10	314	444	243	486	2.7	265	14.0mm	235-1084-ND	4.17	36.51	283.10	YM120D370N100
6	407	575	315	630	3.9	265	16.5mm	235-1085-ND	5.12	44.84	347.70	YM120D480N060

YP SERIES (Wired Disc)



Features

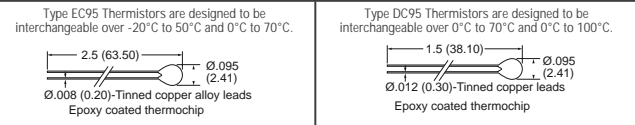
- Designed for general purpose over-current, over-voltage and direct over-temperature protection
- Wide range of operating current and voltage levels
- Excellent stability
- Approved to CECC 44 001-002 (certified E1254/F)
- Fail-safe operation
- Solid state
- High performance barium titanate ceramic

Vmax	Maximum operating voltage
Tb	Switching temperature
R25	Resistance at 25°C
Int	Maximum current without tripping (25°C ambient)
It	Minimum trip current (25°C ambient)
I mo	Maximum overload current
Ir	Residual current (25°C ambient)

Electrical Specifications					Dimensions (mm)				Digi-Key Part No.	Pricing			Thermometrics Part No.
Res. @ 25°C Ω	Int A	It A	I mo A	Ir mA	A	B	C	D		1	10	100	
Vmax = 30Vdc - Tb = 120°C													
0.45	1.3	2.6	8.0	115	17.5	3.5	21.0	0.6	235-1086-ND	2.35	20.58	159.60	YPAL0.45N
0.8	0.85	1.7	5.5	80	13.5	3.5	17.0	0.6	235-1087-ND	1.82	15.93	123.50	YPAL0.80N
1.2	0.6	1.2	4.3	70	11.0	3.5	14.5	0.6	235-1088-ND	1.26	11.03	85.50	YPAL1.20N
1.8	0.45	0.9	3.0	60	9	3.5	12.5	0.6	235-1089-ND	1.15	10.05	77.90	YPAL1.80N
4.6	0.25	0.5	1.0	45	6.5	3.5	10.0	0.6	235-1090-ND	.90	7.84	60.80	YPAL4.60N
13	0.12	0.24	0.7	25	4.0	3.5	7.5	0.5	235-1091-ND	.90	7.84	60.80	YPAL0013N
Vmax = 265Vrms - Tb = 120°C													
6	0.33	0.66	4.1	15	17.5	5	21.0	0.6	235-1092-ND	3.05	26.71	207.10	YPCL0006N
10	0.2	0.4	2.2	13	13.5	5	17.0	0.6	235-1093-ND	2.13	18.62	144.40	YPCL0010N
15	0.14	0.28	1.5	10	11.0	5	14.5	0.6	235-1094-ND	1.48	12.99	100.70	YPCL0015N
25	0.1	0.2	1.0	9	9.0	5	12.5	0.6	235-1095-ND	1.26	11.03	85.50	YPCL0025N
35	0.08	0.16	1.0	9	9.0	5	12.5	0.6	235-1096-ND	1.26	11.03	85.50	YPCL0035N
45	0.07	0.14	1.0	9	9.0	5	12.5	0.6	235-1097-ND	1.26	11.03	85.50	YPCL0045N
55	0.06	0.125	1.0	9	9.0	5	12.5	0.6	235-1098-ND	1.26	11.03	85.50	YPCL0055N
65	0.055	0.11	1.0	9	9.0	5	12.5	0.6	235-1099-ND	1.26	11.03	85.50	YPCL0065N
70	0.055	0.11	0.4	6	6.5	5	10.0	0.6	235-1100-ND	1.01	8.82	68.40	YPCL0070N
120	0.035	0.07	0.4	5	6.5	5	10.0	0.6	235-1101-ND	1.01	8.82	68.40	YPCL0120N
150	0.03	0.06	0.2	5	4.0	5	7.5	0.5	235-1102-ND	.90	7.84	60.80	YPCL0150N

NTC Thermistors

THERMAL AND ELECTRICAL PROPERTIES: Dissipation Constant: (Still Air) 1 m w/Deg C., (Stirred Oil) 8 m w/Deg C. **Thermal Time Constant:** (Still Air) 10 Seconds, (Stirred Oil) 1 Second. **Maximum Power Rating:** .075 Watts (Derated from 100% at 25°C to 0% at 100°C).



Type EC95 and Type DC95 Thermistors may be used at temperatures as low as -80°C and as high as 150°C, however, best over-all stability is achieved with exposure or storage temperatures lower than 105°C.

Thermometrics Type C100 Thermochips are low cost, epoxy coated chip thermistors which represent the highest level of thermistor technology.

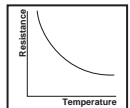
Thermometrics exclusive "state of the art" materials processing techniques have been proven through extensive field use and long term testing to provide stable, rugged, easy handling thermistors suitable for applications in the temperature range of -80°C to +150°C. Best stability is achieved at temperatures not exceeding 105°C.

Res. @ 25°C (Ω)	Res. Ratio†	Digi Key Part No.	1	10	100	250	Thermometrics Part No.
10K	9.06	235-1001-ND	5.04	39.69	315.00	582.75	C100F103G
10K	9.06	235-1002-ND	3.96	31.19	247.50	457.88	C100F103J
10K	7.60	235-1003-ND	3.96	31.19	247.50	457.88	C100Y103J
10K	9.06	235-1004-ND	5.52	43.47	345.00	638.25	DC95F103W
2K	9.06	235-1005-ND	5.52	43.47	345.00	638.25	DC95F202W
225K	9.06	235-1006-ND	5.52	43.47	345.00	638.25	DC95F232W
5K	9.06	235-1007-ND	5.52	43.47	345.00	638.25	DC95F502W
100K	10.45	235-1008-ND	5.52	43.47	345.00	638.25	DC95G104W
50K	10.45	235-1009-ND	5.52	43.47	345.00	638.25	DC95G503W
10K	9.06	235-1010-ND	5.52	43.47	345.00	638.25	EC95F103W
2K	9.06	235-1011-ND	5.52	43.47	345.00	638.25	EC95F202W
3K	9.06	235-1012-ND	5.52	43.47	345.00	638.25	EC95F302W
100K	10.45	235-1013-ND	5.52	43.47	345.00	638.25	EC95G104W
50K	10.45	235-1014-ND	5.52	43.47	345.00	638.25	EC95G503W
30K	8.69	235-1015-ND	5.52	43.47	345.00	638.25	EC95H303W

† 0°C/50°C Ratio

NTC Thermistors

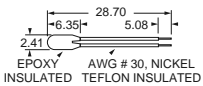
NTC (Negative Temperature Coefficient) Thermistors decrease in resistance as temperature increases. Temperature coefficients range from -20%/°C to -5%/°C @ 25°C. Maximum operating temperature: 150°C. Tolerance: ±20% 100-5Ω; ±10% 1K-100KΩ.



Res. @ 25°C (Ω)	Res. Ratio†	D.C.†	Dim. A (mm)	Digi-Key Part No.	1	10	100	250
100	5.53	2.5	2.79	KC001N-ND*	2.76	24.80	195.30	387.50
50	5.53	6.5	5.59	KC012N-ND*	2.19	19.68	154.98	307.50
25	5.53	6.5	5.59	KC011N-ND*	2.19	19.68	154.98	307.50
10	5.53	7.0	8.13	KC021N-ND*	2.24	20.12	158.45	314.38
5	5.53	10.0	12.19	KC024N-ND*	2.40	21.60	170.10	337.50
1K	6.85	2.8	2.79	KC003N-ND*	2.72	24.44	192.47	381.88
500	6.85	2.5	2.79	KC002N-ND*	2.72	24.44	192.47	381.88
300	6.85	6.5	5.59	KC015N-ND*	2.14	19.28	151.83	301.25
200	6.85	6.5	5.59	KC014N-ND*	2.14	19.28	151.83	301.25
100	6.85	6.5	5.59	KC013N-ND*	2.14	19.28	151.83	301.25
50	6.85	7.5	9.40	KC022N-ND*	2.19	19.72	155.30	308.13
10K	9.60	2.5	2.79	KC025N-ND*	2.72	24.44	192.47	381.88
5K	9.10	2.5	2.79	KC005N-ND*	2.72	24.44	192.47	381.88
3K	9.10	2.5	2.79	KC004N-ND*	2.72	24.44	192.47	381.88
2K	9.10	6.5	5.59	KC017N-ND*	2.14	19.28	151.83	301.25
1K	9.10	6.5	5.59	KC016N-ND*	2.14	19.28	151.83	301.25
300	9.10	9.0	10.92	KC023N-ND*	2.36	21.24	167.27	331.88
25K	11.41	2.8	2.79	KC007N-ND*	2.88	25.92	204.12	405.00
10K	11.41	7.2	5.59	KC018N-ND*	2.44	21.96	172.94	343.13
100K	12.90	2.7	2.79	KC009N-ND*	2.88	25.92	204.12	405.00
50K	12.90	2.5	2.79	KC008N-ND*	2.88	25.92	204.12	405.00
25K	12.90	6.5	5.59	KC019N-ND*	2.35	21.16	166.64	330.63
200K	13.82	2.5	2.79	KC010N-ND*	2.88	25.92	204.12	405.00
100K	13.82	6.5	5.59	KC020N-ND*	2.35	21.16	166.64	330.63

* KCNTC-Kit-ND Digi-Key® NTC Thermistors Kit 2 each of 15 values denoted (30 total pieces). Notebook-style storage case and bin storage guide included. **\$39.95**
† D.C. — Dissipation Constant (MW/°C)
†† Resistance Ratio — ratio of zero power resistance @ 0°C to zero power resistance @ 50°C; AWG.

Miniature Sensors 1°C Accuracy



SPECIFICATIONS:

- Temp. Accuracy: $\pm 1^\circ\text{C}$ @ 25°C
- Dissipation Constant: 1.4 mW/ $^\circ\text{C}$
- Time Constant: 15 sec.
- Operating Range: -50°C to $+150^\circ\text{C}$.

9190B-ND Keystone Thermistor Catalog \$4.98

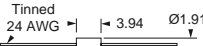
Ro @ 25°C	Temp. Coef. %/°C. @ 25°C	Material	Digi-Key Part No.	1	10	Pricing 100	250
2K	-3.83	MS73	KC001T-ND	2.71	24.32	191.52	380.00
5K	-4.43	MS95	KC002T-ND	2.71	24.32	191.52	380.00
10K	-4.40	MS97	KC003T-ND	2.71	24.32	191.52	380.00
30K	-4.32	MS96	KC004T-ND	2.71	24.32	191.52	380.00
50K	-4.84	MS120	KC005T-ND	2.71	24.32	191.52	380.00
100K	-4.78	MS122	KC006T-ND	2.71	24.32	191.52	380.00

Glass Encapsulated Thermistors

SPECIFICATIONS:

- Temp. Range: -50°C to 204°C
- Dissipation Constant: 2.0mW/ $^\circ\text{C}$
- Time Constant: 3 sec.

Keystone glass encapsulated NTC thermistors are tiny pellets of thermistor material hermetically sealed in glass bodies with a controlled amount of selected atmosphere. The hermetic seal makes these parts extremely stable in applications up to 204°C (400°F).



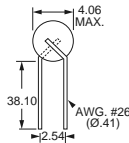
Ro @ 25°C	Temp. Coef. %/°C. @ 25°C	Material	Digi-Key Part No.	1	10	Pricing 100	250
250	-3.34	GE55*	KC001G-ND	2.66	23.88	188.06	373.13
500	-3.34	GE55*	KC002G-ND	2.66	23.88	188.06	373.13
1K	-3.83	GE73	KC003G-ND	2.66	23.88	188.06	373.13
2K	-3.83	GE73	KC004G-ND	2.66	23.88	188.06	373.13
2786	-4.68	GE101	KC005G-ND	2.66	23.88	188.06	373.13
3K	-3.85	GE76	KC006G-ND	2.66	23.88	188.06	373.13
4K	-3.85	GE76	KC007G-ND	2.66	23.88	188.06	373.13
5K	-3.85	GE76	KC008G-ND	2.66	23.88	188.06	373.13
10K	-4.41	GE97A	KC009G-ND	2.66	23.88	188.06	373.13
20K	-4.34	GE98	KC010G-ND	2.66	23.88	188.06	373.13
30K	-4.34	GE98	KC011G-ND	2.66	23.88	188.06	373.13
50K	-4.32	GE97B	KC012G-ND	2.66	23.88	188.06	373.13
100K	-4.32	GE97B	KC013G-ND	2.66	23.88	188.06	373.13
200K	-4.71	GE123	KC014G-ND	2.66	23.88	188.06	373.13
500K	-4.99	GE138	KC015G-ND	2.66	23.88	188.06	373.13
1M	-5.07	GE145	KC016G-ND	2.66	23.88	188.06	373.13

* Maximum Operating Temperature: 150°C .

Precision Thermistors $\pm 0.2^\circ\text{C}$ from 0°C to 75°C

- SPECIFICATIONS:** • Temp. Coef.: @ 25°C = $-4.40\%/^\circ\text{C}$ • Dissipation Constant: 1.0 mW/ $^\circ\text{C}$ • Time Constant: 10sec. • Max. Operating Temp.: 100°C .

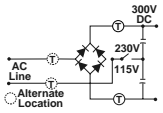
Keystone precision units are the designer's choice for low cost, close tolerance temperature measurement. These ultra stable thermistors are accurate to $\pm 0.2^\circ\text{C}$ from 0°C to 75°C . They are widely used in OEM applications because they offer close-tolerance temperature measurement without requiring individual calibration. A protective coating is standard.



Ro @ 25°C	Digi-Key Part No.	1	10	Pricing 100	250
3K	KC001A-ND	11.50	103.40	814.28	1615.63
5K	KC002A-ND	11.50	103.40	814.28	1615.63
10K	KC003A-ND	11.50	103.40	814.28	1615.63

Inrush Current Limiters

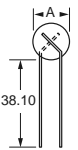
Inrush Current Limiters protect against high peak inrush current, especially in AC/DC switching power supplies. All resistances $\pm 25\%$ @ 25°C . All parts insulated with a protective coating. Resistance under load is for reference only. Actual values may vary due to ambient temperature, air flow, or mounting conditions.



No Load Res. @ 25°C (Ω)	Max. Steady State Current (Amps)	Approx Res. @ I Max. (Ω)	Dia. (mm)	Digi-Key Part No.	1	Pricing 10	100
0.7	12.0	.02	19.56	KC0022L-ND	2.58	23.20	182.70
1.3	8.0	.04	13.97	KC0023L-ND	2.39	21.44	168.84
2.5	8.0	.06	19.56	KC0033L-ND	2.58	23.20	182.70
5.0	6.0	.11	19.56	KC0044L-ND	2.58	23.20	182.70
7.0	5.0	.16	19.56	KC0055L-ND	2.58	23.20	182.70
10.0	5.0	.18	19.56	KC0066L-ND	2.58	23.20	182.70
16.0	4.0	.27	19.56	KC0077L-ND	2.58	23.20	182.70
47.0	3.0	.49	19.56	KC0088L-ND	2.58	23.20	182.70
120.0	2.0	1.18	23.62	KC0099L-ND	2.91	26.12	205.70
0.5	16.0	.02	23.62	KC0244L-ND	4.18	37.56	295.79
10.0	3.2	.18	10.16	KC0111L-ND	2.35	21.08	166.01
10.0	1.7	.34	10.16	KC0122L-ND	2.35	21.08	166.01
50.0	1.6	.75	11.43	KC0133L-ND	2.35	21.08	166.01
50.0	1.1	.89	11.43	KC0144L-ND	2.35	21.08	166.01
5.0	4.7	.11	13.97	KC0155L-ND	2.39	21.44	168.84
5.0	2.8	.20	13.97	KC0166L-ND	2.39	21.44	168.84
16.0	2.7	.33	13.97	KC0177L-ND	2.39	21.44	168.84
16.0	1.7	.49	13.97	KC0188L-ND	2.39	21.44	168.84
25.0	2.4	.41	13.97	KC0199L-ND	2.39	21.44	168.84
25.0	1.7	.49	13.97	KC0200L-ND	2.39	21.44	168.84
30.0	1.5	.60	15.24	KC0211L-ND	2.35	21.08	166.01

* These values are suggested maximums based upon 25°C ambient, no air flow environment with the thermistor mounted $1/2"$ from circuit board.

Standard Thermistors For Temperature Measurement Accuracy $\pm 1^\circ\text{C}$ (0°C - 120°C)



Operating Range: -50°C to $+150^\circ\text{C}$ D.C.: Dissipation Constant (mW/ $^\circ\text{C}$)
T.C.: Time Constant (Seconds)

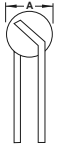
R25°	A Max. (mm) @25°C	D.C. mW/°C	T.C. Sec.	Digi-Key Part No.	1	Pricing 10	100
1000	8.13	3.5	30	KC001E-ND	2.39	21.44	168.84
2000	5.59	2.5	20	KC002E-ND	2.30	20.68	162.86
2786	5.59	2.5	20	KC003E-ND	2.30	20.68	162.86
3000	5.59	2.5	20	KC004E-ND	2.30	20.68	162.86
5000	2.79	1.0	10	KC005E-ND	2.88	25.92	204.12
10000	2.79	1.0	10	KC006E-ND	2.88	25.92	204.12

PTC Resettable Fuses

- Telephone line fault protection.
- Over-current protection for transformers.
- Locked rotor protection for FHP motors.

Minimum Limit Current: The minimum amount of current required by the PTC to guarantee switching at the minimum ambient temperatures.

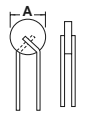
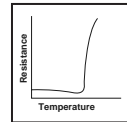
Maximum Limit Current: The maximum amount of current the PTC must be able to pass without switching at the maximum ambient temperature.



Oper. Volt.	No Ld. Res. @25°C	Dim. A (mm)	Min. Switch Current 0°C	Max. No-Switch Current 20°C	Max. No-Switch Current 30°C	Max. No-Switch Current 55°C	Type Number	Digi-Key Part No.	1	Pricing 10	100
12	1	15.24	1.45	1.32	0.84	0.64	RL5305-1-110-12-PTF	KC001R-ND	3.11	27.92	219.87
	2.5	15.24	0.92	0.84	0.53	0.40	RL5305-2.5-110-12-PTF	KC014R-ND	3.11	27.92	219.87
	5	11.43	0.55	0.50	0.32	0.24	RL4005-5-110-12-PTF	KC002R-ND	2.87	25.76	202.86
	10	8.89	0.32	0.30	0.19	0.14	RL3005-10-110-12-PTF	KC003R-ND	2.66	23.92	188.37
	25	8.89	0.20	0.19	0.12	0.09	RL3005-25-110-12-PTF	KC013R-ND	2.66	23.92	188.37
25	1.5	19.05	1.34	1.22	0.77	0.59	RL7008-1.5-110-25-PTF	KC015R-ND	3.87	34.80	274.05
	3.0	13.97	0.84	0.76	0.48	0.37	RL5008-3.0-110-25-PTF	KC016R-ND	3.22	28.96	228.06
	5.0	15.24	0.65	0.59	0.37	0.29	RL5506-5-110-50-PTF	KC005R-ND	3.11	27.92	219.87
50	10	11.43	0.39	0.35	0.22	0.17	RL4006-10-110-50-PTF	KC006R-ND	2.87	25.76	202.86
	25	12.70	0.27	0.24	0.15	0.12	RL4508-25-110-50-PTF	KC017R-ND	3.22	28.96	228.06
	50	11.43	0.19	0.17	0.11	0.08	RL4010-50-110-50-PTF	KC012R-ND	2.87	25.76	202.86
	100	10.67	0.13	0.12	0.08	0.06	RL3810-100-110-50-PTF	KC008R-ND	3.02	27.12	213.57
120	10	20.32	0.55	0.50	0.32	0.24	RL7510-10-110-120-PTF	KC009R-ND	3.87	34.80	274.05
	20	16.51	0.37	0.34	0.21	0.16	RL6010-20-110-120-PTF	KC018R-ND	3.11	27.92	219.87
	50	12.70	0.19	0.17	0.11	0.08	RL4510-50-110-120-PTF	KC010R-ND	3.22	28.96	228.06
	100	10.16	0.13	0.12	0.07	0.06	RL3510-100-110-120-PTF	KC011R-ND	3.02	27.12	213.57
240	50	16.51	0.23	0.21	0.13	0.10	RL6315-50-110-240-PTF	KC019R-ND	3.87	34.80	274.05
	250	16.51	0.16	0.15	0.09	0.04	RL6315-100-110-240-PTF	KC020R-ND	3.87	34.80	274.05
							RL6315-250-110-240-PTF	KC021R-ND	3.87	34.80	274.05

PTC Thermistors

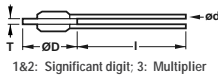
PTC (Positive Temperature Coefficient) Thermistors are thermally sensitive resistors made of polycrystalline ceramic materials. They are characterized by an extremely large resistance change in a small temperature span.



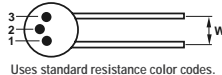
All PTC resistances $\pm 30\%$ at 25°C . Tolerance on transition temperature is $\pm 7^\circ\text{C}$.

Oper. Volt.	R @ 25°C (Ω)	Transition Temp.	D.C.†	Dim. A (mm)	Digi-Key* Part No.	1	Pricing 10	100	
12	1	120°C	14.0	15.24	KC012P-ND	2.98	26.76	210.74	
	2	120°C	14.0	15.24	KC013P-ND	2.98	26.76	210.74	
	12	10	110°C	7.0	8.89	KC014P-ND	2.98	26.76	210.74
	12	25	110°C	7.0	8.89	KC015P-ND	2.54	22.80	179.55
	25	50	30°C	7.0	7.62	KC001P-ND*	2.54	22.80	179.55
50		40°C	7.0	7.62	KC002P-ND*	2.54	22.80	179.55	
25		50	50°C	7.0	7.62	KC003P-ND*	2.54	22.80	179.55
25		50	60°C	7.0	7.62	KC004P-ND*	2.54	22.80	179.55
25		50	70°C	7.0	7.62	KC006P-ND*	2.54	22.80	179.55
25		50	80°C	7.0	7.62	KC007P-ND*	2.54	22.80	179.55
25		50	90°C	7.0	7.62	KC008P-ND*	2.54	22.80	179.55
25		50	100°C	7.0	7.62	KC009P-ND*	2.54	22.80	179.55
25		50	110°C	7.0	7.62	KC010P-ND*	2.54	22.80	179.55
25		50	120°C	7.0	7.62	KC011P-ND*	2.54	22.80	179.55
50	5	65°C	14.0	15.24	KC016P-ND	2.98	26.76	210.74	
	50	10	110°C	10.0	11.43	KC017P-ND	3.26	29.28	230.58
	50	50	110°C	12.0	14.43	KC018P-ND	2.98	26.76	210.74
	50	200	110°C	9.0	10.16	KC019P-ND	3.26	29.28	230.58
	120	10	120°C	20.0	20.32	KC020P-ND	3.81	34.24	269.64
	120	20	120°C	18.0	16.51	KC021P-ND	3.05	27.40	215.78
	120	25	60°C	15.0	15.24	KC022P-ND	3.05	27.40	215.78
	120	50	120°C	12.0	12.70	KC023P-ND	2.98	26.76	210.74
	240	40							

Panasonic NTC Thermistors



1&2: Significant digit; 3: Multiplier



Uses standard resistance color codes.

FEATURES: • Resistance temperature coefficient is negative and extremely large • Wide selection of temperature coefficient (constant B) • Excellent electrical and thermal stability • Color coded to indicate resistance value @ 25°C.

SPECIFICATIONS: Max. Watt Rtg. (W): PNT100-123 ~ 0.4; PNT124-138 ~ 0.6. Nom. Time Constant (sec.): PNT100-123 ~ 20; PNT124-138 ~ 27. APPLICATION: • For measuring equipment: thermometer, wind gauge, liquid level gauge, temperature controller • For temperature compensation: transistor circuit, measuring equipment • For driving: delay setting in relay operation, inrush current surge protection, communication equipment, AGC, time lag.

F Type	Dimensions	øD	T	l	W	ød
PNT100 ~ PNT123 (D2)		5.0 ± 0.5	1.3 ± 0.5	30 min.	2.5 ± 1	0.4
PNT124 ~ PNT138 (D3)		7.5 ± 0.5	1.4 ± 0.5	30 min.	5 ± 1	0.5

Res. at 25°C (Ω)	Temp. Coef. (25°C) %/°C	Res. Ratio R ₂₅ /R ₅₀	Digi-Key Part No.	Pricing 1 10 100 1,000	Panasonic Part No.
20	-3.4	2.18	PNT100-ND	90 7.73 51.52 322.00	ERT-D2FGL200S
40	-3.9	2.48	PNT101-ND	90 7.73 51.52 322.00	ERT-D2FGL400S
75	-4.2	2.62	PNT102-ND	90 7.73 51.52 322.00	ERT-D2FGL750S
100	-3.9	2.48	PNT104-ND	90 7.73 51.52 322.00	ERT-D2FGL101S
100	-4.2	2.62	PNT105-ND	90 7.73 51.52 322.00	ERT-D2FGL101S
170	-4.2	2.62	PNT106-ND	90 7.73 51.52 322.00	ERT-D2FGL171S
250	-3.9	2.48	PNT107-ND	90 7.73 51.52 322.00	ERT-D2FGL251S

Res. at 25°C (Ω)	Temp. Coef. (25°C) %/°C	Res. Ratio R ₂₅ /R ₅₀	Digi-Key Part No.	Pricing 1 10 100 1,000	Panasonic Part No.
250	-4.2	2.62	PNT108-ND	90 7.73 51.52 322.00	ERT-D2FGL251S
300	-4.2	2.62	PNT109-ND	90 7.73 51.52 322.00	ERT-D2FGL301S
350	-3.9	2.48	PNT110-ND	90 7.73 51.52 322.00	ERT-D2FGL351S
600	-4.5	2.83	PNT111-ND	90 7.73 51.52 322.00	ERT-D2FGL601S
800	-4.4	2.76	PNT112-ND	90 7.73 51.52 322.00	ERT-D2FGL801S
1,000	-4.1	2.55	PNT113-ND	90 7.73 51.52 322.00	ERT-D2FGL102S
1,400	-4.4	2.76	PNT114-ND	90 7.73 51.52 322.00	ERT-D2FGL142S
2,000	-4.5	2.83	PNT115-ND	90 7.73 51.52 322.00	ERT-D2FGL202S
3,300	-4.5	2.83	PNT116-ND	90 7.73 51.52 322.00	ERT-D2FGL332S
4,600	-4.6	2.90	PNT117-ND	90 7.73 51.52 322.00	ERT-D2FGL462S
8,000	-4.6	2.90	PNT118-ND	90 7.73 51.52 322.00	ERT-D2FGL802S
10,000	-4.6	2.90	PNT119-ND	90 7.73 51.52 322.00	ERT-D2FGL103S
15,000	-4.7	2.98	PNT120-ND	90 7.73 51.52 322.00	ERT-D2FGL153S
33,000	-5.1	3.22	PNT121-ND	90 7.73 51.52 322.00	ERT-D2FGL333S
50,000	-5.1	3.48	PNT122-ND	90 7.73 51.52 322.00	ERT-D2FGL503S
150,000	-5.4	3.48	PNT123-ND	90 7.73 51.52 322.00	ERT-D2FGL154S
18	-3.4	2.18	PNT124-ND	1.90 16.26 108.42 678.00	ERT-D3FGLR80S
13	-3.6	2.30	PNT125-ND	1.90 16.26 108.42 678.00	ERT-D3FFL130S
16	-3.6	2.30	PNT126-ND	1.90 16.26 108.42 678.00	ERT-D3FFL160S
20	-3.6	2.30	PNT127-ND	1.90 16.26 108.42 678.00	ERT-D3FGL200S
30	-3.7	2.30	PNT128-ND	1.90 16.26 108.42 678.00	ERT-D3FGL300S
40	-3.2	2.30	PNT130-ND	1.90 16.26 108.42 678.00	ERT-D3FFL400S
75	-4.2	2.62	PNT131-ND	1.90 16.26 108.42 678.00	ERT-D3FGL750S
80	-4.2	2.62	PNT132-ND	1.90 16.26 108.42 678.00	ERT-D3FGL800S
130	-4.5	2.62	PNT134-ND	1.90 16.26 108.42 678.00	ERT-D3FGL131S
500	-4.6	2.83	PNT135-ND	1.90 16.26 108.42 678.00	ERT-D3FGL501S
4,000	-4.6	2.90	PNT136-ND	1.90 16.26 108.42 678.00	ERT-D3FHL402S
20,000	-5.1	3.22	PNT137-ND	1.90 16.26 108.42 678.00	ERT-D3FHL203S
80,000	-5.6	3.70	PNT138-ND	1.90 16.26 108.42 678.00	ERT-D3FHL803S

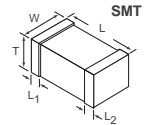
Panasonic Multilayer Chip NTC Thermistors (ERTJ)

The Multilayer Chip NTC Thermistors are especially designed for surface mountings featuring the miniature sizes of "0402" and "0603" type (EIA) with highly reliable multilayer and monolithic structure.

FEATURES: • Highly reliable multilayer/monolithic structure

• Superior heat resistance to reflow soldering and excellent solderability thanks to the unique external electrodes of three metallic layers • Wide ranges of operating temperature (-40°C to 125°C) • Low Capacitance (less 3pF) • Soldering Temperature (270±5°C), Dipping Time (3.0±0.5 sec.)

Size Code (EIA)	Dimensions (mm)			
	L	W	T	L1 L2
0603	1.60	0.80	0.80	0.30
0402	1.00	0.50	0.50	0.20



Size Code (EIA)	Zero-Power Resistance (at 25°C)	B Value B25/50 B25/85	Heat Dissipation Constant	Digi-Key Part No.	Cut Tape Pricing 1 10 100 500	Digi-Key Part No.	Tape & Reel Pricing 4,000 10,000	Panasonic Part No.
0603	22Ω	2750K±3% (2700K)	Approx. 3mW/°C	P10531CT-ND	.81 7.06 55.44 226.80	P10531TR-ND	302.40/M	ERT-J1VA220J
	33Ω	2750K±3% (2700K)		P10532CT-ND	.81 7.06 55.44 226.80	P10532TR-ND	302.40/M	ERT-J1VA330J
	40Ω	2800K±3% (2750K)		P10533CT-ND	.81 7.06 55.44 226.80	P10533TR-ND	302.40/M	ERT-J1VA400J
	47Ω	2800K±3% (2750K)	Approx. 3mW/°C	P10534CT-ND	.81 7.06 55.44 226.80	P10534TR-ND	302.40/M	ERT-J1VA470J
	68Ω	2800K±3% (2750K)		P10535CT-ND	.81 7.06 55.44 226.80	P10535TR-ND	302.40/M	ERT-J1VA680J
	100Ω	2800K±3% (2750K)		P10536CT-ND	.81 7.06 55.44 226.80	P10536TR-ND	302.40/M	ERT-J1VA101J
	1kΩ	4500K±3% (4450K)	Approx. 3mW/°C	P10537CT-ND	.81 7.06 55.44 226.80	P10537TR-ND	302.40/M	ERT-J1VT102J
	1.5kΩ	4500K±3% (4450K)		P10538CT-ND	.81 7.06 55.44 226.80	P10538TR-ND	302.40/M	ERT-J1VT152J
	2.0kΩ	4500K±3% (4450K)		P10539CT-ND	.81 7.06 55.44 226.80	P10539TR-ND	302.40/M	ERT-J1VT202J
	2.2kΩ	4500K±3% (4450K)	Approx. 3mW/°C	P10540CT-ND	.81 7.06 55.44 226.80	P10540TR-ND	302.40/M	ERT-J1VT222J
	3.0kΩ	4500K±3% (4450K)		P10541CT-ND	.81 7.06 55.44 226.80	P10541TR-ND	302.40/M	ERT-J1VT302J
	3.3kΩ	4500K±3% (4450K)		P10542CT-ND	.81 7.06 55.44 226.80	P10542TR-ND	302.40/M	ERT-J1VT332J
	4.7kΩ	4500K±3% (4450K)	Approx. 3mW/°C	P10543CT-ND	.81 7.06 55.44 226.80	P10543TR-ND	302.40/M	ERT-J1VT472J
	3.3kΩ	4250K±3% (4300K)		P10544CT-ND	.81 7.06 55.44 226.80	P10544TR-ND	302.40/M	ERT-J1VR332J
	4.7kΩ	4250K±3% (4300K)		P10545CT-ND	.81 7.06 55.44 226.80	P10545TR-ND	302.40/M	ERT-J1VR472J
	6.8kΩ	4250K±3% (4300K)	Approx. 3mW/°C	P10546CT-ND	.81 7.06 55.44 226.80	P10546TR-ND	302.40/M	ERT-J1VR682J
	10kΩ	4250K±3% (4300K)		P10547CT-ND	.81 7.06 55.44 226.80	P10547TR-ND	302.40/M	ERT-J1VR103J
	15kΩ	4250K±3% (4300K)		P10548CT-ND	.81 7.06 55.44 226.80	P10548TR-ND	302.40/M	ERT-J1VR153J
22kΩ	4250K±3% (4300K)	Approx. 3mW/°C	P10549CT-ND	.81 7.06 55.44 226.80	P10549TR-ND	302.40/M	ERT-J1VR223J	
33kΩ	4250K±3% (4300K)		P10550CT-ND	.81 7.06 55.44 226.80	P10550TR-ND	302.40/M	ERT-J1VR333J	
47kΩ	4250K±3% (4300K)		P10551CT-ND	.81 7.06 55.44 226.80	P10551TR-ND	302.40/M	ERT-J1VR473J	
68kΩ	4250K±3% (4300K)	Approx. 3mW/°C	P10552CT-ND	.81 7.06 55.44 226.80	P10552TR-ND	302.40/M	ERT-J1VR683J	
47kΩ	4700K±3% (4750K)		P10553CT-ND	.81 7.06 55.44 226.80	P10553TR-ND	302.40/M	ERT-J1VV473J	
68kΩ	4700K±3% (4750K)		P10554CT-ND	.81 7.06 55.44 226.80	P10554TR-ND	302.40/M	ERT-J1VV683J	
100kΩ	4700K±3% (4750K)	Approx. 3mW/°C	P10555CT-ND	.81 7.06 55.44 226.80	P10555TR-ND	302.40/M	ERT-J1VV104J	
150kΩ	4700K±3% (4750K)		P10556CT-ND	.81 7.06 55.44 226.80	P10556TR-ND	302.40/M	ERT-J1VV154J	
22kΩ	2750K±3% (2700K)		Approx. 2mW/°C	P10557CT-ND	.89 7.76 60.98 249.48	P10557TR-ND	—	299.38/M
33kΩ	2750K±3% (2700K)	P10558CT-ND		.89 7.76 60.98 249.48	P10558TR-ND	—	299.38/M	ERT-J0EA330J
40kΩ	2750K±3% (2700K)	P10559CT-ND		.89 7.76 60.98 249.48	P10559TR-ND	—	299.38/M	ERT-J0EA400J
47kΩ	2750K±3% (2700K)	Approx. 2mW/°C	P10560CT-ND	.89 7.76 60.98 249.48	P10560TR-ND	—	299.38/M	ERT-J0EA470J
68kΩ	2800K±3% (2750K)		P10561CT-ND	.89 7.76 60.98 249.48	P10561TR-ND	—	299.38/M	ERT-J0EA680J
100kΩ	2800K±3% (2750K)		P10562CT-ND	.89 7.76 60.98 249.48	P10562TR-ND	—	299.38/M	ERT-J0EA101J
150kΩ	2800K±3% (2750K)	Approx. 2mW/°C	P10563CT-ND	.89 7.76 60.98 249.48	P10563TR-ND	—	299.38/M	ERT-J0EA151J
1kΩ	4500K±3% (4450K)		P10564CT-ND	.89 7.76 60.98 249.48	P10564TR-ND	—	299.38/M	ERT-J0ET102J
1.5kΩ	4500K±3% (4450K)		P10565CT-ND	.89 7.76 60.98 249.48	P10565TR-ND	—	299.38/M	ERT-J0ET152J
2.0kΩ	4500K±3% (4450K)	Approx. 2mW/°C	P10566CT-ND	.89 7.76 60.98 249.48	P10566TR-ND	—	299.38/M	ERT-J0ET202J
2.2kΩ	4500K±3% (4450K)		P10567CT-ND	.89 7.76 60.98 249.48	P10567TR-ND	—	299.38/M	ERT-J0ET222J
3.0kΩ	4500K±3% (4450K)		P10568CT-ND	.89 7.76 60.98 249.48	P10568TR-ND	—	299.38/M	ERT-J0ET302J
3.3kΩ	4500K±3% (4450K)	Approx. 2mW/°C	P10569CT-ND	.89 7.76 60.98 249.48	P10569TR-ND	—	299.38/M	ERT-J0ET332J
4.7kΩ	4500K±3% (4450K)		P10570CT-ND	.89 7.76 60.98 249.48	P10570TR-ND	—	299.38/M	ERT-J0ET472J
3.3kΩ	4250K±3% (4300K)		P10571CT-ND	.89 7.76 60.98 249.48	P10571TR-ND	—	299.38/M	ERT-J0ET332J
4.7kΩ	4250K±3% (4300K)	Approx. 2mW/°C	P10572CT-ND	.89 7.76 60.98 249.48	P10572TR-ND	—	299.38/M	ERT-J0ER472J
6.8kΩ	4250K±3% (4300K)		P10573CT-ND	.89 7.76 60.98 249.48	P10573TR-ND	—	299.38/M	ERT-J0ER682J
10kΩ	4250K±3% (4300K)		P10574CT-ND	.89 7.76 60.98 249.48	P10574TR-ND	—	299.38/M	ERT-J0ER103J
15kΩ	4250K±3% (4300K)	Approx. 2mW/°C	P10575CT-ND	.89 7.76 60.98 249.48	P10575TR-ND	—	299.38/M	ERT-J0ER153J
22kΩ	4250K±3% (4300K)		P10576CT-ND	.89 7.76 60.98 249.48	P10576TR-ND	—	299.38/M	ERT-J0ER223J
33kΩ	4250K±3% (4300K)		P10577CT-ND	.89 7.76 60.98 249.48	P10577TR-ND	—	299.38/M	ERT-J0ER333J
47kΩ	4700K±3% (4750K)	Approx. 2mW/°C	P10578CT-ND	.89 7.76 60.98 249.48	P10578TR-ND	—	299.38/M	ERT-J0EV473J
68kΩ	4700K±3% (4750K)		P10579CT-ND	.89 7.76 60.98 249.48	P10579TR-ND	—	299.38/M	ERT-J0EV683J

* Mounted on a glass epoxy board (1.6t).

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Panasonic Surface Mount Chip Resistor Networks

Chip Resistor Networks - Series EXB-A, EXB-E and EXB-D:

FEATURES:

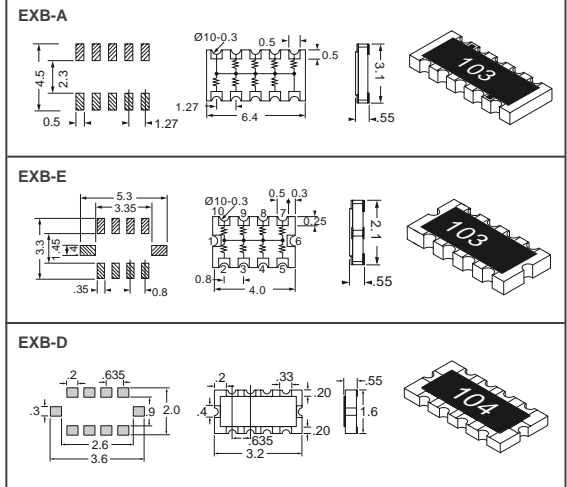
- High Density: Bussed 8 resistors for pull up/down circuit in EXB-A Type 2512 (6.4mm x 3.1mm x 0.55mm), EXB-E Type 1608 (4.0mm x 2.1mm x 0.55mm), and EXB-D Type 1206 (3.2 x 1.6 x .55) size.
- Automatic Placement: Taped and reeled packaging is suitable for high speed automatic placement machine.
- 2 common terminals without directional problem.
- Superior Solderability: Self-alignment by unique concave terminal design with reflow soldering.

SPECIFICATIONS:

- Resistance Range: EXB-A: 100Ω to 470 KΩ; E6 series, EXB-E: 1KΩ to 220kΩ, and EXB-D 1KΩ to 100KΩ.
- Resistance Tolerance: ±5%.
- Number of Terminals: 10 terminals.
- Number of Resistors: 8 resistors.
- Power Rating at 70°C: 62.5 mW/element (50 mW/element for EXB-D).
- Max. Rated Continuous Working Voltage*: EXB-A: 50V, EXB-E: 25V, and EXB-D: 25V.
- Max. Overload Voltage: EXB-A: 100V, EXB-E: 50V, and EXB-D: 50V.
- Temperature Characteristic Range: ±200 ppm/°C.
- Operating Temperature Range: -55°C to 125°C.
- Solderability: 95% coverage (Test temperature at solder 230±5°C; Dwell time in solder: 5±1 seconds).

Resistance Codes (Values listed in ohms)

EXB-A Code (Value)	EXB-E Code (Value)	EXB-D Code (Value)
101 (100)	102 (1K)	102 (1K2)
470 (471)	152 (1.5K)	152 (1.5K)
102 (1K)	222 (2.2K)	222 (2.2K)
472 (4.7K)	332 (3.3K)	332 (3.3K)
103 (10K)	472 (4.7K)	472 (4.7K)
473 (47K)	682 (6.8K)	682 (6.8K)
104 (100K)	103 (10K)	103 (10K)
474 (470K)	153 (15K)	153 (15K)
	223 (22K)	223 (22K)
	333 (33K)	333 (33K)
	473 (47K)	473 (47K)
	683 (68K)	683 (68K)
	104 (100K)	104 (100K)
	154 (150K)	154 (150K)
	224 (220K)	224 (220K)



* Rated continuous working voltage (RCWV) shall be determined from RCWV = $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$, or max. RCWV listed above, whichever is less.

Digi-Key* Part No.	1	10	Cut Tape Pricing			Digi-Key* Part No.	4,000	5,000	Tape & Reel Pricing			Panasonic* Part No.
			100	500	1,000			8,000	10,000	12,000	15,000	
U7□□□CT-ND	.49	4.53	36.71	152.98	244.76	U7□□□TR-ND	222.00/M	—	188.00/M	—	175.00/M	—
U8□□□CT-ND	.45	4.15	33.65	140.23	224.36	U8□□□TR-ND	204.00/M	—	173.00/M	—	160.00/M	—
U9□□□CT-ND	.46	4.21	34.16	142.31	227.70	U9□□□TR-ND	—	207.00/M	—	175.00/M	—	163.00/M

* For complete part number, substitute the corresponding resistance code (listed above) for □□□.

Surface Mount Chip Resistor Arrays Series EXB-V

FEATURES:

- High Density:
- 2 resistors in 1.6 mm x 1.6 mm size (EXB-V4V)
- 4 resistors in 3.2 mm x 1.6 mm size (EXB-V8V)
- 2 resistors in 1.0 mm x 1.0 mm size (EXB-24V)
- 4 resistors in 2.0 mm x 1.0 mm size (EXB-28V)
- 2 resistors in 1.6 mm x 1.6 mm size (EXB-34V)
- 4 resistors in 3.2 mm x 1.6 mm size (EXB-38V)
- Improvement of placement efficiency: Placement efficiency of Chip Resistor Array is two or four times that of discrete chip resistors.
- Automatic placement: Taped and reeled packaging (EIA RS-481) is suitable for automatic placement machine.

SPECIFICATIONS:

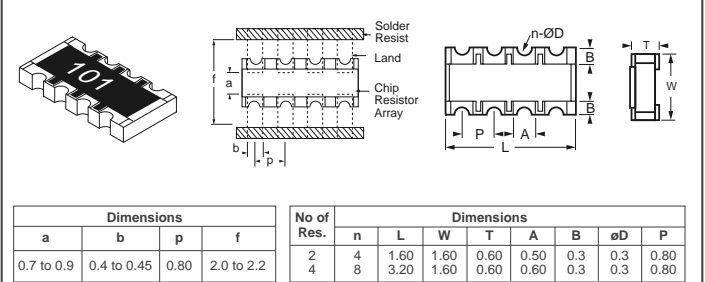
- Resistance Range: 10Ω to 1MΩ; E24 series
- Resistance Tolerance: J: ±5%
- No. of Terminals: 4 terminal, 8 terminal
- No. of Resistors: 2 resistors, 4 resistors
- Power Rating at 70°C: 1/16 W/element
- Max. Rated Continuous Working Voltage*: 50V
- Max. Over-load Voltage: 100V
- Temp. Characteristic Range: ±200 ppm/°C
- Operating Temp. Range: -55°C to 125°C
- Storage Temp. Range: -55°C to 125°C

* Rated continuous working voltage (RCWV) shall be determined from RCWV = $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$, or max. RCWV listed above, whichever is less.

Isolated Terminals Resistance Codes (Value listed in ohms)

Code (Value)	Code (Value)	Code (Value)	Code (Value)	Code (Value)	Code (Value)
100 (10)	820 (82)	681 (680)	562 (5.6K)	473 (47K)	394 (390K)
120 (12)	101 (100)	821 (820)	682 (6.8K)	563 (56K)	474 (470K)
150 (15)	121 (120)	102 (1K)	822 (8.2K)	683 (68K)	564 (560K)
180 (18)	151 (150)	122 (1.2K)	103 (10K)	823 (82K)	684 (680K)
220 (22)	181 (180)	152 (1.5K)	123 (12K)	104 (100K)	824 (820K)
270 (27)	221 (220)	182 (1.8K)	153 (15K)	124 (120K)	105 (1M)
330 (33)	271 (270)	222 (2.2K)	183 (18K)	154 (150K)	
390 (39)	331 (330)	272 (2.7K)	223 (22K)	184 (180K)	
470 (47)	391 (390)	332 (3.3K)	273 (27K)	224 (220K)	
560 (56)	471 (470)	392 (3.9K)	333 (33K)	274 (270K)	
680 (68)	561 (560)	472 (4.7K)	393 (39K)	334 (330K)	

EXB-V4V and EXB-V8V



Dimensions				Dimensions								
a	b	p	f	No of Res.	n	L	W	T	A	B	øD	P
0.7 to 0.9	0.4 to 0.45	0.80	2.0 to 2.2	2	4	1.60	1.60	0.60	0.50	0.3	0.3	0.80
				4	8	3.20	1.60	0.60	0.60	0.3	0.3	0.80

Isolated Terminals

Fig. 1 — 2 Resistors

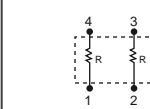
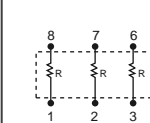
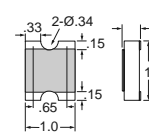


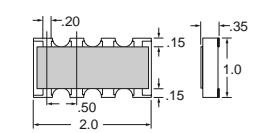
Fig. 2 — 4 Resistors



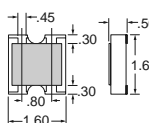
EXB-24V



EXB-28V



EXB-34V



EXB-38V

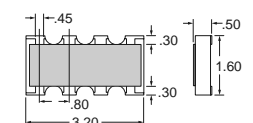


Fig.	No. of Res.	Digi-Key* Part No.	Cut Tape Pricing			Digi-Key* Part No.	Tape & Reel Pricing				Panasonic* Part No.	
			10	500	1,000		5,000	10,000	20,000	25,000	30,000	
1	2	Y2□□□CT-ND	.50	4.34	15.50	27.00	17.00/M	16.00/M	—	15.00/M	—	EXB-V4V□□□JV
2	4	Y4□□□CT-ND	.86	7.54	27.00	46.00	30.00/M	28.00/M	—	26.00/M	—	EXB-V8V□□□JV
1	2	Y5□□□CT-ND	1.55	13.58	48.51	83.44	—	52.00/M	50.00/M	—	47.00/M	EXB-24V□□□JX
2	4	Y7□□□CT-ND	2.53	22.14	79.06	135.99	—	85.00/M	82.00/M	—	77.00/M	EXB-28V□□□JX
1	2	Y8□□□CT-ND	.48	4.19	14.95	25.71	17.00/M	16.00/M	—	15.00/M	—	EXB-34V□□□JV
2	4	Y9□□□CT-ND	.90	7.89	28.18	48.46	32.00/M	29.00/M	—	27.00/M	—	EXB-38V□□□JV

* For complete part number, substitute the corresponding resistance code (listed above) for □□□.

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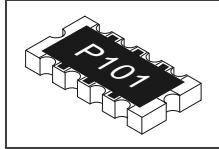
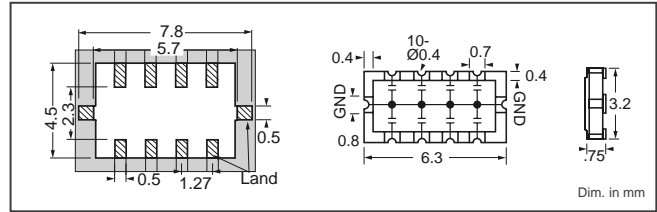
Panasonic Surface Mount Chip Capacitor Networks Series EZA-NP

FEATURES:

- Chip Capacitor Networks, exclusively developed by Panasonic thick film technology. Bussed 8 capacitors in one package (6.3 mm x 3.2 mm x 0.75 mm), half-pitch (0.65 mm) spacing for high density automatic placing
- Superior noise reduction by using two ground terminals
- Superior solderability by using Ni + Solder plating with unique concave terminals

SPECIFICATIONS:

- Capacitance Range: 47 pF, 100 pF, 220 pF
- Capacitance Tolerance: $\pm 20\%$
- Temperature Characteristic: E Characteristic: $+20\% / -55\%$ (-25°C to $+85^{\circ}\text{C}$)
- Dissipation Factor: Less than 3.0% (25°C, 1 kHz, 1 Vrms)
- Rated Voltage: 25V
- Operating Temperature Range: -25°C to $+85^{\circ}\text{C}$



Volts (DC)	Cap. (PF)	Digi-Key Part No.	Cut Tape Pricing				Digi-Key Part No.	Tape & Reel Pricing 4,000	Panasonic Part No.
			1	10	100	500			
25	47	PCN1001CT-ND	2.06	18.06	154.83	645.00	PCN1001TR-ND	727.00/M	EZA-NPE470M
25	100	PCN1002CT-ND	2.06	18.06	154.83	645.00	PCN1002TR-ND	727.00/M	EZA-NPE101M
25	220	PCN1003CT-ND	2.06	18.06	154.83	645.00	PCN1003TR-ND	727.00/M	EZA-NPE221M

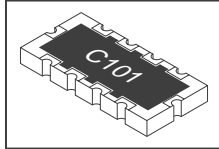
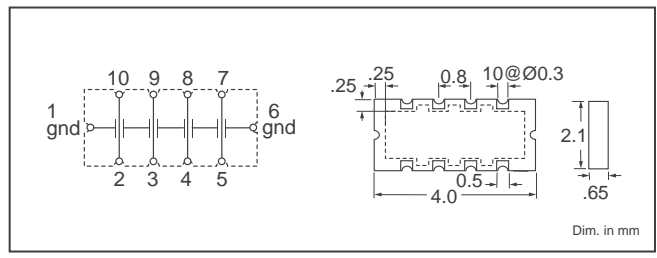
Surface Mount Chip 3-Terminal Capacitor Array Series EZA-SC

FEATURES:

- Suitable for EMI suppression filtering**
- The low residual inductance at high frequency range provides effective reduction of noise
- Equivalent noise reduction to the EMI filters with low cost design
- Compact design for high density PWB assembly**
- 4.0 x 2.1 x 0.65mm
- Flat and square packages suitable for high speed automatic placement machine
- Superior mountability with concave terminals**
- Firm solder joint (two times of convex terminal)
- Self-alignment of placement at reflow process

SPECIFICATIONS:

- Capacitance Tolerance: $\pm 20\%$ ($+30\% / -20\%$ in the case of 22pF)
- Temperature Characteristic: ΔC : $+20\% / -55\%$ (-25°C to $+85^{\circ}\text{C}$)
- Dissipation Factor: Less than 2.0% (25°C, 1kHz - In measuring at 1MHz, capacitance value and dissipation factor are different, 1 Vrms)
- Rated Voltage: 25V
- Rated Current: 200mA (between input terminal and output terminal)
- Resistance: Less than 1.0Ω (between input terminal and output terminal)
- Operating Temperature Range: -25°C to $+85^{\circ}\text{C}$



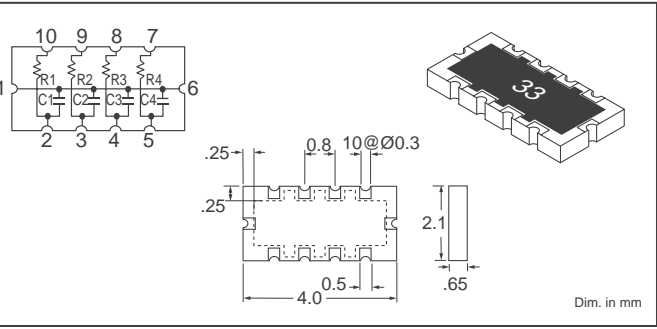
Volts (DC)	Cap. (pF)	Digi-Key Part No.	Cut Tape Pricing				Digi-Key Part No.	Tape & Reel Pricing 4,000	Panasonic Part No.
			1	10	100	500			
25	22	P10192CT-ND	1.21	10.54	90.38	376.50	P10192TR-ND	422.00/M	EZA-SCE220M
25	47	P10193CT-ND	1.21	10.54	90.38	376.50	P10193TR-ND	422.00/M	EZA-SCE470M
25	100	P10194CT-ND	1.21	10.54	90.38	376.50	P10194TR-ND	422.00/M	EZA-SCE101M

Surface Mount Chip RC Networks Series EZA-ST

FEATURES:

- Smallest SMD R/C networks**
- Four popular noise reduction circuits made from damping resistors and bypass capacitors in a smallest chip (4.0 x 2.1 x 0.65 mm, 0.8 mm pitch)
- Smaller occupied space than discrete 0402 (1.0 x 0.5 mm) chips; 70% of 0402 (1.0 x 0.5 mm) chips placing area; 45% of 0804 (1.6 x 0.8 mm) chips placing area
- Superior mountability with concave terminal**
- Firm solder joint (two times of convex terminal)
- Self-alignment of placement at reflow soldering

- Rated Power: 1/16 W ($\leq 70^{\circ}\text{C}$ - For resistors operated in ambient temperature above 70°C , rated power shall be derated)
- Max. Rated Continuous Working Voltage: 25 V (Rated Voltage for resistor shall be determined from $\sqrt{\text{Rated Power} \times \text{Resistance Value}}$, or Max. Rated Continuous Working Voltage, whichever is less.)
- Capacitance Tolerance: $+30\% / -20\%$
- Capacitance Temperature Characteristic: E Characteristic: $+20\% / -55\%$ (-25°C to $+85^{\circ}\text{C}$)
- Dissipation Factor: Less than 3.0% (25°C, 1kHz - In measuring at 1MHz, capacitance and dissipation factor are different, 1 Vrms)
- Rated Voltage: 25V
- Operating Temperature Range: -25°C to $+85^{\circ}\text{C}$



Res. (Ohms)	Cap. (pF)	Digi-Key Part No.	Cut Tape Pricing				Digi-Key Part No.	Tape & Reel Pricing 4,000	Panasonic Part No.
			1	10	100	500			
22	22	PST11CT-ND	1.21	10.54	90.38	376.50	PST11TR-ND	422.00/M	EZA-ST11AAA
22	47	PST12CT-ND	1.21	10.54	90.38	376.50	PST12TR-ND	422.00/M	EZA-ST12AAA
22	100	PST13CT-ND	1.21	10.54	90.38	376.50	PST13TR-ND	422.00/M	EZA-ST13AAA
47	22	PST21CT-ND	1.21	10.54	90.38	376.50	PST21TR-ND	422.00/M	EZA-ST21AAA
47	47	PST22CT-ND	1.21	10.54	90.38	376.50	PST22TR-ND	422.00/M	EZA-ST22AAA
47	100	PST23CT-ND	1.21	10.54	90.38	376.50	PST23TR-ND	422.00/M	EZA-ST23AAA
100	22	PST31CT-ND	1.21	10.54	90.38	376.50	PST31TR-ND	422.00/M	EZA-ST31AAA
100	47	PST32CT-ND	1.21	10.54	90.38	376.50	PST32TR-ND	422.00/M	EZA-ST32AAA
100	100	PST33CT-ND	1.21	10.54	90.38	376.50	PST33TR-ND	422.00/M	EZA-ST33AAA
220	22	PST41CT-ND	1.21	10.54	90.38	376.60	PST41TR-ND	422.00/M	EZA-ST41AAA
220	47	PST42CT-ND	1.21	10.54	90.38	376.60	PST42TR-ND	422.00/M	EZA-ST42AAA
220	100	PST43CT-ND	1.21	10.54	90.38	376.60	PST43TR-ND	422.00/M	EZA-ST43AAA
470	22	PST51CT-ND	1.21	10.54	90.38	376.60	PST51TR-ND	422.00/M	EZA-ST51AAA
470	47	PST52CT-ND	1.21	10.54	90.38	376.60	PST52TR-ND	422.00/M	EZA-ST52AAA
470	100	PST53CT-ND	1.21	10.54	90.38	376.60	PST53TR-ND	422.00/M	EZA-ST53AAA
1K	22	PST61CT-ND	1.21	10.54	90.38	376.60	PST61TR-ND	422.00/M	EZA-ST61AAA
1K	47	PST62CT-ND	1.21	10.54	90.38	376.60	PST62TR-ND	422.00/M	EZA-ST62AAA
1K	100	PST63CT-ND	1.21	10.54	90.38	376.60	PST63TR-ND	422.00/M	EZA-ST63AAA

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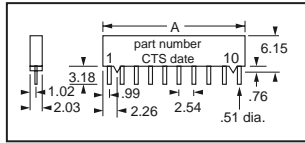
750 SERIES

Single-In-Line

Solid ceramic networks are more efficient because they operate at lower temperatures. This translates into long term reliability in a resistor network.

Specifications: Resistance Values: 22Ω through 1 MegΩ **Resistance Tolerance:** ±2% **Temperature Coefficient:** ±100PPM/°C typical

Features: • Low-profile construction • Excellent power dissipation • High reliability • Alumina substrate



AVAILABLE VALUES (listed in ohms)

Isolated & Bussed Circuits				Dual Terminator Circuits			
22	150	820	5.1K	33K	270K	81/130	
27	180	1K	5.6K	39K	330K	121/195	
33	200	1.2K	6.8K	47K	390K	162/260	
39	220	1.5K	8.2K	56K	470K	180/390	
47	270	1.8K	10K	68K	560K	220/330	
51	330	2K	12K	82K	680K	330/390	
56	390	2.2K	15K	100K	820K		
68	470	2.7K	18K	120K	1Meg		
82	510	3.3K	20K	150K			
100	560	3.9K	22K	180K			
120	680	4.7K	27K	220K			

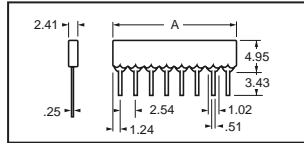
770 SERIES

Single-In-Line Conformal

Standard Products 770 series is available in 6, 8 and 10 pin sizes, and in many available resistance values.

Specifications: Resistance Values: 22Ω through 1 MegΩ **Resistance Tolerance:** ±2% **Temperature Coefficient:** ±100PPM/°C typical

Features: • High reliability resistors • Low-profile construction • .100" lead spacing • High reliability • Alumina substrate



AVAILABLE VALUES (listed in ohms)

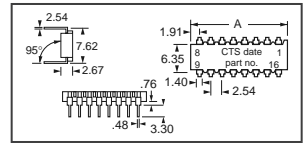
Isolated & Bussed Circuits				Dual Terminator Circuits			
22	150	820	5.1K	33K	270K	81/130	
27	180	1K	5.6K	39K	330K	121/195	
33	200	1.2K	6.8K	47K	390K	162/260	
39	220	1.5K	8.2K	56K	470K	180/390	
47	270	1.8K	10K	68K	560K	220/330	
51	330	2K	12K	82K	680K	330/390	
56	390	2.2K	15K	100K	820K		
68	470	2.7K	18K	120K	1Meg		
82	510	3.3K	20K	150K			
100	560	3.9K	22K	180K			
120	680	4.7K	27K	220K			

760/761 SERIES

Dual-In-Line

Thin cover coating generates higher power ratings. This proprietary cover protection keeps resistors near the surface, allowing the alumina substrate to act as a heat sink. That means higher power ratings than molded networks.

Specifications: Resistance Values: 22Ω through 1 MegΩ. **Resistance Tolerance:** ±2%. **Temperature Coefficient:** ±100PPM/°C typical



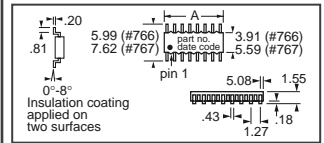
AVAILABLE VALUES (listed in ohms)

Isolated & Bussed Circuits				Dual Terminator Circuits			
22	150	820	5.1K	33K	270K	180/390	
27	180	1K	5.6K	39K	330K	220/270	
33	200	1.2K	6.8K	47K	390K	220/330	
39	220	1.5K	8.2K	56K	470K	330/390	
47	270	1.8K	10K	68K	560K	680/1.5K	
51	330	2K	12K	82K	680K	1.5K/3.3K	
56	390	2.2K	15K	100K	820K		
68	470	2.7K	18K	120K	1Meg		
82	510	3.3K	20K	150K			
100	560	3.9K	22K	180K			
120	680	4.7K	27K	220K			

766/767 SERIES

Dual-In-Line Surface Mount

Requires 30% less board space than molded networks of the same power rating. **Specifications: Resistance Range:** 22Ω — 1 MegΩ. **Resistance Tolerance:** Standard: ±2% **Max. Oper. Voltage:** 50V not to exceed rated power **Temp. Coefficient:** 100Ω - 1 MegΩ ±100PPM/°C typical. Below 100Ω±200PPM/°C typical **Oper. Temp. Range:** -55°C to 125°C. **Storage Temp. Range:** -55°C to 125°C. **Dielectric Strength:** 100V



AVAILABLE VALUES (listed in ohms)

Isolated & Bussed Circuits				Dual Terminator Circuits			
22	150	820	5.1K	33K	270K	180/390	
27	180	1K	5.6K	39K	330K	220/330	
33	200	1.2K	6.8K	47K	390K	330/390	
39	220	1.5K	8.2K	56K	470K	330/470	
47	270	1.8K	10K	68K	560K		
51	330	2K	12K	82K	680K		
56	390	2.2K	15K	100K	820K		
68	470	2.7K	18K	120K	1Meg		
82	510	3.3K	20K	150K			
100	560	3.9K	22K	180K			
120	680	4.7K	27K	220K			

Fig. 1 - Bussed

Fig. 2 - Isolated

Fig. 3 - Dual Term

Fig. 4 - Bussed

Fig. 5 - Isolated

Fig. 6 - Dual Term

Series	Fig.	No. of Pins	No. of Res.	Dim. "A" (mm)	Resistor Power Rating (mW@70°C)	Digi-Key* Part No.	Pricing			
							1	10	100	1,000
750	1	6	5	14.68	250	750-61-R(Value)-ND	.65	5.67	44.55	324.00
	1	8	7	19.76	250	750-81-R(Value)-ND	.75	6.55	51.43	374.00
	1	10	9	24.84	250	750-101-R(Value)-ND	.89	7.81	61.33	446.00
	2	6	3	14.68	400	750-63-R(Value)-ND	.65	5.67	44.55	324.00
	2	8	4	19.76	400	750-83-R(Value)-ND	.75	6.55	51.43	374.00
	2	10	5	24.84	400	750-103-R(Value)-ND	.89	7.81	61.33	446.00
770	3	8	12	19.76	250	750-85-R(Value)-ND	1.01	8.82	69.30	504.00
	3	10	16	24.84	250	750-105-R(Value)-ND	1.22	10.64	83.60	608.00
	1	6	5	15.19	100	770-61-R(Value)-ND	.21	1.80	13.50	90.00
	1	8	7	20.27	100	770-81-R(Value)-ND	.29	2.40	18.00	120.00
	1	10	9	25.35	100	770-101-R(Value)-ND	.30	2.63	150.00	
	2	6	3	15.19	200	770-63-R(Value)-ND	.21	1.80	13.50	90.00
2	8	4	20.27	200	770-83-R(Value)-ND	.29	2.40	18.00	120.00	
2	10	5	25.35	200	770-103-R(Value)-ND	.30	2.63	20.63	150.00	
3	8	12	20.27	100	770-85-R(Value)-ND	.55	4.60	34.50	230.00	
3	10	16	25.35	100	770-105-R(Value)-ND	.52	4.55	35.75	260.00	

* For complete part number, substitute the corresponding value (listed above) in (value).

Series	Fig.	No. of Pins	No. of Res.	Dim. "A" (mm)	Resistor Power Rating (mW@70°C)	Digi-Key* Part No.	Pricing			
							1	10	100	1,000
760	4	14	13	19.05	150	760-1-R(Value)-ND	.70	6.38	58.00	348.00
	4	16	15	21.59	150	761-1-R(Value)-ND	.71	6.55	59.00	357.00
	5	14	7	19.05	300	760-3-R(Value)-ND	.70	6.38	58.00	348.00
	5	16	8	21.59	300	761-3-R(Value)-ND	.71	6.55	59.00	357.00
	6	14	24	21.05	150	760-5-R(Value)-ND	.97	8.86	80.50	483.00
	6	16	28	21.59	150	761-5-R(Value)-ND	.98	9.02	82.00	492.00
766	4	14	13	8.64	80	766-141-R(Value)-ND	1.22	9.72	74.52	537.84
	4	16	15	9.91	80	766-161-R(Value)-ND	1.22	9.72	74.52	537.84
	5	14	7	8.64	160	766-143-R(Value)-ND	1.22	9.72	74.52	537.84
	5	16	8	9.91	160	766-163-R(Value)-ND	1.22	9.72	74.52	537.84
	6	14	24	8.64	80	766-145-R(Value)-ND	1.43	11.40	87.40	630.80
	6	16	28	9.91	80	766-165-R(Value)-ND	1.43	11.40	87.40	630.80
767	4	14	13	9.91	100	767-141-R(Value)-ND	.75	6.00	46.00	332.00
	4	16	15	11.18	100	767-161-R(Value)-ND	.75	6.00	46.00	332.00
	5	14	7	9.91	200	767-143-R(Value)-ND	.75	6.00	46.00	332.00
	5	16	8	11.18	200	767-163-R(Value)-ND	.75	6.00	46.00	332.00
	6	14	24	9.91	100	767-145-R(Value)-ND	.90	7.20	55.20	398.40
	6	16	28	11.18	100	767-165-R(Value)-ND	.90	7.20	55.20	398.40

NEW! 773 SERIES Single-In-Line

SPECIFICATIONS: • Resistance Tolerance: 2% • Maximum Operating Voltage: 100VDC • Temperature Coefficient: ±100 PPM/°C±50Ω, ±200 PPM/°C±50Ω • Dielectric Withstand Voltage: 200VDC • Operating Temperature Range: -55°C to +125°C • Resistance Power @ 70°C: -1 and -5 Schematic = .10 Watts and -3 Schematic = .20 Watts

FEATURES: • Low cost • High reliability cermet resistors • 2% standard resistor tolerance • Laser marking for permanent identification • High temperature solder • Low profile

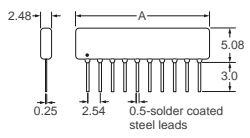


Fig. 1 - Bussed

Fig. 2 - Isolated

Fig. 3 - Dual Term

Fig.	No. of Pins	No. of Res.	Dim. "A" (mm)	Resistor Power Rating (mW@70°C)	Digi-Key* Part No.	Pricing			
						1	10	100	1,000
1	6	3	15.55	100	773061-□□□□-ND	.25	1.95	13.00	65.00
1	6	3	15.55	200	773063-□□□□-ND	.25	1.95	13.00	65.00
1	8	7	20.65	100	773081-□□□□-ND	.32	2.55	17.00	85.00
2	8	4	20.65	200	773083-□□□□-ND	.32	2.55	17.00	85.00
3	8	12	20.65	100	773085-□□□□-ND	.69	5.48	36.50	182.50
1	9	8	23.15	100	773091-□□□□-ND	.50	3.98	26.50	132.50
1	10	9	25.65	100	773101-□□□□-ND	.41	3.23	21.50	107.50
2	10	5	25.65	200	773103-□□□□-ND	.41	3.23	21.50	107.50
3	10	16	25.65	100	773105-□□□□-ND	.86	6.83	45.50	227.50

* For complete part number, substitute the corresponding resistance "code" (listed to the right) in □□□□.

All values listed in ohms

Resistance Values 773061 Series (Bussed)	
(Code) Value	(Code) Value
(151) 150	(472) 4.7K
(221) 220	(103) 10K
(271) 270	(153) 15K
(331) 330	(203) 20K
(471) 470	(223) 22K
(102) 1K	(333) 33K
(152) 1.5K	(473) 47K
(272) 2.7K	(104) 100K

Resistance Values 773063 Series (Isolated)	
(Code) Value	(Code) Value
(101) 100	(103) 10K
(561) 560	(104) 100K
(102) 1K	(224) 220K
(222) 2.2K	(105) 1MEG

Resistance Values 773081 Series (Bussed)	
(Code) Value	(Code) Value
(151) 150	(102) 1K
(181) 180	(222) 2.2K
(271) 270	(472) 4.7K
(331) 330	(103) 10K
(471) 470	(473) 47K
(511) 510	(104) 100K

Resistance Values 773083 Series (Isolated)	
(Code) Value	(Code) Value
(220) 22	(102) 1K
(270) 27	(122) 1.2K
(330) 33	(152) 1.5K
(470) 47	(222) 2.2K
(510) 51	(272) 2.7K
(560) 56	(332) 3.3K
(101) 100	(472) 4.7K

4100R Series 4116R

Thick Film Molded DIPs

- Compatible with automatic insertion equipment • Copper leads for excellent heat dissipation • High temperature lead attachment to withstand reflow solder temperatures up to 260°C • Trifurcated Krimp-Join™ lead attachment for product reliability and strength

Electrical Characteristics:

- Max. Operating Voltage: 100V • Temp. Coefficient of Resistance: 50Ω to 2.2MΩ: ±100ppm/°C, below 50Ω: ±250ppm/°C • Operating Temperature: -55°C to +125°C

Environmental Characteristics:

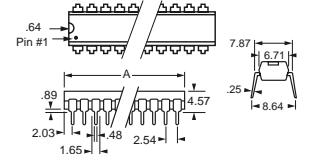
- Insulation Resistance: 10,000 megohms minimum • Dielectric Withstanding Voltage: 200 VRMS • Lead Solderability/Solvent Resistance: Meet requirements of MIL-R-83401

Physical Characteristics:

- Flammability: Conforms to UL94V-0 • Lead Frame Material: Copper (OLIN 194) 90/10 electroplate • Body Material: Novolac Epoxy

Resistance Tolerance:

- Isolated/Bussed: Below 50 ohms ±1 ohms; Above 50 ohms ±2% • Dual Terminated: Below 100 ohms ±2 ohms; Above 100 ohms ±2%



All values listed in ohms. Resistance Values (001 and 202) Isolated and Bussed Circuits

Code (Value)	Code (Value)	Code (Value)	Code (Value)	Code (Value)
220 (22)	221 (220)	202 (2K)	183 (18K)	154 (150K)
270 (27)	271 (270)	222 (2.2K)	203 (20K)	184 (180K)
330 (33)	331 (330)	272 (2.7K)	223 (22K)	224 (220K)
390 (39)	391 (390)	332 (3.3K)	273 (27K)	274 (270K)
470 (47)	471 (470)	392 (3.9K)	333 (33K)	334 (330K)
560 (56)	561 (560)	472 (4.7K)	393 (39K)	394 (390K)
680 (68)	681 (680)	562 (5.6K)	473 (47K)	474 (470K)
820 (82)	821 (820)	682 (6.8K)	563 (56K)	564 (560K)
101 (100)	102 (1K)	822 (8.2K)	683 (68K)	684 (680K)
121 (120)	122 (1.2K)	103 (10K)	823 (82K)	824 (820K)
151 (150)	152 (1.5K)	123 (12K)	104 (100K)	105 (10K)
181 (180)	182 (1.8K)	153 (15K)	124 (120K)	

Resistance Values (003) Dual Terminator Circuits

Code (Value)
181/391 (180/390)
221/271 (220/270)
221/331 (220/330)
331/391 (330/390)
302/622 (3K/6.2K)

4300R Series 4306R, 4308R and 4310R

Thick Film Molded SIPs, Low Profile

- Low profile provides compatibility with DIPs • Compatible with automatic insertion equipment • High temperature lead attachment to withstand reflow temperatures up to 260°C • Copper leads for excellent heat dissipation

Electrical Characteristics:

- Max. Operating Voltage: 100V • Temp. Coefficient of Resistance: 50Ω to 2.2MΩ: ±100ppm/°C, below 50Ω: ±250ppm/°C • Operating Temp.: -55°C to +125°C • Power Rating: Derate to zero power from +70°C to +125°C

Environmental Characteristics:

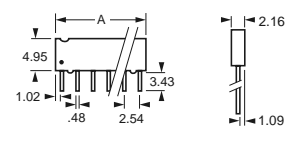
- Insulation Resistance: 10,000 megohms minimum • Dielectric Withstanding Voltage: 200 VRMS • Lead Solderability/Solvent Resistance: Meet requirements of MIL-R-83401

Physical Characteristics:

- Flammability: Conforms to UL94V-0 • Lead Frame Material: Copper (OLIN 194) 90/10 plated • Body Material: Novolac Epoxy

Resistance Tolerance:

- Isolated/Bussed: Below 50 ohms ±1 ohms; Above 50 ohms ±2% • Dual Terminated: Below 100 ohms ±2 ohms; Above 100 ohms ±2%

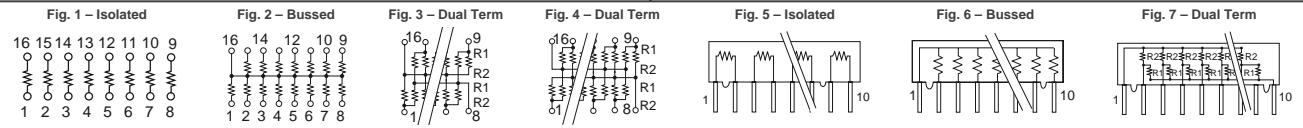


All values listed in ohms. Resistance Values (001 and 002) Isolated and Bussed Circuits

Code (Value)	Code (Value)	Code (Value)	Code (Value)	Code (Value)
220 (22)	221 (220)	202 (2K)	183 (18K)	154 (150K)
270 (27)	271 (270)	222 (2.2K)	203 (20K)	184 (180K)
330 (33)	331 (330)	272 (2.7K)	223 (22K)	224 (220K)
390 (39)	391 (390)	332 (3.3K)	273 (27K)	274 (270K)
470 (47)	471 (470)	392 (3.9K)	333 (33K)	334 (330K)
560 (56)	561 (560)	472 (4.7K)	393 (39K)	394 (390K)
680 (68)	681 (680)	562 (5.6K)	473 (47K)	474 (470K)
820 (82)	821 (820)	682 (6.8K)	563 (56K)	564 (560K)
101 (100)	102 (1K)	822 (8.2K)	683 (68K)	684 (680K)
121 (120)	122 (1.2K)	103 (10K)	823 (82K)	824 (820K)
151 (150)	152 (1.5K)	123 (12K)	104 (100K)	105 (10K)
181 (180)	182 (1.8K)	153 (15K)	124 (120K)	

Resistance Values (004) Dual Terminator Circuits

Code (Value)
161/241 (160/240)
181/391 (180/390)
221/271 (220/270)
221/331 (220/330)
331/391 (330/390)
331/471 (330/470)
302/622 (3K/6.2K)



Series	Fig.	No. of Pins	No. of Res.	Dim. "A" (mm)	Element Power Rating (W @ 70°C)	Digi-Key® Part No.	1	10	50	100	500	1,000	Bourns® Part No.
4100	1	16	8	21.97	.25	4116R-1-□□□-ND	.60	5.27	22.10	37.78	157.41	264.00	4116R-001-□□□
	2	16	15	21.97	.125	4116R-2-□□□-ND	.60	5.27	22.10	37.78	157.41	264.00	4116R-002-□□□
	3	16	28	21.97	.125	4116R-3-□□□□-ND	1.27	11.28	47.32	80.89	337.04	566.00	4116R-003-□□□□□□
4300	6	6	5	14.83	.20	4306R-1-□□□-ND	.47	4.19	17.55	30.00	125.00	210.00	4306R-101-□□□
	5	6	3	14.83	.30	4306R-2-□□□-ND	.47	4.19	17.55	30.00	125.00	210.00	4306R-102-□□□
	7	6	8	14.83	.20	4306R-4-□□□□-ND	.67	5.89	24.70	42.22	175.93	296.00	4306R-104-□□□□□□
	6	8	7	19.91	.20	4308R-1-□□□-ND	.54	4.81	20.15	34.44	143.52	241.00	4308R-101-□□□
	5	8	4	19.91	.30	4308R-2-□□□-ND	.54	4.81	20.15	34.44	143.52	241.00	4308R-102-□□□
	7	8	12	19.91	.20	4308R-4-□□□□-ND	.74	6.51	27.30	46.67	194.44	327.00	4308R-104-□□□□□□
	6	10	9	24.99	.20	4310R-1-□□□-ND	.65	5.74	24.05	41.11	171.30	288.00	4310R-101-□□□
5	10	5	24.99	.30	4310R-2-□□□-ND	.65	5.74	24.05	41.11	171.30	288.00	4310R-102-□□□	
7	10	16	24.99	.20	4310R-4-□□□□-ND	.88	7.75	32.50	55.56	231.48	389.00	4310R-104-□□□□□□	
4600	6	6	5	15.19	.20	4606X-1-□□□-ND	.25	2.23	9.36	16.00	66.67	112.00	4606X-101-□□□
	5	6	3	15.19	.30	4606X-2-□□□-ND	.25	2.23	9.36	16.00	66.67	112.00	4606X-102-□□□
	7	6	8	15.19	.20	4606X-4-□□□□-ND	.53	4.65	19.50	33.33	138.89	233.00	4606X-104-□□□□□□
	6	8	7	20.27	.20	4608X-1-□□□-ND	.32	2.79	11.70	20.00	83.33	140.00	4608X-101-□□□
	5	8	4	20.27	.30	4608X-2-□□□-ND	.32	2.79	11.70	20.00	83.33	140.00	4608X-102-□□□
	7	8	12	20.27	.20	4608X-4-□□□□-ND	.63	5.58	23.40	40.00	166.67	280.00	4608X-104-□□□□□□
	6	10	9	25.35	.20	4610X-1-□□□-ND	.39	3.41	14.30	24.44	101.85	171.00	4610X-101-□□□
5	10	5	25.35	.30	4610X-2-□□□-ND	.39	3.41	14.30	24.44	101.85	171.00	4610X-102-□□□	
7	10	16	25.35	.20	4610X-4-□□□□-ND	.70	6.20	26.00	44.44	185.19	311.00	4610X-104-□□□□□□	
4800	1	16	8	12.45	.160	4816P-1-□□□-ND	1.12	9.92	41.60	71.00	300.00	500.00	4816P-T01-□□□
	2	16	15	12.45	.080	4816P-2-□□□-ND	1.12	9.92	41.60	71.00	300.00	500.00	4816P-T02-□□□
	4	16	28	12.45	.080	4816P-3-□□□□-ND	1.75	15.50	65.00	110.94	468.75	781.00	4816P-T03-□□□□□□

* For complete part number, substitute the corresponding resistance code (listed above) for □□□.

Panasonic® Multilayer Varistor (Strontium Titanate) 0805 Pkg.

For EMI noise suppression and transient surge protection.

Features: • Multilayer monolithic construction of SrTiO₃ ceramics. • Low varistor voltage with high parallel capacitance. • Fast response to high speed transient overvoltage for ESD protection (IEC1000-4-2).

Characteristics: • Maximum Allowable Voltage: DC 6V • Nominal Varistor Voltage Range (V0.1mA): 8-15V • Nominal Capacitance Range (at 1 kHz): 0.022 µF • Maximum Peak Current (at 8/20 µs, 2 times): 25A • Maximum Energy (2ms): 0.2J • Operating Temperature Range: -40°C to 85°C.

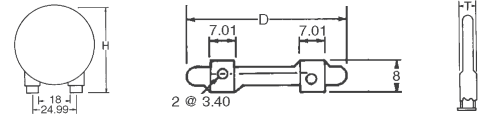


Digi-Key Part No.	Cut Pricing			Digi-Key Part No.	Tape & Reel Pricing		Panasonic Part No.
	1	10	100		5,000	10,000	
P223ZJCT-ND	1.58	13.99	117.35	P223ZJTR-ND	645.00/M	602.00/M	ERZ-S2VB23ZT

Panasonic® "ZNR" With Tabs, Type C Series 32 and 40

These are heavy duty type ZNR with very unique tab terminals which are used as electrical connecting terminals and also its mounting legs. This ZNR is meant for application in power supplies or transient voltage surge suppressor units where high surge current or high surge energy absorption is required.

Features:
 • High energy handling capability (210 to 710 joules).
 • Large withstanding surge current (25 to 30kA).
 • Compact size.
 • Common terminals for electrical connection & mounting.
 • UL recognized.

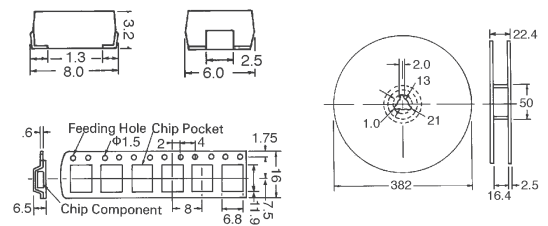


Series	Type	Max. Allow. Volt. (V)		Varistor Volt. ±10% (V)	Max. Clamp Volt. @ Test Current (8/20µsec.)		Surge Current (kA)	Dimensions (mm)			Digi-Key Part No.	Pricing					Panasonic Part No.	
		AC	DC		Vc(V)	Vp(A)		D	T	H		1	10	100	1,000	5,000		10,000
32	C	130	170	200	340	200	25	35.99	7.49	46.00	P7158-ND	13.92	119.31	994.28	5667.00	5303.00/M	5130.00/M	ERZ-C32CK201B
		150	200	240	395	200	25	35.99	7.49	46.00	P7159-ND	13.92	119.31	994.28	5667.00	5303.00/M	5130.00/M	ERZ-C32CK241B
		230	300	360	595	200	25	35.99	8.99	46.00	P7160-ND	14.90	127.75	1064.56	6068.00	5678.00/M	5493.00/M	ERZ-C32CK361B
		250	320	390	650	200	25	35.99	8.99	46.00	P7161-ND	14.90	127.75	1064.56	6068.00	5678.00/M	5493.00/M	ERZ-C32CK391B
		275	350	430	710	200	25	35.99	8.99	46.00	P7162-ND	14.90	127.75	1064.56	6068.00	5678.00/M	5493.00/M	ERZ-C32CK431B
		385	505	620	1025	200	25	35.99	9.70	46.00	P7163-ND	16.81	144.08	1200.64	6844.00	6403.00/M	6195.00/M	ERZ-C32CK621B
	420	560	680	1120	200	25	35.99	9.70	46.00	P7164-ND	16.81	144.08	1200.64	6844.00	6403.00/M	6195.00/M	ERZ-C32CK681B	
	460	615	750	1240	200	25	35.99	11.51	46.00	P7165-ND	16.81	144.08	1200.64	6844.00	6403.00/M	6195.00/M	ERZ-C32CK741B	
	485	640	780	1290	200	25	35.99	11.51	46.00	P7166-ND	16.81	144.08	1200.64	6844.00	6403.00/M	6195.00/M	ERZ-C32CK781B	
	510	670	820	1355	200	25	35.99	11.51	46.00	P7167-ND	18.32	157.01	1308.44	7458.00	6978.00/M	6752.00/M	ERZ-C32CK821B	
	550	745	910	1500	200	25	35.99	11.51	46.00	P7168-ND	19.70	168.84	1407.00	8020.00	7504.00/M	7260.00/M	ERZ-C32CK911B	
	40	C	130	170	200	340	250	30	43.99	7.49	50.01	P7169-ND	20.88	178.95	1491.28	8500.00	7953.00/M	7695.00/M
150			200	240	395	250	30	43.99	7.49	50.01	P7170-ND	20.88	178.95	1491.28	8500.00	7953.00/M	7695.00/M	ERZ-C40CK241B
230			300	360	595	250	30	43.99	8.99	50.01	P7171-ND	22.26	190.78	1589.84	9062.00	8479.00/M	8204.00/M	ERZ-C40CK361B
250			320	390	650	250	30	43.99	8.99	50.01	P7172-ND	22.26	190.78	1589.84	9062.00	8479.00/M	8204.00/M	ERZ-C40CK391B
275			350	430	710	250	30	43.99	8.99	50.01	P7173-ND	22.26	190.78	1589.84	9062.00	8479.00/M	8204.00/M	ERZ-C40CK431B
385			505	620	1025	250	30	43.99	9.70	50.01	P7174-ND	26.13	223.98	1866.48	10639.00	9955.00/M	9631.00/M	ERZ-C40CK621B
420		560	680	1120	250	30	43.99	9.70	50.01	P7175-ND	26.13	223.98	1866.48	10639.00	9955.00/M	9631.00/M	ERZ-C40CK681B	
460		615	750	1240	250	30	43.99	11.51	50.01	P7176-ND	26.13	223.98	1866.48	10639.00	9955.00/M	9631.00/M	ERZ-C40CK741B	
485		640	780	1290	250	30	43.99	11.51	50.01	P7177-ND	26.13	223.98	1866.48	10639.00	9955.00/M	9631.00/M	ERZ-C40CK781B	
510		670	820	1355	250	30	43.99	11.51	50.01	P7178-ND	27.18	232.98	1941.52	11067.00	10355.00/M	10018.00/M	ERZ-C40CK821B	
550		745	910	1500	250	30	43.99	11.51	50.01	P7179-ND	28.49	244.24	2035.32	11601.00	10855.00/M	10502.00/M	ERZ-C40CK911B	

Panasonic® "ZNR" Chip Type Type CF & SF Surface Mount

Features:
 • Designed for flow/reflow soldering
 • Excellent response against high steep surge voltage
 • Compact package with large withstanding surge capability
 • Low Clamping Voltage for better surge protection
 • SF Type has the ability to withstand 2 or 3 times the surge current of the CF Type

Suggestions for Handling:
 Flow Soldering: Recommended condition: 260°C within 5 seconds. Suggestions: Gas removal is recommended to keep good solderability at high mounting density of components. Reflow Soldering: Recommended condition: 230°C within 10 seconds. Suggestions: If land is too large in comparison with the size of the terminal surface, part may be ill situated at solder melting.



Type	Varistor Voltage ±10% (V)	Max. Allowable Voltage (V)		Max. Clamping Voltage Vxk(V)*	Rated Power (W)	Energy (Zms) (J)	Maximum Peak Current	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape & Reel Pricing			Panasonic Part No.
		AC	DC						100	1,000	2,000		6,000	10,000		
SF	22	14	18	43	0.02	0.9	125	P220ZSCT-ND	16.87	141.52	1143.00	P220ZSTR-ND	778.00/M	726.00/M	680.00/M	ERZ-SF2MK220
	27	17	22	53	0.02	1.0	125	P270ZSCT-ND	16.87	141.52	1143.00	P270ZSTR-ND	778.00/M	726.00/M	680.00/M	ERZ-SF2MK230
	33	20	26	65	0.02	1.2	125	P330ZSCT-ND	16.87	141.52	1143.00	P330ZSTR-ND	778.00/M	726.00/M	680.00/M	ERZ-SF2MK300
	39	25	31	77	0.02	1.5	125	P390ZSCT-ND	16.87	141.52	1143.00	P390ZSTR-ND	778.00/M	726.00/M	680.00/M	ERZ-SF2MK390
	47	30	38	93	0.02	1.8	125	P470ZSCT-ND	16.87	141.52	1143.00	P470ZSTR-ND	778.00/M	726.00/M	680.00/M	ERZ-SF2MK470
	56	35	45	110	0.02	2.2	125	P560ZSCT-ND	16.87	141.52	1143.00	P560ZSTR-ND	778.00/M	726.00/M	680.00/M	ERZ-SF2MK560
	68	40	56	135	0.02	2.5	125	P680ZSCT-ND	16.87	141.52	1143.00	P680ZSTR-ND	778.00/M	726.00/M	680.00/M	ERZ-SF2MK680
	82	50	65	135	0.25	3.5	600	P820ZSCT-ND	16.87	141.52	1143.00	P820ZSTR-ND	778.00/M	726.00/M	680.00/M	ERZ-SF2MK820
	120	75	100	200	0.25	5.0	600	P121ZSCT-ND	16.87	141.52	1143.00	P121ZSTR-ND	778.00/M	726.00/M	680.00/M	ERZ-SF2MK121
	220	140	180	360	0.25	9.0	600	P221ZSCT-ND	16.87	141.52	1143.00	P221ZSTR-ND	778.00/M	726.00/M	680.00/M	ERZ-SF2MK221
	240	150	200	395	0.25	10.0	600	P241ZSCT-ND	16.87	141.52	1143.00	P241ZSTR-ND	778.00/M	726.00/M	680.00/M	ERZ-SF2MK241
	270	175	225	455	0.25	12.0	600	P271ZSCT-ND	16.87	141.52	1143.00	P271ZSTR-ND	778.00/M	726.00/M	680.00/M	ERZ-SF2MK271
CF	22	14	18	48	0.01	0.4	50	P220ZFCT-ND	15.52	130.17	1051.00	P220ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK220
	27	17	22	60	0.01	0.5	50	P270ZFCT-ND	15.52	130.17	1051.00	P270ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK270
	33	20	26	73	0.01	0.6	50	P330ZFCT-ND	15.52	130.17	1051.00	P330ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK330
	39	25	31	86	0.01	0.8	50	P390ZFCT-ND	15.52	130.17	1051.00	P390ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK390
	47	30	38	104	0.01	1.0	50	P470ZFCT-ND	15.52	130.17	1051.00	P470ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK470
	56	35	45	123	0.01	1.0	50	P560ZFCT-ND	15.52	130.17	1051.00	P560ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK560
	68	40	56	150	0.01	1.2	50	P680ZFCT-ND	15.52	130.17	1051.00	P680ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK680
	82	50	65	145	0.1	1.7	200	P820ZFCT-ND	15.52	130.17	1051.00	P820ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK820
	100	60	85	175	0.1	2.0	200	P101ZFCT-ND	15.52	130.17	1051.00	P101ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK101
	120	75	100	210	0.1	2.5	200	P121ZFCT-ND	15.52	130.17	1051.00	P121ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK121
	150	95	125	240	0.1	3.0	200	P151ZFCT-ND	15.52	130.17	1051.00	P151ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK151
	200	130	170	355	0.1	4.0	200	P201ZFCT-ND	15.52	130.17	1051.00	P201ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK201
220	140	180	380	0.1	4.5	200	P221ZFCT-ND	15.52	130.17	1051.00	P221ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK221	
240	150	200	415	0.1	5.0	200	P241ZFCT-ND	15.52	130.17	1051.00	P241ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK241	
270	175	225	475	0.1	6.0	200	P271ZFCT-ND	15.52	130.17	1051.00	P271ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK271	
360	230	300	620	0.1	6.0	200	P361ZFCT-ND	15.52	130.17	1051.00	P361ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK361	
390	260	320	675	0.1	6.0	200	P391ZFCT-ND	15.52	130.17	1051.00	P391ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK391	
430	275	350	745	0.1	6.3	200	P431ZFCT-ND	15.52	130.17	1051.00	P431ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK431	
470	300	385	810	0.1	7.0	200	P471ZFCT-ND	15.52	130.17	1051.00	P471ZFR-ND	716.00/M	668.00/M	626.00/M	ERZ-CF2MK471	

† (8/20 us, 2 times), * Measuring Current of Maximum Clamping Voltage is as follows: For Varistor Voltage of 22 to 68 V: xA=1A, For Varistor Voltage of 82 to 470 V: xA=5A • Temperature Characteristics of Varistor Voltage 0 to -0.05%/°C • Operating Temperature Range: -40 to 85°C • Storage Temperature Range: -40 to 125°C

1-800-344-4539

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Panasonic "ZNR" Transient/Surge Absorbers Type D and E

Features: • Excellent clamping voltage characteristic and fast response time (50nsec.) when subjected to impulse surges. Eliminates the discharge lag that is indicative of gap-type arresters. • Bilateral and symmetrical V-1 characteristic curve. The ZNR can, therefore, be used both in AC and DC circuits, for protection of either positive or negative transients. Panasonic ZNRs are zinc oxide nonlinear resistors whose resistance changes as a function of the applied voltage. The ZNR has a bilateral and symmetrical V-1 characteristic curve and can therefore be used in circuits in place of back-to-back zener diodes. This gives your circuit clamping protection in either direction. The ZNR thus provides a highly reliable and economical way to protect against repeated high voltage transients and surges such as those produced by lightning, switching surges and noise spikes.

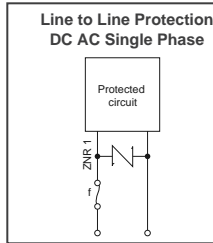
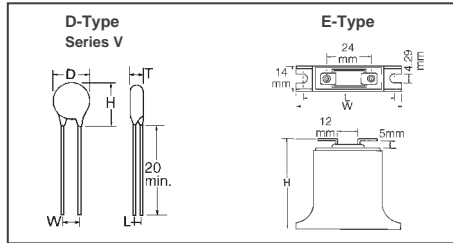
Ratings: Varistor Voltage: The voltage between two terminals with the specified measuring current C_m AC applied is called V_c . The measurement shall be made as fast as possible to avoid heat affection.

Maximum Allowable Voltage: The recommended maximum sine wave voltage (rms) or the maximum DC voltage that can be applied continuously.

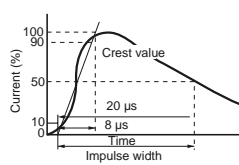
Withstanding Surge Current: The maximum current within the varistor voltage change of 510% with the standard impulse current (8/20 μ sec.) applied one time.

Maximum Clamping Voltage: The maximum voltage between two terminals with the specified standard impulse current (8/20 μ sec.) illustrated.

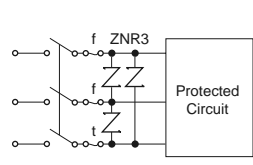
V-Series: ZNR Surge Absorbers Type D, Series V, have been put on the market as a result of the development of a new ceramic material composition, higher quality of parts and materials used in the varistor and an improvement of manufacturing process control. They have a smaller size but a larger surge current and energy ratings so that they can be used in smaller equipment and exhibit their excellent surge protection ability in severe conditions. **Features:** • Improved in "Surge Current Handling Capability" (@ 8/20 μ s, 2 times) by 1.6 to 3.0 times over the current conventional type. • Very large "Energy Handling Capability" absorbing transient overvoltages in compact sizes. • Varistor voltages 250V-1850V are listed under UL1414, UL1449 and CSA 2221 01, varistor voltages 82-150V are UL1449 only. • Wide products range for transient/surge protection on AC 100V to AC 480V nominal system with the maximum peak current ratings of 600A to 6500A (@ 8/20 μ s, 2 times) • Operating Temperature Range -40° to 85°C



Maximum Clamping Voltage



AC Three Phase

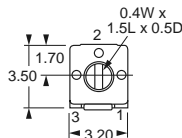
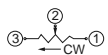


Series	Type	Max. Allow. Volt. (V)		Varistor Volt. $\pm 10\%$ (V)	Max. Clamp Volt. @ Test Current (8/20 μ sec.)		Surge Current (A)	Dimensions (mm)					Digi-Key Part No.	Pricing			Panasonic Part No.					
		AC	DC		V_c (V)	I_p (A)		D	T Max.	W ± 1	H Max.	L ± 1		1	10	100		1,000	5,000	10,000		
5	D Ser.V	11	14	18	40	1	125	7.0	4.5	5.0	10.0	1.5	P7282-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D180		
		14	18	22	48	1	125	7.0	4.5	5.0	10.0	1.5	P7283-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZV05D220		
		17	22	27	60	1	125	7.0	4.5	5.0	10.0	1.5	P7284-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D270		
		20	26	33	73	1	125	7.0	4.5	5.0	10.0	1.5	P7285-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D330		
		25	31	39	86	1	125	7.0	4.5	5.0	10.0	1.5	P7286-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D390		
		30	38	47	104	1	125	7.0	4.5	5.0	10.0	1.5	P7287-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D470		
		35	45	56	123	1	125	7.0	4.5	5.0	10.0	1.5	P7288-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D560		
		40	56	68	150	1	125	7.0	4.5	5.0	10.0	1.5	P7289-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D680		
		50	65	82	145	5	600	7.0	4.1	5.0	10.0	1.4	P7180-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D820		
		60	85	100	175	5	600	7.0	4.3	5.0	10.0	1.6	P7240-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D101		
		75	100	120	210	5	600	7.0	4.5	5.0	10.0	1.8	P7241-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D121		
		95	125	150	260	5	600	7.0	4.8	5.0	10.0	2.1	P7242-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D151		
		130	170	200	355	5	600	7.0	4.4	5.0	10.0	1.7	P7181-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D201		
		140	180	220	380	5	600	7.0	4.5	5.0	10.0	1.8	P7182-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D221		
		150	200	240	415	5	600	7.0	4.6	5.0	10.0	1.9	P7183-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D241		
		175	225	270	475	5	600	7.0	4.8	5.0	10.0	2.1	P7184-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D271		
		210	270	330	570	5	600	7.0	5.1	5.0	10.0	2.4	P7185-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D331		
		230	300	360	620	5	600	7.0	5.3	5.0	10.0	2.5	P7243-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D361		
		250	320	390	675	5	600	7.0	5.4	5.0	10.0	2.7	P7244-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D391		
		275	350	430	745	5	600	7.0	5.6	5.0	10.0	2.9	P7245-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D431		
		300	385	470	810	5	600	7.0	5.8	5.0	10.0	3.1	P7186-ND	.29	2.49	20.75	118.00	111.00/M	107.00/M	ERZ-V05D471		
		7	D Ser.V	11	14	18	36	2.5	250	8.5	4.5	5.0	11.5	1.3	P7290-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D180
				14	18	22	43	2.5	250	8.5	4.6	5.0	11.5	1.4	P7291-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D220
				17	22	27	53	2.5	250	8.5	4.7	5.0	11.5	1.5	P7292-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D270
				20	26	33	65	2.5	250	8.5	4.9	5.0	11.5	1.7	P7293-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D330
				25	31	39	77	2.5	250	8.5	4.8	5.0	11.5	1.6	P7294-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D390
				30	38	47	93	2.5	250	8.5	4.9	5.0	11.5	1.7	P7295-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D470
				35	45	56	110	2.5	250	8.5	5.0	5.0	11.5	1.8	P7296-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D560
				40	56	68	135	2.5	250	8.5	5.2	5.0	11.5	2.0	P7297-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D680
				50	65	82	135	10	1250	8.5	4.1	5.0	11.5	1.4	P7187-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D820
60	85			100	165	10	1250	8.5	4.3	5.0	11.5	1.6	P7246-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D101		
75	100			120	200	10	1250	8.5	4.5	5.0	11.5	1.8	P7247-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D121		
95	125			150	250	10	1250	8.5	4.8	5.0	11.5	2.1	P7248-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D151		
130	170			200	340	10	1250	8.5	4.4	5.0	11.5	1.7	P7188-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D201		
140	180			220	360	10	1250	8.5	4.5	5.0	11.5	1.8	P7189-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D221		
150	200			240	395	10	1250	8.5	4.6	5.0	11.5	1.9	P7190-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D241		
175	225			270	455	10	1250	8.5	4.8	5.0	11.5	2.1	P7200-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D271		
210	270			330	545	10	1250	8.5	5.1	5.0	11.5	2.4	P7201-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D331		
230	300			360	595	10	1250	8.5	5.3	5.0	11.5	2.5	P7249-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D361		
250	320			390	650	10	1250	8.5	5.4	5.0	11.5	2.7	P7250-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D391		
275	350			430	710	10	1250	8.5	5.8	5.0	11.5	2.9	P7251-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D431		
300	385			470	775	10	1250	8.5	5.8	5.0	11.5	3.1	P7202-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D471		
320	410			510	845	10	1250	8.5	6.0	5.0	11.5	3.3	P7203-ND	.32	2.73	22.75	130.00	121.00/M	117.00/M	ERZ-V07D511		
10	D Ser.V			11	14	18	36	5	500	11.5	4.6	7.5	14.5	1.3	P7298-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D180
				14	18	22	43	5	500	11.5	4.7	7.5	14.5	1.4	P7299-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D220
				17	22	27	53	5	500	11.5	4.8	7.5	14.5	1.5	P7300-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D270
				20	26	33	65	5	500	11.5	5.0	7.5	14.5	1.7	P7301-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D330
				25	31	39	77	5	500	11.5	4.9	7.5	14.5	1.6	P7302-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D390
				30	38	47	93	5	500	11.5	5.0	7.5	14.5	1.7	P7303-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D470
				35	45	56	110	5	500	11.5	5.1	7.5	14.5	1.8	P7304-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D560
				40	56	68	135	5	500	11.5	5.3	7.5	14.5	2.0	P7305-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D680
		50	65	82	135	25	2500	11.5	4.5	7.5	14.5	1.6	P7204-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D820		
		60	85	100	165	25	2500	11.5	4.7	7.5	14.5	1.8	P7252-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D101		
		75	100	120	200	25	2500	11.5	4.9	7.5	14.5	2.0	P7253-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D121		
		95	125	150	250	25	2500	11.5	5.2	7.5	14.5	2.3	P7254-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D151		
		130	170	200	340	25	2500	11.5	4.8	7.5	14.5	1.9	P7205-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D201		
		140	180	220	360	25	2500	11.5	4.9	7.5	14.5	2.0	P7206-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D221		
		150	200	240	395	25	2500	11.5	5.0	7.5	14.5	2.1	P7207-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D241		
		175	225	270	455	25	2500	11.5	5.2	7.5	14.5	2.3	P7208-ND	.46	3.96	33.00	188.00	176.00/M	170.00/M	ERZ-V10D271		
		210	270	330</																		

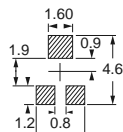
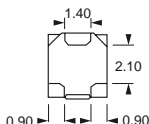
Series	Type	Max. Allow. Volt. (V)		Varistor Volt. $\pm 10\%$ (V)	Max. Clamp Volt. @ Test Current (8/20 μ sec.) (V)	Surge Current (A)	Dimensions (mm)					Digi-Key Part No.	Pricing				Panasonic Part No.			
		AC	DC				D Max.	T Max.	W ± 1	H Max.	L ± 1		1	10	100	1,000		5,000	10,000	
10	D Ser.V	625	825	1000	1650	25	2500	12.5	9.1	7.5	15.5	6.2	P7261-ND	.63	5.37	44.75	255.00	238.00/M	231.00/M	ERZ-V10D102
		680	895	1100	1815	25	2500	12.5	9.7	7.5	15.5	6.8	P7214-ND	.63	5.37	44.75	255.00	239.00/M	231.00/M	ERZ-V10D112
		1000	1465	1800	2970	25	2500	13.5	14.4	11.0	16.5	10.5	P7215-ND	1.47	12.57	104.75	597.00	559.00/M	541.00/M	ERZ-V10D182
		11	14	18	36	10	1000	15.5	4.6	7.5	18.5	1.3	P7306-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D180
		14	18	22	43	10	1000	15.5	4.7	7.5	18.5	1.4	P7307-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D220
		17	22	27	53	10	1000	15.5	4.8	7.5	18.5	1.5	P7308-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D270
		20	26	33	65	10	1000	15.5	5.0	7.5	18.5	1.7	P7309-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D330
		25	31	39	77	10	1000	15.5	4.9	7.5	18.5	1.6	P7310-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D390
		30	38	47	93	10	1000	15.5	5.0	7.5	18.5	1.7	P7311-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D470
		35	45	56	110	10	1000	15.5	5.1	7.5	18.5	1.8	P7312-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D560
14	D Ser.V	40	56	68	135	10	1000	15.5	5.3	7.5	18.5	2.0	P7313-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D680
		50	65	82	135	50	4500	15.5	4.5	7.5	18.5	1.6	P7216-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D820
		60	85	100	165	50	4500	15.5	4.7	7.5	18.5	1.8	P7262-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D101
		75	100	120	200	50	4500	15.5	4.9	7.5	18.5	2.0	P7263-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D121
		95	125	150	250	50	4500	15.5	5.2	7.5	18.5	2.3	P7264-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D151
		130	170	200	340	50	4500	15.5	4.8	7.5	18.5	1.9	P7217-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D201
		140	180	220	360	50	4500	15.5	4.9	7.5	18.5	2.0	P7218-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D221
		150	200	240	395	50	4500	15.5	5.0	7.5	18.5	2.1	P7219-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D241
		175	225	270	455	50	4500	15.5	5.2	7.5	18.5	2.3	P7220-ND	.51	4.41	36.75	209.00	196.00/M	190.00/M	ERZ-V14D271
		210	270	330	545	50	4500	15.5	5.5	7.5	18.5	2.6	P7221-ND	.62	5.31	44.25	252.00	236.00/M	228.00/M	ERZ-V14D331
20	D Ser.V	230	300	360	595	50	4500	15.5	5.7	7.5	18.5	2.8	P7265-ND	.62	5.31	44.25	252.00	236.00/M	228.00/M	ERZ-V14D361
		250	320	390	650	50	4500	15.5	5.8	7.8	18.5	2.9	P7266-ND	.62	5.31	44.25	252.00	236.00/M	228.00/M	ERZ-V14D391
		275	350	430	710	50	4500	15.5	6.0	7.5	18.5	3.1	P7267-ND	.62	5.31	44.25	252.00	236.00/M	228.00/M	ERZ-V14D431
		300	385	470	775	50	4500	15.5	6.2	7.5	18.5	3.3	P7222-ND	.62	5.31	44.25	252.00	236.00/M	228.00/M	ERZ-V14D471
		320	410	510	845	50	4500	15.5	6.4	7.5	18.5	3.5	P7223-ND	.62	5.31	44.25	252.00	236.00/M	228.00/M	ERZ-V14D511
		385	505	620	1025	50	4500	16.0	7.1	7.5	19.0	4.2	P7268-ND	1.15	9.87	82.25	469.00	439.00/M	424.00/M	ERZ-V14D621
		420	560	680	1120	50	4500	16.0	7.4	7.5	19.0	4.5	P7269-ND	1.15	9.87	82.25	469.00	439.00/M	424.00/M	ERZ-V14D681
		460	615	750	1240	50	4500	16.0	7.8	7.5	19.0	4.9	P7270-ND	1.15	9.87	82.25	469.00	439.00/M	424.00/M	ERZ-V14D751
		510	670	820	1355	50	4500	16.0	8.1	7.5	19.0	5.2	P7224-ND	1.15	9.87	82.25	469.00	439.00/M	424.00/M	ERZ-V14D821
		550	745	910	1500	50	4500	16.0	8.6	7.5	19.0	5.7	P7225-ND	1.31	11.22	93.50	533.00	499.00/M	482.00/M	ERZ-V14D911
20	D Ser.V	625	825	1000	1650	25	2500	16.0	9.1	7.5	19.0	6.2	P7271-ND	1.31	11.22	93.50	533.00	499.00/M	482.00/M	ERZ-V14D102
		680	895	1100	1815	25	2500	16.0	9.7	7.5	19.0	6.8	P7226-ND	1.31	11.22	93.50	533.00	499.00/M	482.00/M	ERZ-V14D112
		1000	1465	1800	2970	25	2500	17.0	14.4	15.0	20.5	10.5	P7227-ND	2.19	18.76	156.50	892.00	835.00/M	808.00/M	ERZ-V14D182
		11	14	18	36	20	2000	21.5	5.1	10.0	24.5	1.5	P7314-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D180
		14	18	22	43	20	2000	21.5	5.2	10.0	24.5	1.6	P7315-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D220
		17	22	27	53	20	2000	21.5	5.3	10.0	24.5	1.7	P7316-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D270
		20	26	33	65	20	2000	21.5	5.5	10.0	24.5	1.9	P7317-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D330
		25	31	39	77	20	2000	21.5	5.5	10.0	24.5	1.9	P7318-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D390
		30	38	47	93	20	2000	21.5	5.6	10.0	24.5	2.0	P7319-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D470
		35	45	56	110	20	2000	21.5	5.7	10.0	24.5	2.1	P7320-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D560
20	D Ser.V	40	56	68	135	20	2000	21.5	5.8	10.0	24.5	2.2	P7321-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D680
		50	65	82	135	100	6500	21.5	4.9	10.0	24.5	1.8	P7228-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D820
		60	85	100	165	100	6500	21.5	5.1	10.0	24.5	2.0	P7272-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D101
		75	100	120	200	100	6500	21.5	5.3	10.0	24.5	2.2	P7273-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D121
		95	125	150	250	100	6500	21.5	5.6	10.0	24.5	2.5	P7274-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D151
		130	170	200	340	100	6500	21.5	5.2	7.5	24.5	2.1	P7322-ND	.72	6.15	51.24	292.07	273.28/M	264.40/M	ERZ-V20R201
		130	170	200	340	100	6500	21.5	5.2	10.0	24.5	2.1	P7229-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D201
		140	180	220	360	100	6500	21.5	5.3	7.5	24.5	2.2	P7323-ND	.72	6.15	51.24	292.07	273.28/M	264.40/M	ERZ-V20R221
		140	180	220	360	100	6500	21.5	5.3	10.0	24.5	2.2	P7230-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D221
		150	200	240	395	100	6500	21.5	5.4	7.5	24.5	2.3	P7324-ND	.72	6.15	51.24	292.07	273.28/M	264.40/M	ERZ-V20R241
20	D Ser.V	150	200	240	395	100	6500	21.5	5.4	10.0	24.5	2.3	P7231-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D241
		175	225	270	455	100	6500	21.5	5.6	7.5	24.5	2.5	P7325-ND	.72	6.15	51.24	292.07	273.28/M	264.40/M	ERZ-V20R271
		175	225	270	455	100	6500	21.5	5.6	10.0	24.5	2.5	P7232-ND	.86	7.35	61.25	349.00	327.00/M	316.00/M	ERZ-V20D271
		210	270	330	545	100	6500	21.5	5.9	7.5	24.5	2.8	P7326-ND	1.06	9.07	75.60	430.92	403.20/M	390.10/M	ERZ-V20R331
		210	270	330	545	100	6500	21.5	5.9	10.0	24.5	2.8	P7233-ND	1.26	10.83	90.25	514.00	481.00/M	466.00/M	ERZ-V20D331
		230	300	360	595	100	6500	21.5	6.1	7.5	24.5	3.0	P7327-ND	1.06	9.07	75.60	430.92	403.20/M	390.10/M	ERZ-V20R361
		230	300	360	595	100	6500	21.5	6.1	10.0	24.5	3.0	P7275-ND	1.26	10.83	90.25	514.00	481.00/M	466.00/M	ERZ-V20D361
		250	320	390	650	100	6500	21.5	6.2	7.5	24.5	3.1	P7328-ND	1.06	9.07	75.60	430.92	403.20/M	390.10/M	ERZ-V20R391
		250	320	390	650	100	6500	21.5	6.2	10.0	24.5	3.1	P7276-ND	1.26	10.83	90.25	514.00	481.00/M	466.00/M	ERZ-V20D391
		275	350	430	710	100	6500	21.5	6.4	7.5	24.5	3.3	P7329-ND	1.06	9.07	75.60	430.92	403.20/M	390.10/M	ERZ-V20R431
20	D Ser.V	275	350	430	710	100	6500	21.5	6.4	10.0	24.5	3.3	P7277-ND	1.26	10.83	90.25	514.00	481.00/M	466.00/M	ERZ-V20D431
		300	385	470	775	100	6500	21.5	6.6	7.5	24.5	3.5	P7330-ND	1.06	9.07	75.60	430.92	403.20/M	390.10/M	ERZ-V20R471
		300	385	470	775	100	6500	21.5	6.6	10.0	24.5	3.5	P7234-ND	1.26	10.83	90.25	514.00	481.00/M	466.00/M	ERZ-V20D471
		320	410	510	845	100	6500	21.5	6.8	7.5	24.5	3.7	P7331-ND	1.06	9.07	75.60	430.92	403.20/M	390.10/M	ERZ-V20R511
		320	410	510	845	100														

Model ST3

Surface Mount, 3mm Squared Single-Turn, Cermet Potentiometers



Model ST3A — Top Adjust



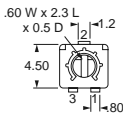
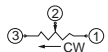
FEATURES: • Sealed to Allow for Automatic Processing • Precious Metal Alloy Contact • Chip Style Design for Compact Size. **ELECTRICAL:** Resistance Tolerance: $\pm 20\%$ Standard. Temp. Coeff. of Resistance: 10 Ohms to 50 Ohms ± 250 ppm/ $^{\circ}\text{C}$, 100 Ohms to 1 Meg. Ohm ± 100 ppm/ $^{\circ}\text{C}$. Power Rating: 0.125W at 70 $^{\circ}\text{C}$. Operating Voltage Max.: 200VDC or Power Rating, Whichever is Less. Wiper Current Max.: 100mA or Power Rating, whichever is less. Nom. Electrical Angle: 210 $^{\circ}$. Electrical Continuity: Continuous Over Full Mechanical Range. End Resistance: 1% or 2 Ohms, whichever is greater. Resolution: Essentially Infinite. Contact Resistance Variation: 1% or 3 Ohms, whichever is greater. Oper. Temp. Range: -55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$. Min. Insulation Resistance: 1000 Meg. at 500VDC. Dielectric Strength: 500VAC rms, 1 min., 1 millamp max. **MECHANICAL:** Nom. Mechanical Angle: 240 $^{\circ}$. Operating Torque: 50 gram-cm max. (.69 Oz. in.). Min. Stop Strength: 200 gram-cm min (2.8 Oz. in.). Rotational Life: 100 cycles (Δ R/R $\leq 2\%$ +3%).

Res. (Ohms)	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Digi-Key Part No.	T & R* Pricing 1,000
		1	10	100			
1K	ST3A102CT-ND	1.56	14.40	135.00	ST3A102TR-ND	ST3A102TR-ND	843.00
2K	ST3A202CT-ND	1.56	14.40	135.00	ST3A202TR-ND	ST3A202TR-ND	843.00
5K	ST3A502CT-ND	1.56	14.40	135.00	ST3A502TR-ND	ST3A502TR-ND	843.00
10K	ST3A103CT-ND	1.56	14.40	135.00	ST3A103TR-ND	ST3A103TR-ND	843.00
20K	ST3A203CT-ND	1.56	14.40	135.00	ST3A203TR-ND	ST3A203TR-ND	843.00
50K	ST3A503CT-ND	1.56	14.40	135.00	ST3A503TR-ND	ST3A503TR-ND	843.00
100K	ST3A104CT-ND	1.56	14.40	135.00	ST3A104TR-ND	ST3A104TR-ND	843.00

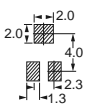
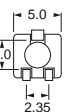
Units Marked with Resistance Mark and 1 Digit Date Code. *T&R Denotes Tape & Reel Pricing.

Model ST4

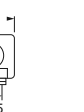
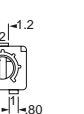
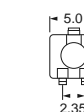
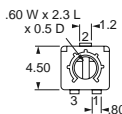
Surface Mount, 4mm Squared Single-Turn, Cermet Potentiometers



Model ST4A — J Lead, Top Adjust



Model ST4B — Gull Wing, Top Adjust



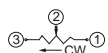
FEATURES: • Sealed to Allow for Automatic Processing • Vertical and Horizontal Adjustment Styles • Precious Metal Alloy Contact • Gull Wing, J Lead and Thru Hole Pin Styles. **ELECTRICAL:** Resistance Tolerance: $\pm 20\%$ Standard. Temp. Coeff. of Resistance: 100 Ohms to 2 Meg. ± 100 ppm, other ± 250 ppm. Power Rating: 1/4W at 70 $^{\circ}\text{C}$. Operating Voltage Max.: 200VDC or Power Rating, Whichever is Less. Wiper Current Max.: 100mA or Power Rating, Whichever is Less. Nom. Electrical Angle: 210 $^{\circ}$. Electrical Continuity: Continuous Over Full Mechanical Range. End Resistance: 1% or 2 Ohms, Whichever is Greater. Resolution: Essentially Infinite. Contact Resistance Variation: 1% or 3 Ohms, Whichever is Greater. Oper. Temp. Range: -55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$. Min. Insulation Resistance: 1000 Meg. at 500VDC for 2 minutes. Dielectric Strength: 500VAC rms, 1 min., 1 millamp max. **MECHANICAL:** Nom. Mechanical Angle: 240 $^{\circ}$. Operating Torque: 100 gram-cm max. (1.39 Oz. in.). Min. Stop Strength: 300 gram-cm min (4.17 Oz. in.). Rotational Life: 100 cycles (Δ R/R $\leq 2\%$ +3%).

Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Digi-Key Part No.	T&R* Pricing 500
			1	10	100			
1K	ST4A102CT-ND	ST4B102CT-ND	1.46	13.44	126.00	ST4A102TR-ND	ST4B102TR-ND	486.50
2K	ST4A202CT-ND	ST4B202CT-ND	1.46	13.44	126.00	ST4A202TR-ND	ST4B202TR-ND	486.50
5K	ST4A502CT-ND	ST4B502CT-ND	1.46	13.44	126.00	ST4A502TR-ND	ST4B502TR-ND	486.50
10K	ST4A103CT-ND	ST4B103CT-ND	1.46	13.44	126.00	ST4A103TR-ND	ST4B103TR-ND	486.50
20K	ST4A203CT-ND	ST4B203CT-ND	1.46	13.44	126.00	ST4A203TR-ND	ST4B203TR-ND	486.50
50K	ST4A503CT-ND	ST4B503CT-ND	1.46	13.44	126.00	ST4A503TR-ND	ST4B503TR-ND	486.50
100K	ST4A104CT-ND	ST4B104CT-ND	1.46	13.44	126.00	ST4A104TR-ND	ST4B104TR-ND	486.50

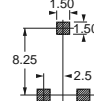
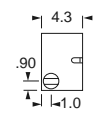
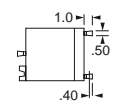
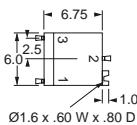
Units Marked with Resistance Mark and 1 Digit Date Code. *T&R Denotes Tape & Reel Pricing.

Model ST5

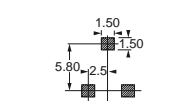
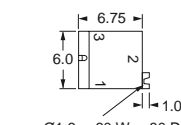
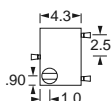
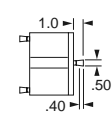
Surface Mount, 6mm Squared Multi-Turn, Cermet Potentiometers



Model ST5P — Gull Wing, Side Adjust



Model ST5W — Gull Wing, Top Adjust



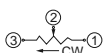
FEATURES: • Sealed to Allow for Automatic Processing • Vertical and Horizontal Mount • Precious Metal Alloy Contact. **ELECTRICAL:** Resistance Tolerance: $\pm 10\%$ Standard. Temp. Coeff. of Resistance: 100 Ohms to 2 Meg. ± 100 ppm/ $^{\circ}\text{C}$, others ± 250 ppm/ $^{\circ}\text{C}$. Power Rating: 1/4W at 85 $^{\circ}\text{C}$. Operating Voltage Max.: 200VDC or Power Rating, Whichever is Less. Wiper Current Max.: 100mA or Power Rating, Whichever is Less. Nom. Electrical Angle: 11 Turns. Electrical Continuity: Continuous Over Full Mechanical Range. End Resistance: 1% or 2 Ohms, Whichever is Greater. Resolution: Essentially Infinite. Contact Resistance Variation: 1% or 3 Ohms, Whichever is Greater. Oper. Temp. Range: -55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$. Min. Insulation Resistance: 1000 Meg. at 500VDC for 2 minutes. Dielectric Strength: 600VAC rms, 1 min., 1 millamp max. **MECHANICAL:** Nom. Mechanical Angle: 14 Turns. Operating Torque: 200 gram-cm max. (2.78 Oz. in.). Min. Stop Strength: N/A, Wiper Idles. Rotational Life: 200 cycles, 10 Ω to 200 Ω Δ R/R $\leq 0.5\%$ +3%, 500 Ω to 2M Ω (Δ R/R $\leq 0.5\%$ +2%).

Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Digi-Key Part No.	T&R* Pricing 500
			1	10	100			
1K	ST5P102CT-ND	ST5W102CT-ND	4.81	43.48	370.00	ST5P102TR-ND	ST5W102TR-ND	1645.00
2K	ST5P202CT-ND	ST5W202CT-ND	4.81	43.48	370.00	ST5P202TR-ND	ST5W202TR-ND	1645.00
5K	ST5P502CT-ND	ST5W502CT-ND	4.81	43.48	370.00	ST5P502TR-ND	ST5W502TR-ND	1645.00
10K	ST5P103CT-ND	ST5W103CT-ND	4.81	43.48	370.00	ST5P103TR-ND	ST5W103TR-ND	1645.00
20K	ST5P203CT-ND	ST5W203CT-ND	4.81	43.48	370.00	ST5P203TR-ND	ST5W203TR-ND	1645.00
50K	ST5P503CT-ND	ST5W503CT-ND	4.81	43.48	370.00	ST5P503TR-ND	ST5W503TR-ND	1645.00
100K	ST5P104CT-ND	ST5W104CT-ND	4.81	43.48	370.00	ST5P104TR-ND	ST5W104TR-ND	1645.00

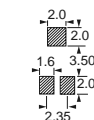
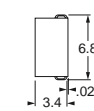
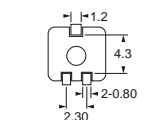
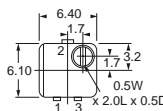
Units Marked with Resistance Mark and 1 Digit Date Code. *T&R Denotes Tape & Reel Pricing.

Model ST7

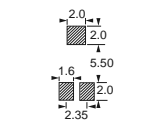
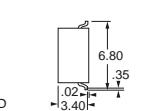
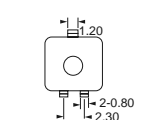
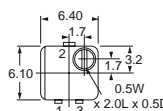
Low Profile, Surface Mount, 7mm Squared Multi-Turn, Cermet Potentiometers



Model ST7A — J Lead, Top Adjust



Model ST7B — Gull Wing, Top Adjust



FEATURES: • Sealed to Allow for Automatic Processing • Precious Metal Alloy Contact. **ELECTRICAL:** Resistance Tolerance: $\pm 20\%$ Standard. Temp. Coeff. of Resistance: 100 Ohms to 1 Meg. ± 100 ppm/ $^{\circ}\text{C}$, 50 Ω ± 250 ppm/ $^{\circ}\text{C}$. Power Rating: 1/4W at 70 $^{\circ}\text{C}$. Operating Voltage Max.: 200VDC or Power Rating, Whichever is Less. Wiper Current Max.: 100mA or Power Rating, Whichever is Less. Nom. Electrical Angle: 2.5 Turns. Electrical Continuity: Continuous Over Full Mechanical Range. End Resistance: 1% or 3 Ohms, Whichever is Greater. Resolution: Essentially Infinite. Contact Resistance Variation: 1% or 3 Ohms, Whichever is Greater. Oper. Temp. Range: -55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$. Min. Insulation Resistance: 1000 Meg. at 500VDC for 2 minutes. Dielectric Strength: 500VAC rms, 1 min., 1 millamp max. **MECHANICAL:** Nom. Mechanical Angle: 3 Turns. Operating Torque: 50 gram-cm max. (0.70 Oz. in.). Min. Stop Strength: N/A, Wiper Idles. Rotational Life: 100 cycles (Δ R/R $\leq 2.0\%$ +3%).

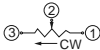
Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Digi-Key Part No.	T&R* Pricing 500
			1	10	100			
1K	ST7A102CT-ND	ST7B102CT-ND	5.33	48.18	410.00	ST7A102TR-ND	ST7B102TR-ND	1710.00
2K	ST7A202CT-ND	ST7B202CT-ND	5.33	48.18	410.00	ST7A202TR-ND	ST7B202TR-ND	1710.00
5K	ST7A502CT-ND	ST7B502CT-ND	5.33	48.18	410.00	ST7A502TR-ND	ST7B502TR-ND	1710.00
10K	ST7A103CT-ND	ST7B103CT-ND	5.33	48.18	410.00	ST7A103TR-ND	ST7B103TR-ND	1710.00
20K	ST7A203CT-ND	ST7B203CT-ND	5.33	48.18	410.00	ST7A203TR-ND	ST7B203TR-ND	1710.00
50K	ST7A503CT-ND	ST7B503CT-ND	5.33	48.18	410.00	ST7A503TR-ND	ST7B503TR-ND	1710.00
100K	ST7A104CT-ND	ST7B104CT-ND	5.33	48.18	410.00	ST7A104TR-ND	ST7B104TR-ND	1710.00

Units Marked with Resistance Mark and 1 Digit Date Code. *T&R Denotes Tape & Reel Pricing.

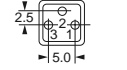
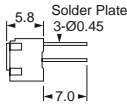
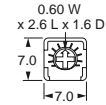
MEPCOPAL / PHILIPS Potentiometers

Model CT6

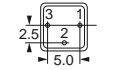
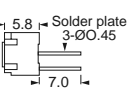
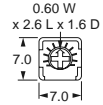
6mm Squared Single Turn, Cermet Potentiometers



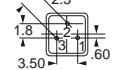
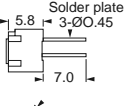
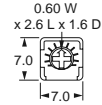
Model CT6P — Top Adjust



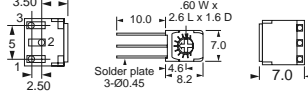
Model CT6R — Top Adjust



Model CT6W — Top Adjust



Model CT6X — Side Adjust



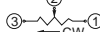
Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Pricing				
					1	10	100	500	1,000
1K	CT6P102-ND	CT6R102-ND	CT6W102-ND	CT6X102-ND	.99	8.58	77.55	330.00	577.50
2K	CT6P202-ND	CT6R202-ND	CT6W202-ND	CT6X202-ND	.99	8.58	77.55	330.00	577.50
5K	CT6P502-ND	CT6R502-ND	CT6W502-ND	CT6X502-ND	.99	8.58	77.55	330.00	577.50
10K	CT6P103-ND	CT6R103-ND	CT6W103-ND	CT6X103-ND	.99	8.58	77.55	330.00	577.50
20K	CT6P203-ND	CT6R203-ND	CT6W203-ND	CT6X203-ND	.99	8.58	77.55	330.00	577.50
50K	CT6P503-ND	CT6R503-ND	CT6W503-ND	CT6X503-ND	.99	8.58	77.55	330.00	577.50
100K	CT6P104-ND	CT6R104-ND	CT6W104-ND	CT6X104-ND	.99	8.58	77.55	330.00	577.50

Units Marked with Resistance Mark and 1 Digit Date Code.

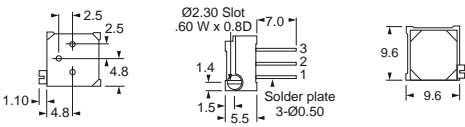
FEATURES: • Sealed to Allow for Automatic Processing • Precious Metal Alloy Contact • Highly Automated Assembly. **ELECTRICAL:** Resistance Tolerance: ±10% Standard. Temp. Coeff. of Resistance: 50 Ohms to 2 Meg. ± 100 ppm/°C, others ±250 ppm/°C. Power Rating: 1/2W at 70°C. Operating Voltage Max.: 300VDC or Power Rating, Whichever is less. Wiper Current Max.: 100mA or Power Rating, Whichever is less. **Nom. Electrical Angle:** 16 Turns. **Electrical Continuity:** Continuous Over Full Mechanical Range. **End Resistance:** 1% or 2 Ohms, Whichever is Greater. **Resolution:** Essentially Infinite. **Contact Resistance Variation:** 1% or 3 Ohms, Whichever is Greater. **Oper. Temp. Range:** -55°C to +125°C. **Min. Insulation Resistance:** 1000 Meg. at 500VDC for 2 minutes. **Dielectric Strength:** 900VAC rms, 1 min., 1 milliamper max. **MECHANICAL:** Nom. Mechanical Angle: 260°. **Operating Torque:** 20-200 gram-cm max. (0.27-2.78 Oz. in.). **Min. Stop Strength:** 500 gram-cm min. (6.94 Oz.-in.). **Rotational Life:** 200 cycles (▲ R/R ≤ 2 ± 3%) **Solderability:** Mil-Std-202 Method 208. **Min. Terminal Strength:** 1 Kg.

Model CT9P

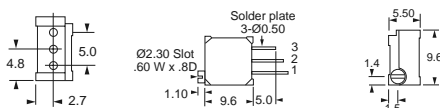
9mm Squared Multi-Turn, Cermet Potentiometers



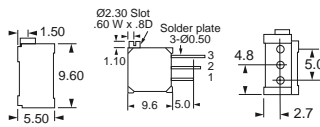
Model CT9P — Side Adjust



Model CT9W — Top Adjust



Model CT9X — Side Adjust

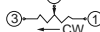


Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Pricing					
				1	10	100	500	1,000	5,000
1K	CT9P102-ND	CT9W102-ND	CT9X102-ND	1.65	15.51	132.00	610.50	1069.20	976.80/M
2K	CT9P202-ND	CT9W202-ND	CT9X202-ND	1.65	15.51	132.00	610.50	1069.20	976.80/M
5K	CT9P502-ND	CT9W502-ND	CT9X502-ND	1.65	15.51	132.00	610.50	1069.20	976.80/M
10K	CT9P103-ND	CT9W103-ND	CT9X103-ND	1.65	15.51	132.00	610.50	1069.20	976.80/M
20K	CT9P203-ND	CT9W203-ND	CT9X203-ND	1.65	15.51	132.00	610.50	1069.20	976.80/M
50K	CT9P503-ND	CT9W503-ND	CT9X503-ND	1.65	15.51	132.00	610.50	1069.20	976.80/M
100K	CT9P104-ND	CT9W104-ND	CT9X104-ND	1.65	15.51	132.00	610.50	1069.20	976.80/M

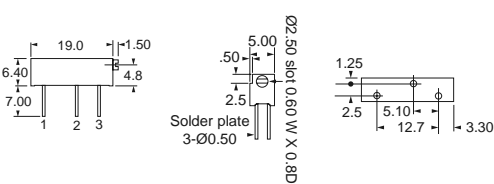
Units Marked with Resistance Mark and 1 Digit Date Code.

Model CT20

20mm Rectangular Multi-Turn, Cermet Potentiometers



Model CT20P — Side Adjust



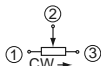
FEATURES: • Sealed to Allow for Automatic Processing • Precious Metal Alloy Contact • Highly Automated Assembly. **ELECTRICAL:** Resistance Tolerance: ±10% Standard. Temp. Coeff. of Resistance: 50 Ohms to 2 Meg. ± 100 ppm/°C, others ± 250 ppm/°C. Power Rating: 3/4W at 70°C. Operating Voltage Max.: 300VDC or Power Rating, Whichever is less. Wiper Current Max.: 100mA or Power Rating, Whichever is less. **Nom. Electrical Angle:** 12 Turns. **Electrical Continuity:** Continuous Over Full Mechanical Range. **End Resistance:** 1% or 2 Ohms, Whichever is Greater. **Resolution:** Essentially Infinite. **Contact Resistance Variation:** 1% or 3 Ohms, Whichever is Greater. **Oper. Temp. Range:** -55°C to +125°C. **Min. Insulation Resistance:** 1000 Meg. at 500VDC for 2 min. **Dielectric Strength:** 600VAC rms, 1 min., 1 milliamper max. **MECHANICAL:** Nom. Mechanical Angle: 15 Turns. **Operating Torque:** 360 gram-cm max. (5 Oz.-in.). **Min. Stop Strength:** N/A, Wiper Idles. **Rotational Life:** 200 cycles, 10Ω - 200Ω. ▲ R/R ≤ ± (0.5Ω ± 3%), 500Ω - 5MΩ ▲ R/R ≤ ± (0.5Ω ± 2%). **Solderability:** Mil-Std-202 Method 208.

Res. (Ohms)	Digi-Key Part No.	1	10	100	Pricing		
					500	1,000	5,000
1K	CT20P102-ND	1.65	15.34	138.65	590.00	1062.00	979.40/M
2K	CT20P202-ND	1.65	15.34	138.65	590.00	1062.00	979.40/M
5K	CT20P502-ND	1.65	15.34	138.65	590.00	1062.00	979.40/M
10K	CT20P103-ND	1.65	15.34	138.65	590.00	1062.00	979.40/M
20K	CT20P203-ND	1.65	15.34	138.65	590.00	1062.00	979.40/M
50K	CT20P503-ND	1.65	15.34	138.65	590.00	1062.00	979.40/M
100K	CT20P104-ND	1.65	15.34	138.65	590.00	1062.00	979.40/M

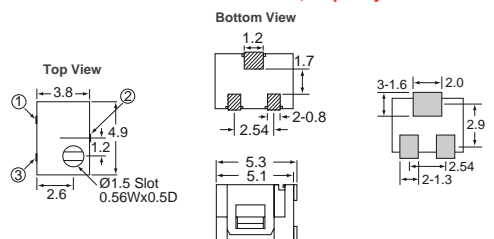
Units Marked with Resistance Mark and 1 Digit Date Code.

Model SM4

NEW! Surface Mount 4mm, 12-Turn, Sealed Cermet Potentiometers



Model SM4W — J Lead, Top Adjust



FEATURES: • Sealed to Allow for Automatic Processing • Stable Cermet Element • Precious Metal Contact. **ELECTRICAL:** Resistance Range: 10Ω - 2MΩ. Resistance Tolerance: ±10%. Max. Temp. Coefficient: ± 100 ppm/°C. Power Rating: 0.25 W at 85°C, 0 W at 150°C. Max. Input Voltage: 300VDC or Power Rating, whichever is less. Max. Wiper Current: 100mA or Power Rating, whichever is less. Max. End Resistance: 1% or 2Ω, whichever is greater. **Contact Resistance Variation:** 1% or 3Ω, whichever is greater. **Operating Temp. Range:** -65°C to +150°C. **Min. Insulation Resistance:** 1000MΩ at 500VDC. **Dielectric Strength:** 600VAC, 1 minute. **MECHANICAL:** Mechanical Turn: 12 Turns. **Operating Torque:** 20-300 g.cm. **Min. Stop Strength:** Clutch Action. **Rotational Life:** 200 cycles, ±3Ω ±3%.

Res. (Ohms)	Digi-Key Part No.	1	10	100	Pricing		
					500	1,000	5,000
100	SM4W101-ND	4.08	35.36	319.60	1360.00	2380.00	2040.00/M
200	SM4W201-ND	4.08	35.36	319.60	1360.00	2380.00	2040.00/M
500	SM4W501-ND	4.08	35.36	319.60	1360.00	2380.00	2040.00/M
1K	SM4W102-ND	4.08	35.36	319.60	1360.00	2380.00	2040.00/M
2K	SM4W202-ND	4.08	35.36	319.60	1360.00	2380.00	2040.00/M
5K	SM4W502-ND	4.08	35.36	319.60	1360.00	2380.00	2040.00/M
10K	SM4W103-ND	4.08	35.36	319.60	1360.00	2380.00	2040.00/M
20K	SM4W203-ND	4.08	35.36	319.60	1360.00	2380.00	2040.00/M
50K	SM4W503-ND	4.08	35.36	319.60	1360.00	2380.00	2040.00/M
100K	SM4W104-ND	4.08	35.36	319.60	1360.00	2380.00	2040.00/M

Units Marked with Resistance Code and 2-Digit Date Code.

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

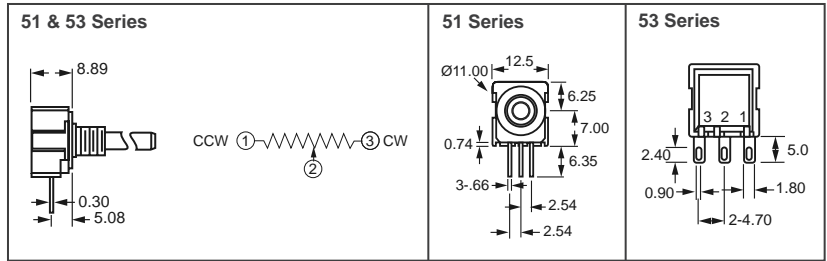


NEW! Precision Potentiometers

SERIES 50

Sealed 1/2" (12.5mm) Square Control

- **Effective Electrical Angle:** 270° ±5°
- **Contact Resistance Variation:** 2.0%
- **Dielectric Withstanding Voltage:** Sea Level: 1,500 VAC minimum
70,000 Feet: 500 VAC minimum
- **Insulation Resistance:** 1,000 megohms minimum



Shaft/Bushing Styles

Fig. 1

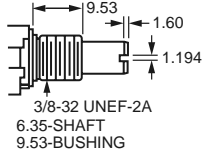
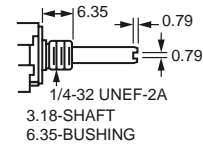


Fig. 2

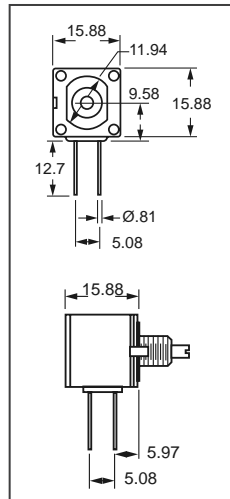


Bushing Fig.	Taper	Resistance Tolerance	Ohms	Watts	Element Material	Digi-Key Part No.	Pricing			
							1	25	50	100
2	Linear	±10%	1K	1	Cermet	51CAD-E28-A10-ND	7.39	143.75	235.00	398.00
2	Linear	±10%	5K	1	Cermet	51CAD-E28-A13-ND	7.39	143.75	235.00	398.00
1	Audio	±20%	10K	1/4	Conductive Plastic	51AAD-B28-D15-ND	8.68	169.16	276.21	467.44
2	Audio	±20%	10K	1/4	Conductive Plastic	51CAD-E28-D15-ND	7.97	155.25	253.50	429.00
2	Linear	±20%	10K	1/2	Conductive Plastic	51CAD-E24-B15-ND	7.39	143.75	235.00	398.00
1	Linear	±10%	10K	1	Cermet	51AAD-B24-A15-ND	7.39	143.75	235.00	398.00
2	Linear	±10%	10K	1	Cermet	51CAD-E24-A15-ND	7.39	143.75	235.00	398.00
2	Linear	±10%	100K	1	Cermet	51CAD-E28-A20-ND	7.39	143.75	235.00	398.00
1	Linear	±20%	10K	1/2	Conductive Plastic	53AAA-B28-B15-ND	8.51	165.75	270.50	458.00

SERIES 81

2 Watt Cermet - 5/8" (15.88mm) Square Single - Turn Conductive Plastic

- **Resistance Tolerance:** ±10%
- **Continuity:** Maintained for full mechanical angle
- **Effective Electrical Angle:** 240° ±6°
- **Contact Resistance Variation:** ±1% or 3 ohms (whichever is greater)
- **Theoretical Resolution:** Essentially Infinite
- **Dielectric Withstanding Voltage:** MIL-STD-202, Method 301 (Sea Level: 1500 VAC minimum; 70,000 Feet: 500 VAC minimum)
- **Insulation Resistance (500 VDC):** 1,000 megohms minimum



Shaft/Bushing Styles

Fig. 1

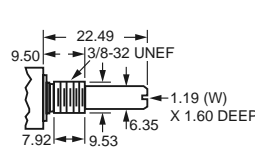
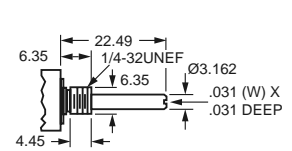


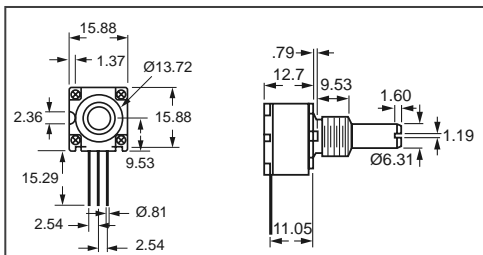
Fig. 2



Bushing Fig.	Ohms	Digi-Key Part No.	Pricing			
			1	25	50	100
1	1K	81A1A-B28-A10-ND	9.02	175.50	287.00	485.00
1	5K	81A1A-B28-A13-ND	9.02	175.50	287.00	485.00
2	5K	81C1A-E28-A13-ND	9.02	175.50	287.00	485.00
1	10K	81A1A-B28-A15-ND	9.02	175.50	287.00	485.00
2	10K	81C1A-E28-A15-ND	9.02	175.50	287.00	485.00
2	100K	81C1A-E28-A20-ND	9.02	175.50	287.00	485.00

SERIES 91

5/8" Square Single-Turn Conductive Plastic - Bushing Mount



- **Resistance Tolerance:** ±20%
- **Continuity:** Maintained for full mechanical angle
- **Effective Electrical Angle:** 240° ±5°
- **Contact Resistance Variation:** ±1%
- **Dielectric Withstanding Voltage:** MIL-STD-202, Method 301 (Sea Level: 1,500 VAC minimum; 70,000 Feet: 500 VAC minimum)
- **Insulation Resistance (500 VDC):** 1,000 megohms minimum
- **Theoretical Resolution:** Essentially infinite

Taper	Ohms	Watts	Shaft Length From Mtg. Surface inches (mm)	Digi-Key Part No.	Pricing			
					1	25	50	100
Linear	1K	1/2	7/8" (22.23)	91A1A-B28-B10-ND	4.74	92.25	150.50	255.00
Linear	5K	1/2	3/4" (19.05)	91A1A-B24-B13-ND	4.74	92.25	150.50	255.00
Linear	5K	1/2	7/8" (22.23)	91A1A-B28-B13-ND	4.74	92.25	150.50	255.00
Audio	10K	1/4	3/4" (19.05)	91A1A-B24-D15-ND	5.37	104.50	171.00	289.00
Linear	10K	1/2	3/4" (19.05)	91A1A-B24-B15-ND	4.74	92.25	150.50	255.00
Linear	10K	1/2	7/8" (22.23)	91A1A-B28-B15-ND	4.74	92.25	150.50	255.00

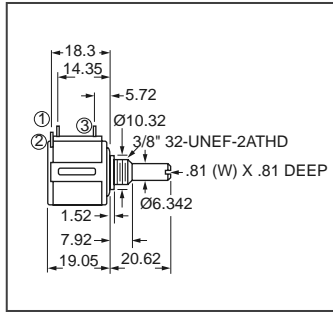


NEW! Precision Potentiometers

SERIES 3540/3541

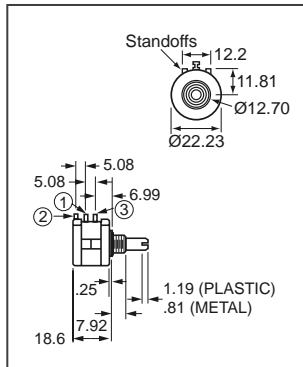
2 Watt - Wirewound/Hybrित्रon®

- Resistance Tolerance: ±5% for 3540 series ±10% for 3541 series
- Effective Electrical Angle: 3600° +10°, -0°
- Dielectric Withstanding Voltage: MIL-STD-202, Method 301 (Sea Level: 1,000 VAC minimum)
- Insulation Resistance (500 VDC): 1,000 megohms minimum

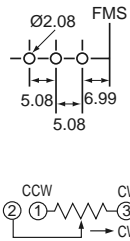


Ohms	Reso-lution %	Digi-Key Part No.	Pricing			
			1	50	100	500
<i>Wirewound</i>						
1K	.027	3540S-1-102-ND	13.38	542.00	990.00	4685.01
5K	.021	3540S-1-502-ND	13.38	542.00	990.00	4685.01
10K	.019	3540S-1-103-ND	13.38	542.00	990.00	4685.01
100K	.008	3540S-1-104-ND	16.72	677.00	1237.00	5849.99
<i>Hybrित्रon</i>						
1K	Essen-tially	3541H-1-102-ND	33.28	1347.50	2462.00	11645.00
5K		3541H-1-502-ND	33.28	1347.50	2462.00	11645.00
10K	Infinite	3541H-1-103-ND	33.28	1347.50	2462.00	11645.00

SERIES 3590 2 Watt - Wirewound



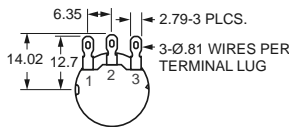
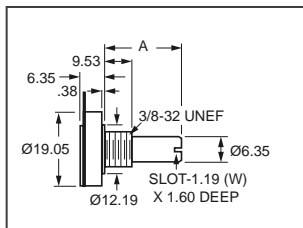
Recommended PC Board Mtg. Hole Locations



- Resistance Tolerance: ±5%
- Effective Electrical Angle: 3600° +10°, -0°
- Dielectric Withstanding Voltage: MIL-STD-202, Method 301 (Sea Level: 2,000 VAC minimum)
- Insulation Resistance (500 VDC): 1,000 megohms minimum

Ohms	Resolu-tion%	Bushing Type & Dim.	Shaft Length From Mtg. Surface Inches (mm)	Digi-Key Part No.	Pricing			
					1	50	100	500
1K	.029	3/8" x 5/16" Plastic	.2480" (6.30)	3590S-1-102-ND	8.10	328.00	599.00	2835.00
5K	.025			3590S-1-502-ND	8.10	328.00	599.00	2835.00
10K	.020			3590S-1-103-ND	8.10	328.00	599.00	2835.00
20K	.016			3590S-1-203-ND	8.10	328.00	599.00	2835.00
50K	.013			3590S-1-503-ND	10.24	414.50	758.00	3585.00
100K	.009			3590S-1-104-ND	11.08	448.50	820.00	3879.99
1K	.029	3/8" x 5/16" Metal	.2497" (6.34)	3590S-2-102-ND	10.02	406.00	741.00	3505.00
5K	.025			3590S-2-502-ND	10.02	406.00	741.00	3505.00
10K	.020			3590S-2-103-ND	10.02	406.00	741.00	3505.00
20K	.016			3590S-2-203-ND	10.02	406.00	741.00	3505.00
50K	.013			3590S-2-503-ND	12.10	490.00	895.00	4235.00
100K	.009			3590S-2-104-ND	12.98	525.50	961.00	4545.01

SERIES 3852 2 Watt Cermet 3/4" (19.05mm) Diameter Panel Control



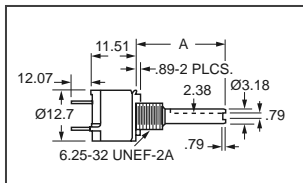
- Resistance Tolerance: ±10%
- Continuity: Maintained for full mechanical angle
- Effective Electrical Angle: 250° ±5°
- Contact Resistance Variation: ±3% of total resistance or 3 ohms (whichever is greater)
- Dielectric Withstanding Voltage: MIL-STD-202, Method 301 (Sea Level: 900 VAC minimum; 70,000 Feet: 350 VAC minimum)
- Insulation Resistance (500 VDC): 1,000 megohms minimum

Ohms	Dim. A (mm)	Shaft Dia. (mm)	Digi-Key Part No.	Pricing				
				1	25	50	100	250
1K	12.7	3.18	3852A-162-102A-ND	9.16	178.25	291.50	493.00	1145.00
1K	22.20	6.35	3852A-282-102A-ND	9.16	178.25	291.50	493.00	1145.00
10K	22.20	6.35	3852A-282-103A-ND	9.16	178.25	291.50	493.00	1145.00

SERIES 3862

1 Watt Cermet 1/2" (12.5mm) Diameter Single-Turn Panel Control

- Resistance Tolerance: ±10%
- Continuity: Maintained for full mechanical angle
- Effective Electrical Angle: 260° ±10°
- Contact Resistance Variation: ±3% of total resistance
- Theoretical Resolution: Essentially infinite
- Dielectric Withstanding Voltage: MIL-STD-202, Method 301 (Sea Level: 750 VAC minimum; 70,000 Feet: 350 VAC minimum)
- Insulation Resistance (500 VDC): 1,000 megohms minimum

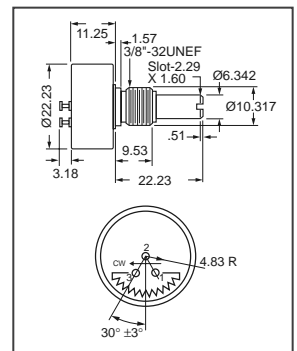


Ohms	Dim. A (mm)	Shaft Dia. (mm)	Digi-Key Part No.	Pricing			
				1	25	50	250
10K	12.7	3.18	3862C-162-103A-ND	14.69	286.00	467.00	1837.50
10K	22.20	6.35	3862C-282-103A-ND	14.69	286.00	467.00	1837.50

SERIES 6639

1 Watt Conductive Plastic - Bushing Mount

- Resistance Tolerance: Standard ±15%
- Resolution: Essentially infinite
- Effective Electrical Angle: 340° +3°
- End Voltage: 0.5% maximum
- Output Smoothness: 0.1%
- Dielectric Withstanding Voltage: MIL-STD-202, Method 301 (Sea Level: 750 VAC minimum)
- Insulation Resistance (500 VDC): 500 megohms minimum



Ohms	Digi-Key Part No.	Pricing			
		1	50	100	500
1K	6639S-1-102-ND	13.61	551.00	1007.00	4765.00
5K	6639S-1-502-ND	13.61	551.00	1007.00	4765.00
10K	6639S-1-103-ND	13.61	551.00	1007.00	4765.00

1-800-344-4539

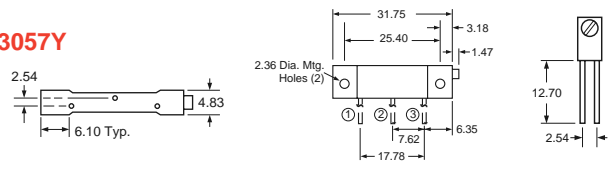
218-681-6674 • FAX: 218-681-3380 • www.digikey.com



Trimmer Potentiometers

SERIES 1-1/4" (31.75mm) Rectangular/Multiturn (22) 3057 Wirewound/Industrial/Sealed

3057Y



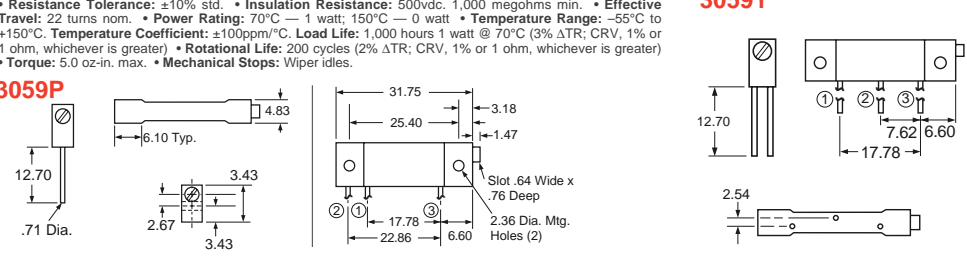
- Resistance Tolerance: $\pm 5\%$ std.
- Insulation Resistance: 500vdc, 1,000 M Ω min.
- Adjustment Travel: 22 turns nom.
- Power Rating: 70°C — 1 watt; 150°C — 0 watt.
- Temperature Range: -55°C to +150°C.
- Temperature Coefficient: ± 50 ppm/°C.
- Load Life: 1,000 hours 1 watt @ 70°C (2% Δ TR).
- Rotational Life: 200 cycles (2% Δ TR).
- Torque: 5.0 oz-in. max.
- Mechanical Stops: Wiper idles.

Res. (Ohms)	Digi-Key Part No.	Nominal Resolution (Percent)
200	3057Y-201-ND	0.86
500	3057Y-501-ND	0.89
1K	3057Y-102-ND	0.72
2K	3057Y-202-ND	0.58
5K	3057Y-502-ND	0.43
10K	3057Y-103-ND	0.34
20K	3057Y-203-ND	0.31

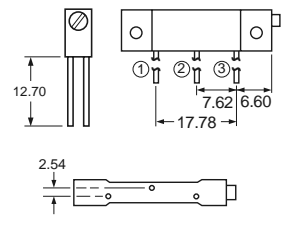
Series	Pricing		
	1	10	50
3057Y	16.36	148.75	639.63

SERIES 1-1/4" (31.75mm) Rectangular/Multiturn (22) 3059 Cermet/Industrial/Sealed

3059P



3059Y

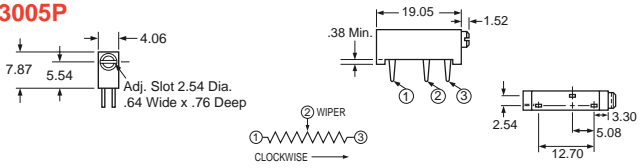


Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.
100	3059P-101-ND	3059Y-101-ND
200	3059P-201-ND	3059Y-201-ND
500	3059P-501-ND	3059Y-501-ND
1K	3059P-102-ND	3059Y-102-ND
2K	3059P-202-ND	3059Y-202-ND
5K	3059P-502-ND	3059Y-502-ND
10K	3059P-103-ND	3059Y-103-ND
20K	3059P-203-ND	3059Y-203-ND
50K	3059P-503-ND	3059Y-503-ND
100K	3059P-104-ND	3059Y-104-ND
200K	3059P-204-ND	3059Y-204-ND
500K	3059P-504-ND	3059Y-504-ND
1M	3059P-105-ND	3059Y-105-ND

Series	Pricing		
	1	10	50
3059P/3059Y	6.49	59.00	253.70

SERIES 3/4" (19.05mm) Rectangular/Multiturn (20) 3005 Wirewound/Industrial/Sealed

3005P



Sealed to prevent contamination from fluxing, soldering and cleaning.

- Resistance Tolerance: $\pm 10\%$ std.
- Insulation Resistance: 500vdc, 1,000 M Ω min.
- Adjustment Travel: 20 turns nom.
- Power Rating: 70°C — 1 watt; 125°C — 0 watt.
- Temperature Range: -65°C to +125°C.
- Temperature Coefficient: ± 50 ppm/°C.
- Load Life: 1,000 hours 1 watt @ 70°C (3% Δ TR).
- Rotational Life: 200 cycles (4% Δ TR).
- Torque: 5.0 oz-in. max.
- Mechanical Stops: Wiper idles.

Res. (Ohms)	Digi-Key Part No.	Nominal Resolution (Percent)
100	3005P-101-ND	0.8
200	3005P-201-ND	0.7
500	3005P-501-ND	0.5
1K	3005P-102-ND	0.5
2K	3005P-202-ND	0.4
5K	3005P-502-ND	0.3
10K	3005P-103-ND	0.3
20K	3005P-203-ND	0.2

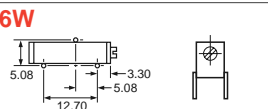
Series	Pricing		
	1	10	50
3005P	8.39	76.25	327.88

SERIES 3/4" (19.05mm) Rectangular/Multiturn (15) 3006 Cermet/Industrial/Sealed

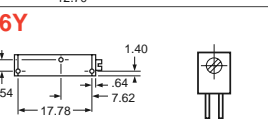
3006P



3006W



3006Y



- Resistance Tolerance: $\pm 10\%$ std.
- Insulation Resistance: 500vdc, 1,000 megohms minimum
- Adjustment Angle: 15 turns nominal
- Power Rating (400 volts max.): 70°C — 0.75 watt; 150°C — 0 watt
- Temperature Range: -55°C to +125°C
- Temperature Coefficient: ± 100 ppm/°C.
- Load Life: 1,000 hours 0.75 watt @ 70°C (4% Δ TR).
- Rotational Life: 200 cycles (3% Δ TR; CRV, 1% or 1 ohm, whichever is greater)
- Torque: 5.0 oz-in. max.
- Mechanical Stops: Wiper idles.

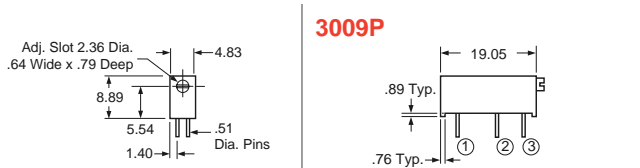
Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.
100	3006P-101-ND*	3006W-101-ND	3006Y-101-ND
200	3006P-201-ND*	3006W-201-ND	3006Y-201-ND
500	3006P-501-ND*	3006W-501-ND	3006Y-501-ND
1K	3006P-102-ND*	3006W-102-ND	3006Y-102-ND
2K	3006P-202-ND*	3006W-202-ND	3006Y-202-ND
5K	3006P-502-ND*	3006W-502-ND	3006Y-502-ND
10K	3006P-103-ND*	3006W-103-ND	3006Y-103-ND
20K	3006P-203-ND*	3006W-203-ND	3006Y-203-ND
25K	3006P-253-ND*	3006W-253-ND	3006Y-253-ND
50K	3006P-503-ND*	3006W-503-ND	3006Y-503-ND
100K	3006P-104-ND*	3006W-104-ND	3006Y-104-ND
200K	3006P-204-ND*	3006W-204-ND	3006Y-204-ND
250K	3006P-254-ND	3006W-254-ND	3006Y-254-ND
500K	3006P-504-ND*	3006W-504-ND	3006Y-504-ND
1M	3006P-105-ND*	3006W-105-ND	3006Y-105-ND
2M	3006P-205-ND*	3006W-205-ND	3006Y-205-ND

Series	Pricing		
	1	10	50
3006P	1.73	15.75	67.73
3006W/3006Y	1.87	17.00	73.10

* 3006P-KIT-ND Digi-Key® Series 3006 Potentiometers Kit
10 each of values denoted (150 total pieces). Notebook style storage case & bin storage guide included\$159.00

SERIES 3/4" (19.05mm) Rectangular/Multiturn (15) 3009 Cermet/Industrial/Sealed

3009P

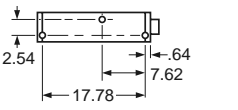


- Resistance Tolerance: $\pm 10\%$ std.
- Insulation Resistance: 500vdc, 1,000 megohms minimum
- Adjustment Travel: 15 turns nominal
- Temperature Coefficient: ± 100 ppm/°C.
- Load Life: 1,000 hours 0.75 watt @ 70°C (4% Δ TR)
- Rotational Life: 200 cycles (3% Δ TR; CRV, 1% or 1 ohm, whichever is greater)
- Torque: 5.0 oz-in. max.
- Mechanical Stops: Wiper idles.

Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.
100	3009P-101-ND	3009Y-101-ND
200	3009P-201-ND	3009Y-201-ND
500	3009P-501-ND	3009Y-501-ND
1K	3009P-102-ND	3009Y-102-ND
2K	3009P-202-ND	3009Y-202-ND
5K	3009P-502-ND	3009Y-502-ND
10K	3009P-103-ND	3009Y-103-ND
20K	3009P-203-ND	3009Y-203-ND
25K	3009P-253-ND	3009Y-253-ND
50K	3009P-503-ND	3009Y-503-ND
100K	3009P-104-ND	3009Y-104-ND
200K	3009P-204-ND	3009Y-204-ND
500K	3009P-504-ND	3009Y-504-ND
1M	3009P-105-ND	3009Y-105-ND

Series	Pricing		
	1	10	50
3009P/3009Y	2.72	24.75	106.43

3009Y



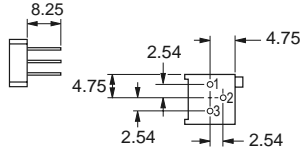
1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

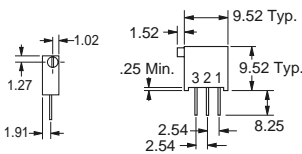
BOURNS INC. Trimmer Potentiometers

SERIES 3292 3/8" (9.52mm) Square/Multiturn (25) Cermet/Industrial/Sealed

3292P

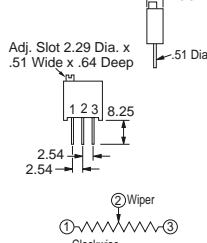


3292X



Resistance Tolerance: $\pm 10\%$ std. Insulation Resistance: 500vdc, 1,000 megohms min. Effective Travel: 25 turns nom. Power Rating (400 volts max.): 85°C — 0.5 watt; 150°C — 0 watt. Temperature Range: -65°C to +150°C. Temperature Coefficient: ± 100 ppm/°C. Load Life: 1,000 hours 0.5 watt @ 85°C (2% Δ TR; CRV, 3% or 3 ohms, whichever is greater). Rotational Life: 200 cycles (2% Δ TR; CRV, 3% or 3 ohms, whichever is greater). Torque: 5.0 oz-in. max. Mechanical Stops: Wiper idles.

3292W

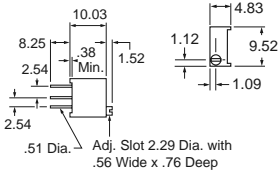


Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.
100	3292P-101-ND	3292W-101-ND	3292X-101-ND
200	3292P-201-ND	3292W-201-ND	3292X-201-ND
500	3292P-501-ND	3292W-501-ND	3292X-501-ND
1K	3292P-102-ND	3292W-102-ND	3292X-102-ND
2K	3292P-202-ND	3292W-202-ND	3292X-202-ND
5K	3292P-502-ND	3292W-502-ND	3292X-502-ND
10K	3292P-103-ND	3292W-103-ND	3292X-103-ND
20K	3292P-203-ND	3292W-203-ND	3292X-203-ND
50K	3292P-503-ND	3292W-503-ND	3292X-503-ND
100K	3292P-104-ND	3292W-104-ND	3292X-104-ND
200K	3292P-204-ND	3292W-204-ND	3292X-204-ND
500K	3292P-504-ND	3292W-504-ND	3292X-504-ND
1M	3292P-105-ND	3292W-105-ND	3292X-105-ND

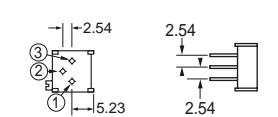
Series	Pricing		
	1	10	50
3292P/3292W/3292X	15.51	141.00	606.30

SERIES 3296 3/8" (9.52mm) Square/Multiturn (25) Cermet/Industrial/Sealed

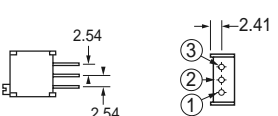
Common Dimensions



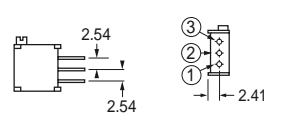
3296P



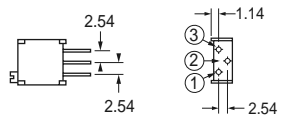
3296W



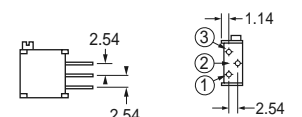
3296X



3296Y



3296Z



Resistance Tolerance: $\pm 10\%$ std. Insulation Resistance: 500vdc, 1,000 megohms min. Effective Travel: 25 turns nom. Power Rating (300 volts max.): 70°C — 0.5 watt; 125°C — 0 watt. Temperature Range: -55°C to +125°C. Temperature Coefficient: ± 100 ppm/°C. Load Life: 1,000 hours 0.5 watt @ 70°C (3% Δ TR; CRV, 3% or 3 ohms, whichever is greater). Rotational Life: 200 cycles (4% Δ TR; CRV, 3% or 3 ohms, whichever is greater). Torque: 3.0 oz-in. max. Mechanical Stops: Wiper idles.

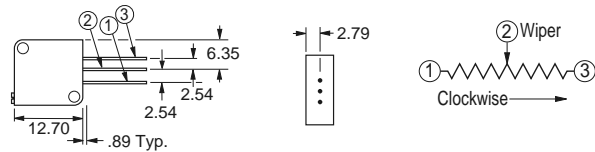
Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.
10	3296P-100-ND*	3296W-100-ND*	3296X-100-ND*	3296Y-100-ND*	3296Z-100-ND*
20	3296P-200-ND	3296W-200-ND	3296X-200-ND	3296Y-200-ND	3296Z-200-ND
50	3296P-500-ND*	3296W-500-ND*	3296X-500-ND*	3296Y-500-ND*	3296Z-500-ND*
100	3296P-101-ND*	3296W-101-ND*	3296X-101-ND*	3296Y-101-ND*	3296Z-101-ND*
200	3296P-201-ND	3296W-201-ND	3296X-201-ND	3296Y-201-ND	3296Z-201-ND
500	3296P-501-ND*	3296W-501-ND*	3296X-501-ND*	3296Y-501-ND*	3296Z-501-ND*
1K	3296P-102-ND*	3296W-102-ND*	3296X-102-ND*	3296Y-102-ND*	3296Z-102-ND*
2K	3296P-202-ND*	3296W-202-ND*	3296X-202-ND*	3296Y-202-ND*	3296Z-202-ND*
5K	3296P-502-ND*	3296W-502-ND*	3296X-502-ND*	3296Y-502-ND*	3296Z-502-ND*
10K	3296P-103-ND*	3296W-103-ND*	3296X-103-ND*	3296Y-103-ND*	3296Z-103-ND*
20K	3296P-203-ND*	3296W-203-ND*	3296X-203-ND*	3296Y-203-ND*	3296Z-203-ND*
25K	3296P-253-ND	3296W-253-ND	3296X-253-ND	3296Y-253-ND	3296Z-253-ND
50K	3296P-503-ND*	3296W-503-ND*	3296X-503-ND*	3296Y-503-ND*	3296Z-503-ND*
100K	3296P-104-ND*	3296W-104-ND*	3296X-104-ND*	3296Y-104-ND*	3296Z-104-ND*
200K	3296P-204-ND*	3296W-204-ND*	3296X-204-ND*	3296Y-204-ND*	3296Z-204-ND*
250K	3296P-254-ND	3296W-254-ND	3296X-254-ND	3296Y-254-ND	3296Z-254-ND
500K	3296P-504-ND*	3296W-504-ND*	3296X-504-ND*	3296Y-504-ND*	3296Z-504-ND*
1M	3296P-105-ND*	3296W-105-ND*	3296X-105-ND*	3296Y-105-ND*	3296Z-105-ND*
2M	3296P-205-ND*	3296W-205-ND*	3296X-205-ND*	3296Y-205-ND*	3296Z-205-ND*
5M	3296P-505-ND	3296W-505-ND	3296X-505-ND	—	3296Z-505-ND

Series	Pricing		
	1	10	50
3296P/3296Z	2.70	24.50	105.35
3296W/3296X/3296Y	2.50	22.75	97.83

* 3296□ -KIT-ND Digi-Key® Series 3296 Trimmer Potentiometer Kit
5 each of values denoted in series (75 total pieces). Notebook style case and bin storage guide included.
For complete number, substitute corresponding letter (P,W,X,Y,Z) for □. \$139.00

SERIES 3250 1/2" (12.70mm) Square/Multiturn (25) Wirewound/Sealed

3250W



Resistance Tolerance: $\pm 5\%$ std.
Insulation Resistance: 500vdc, 1,000 megohms min.
Adjustment Travel: 25 turns nom.
Power Rating: 85°C — 1 watt; 150°C — 0 watt.
Temperature Range: -65°C to +150°C.
Temperature Coefficient: ± 70 ppm/°C.
Load Life: 1,000 hours 1 watt @ 85°C (2% Δ TR; ENR, 500 ohms).
Rotational Life: 200 cycles (2% Δ TR; ENR, 500 ohms).
Torque: 5.0 oz-in. max.
Mechanical Stops: Wiper idles.

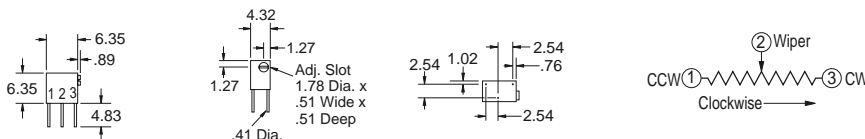
Res. (Ohms)	Digi-Key Part No.	Nominal Resolution (Percent)
200	3250W-201-ND	0.70
500	3250W-501-ND	0.60
1K	3250W-102-ND	0.40
2K	3250W-202-ND	0.30
5K	3250W-502-ND	0.25
10K	3250W-103-ND	0.19
20K	3250W-203-ND	0.16

Series	Pricing		
	1	10	50
3250W	10.31	93.75	403.13

SERIES 3260 1/4" (6.35mm) Square/Multiturn (11) Wirewound/Industrial/Sealed

Resistance Tolerance: $\pm 5\%$ std. Insulation Resistance: 500vdc, 1,000 megohms min. Adjustment Angle: 11 turns nom. Power Rating: 85°C — 0.25 watt; 150°C — 0 watt. Temperature Range: -65°C to +150°C. Temperature Coefficient: ± 70 ppm/°C. Load Life: 1,000 hours 0.25 watt @ 85°C (2% Δ TR; ENR, 500 ohms). Rotational Life: 200 cycles (2% Δ TR; ENR, 500 ohms). Torque: 3.0 oz-in. max. Mechanical Stops: Wiper idles.

3260H



Res. (Ohms)	Digi-Key Part No.	Nominal Resolution (Percent)
100	3260H-101-ND	1.00
200	3260H-201-ND	0.94
500	3260H-501-ND	0.58
1K	3260H-102-ND	0.50
2K	3260H-202-ND	0.45
10K	3260H-103-ND	0.29
20K	3260H-203-ND	0.28

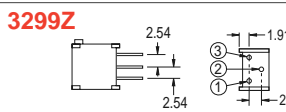
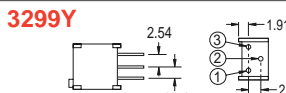
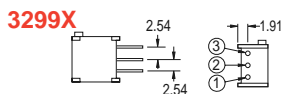
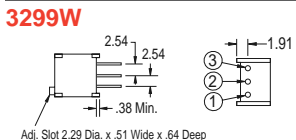
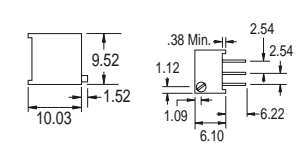
Series	Pricing		
	1	10	50
3260H	24.70	224.50	965.35

1-800-344-4539

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BOURNS Trimmer Potentiometers

SERIES 3299 3/8" (9.52mm) Square/Multiturn (25) Cermet/Industrial/Sealed

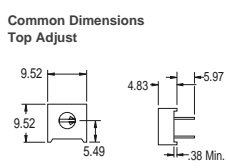
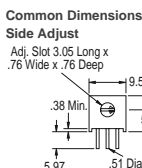


Resistance Tolerance: $\pm 10\%$ std. Insulation Resistance: 500vdc, 1,000 megohms min. Effective Travel: 25 turns nom. Power Rating (300 volts max.): 70°C — 0.5 watt; 125°C — 0 watt. Temperature Range: -55°C to +125°C. Temperature Coefficient: $\pm 100\text{ppm}/^\circ\text{C}$. Load Life: 1,000 hours 0.5 watt @ 70°C (3% ΔTR ; CRV, 3% or 3 ohms, whichever is greater). Rotational Life: 200 cycles (4% ΔTR ; CRV, 3% or 3 ohms, whichever is greater). Torque: 3.0 oz-in. max. Mechanical Stops: Wiper idles.

Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.
10	3299P-100-ND	3299W-100-ND	3299X-100-ND	3299Y-100-ND	3299Z-100-ND
20	3299P-200-ND	3299W-200-ND	3299X-200-ND	3299Y-200-ND	3299Z-200-ND
50	3299P-500-ND	3299W-500-ND	3299X-500-ND	3299Y-500-ND	3299Z-500-ND
100	3299P-101-ND	3299W-101-ND	3299X-101-ND	3299Y-101-ND	3299Z-101-ND
200	3299P-201-ND	3299W-201-ND	3299X-201-ND	3299Y-201-ND	3299Z-201-ND
500	3299P-501-ND	3299W-501-ND	3299X-501-ND	3299Y-501-ND	3299Z-501-ND
1K	3299P-102-ND	3299W-102-ND	3299X-102-ND	3299Y-102-ND	3299Z-102-ND
2K	3299P-202-ND	3299W-202-ND	3299X-202-ND	3299Y-202-ND	3299Z-202-ND
5K	3299P-502-ND	3299W-502-ND	3299X-502-ND	3299Y-502-ND	3299Z-502-ND
10K	3299P-103-ND	3299W-103-ND	3299X-103-ND	3299Y-103-ND	3299Z-103-ND
20K	3299P-203-ND	3299W-203-ND	3299X-203-ND	3299Y-203-ND	3299Z-203-ND
25K	3299P-253-ND	3299W-253-ND	—	3299Y-253-ND	3299Z-253-ND
50K	3299P-503-ND	3299W-503-ND	3299X-503-ND	3299Y-503-ND	3299Z-503-ND
100K	3299P-104-ND	3299W-104-ND	3299X-104-ND	3299Y-104-ND	3299Z-104-ND
200K	3299P-204-ND	3299W-204-ND	3299X-204-ND	3299Y-204-ND	3299Z-204-ND
250K	3299P-254-ND	3299W-254-ND	3299X-254-ND	3299Y-254-ND	3299Z-254-ND
500K	3299P-504-ND	3299W-504-ND	3299X-504-ND	3299Y-504-ND	3299Z-504-ND
1M	3299P-105-ND	3299W-105-ND	3299X-105-ND	3299Y-105-ND	3299Z-105-ND
2M	3299P-205-ND	3299W-205-ND	3299X-205-ND	3299Y-205-ND	3299Z-205-ND
5M	3299P-505-ND	3299W-505-ND	3299X-505-ND	3299Y-505-ND	3299Z-505-ND

Series	1	10	50
3299P	3.14	28.50	122.55
3299W/3299X/3299Y/3299Z	2.92	26.50	113.95

SERIES 3386 3/8" (9.52mm) Square/Single-Turn Cermet/Industrial/Sealed



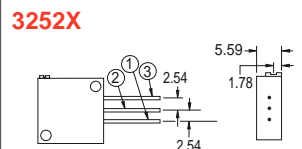
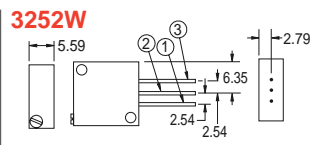
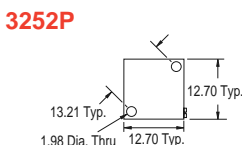
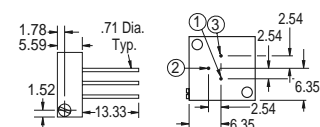
Resistance Tolerance: $\pm 10\%$ std. Insulation Resistance: 500vdc, 1,000 megohms min. Adjustment Angle: 280° Power Rating (300 volts max.): 85°C — 0.5 watt; 125°C — 0 watt. Temperature Range: -55°C to +125°C. Temperature Coefficient: $\pm 100\text{ppm}/^\circ\text{C}$. Load Life: 1,000 hours 0.5 watt @ 70°C (3% ΔTR ; CRV, 1% or 1 ohm, whichever is greater). Rotational Life: 200 cycles (4% ΔTR ; CRV, 1% or 1 ohm, whichever is greater). Mechanical Angle: 310° nom. Torque: 5.0 oz-in. max. Stop Strength: 15.0 oz-in. min.

Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.
50	3386C-500-ND*	3386F-500-ND*	3386H-500-ND	3386P-500-ND*	3386R-500-ND*	3386W-500-ND	3386X-500-ND*
100	3386C-101-ND*	3386F-101-ND*	3386H-101-ND	3386P-101-ND*	3386R-101-ND*	3386W-101-ND	3386X-101-ND*
200	3386C-201-ND*	3386F-201-ND*	3386H-201-ND	3386P-201-ND*	3386R-201-ND*	3386W-201-ND	3386X-201-ND*
500	3386C-501-ND*	3386F-501-ND*	3386H-501-ND	3386P-501-ND*	3386R-501-ND*	3386W-501-ND	3386X-501-ND*
1K	3386C-102-ND*	3386F-102-ND*	3386H-102-ND	3386P-102-ND*	3386R-102-ND*	3386W-102-ND	3386X-102-ND*
2K	3386C-202-ND*	3386F-202-ND*	3386H-202-ND	3386P-202-ND*	3386R-202-ND*	3386W-202-ND	3386X-202-ND*
5K	3386C-502-ND*	3386F-502-ND*	3386H-502-ND	3386P-502-ND*	3386R-502-ND*	3386W-502-ND	3386X-502-ND*
10K	3386C-103-ND*	3386F-103-ND*	3386H-103-ND	3386P-103-ND*	3386R-103-ND*	3386W-103-ND	3386X-103-ND*
20K	3386C-203-ND*	3386F-203-ND*	3386H-203-ND	3386P-203-ND*	3386R-203-ND*	3386W-203-ND	3386X-203-ND*
25K	3386C-253-ND*	3386F-253-ND*	3386H-253-ND	3386P-253-ND*	3386R-253-ND*	3386W-253-ND	3386X-253-ND*
50K	3386C-503-ND*	3386F-503-ND*	3386H-503-ND	3386P-503-ND*	3386R-503-ND*	3386W-503-ND	3386X-503-ND*
100K	3386C-104-ND*	3386F-104-ND*	3386H-104-ND	3386P-104-ND*	3386R-104-ND*	3386W-104-ND	3386X-104-ND*
200K	3386C-204-ND*	3386F-204-ND*	3386H-204-ND	3386P-204-ND*	3386R-204-ND*	3386W-204-ND	3386X-204-ND*
250K	3386C-254-ND*	3386F-254-ND*	3386H-254-ND	3386P-254-ND*	3386R-254-ND*	3386W-254-ND	3386X-254-ND*
500K	3386C-504-ND*	3386F-504-ND*	3386H-504-ND	3386P-504-ND*	3386R-504-ND*	3386W-504-ND	3386X-504-ND*
1M	3386C-105-ND*	3386F-105-ND*	3386H-105-ND	3386P-105-ND*	3386R-105-ND*	3386W-105-ND	3386X-105-ND*
2M	3386C-205-ND*	3386F-205-ND*	3386H-205-ND	3386P-205-ND*	3386R-205-ND*	3386W-205-ND	3386X-205-ND*

Series	1	10	50
3386C/3386R	1.43	13.00	55.90
3386F/3386H/3386P/3386W/3386X	1.29	11.75	50.53

* 3386□-KIT-ND Digi-Key® Series 3386 Trimmer Potentiometer Kit
5 each of values denoted in series (75 total pieces). Notebook style kit box and bin storage guide included. For complete number, substitute corresponding letter (C,F,P,R,X) for □. \$64.95

SERIES 3252 1/2" (12.70mm) Square/Multiturn (25) Cermet/Industrial/Sealed



Resistance Tolerance: $\pm 10\%$ std. Insulation Resistance: 500vdc, 1,000 megohms min. Effective Travel: 25 turns nom. Power Rating (400 volts max.): 85°C — 0.75 watt; 150°C — 0 watt. Temperature Range: -65°C to +150°C. Temperature Coefficient: $\pm 100\text{ppm}/^\circ\text{C}$. Load Life: 1,000 hours 0.75 watt @ 85°C (3% ΔTR ; CRV, 3% or 3 ohms, whichever is greater). Rotational Life: 200 cycles (2% ΔTR ; CRV, 3% or 3 ohms, whichever is greater). Torque: 5.0 oz-in. max. Mechanical Stops: Wiper idles.

Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.
100	3252P-101-ND*	3252W-101-ND*	3252X-101-ND*
200	3252P-201-ND*	3252W-201-ND*	3252X-201-ND*
500	3252P-501-ND*	3252W-501-ND*	3252X-501-ND*
1K	3252P-102-ND*	3252W-102-ND*	3252X-102-ND*
2K	3252P-202-ND*	3252W-202-ND*	3252X-202-ND*
5K	3252P-502-ND*	3252W-502-ND*	3252X-502-ND*
10K	3252P-103-ND*	3252W-103-ND*	3252X-103-ND*
20K	3252P-203-ND*	3252W-203-ND*	3252X-203-ND*
50K	3252P-503-ND*	3252W-503-ND*	3252X-503-ND*
100K	3252P-104-ND*	3252W-104-ND*	3252X-104-ND*
200K	3252P-204-ND*	3252W-204-ND*	3252X-204-ND*

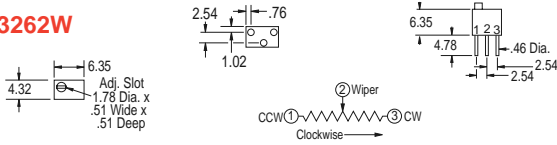
Series	1	10	50
3252P/3252W/3252X	14.44	131.25	564.38

* 3252-KIT-ND Digi-Key® Series 3252 Trimmer Potentiometer Kit
5 each of values denoted (90 total pieces). Notebook style kit box and bin storage guide included. \$569.00

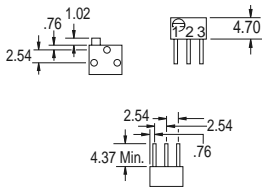
BOURNS Trimmer Potentiometers

SERIES 3262 1/4" (6.35mm) Square/Multiturn (12) Cermet/Industrial/Sealed

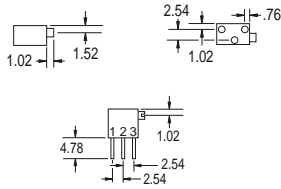
3262W



3262P



3262X



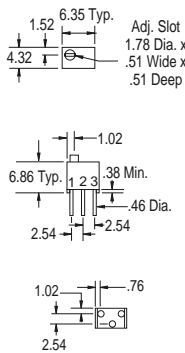
- Resistance Tolerance: $\pm 10\%$ std.
- Insulation Resistance: 500vdc, 1,000 megohms min.
- Effective Travel: 12 turns nom.
- Power Rating: (300 volts max.): 85°C — 0.25 watt; 150°C — 0 watt.
- Temperature Range: -65°C to +150°C.
- Temperature Coefficient: $\pm 100\text{ppm}/^\circ\text{C}$.
- Load Life: 1,000 hours 0.25 watt @ 85°C (3% ΔTR ; CRV, 3% or 3 ohms, whichever is greater).
- Rotational Life: 200 cycles (2% ΔTR ; CRV, 3% or 3 ohms, whichever is greater).
- Torque: 3.0 oz-in. max.
- Mechanical Stops: Wiper idles.

Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.
10	3262P-100-ND	3262W-100-ND	3262X-100-ND
20	3262P-200-ND	3262W-200-ND	3262X-200-ND
50	3262P-500-ND	3262W-500-ND	3262X-500-ND
100	3262P-101-ND	3262W-101-ND	3262X-101-ND
200	3262P-201-ND	3262W-201-ND	3262X-201-ND
500	3262P-501-ND	3262W-501-ND	3262X-501-ND
1K	3262P-102-ND	3262W-102-ND	3262X-102-ND
2K	3262P-202-ND	3262W-202-ND	3262X-202-ND
5K	3262P-502-ND	3262W-502-ND	3262X-502-ND
10K	3262P-103-ND	3262W-103-ND	3262X-103-ND
20K	3262P-203-ND	3262W-203-ND	3262X-203-ND
25K	3262P-253-ND	3262W-253-ND	3262X-253-ND
50K	3262P-503-ND	3262W-503-ND	3262X-503-ND
100K	3262P-104-ND	3262W-104-ND	3262X-104-ND
200K	3262P-204-ND	3262W-204-ND	3262X-204-ND
250K	3262P-254-ND	3262W-254-ND	3262X-254-ND
500K	3262P-504-ND	3262W-504-ND	3262X-504-ND
1M	3262P-105-ND	3262W-105-ND	3262X-105-ND

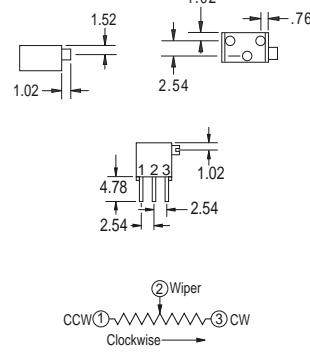
Series	1	Pricing 10	50
3262P/3262W/3262X	14.30	130.00	559.00

SERIES 3266 1/4" (6.35mm) Square/Multiturn (12) Cermet/Industrial/Sealed

3266W



3266X



- Resistance Tolerance: $\pm 10\%$ std.
- Insulation Resistance: 500vdc, 1,000 megohms min.
- Effective Travel: 12 turns nom.
- Power Rating (300 volts max.): 70°C — 0.25 watt; 150°C — 0 watt.
- Temperature Range: -55°C to +125°C.
- Temperature Coefficient: $\pm 100\text{ppm}/^\circ\text{C}$.
- Load Life: 1,000 hours 0.25 watt @ 70°C (3% ΔTR ; CRV, 3%).
- Rotational Life: 200 cycles (4% ΔTR ; CRV, 3% or 3 ohms, whichever is greater).
- Torque: 3.0 oz-in. max.
- Mechanical Stops: Wiper idles.

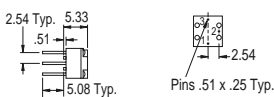
Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.
10	3266W-100-ND*	3266X-100-ND*
20	3266W-200-ND*	3266X-200-ND*
50	3266W-500-ND*	3266X-500-ND*
100	3266W-101-ND*	3266X-101-ND*
200	3266W-201-ND*	3266X-201-ND*
500	3266W-501-ND*	3266X-501-ND*
1K	3266W-102-ND*	3266X-102-ND*
2K	3266W-202-ND*	3266X-202-ND*
5K	3266W-502-ND*	3266X-502-ND*
10K	3266W-103-ND*	3266X-103-ND*
20K	3266W-203-ND*	3266X-203-ND*
25K	3266W-253-ND*	3266X-253-ND*
50K	3266W-503-ND*	3266X-503-ND*
100K	3266W-104-ND*	3266X-104-ND*
200K	3266W-204-ND*	3266X-204-ND*
250K	3266W-254-ND*	3266X-254-ND*
500K	3266W-504-ND*	3266X-504-ND*
1M	3266W-105-ND	3266X-105-ND

Series	1	Pricing 10	50
3266W/3266X	3.58	32.50	139.75

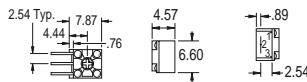
* 3266 KIT-ND Digi-Key® Series 3266 Trimmer Potentiometer Kit 5 each in values denoted in series (85 total pieces). Notebook style storage case and bin storage guide included. For complete number, substitute corresponding letter (W,X) for **\$189.00**

SERIES 3323 1/4" (6.35mm) Square/Single-Turn Cermet/Industrial/Sealed

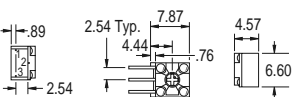
3323P



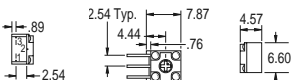
3323S



3323W



3323X



- Miniature industrial single-turn.
- Rotor designed for automatic machine adjust interface.
- Resistance Tolerance: $\pm 20\%$ std.
- Insulation Resistance: 500vdc, 1,000 megohms min.
- Adjustment Angle: 240° nom.
- Power Rating (300 volts max.): 70°C — 0.5 watt; 150°C — 0 watt.
- Temperature Range: -55°C to +125°C.
- Temperature Coefficient: $\pm 100\text{ppm}/^\circ\text{C}$.
- Load Life: 1,000 hours 0.5 watt @ 70°C (3% ΔTR ; CRV, 3% or 3 ohms, whichever is greater).
- Rotational Life: 200 cycles (4% ΔTR ; CRV, 3% or 3 ohms, whichever is greater).
- Mechanical Angle: 270° nom.
- Torque: 3.0 oz-in. max.
- Stop Strength: 8.0 oz-in. min.

Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.
100	—	—	3323W-101-ND	3323X-101-ND
200	—	3323S-201-ND	3323W-201-ND	3323X-201-ND
500	3323P-501-ND	—	—	3323X-501-ND
1K	—	3323S-102-ND	—	3323X-102-ND
2K	—	—	—	3323X-202-ND
5K	—	3323S-502-ND	—	3323X-502-ND
10K	—	3323S-103-ND	—	—
20K	—	—	3323W-203-ND	3323X-203-ND
200K	3323P-204-ND	3323S-204-ND	—	—
500K	—	3323S-504-ND	—	—
1M	—	3323S-105-ND	—	3323X-105-ND

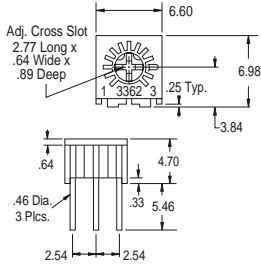
Series	1	Pricing 10	100
3323P/3323W	1.33	11.59	101.87
3323S/3323X	1.40	12.16	106.88

1-800-344-4539

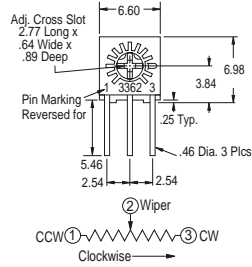
218-681-6674 • FAX: 218-681-3380 • www.digikey.com

SERIES 3362 1/4" (6.35mm) Square/Single-Turn Cermet/Industrial/Sealed

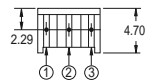
Common Dimensions 3362H, P, R, U



Common Dimensions 3362M, W, X



3362M



3362W



3362X



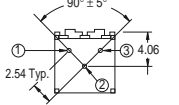
• Miniature package. • Rotor designed for automatic machine adjust interface. • Multi-wire wiper to minimize CRV. • Withstands harsh environments and immersion cleaning process. **Resistance Tolerance:** $\pm 10\%$ std. **Insulation Resistance:** 500Vdc, 1,000 megohms min. **Adjustment Angle:** 240° nom. **Power Rating** (300 volts max.): 70°C — 0.5 watt; 125°C — 0 watt. **Temperature Range:** —55°C to +125°C. **Temperature Coefficient:** $\pm 100\text{ppm}/^\circ\text{C}$. **Load Life:** 1,000 hours 0.5 watt @ 70°C (3% ΔTR ; CRV, 3% or 3 ohms, whichever is greater). **Rotational Life:** 200 cycles (4% ΔTR ; CRV, 3% or 3 ohms, whichever is greater). **Mechanical Angle:** 270° nom. **Torque:** 3.0 oz-in. max. **Stop Strength:** 7.0 oz-in. min.

Res. (Ohms)	Digi-Key® Part No.	Digi-Key® Part No.	Digi-Key® Part No.	Digi-Key® Part No.	Digi-Key® Part No.	Digi-Key® Part No.	Digi-Key® Part No.
100	3362H-101-ND	3362M-101-ND	3362P-101-ND	3362R-101-ND	3362U-101-ND	3362W-101-ND	3362X-101-ND
200	3362H-201-ND	3362M-201-ND	3362P-201-ND	3362R-201-ND	3362U-201-ND	3362W-201-ND	3362X-201-ND
500	3362H-501-ND	3362M-501-ND	3362P-501-ND	3362R-501-ND	3362U-501-ND	3362W-501-ND	3362X-501-ND
1K	3362H-102-ND	3362M-102-ND	3362P-102-ND	3362R-102-ND	3362U-102-ND	3362W-102-ND	3362X-102-ND
2K	3362H-202-ND	3362M-202-ND	3362P-202-ND	3362R-202-ND	3362U-202-ND	3362W-202-ND	3362X-202-ND
5K	3362H-502-ND	3362M-502-ND	3362P-502-ND	3362R-502-ND	3362U-502-ND	3362W-502-ND	3362X-502-ND
10K	3362H-103-ND	3362M-103-ND	3362P-103-ND	3362R-103-ND	3362U-103-ND	3362W-103-ND	3362X-103-ND
20K	3362H-203-ND	3362M-203-ND	3362P-203-ND	3362R-203-ND	3362U-203-ND	3362W-203-ND	3362X-203-ND
25K	3362H-253-ND	3362M-253-ND	3362P-253-ND	3362R-253-ND	3362U-253-ND	3362W-253-ND	3362X-253-ND
50K	3362H-503-ND	3362M-503-ND	3362P-503-ND	3362R-503-ND	3362U-503-ND	3362W-503-ND	3362X-503-ND
100K	3362H-104-ND	3362M-104-ND	3362P-104-ND	3362R-104-ND	3362U-104-ND	3362W-104-ND	3362X-104-ND
200K	3362H-204-ND	3362M-204-ND	3362P-204-ND	3362R-204-ND	3362U-204-ND	3362W-204-ND	3362X-204-ND
500K	3362H-504-ND	3362M-504-ND	3362P-504-ND	3362R-504-ND	3362U-504-ND	3362W-504-ND	3362X-504-ND
1M	3362H-105-ND	3362M-105-ND	3362P-105-ND	3362R-105-ND	3362U-105-ND	3362W-105-ND	3362X-105-ND

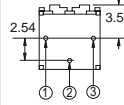
Series	1	Pricing 10	50
3362H/3362M/3362P/3362R/3362U/3362W/3362X	.83	7.50	36.75

* 3362□-KIT-ND Digi-Key® Series 3362 Trimmer Potentiometers Kit
10 each of all values in denoted series (140 total pieces). Notebook style storage case and bin storage guide included. For complete number, substitute corresponding letter (H,R,U,M,X) for □\$89.95

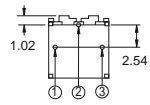
3362H



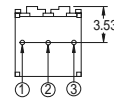
3362P



3362R



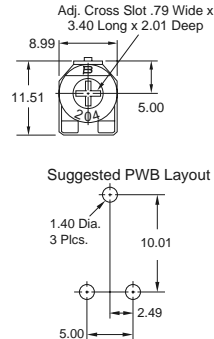
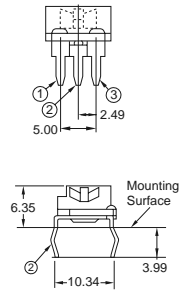
3362U



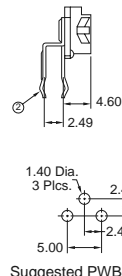
SERIES 3309

9mm Round/Single-Turn Cermet/Industrial/Open Frame

3309P



3309W



Suggested PWB Layout

Resistance Tolerance: $\pm 25\%$ std. **Adjustment Angle:** 235° nom. **Power Rating** (250 volts max.): 70°C — 0.5 watt. **Temperature Range:** —25°C to +100°C. **Temperature Coefficient:** $\pm 250\text{ppm}/^\circ\text{C}$. **Load Life:** 1,000 hours 0.5 watt @ 70°C (5% ΔTR). **Torque:** 5.0 oz-in. max. **Stop Strength:** 11.0 oz-in. min.

Res. (Ohms)	Digi-Key® Part No.	Digi-Key® Part No.
100	3309P-101-ND*	3309W-101-ND*
200	3309P-201-ND	3309W-201-ND
500	3309P-501-ND*	3309W-501-ND*
1K	3309P-102-ND*	3309W-102-ND*
2K	3309P-202-ND*	3309W-202-ND*
5K	3309P-502-ND*	3309W-502-ND*
10K	3309P-103-ND*	3309W-103-ND*
20K	3309P-203-ND*	3309W-203-ND*
50K	3309P-503-ND*	3309W-503-ND*
100K	3309P-104-ND*	3309W-104-ND*
200K	3309P-204-ND	3309W-204-ND
500K	3309P-504-ND	3309W-504-ND
1M	3309P-105-ND	3309W-105-ND

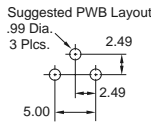
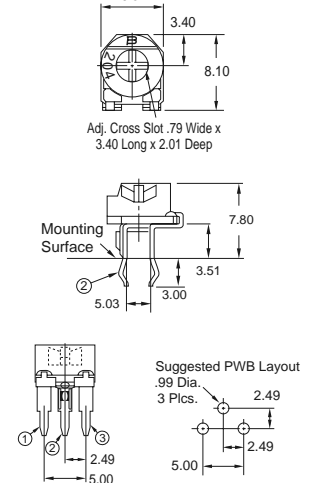
Series	1	Pricing 10	100
3309P/3309W	.56	4.77	39.54

* 3309-KIT-ND Digi-Key® Series 3309 Trimmer Potentiometers Kit
10 each of values denoted (180 total pieces). Notebook style storage case and bin storage guide included\$89.95

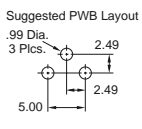
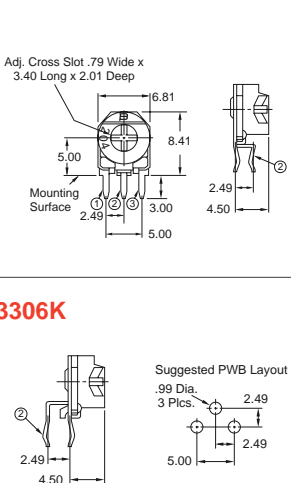
SERIES 3306

6mm Round/Single-Turn Cermet/Industrial/Open Frame

3306P



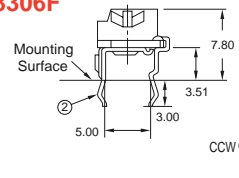
3306W



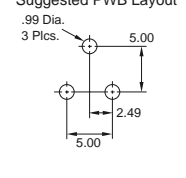
3306K

• Cross slot rotor design suitable for automatic adjustment equipment. • Board retention feature. • Dust resistant/splash resistant cover. • Front and top adjust styles. **Resistance Tolerance:** $\pm 25\%$ std. **Adjustment Angle:** 215° nom. **Power Rating** (100 volts max.): 70°C — 0.2 watt. **Temperature Range:** —25°C to +100°C. **Temperature Coefficient:** $\pm 250\text{ppm}/^\circ\text{C}$. **Load Life:** 1,000 hours 0.2 watt @ 70°C (5% ΔTR). **Torque** (Operating): 4.5 oz-in. max. **Stop Strength:** 6.5 oz-in. min.

3306F



Suggested PWB Layout



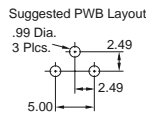
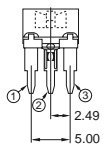
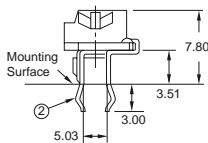
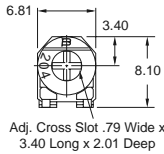
Res. (Ohms)	Digi-Key® Part No.	Digi-Key® Part No.	Digi-Key® Part No.	Digi-Key® Part No.
100	3306F-101-ND	3306K-101-ND	3306P-101-ND	3306W-101-ND
200	3306F-201-ND	3306K-201-ND	3306P-201-ND	3306W-201-ND
500	3306F-501-ND	3306K-501-ND	3306P-501-ND	3306W-501-ND
1K	3306F-102-ND	3306K-102-ND	3306P-102-ND	3306W-102-ND
2K	3306F-202-ND	3306K-202-ND	3306P-202-ND	3306W-202-ND
5K	3306F-502-ND	3306K-502-ND	3306P-502-ND	3306W-502-ND
10K	3306F-103-ND	3306K-103-ND	3306P-103-ND	3306W-103-ND
20K	3306F-203-ND	3306K-203-ND	3306P-203-ND	3306W-203-ND
50K	3306F-503-ND	3306K-503-ND	3306P-503-ND	3306W-503-ND
100K	3306F-104-ND	3306K-104-ND	3306P-104-ND	3306W-104-ND
200K	3306F-204-ND	3306K-204-ND	3306P-204-ND	3306W-204-ND
500K	3306F-504-ND	3306K-504-ND	3306P-504-ND	3306W-504-ND
1M	3306F-105-ND	3306K-105-ND	3306P-105-ND	3306W-105-ND

Series	1	Pricing 10	100
3306F/3306K/3306P/3306W	.57	4.30	40.16

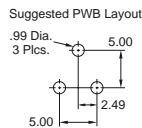
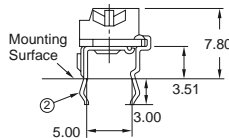
BOURNS Trimmer Potentiometers

SERIES 3316 6mm Round/Single-Turn Carbon/Commercial/Open Frame

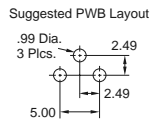
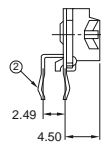
3316P



3316F

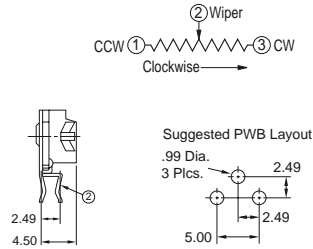
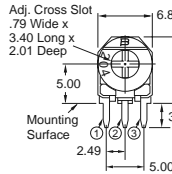


3316K



• Cross slot rotor design suitable for automatic adjustment equipment. • Board retention feature. • Dust resistant/splash resistant cover. • PC board stand-offs. • Front and top adjust styles. **Resistance Tolerance:** $\pm 25\%$ std. **Adjustment Angle:** 215° nom. **Power Rating** (100 volts max.): $70^\circ\text{C} - 0.1$ watt. **Temperature Range:** -25°C to $+100^\circ\text{C}$. **Temperature Coefficient:** $\pm 1,000\text{ppm}/^\circ\text{C}$. **Load Life:** 1,000 hours 0.1 watt @ 70°C (10% ΔTR). **Torque** (Operating): 4.5 oz-in. max. **Stop Strength:** 6.5 oz-in. min.

3316W



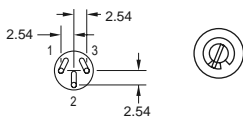
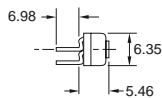
Res. (Ohms)	Digi-Key Part No.	Digi-Key* Part No.	Digi-Key* Part No.	Digi-Key* Part No.
100	—	3316K-101-ND	—	3316W-101-ND
200	3316F-201-ND	—	3316P-201-ND	3316W-201-ND
500	3316F-501-ND	3316K-501-ND	—	3316W-501-ND
1K	—	3316K-102-ND	—	—
2K	3316F-202-ND	—	—	3316W-202-ND
5K	3316F-502-ND	3316K-502-ND	3316P-502-ND	3316W-502-ND
10K	3316F-103-ND	3316K-103-ND	—	—
20K	—	3316K-203-ND	—	3316W-203-ND
50K	—	3316K-503-ND	3316P-503-ND	—
100K	—	3316K-104-ND	3316P-104-ND	3316W-104-ND
200K	—	3316K-204-ND	3316P-204-ND	3316W-204-ND
500K	—	3316K-504-ND	3316P-504-ND	3316W-504-ND
1M	3316F-105-ND	3316K-105-ND	3316P-105-ND	—

Series	1	Pricing 10	100
3316F/3316K/3316P/3316W	.41	3.05	24.40

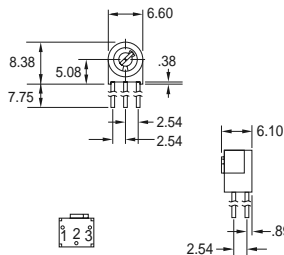
* 3316 -KIT-ND Digi-Key® Series 3316 Trimmer Potentiometers Kit
10 each of all values in a series (130 total pieces). Notebook style storage case and bin storage guide included. For complete number, substitute corresponding letter (K,W) for \$37.95

SERIES 3329 1/4" (6.35mm) Round/Single-Turn Cermet/Industrial/Sealed

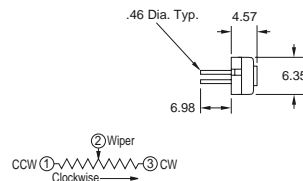
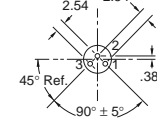
3329P



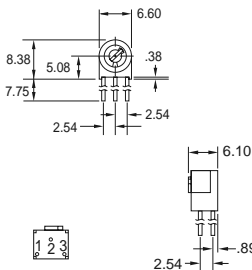
3329S



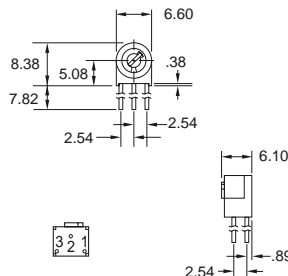
3329H



3329X



3329W



Res. (Ohms)	Digi-Key Part No.	Digi-Key* Part No.	Digi-Key* Part No.	Digi-Key* Part No.	Digi-Key* Part No.
50	3329H-500-ND	3329P-500-ND	3329S-500-ND	3329W-500-ND	3329X-500-ND
100	3329H-101-ND	3329P-101-ND	3329S-101-ND	3329W-101-ND	3329X-101-ND
200	3329H-201-ND	3329P-201-ND	3329S-201-ND	3329W-201-ND	3329X-201-ND
500	3329H-501-ND	3329P-501-ND	3329S-501-ND	3329W-501-ND	3329X-501-ND
1K	3329H-102-ND	3329P-102-ND	3329S-102-ND	3329W-102-ND	3329X-102-ND
2K	3329H-202-ND	3329P-202-ND	3329S-202-ND	3329W-202-ND	3329X-202-ND
5K	3329H-502-ND	3329P-502-ND	3329S-502-ND	3329W-502-ND	3329X-502-ND
10K	3329H-103-ND	3329P-103-ND	3329S-103-ND	3329W-103-ND	3329X-103-ND
20K	3329H-203-ND	3329P-203-ND	3329S-203-ND	3329W-203-ND	3329X-203-ND
50K	3329H-503-ND	3329P-503-ND	3329S-503-ND	3329W-503-ND	3329X-503-ND
100K	3329H-104-ND	3329P-104-ND	3329S-104-ND	3329W-104-ND	3329X-104-ND
200K	3329H-204-ND	3329P-204-ND	3329S-204-ND	3329W-204-ND	3329X-204-ND
500K	3329H-504-ND	3329P-504-ND	3329S-504-ND	3329W-504-ND	3329X-504-ND
1M	3329H-105-ND	3329P-105-ND	3329S-105-ND	3329W-105-ND	3329X-105-ND

Series	1	Pricing 10	50
3329H/3329P	2.61	23.75	102.13
3329S/3329W/3329X	3.14	28.50	122.55

* 3329 -KIT-ND Digi-Key® Series 3329 Trimmer Potentiometers Kit
5 each of all values in denoted series (70 total pieces). Notebook style case and bin storage guide included. For complete number, substitute corresponding letter (H,P,S,W,X) for \$119.95

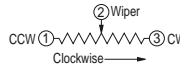
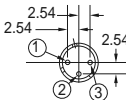
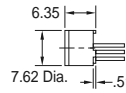
1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

SERIES 3339 5/16" (7.95mm) Round/Four-Turn Cermet/Industrial/Sealed

• Unique planetary drive offers precise wiper setting of a multiturn in a single-turn package size. • Top and side adjust styles. **Resistance Tolerance:** ±10% std. **Insulation Resistance:** 500vdc, 1,000 megohms min. **Effective Travel:** 4 turns nom. **Power Rating** (300 volts max.): 85°C — 0.5 watt; 150°C — 0 watt. **Temperature Range:** -55°C to +150°C. **Temperature Coefficient:** ±100 ppm/°C. **Load Life:** 1,000 hours 0.5 watt @ 85°C (3% ΔTR; CRV, 3% or 3 ohms, whichever is greater). **Rotational Life:** 200 cycles (3% ΔTR; CRV, 3% or 3 ohms, whichever is greater). **Torque:** 3.0 oz-in. max. **Mechanical Stops:** Wiper idles.

3339P

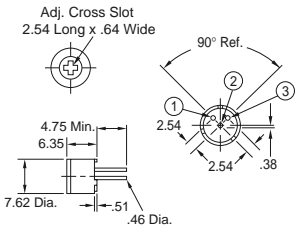


Res. (Ohms)	Digi-Key Part No.	Digi-Key* Part No.	Digi-Key* Part No.
50	3339H-500-ND	3339P-500-ND	3339W-500-ND
100	3339H-101-ND	3339P-101-ND	3339W-101-ND
200	3339H-201-ND	3339P-201-ND	3339W-201-ND
500	3339H-501-ND	3339P-501-ND	3339W-501-ND
1K	3339H-102-ND	3339P-102-ND	3339W-102-ND
2K	3339H-202-ND	3339P-202-ND	3339W-202-ND
5K	3339H-502-ND	3339P-502-ND	3339W-502-ND
10K	3339H-103-ND	3339P-103-ND	3339W-103-ND
20K	3339H-203-ND	3339P-203-ND	3339W-203-ND
50K	3339H-503-ND	3339P-503-ND	3339W-503-ND
100K	3339H-104-ND	3339P-104-ND	3339W-104-ND
200K	3339H-204-ND	3339P-204-ND	3339W-204-ND
500K	3339H-504-ND	3339P-504-ND	3339W-504-ND
1M	3339H-105-ND	3339P-105-ND	3339W-105-ND

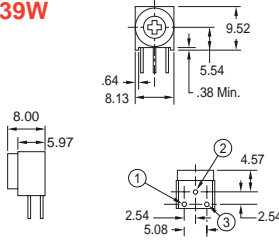
Series	Pricing		
	1	10	50
3339H/3339P	5.28	48.00	206.40
3339W	7.59	69.00	296.70

* 3339□-KIT-ND **Digi-Key® Series 3339 Trimmer Potentiometers Kit** 5 each of all values in denoted series (70 total pieces). Notebook style case and bin storage guide included. For complete number, substitute corresponding letter (P,W) for □ \$259.00

3339H



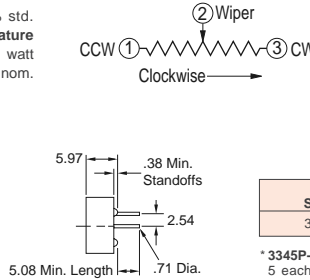
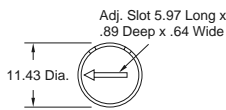
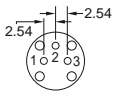
3339W



SERIES 3345 1/2" (12.70mm) Round/Single-Turn Wirewound/Industrial/Sealed

• Industrial wirewound. • 1.0 watt power rating at 70°C. **Resistance Tolerance:** ±5% std. **Adjustment Angle:** 280° nom. **Power Rating:** 70°C — 1 watt; 150°C — 0 watt. **Temperature Range:** -55°C to +150°C. **Temperature Coefficient:** ±50ppm/°C. **Load Life:** 1,000 hours 1 watt @ 70°C. **Rotational Life:** 200 cycles (2% ΔTR; ENR, 500 ohms). **Mechanical Angle:** 310° nom. **Torque:** 5.0 oz-in. max. **Stop Strength:** 15 oz-in. min.

3345P



Res. (Ohms)	Digi-Key* Part No.	Nominal Resolution (Percent)
50	3345P-500-ND	0.58
100	3345P-101-ND	0.49
200	3345P-201-ND	0.49
500	3345P-501-ND	0.38
1K	3345P-102-ND	0.30
2K	3345P-202-ND	0.24
5K	3345P-502-ND	0.18
10K	3345P-103-ND	0.14
20K	3345P-203-ND	0.13

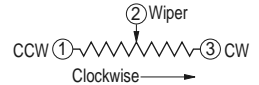
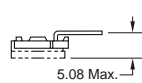
Series	Pricing		
	1	10	50
3345P	7.54	68.50	294.55

* 3345P-KIT-ND **Digi-Key® Series 3345 Trimmer Potentiometers Kit** 5 each of all values (45 total pieces). Notebook style case and bin storage guide included \$169.95

SERIES 3352 3/8" (9.52mm) Round/Single-Turn Cermet/Industrial/Open Frame

Resistance Tolerance: ±20% std. **Adjustment Angle:** 205° nom. **Power Rating** (250 volts max.): 85°C — 0.5 watt; 125°C — 0 watt. **Temperature Range:** -55°C to +125°C. **Temperature Coefficient:** Below 2K — ±150ppm/°C; 2K & up — +100ppm/°C. **Load Life:** 1,000 hours 0.5 watt @ 85°C (3% ΔTR). **Rotational Life:** 200 cycles (10% DTR). **Mechanical Angle:** 2508 nom. **Torque:** 3.0 oz-in. max. **Stop Strength:** 8 oz-in. min.

3352W

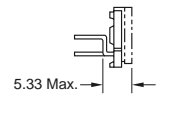
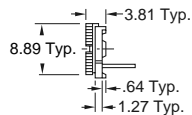
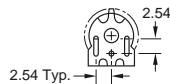
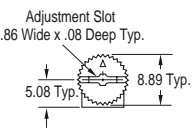


Res. (Ohms)	Digi-Key* Part No.	Digi-Key* Part No.	Digi-Key* Part No.	Digi-Key* Part No.	Digi-Key* Part No.
100	3352E-101-ND	3352H-101-ND	3352P-101-ND	3352T-101-ND	3352W-101-ND
200	3352E-201-ND	3352H-201-ND	3352P-201-ND	3352T-201-ND	3352W-201-ND
500	3352E-501-ND	3352H-501-ND	3352P-501-ND	3352T-501-ND	3352W-501-ND
1K	3352E-102-ND	3352H-102-ND	3352P-102-ND	3352T-102-ND	3352W-102-ND
2K	3352E-202-ND	3352H-202-ND	3352P-202-ND	3352T-202-ND	3352W-202-ND
5K	3352E-502-ND	3352H-502-ND	3352P-502-ND	3352T-502-ND	3352W-502-ND
10K	3352E-103-ND	3352H-103-ND	3352P-103-ND	3352T-103-ND	3352W-103-ND
20K	3352E-203-ND	3352H-203-ND	3352P-203-ND	3352T-203-ND	3352W-203-ND
25K	3352E-253-ND	3352H-253-ND	3352P-253-ND	3352T-253-ND	3352W-253-ND
50K	3352E-503-ND	3352H-503-ND	3352P-503-ND	3352T-503-ND	3352W-503-ND
100K	3352E-104-ND	3352H-104-ND	3352P-104-ND	3352T-104-ND	3352W-104-ND
200K	3352E-204-ND	3352H-204-ND	3352P-204-ND	3352T-204-ND	3352W-204-ND
250K	3352E-254-ND	3352H-254-ND	3352P-254-ND	3352T-254-ND	3352W-254-ND
500K	3352E-504-ND	3352H-504-ND	3352P-504-ND	3352T-504-ND	3352W-504-ND
1M	3352E-105-ND	3352H-105-ND	3352P-105-ND	3352T-105-ND	3352W-105-ND

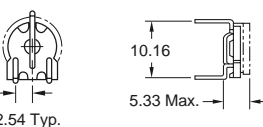
Series	Pricing		
	1	10	50
3352E/3352H/3352P/3352T/3352W	1.10	10.00	43.00

* 3352□-KIT-ND **Digi-Key® Series 3352 Trimmer Potentiometers Kit** 5 each of all values in denoted series (75 total pieces). Notebook style kit box and bin storage guide included. For complete number, substitute corresponding letter (E,H,P,T,W.) for □ \$46.95

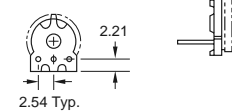
3352P



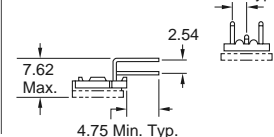
3352E



3352T



3352H

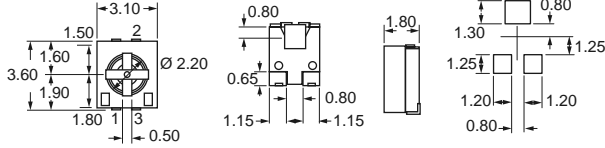




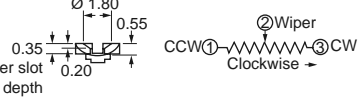
Trimmer Potentiometers

SERIES TC73 Surface Mount 3mm Single-Turn Top Adjust Carbon

TC73X/W



Resistance Tolerance: $\pm 30\%$. Adjustment Angle: 260° . Power Rating: .05 watt. Temperature Range: -25°C to $+85^\circ\text{C}$. Temperature Coefficient: $\pm 250\text{ppm}/^\circ\text{C}$. Rotational Life: 20 turns. Rotational Torque: 10-150g-cm max.

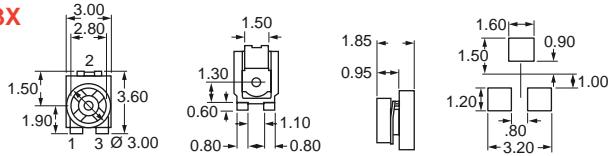


Res. (Ohms)	Digi-Key Part No.
500	TC73X-501E□□-ND
1K	TC73X-102E□□-ND
2K	TC73X-202E□□-ND
5K	TC73X-502E□□-ND
10K	TC73X-103E□□-ND
20K	TC73X-203E□□-ND

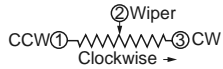
Series	Part No.	Cut Tape Pricing			Part No.	Tape & Reel Pricing
		1	10	100		2,000
TC73X	Add "CT-ND"	.20	1.65	14.40	Add "TR-ND"	99.60/M

SERIES TC03 Surface Mount 3mm Single-Turn Top Adjust Cermet

TC03X



Resistance Tolerance: $\pm 25\%$. Adjustment Angle: 270° . Power Rating: .1 watt. Temperature Range: -40°C to $+85^\circ\text{C}$. Temperature Coefficient: $\pm 250\text{ppm}/^\circ\text{C}$. Rotational Life: 20 turns. Rotational Torque: 20-200g-cm max.

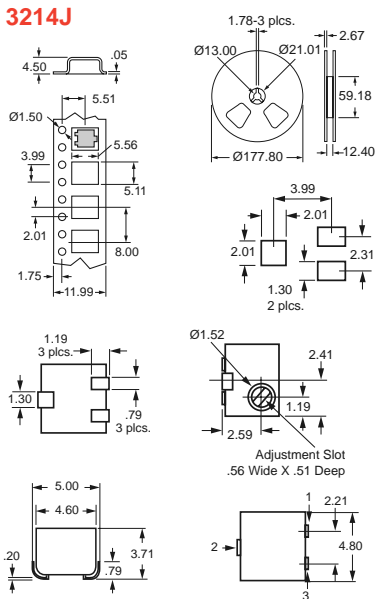


Res. (Ohms)	Digi-Key Part No.
100	TC03X-101E□□-ND
1K	TC03X-102E□□-ND
2K	TC03X-202E□□-ND
5K	TC03X-502E□□-ND
10K	TC03X-103E□□-ND
20K	TC03X-203E□□-ND

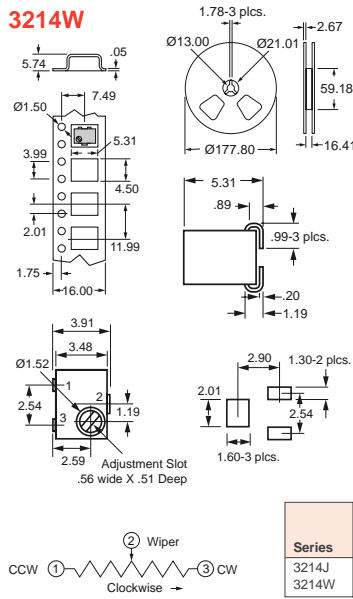
Series	Part No.	Cut Tape Pricing			Part No.	Tape & Reel Pricing
		1	10	100		2,000
TC03X	Add "CT-ND"	.20	1.65	14.40	Add "TR-ND"	99.60/M

SERIES 3214 Surface Mount 4mm Square/ Multi-Turn Cermet/Industrial/Sealed

3214J



3214W



- Sealed to withstand board wash processing
- Pick and place centering design, with flush adjustment
- Patent #5047746 advanced drive/wiper mechanism.

ELECTRICAL CHARACTERISTICS: Resistance Tolerance: $\pm 10\%$ std. Absolute Minimum Resistance: 1% or 2.0 ohms (whichever is greater). Contact Resistance Variation: 3% or 3 ohms max. Resolution: Essentially Infinite. Insulation Resistance: 500 vdc., 100 megohms min. Dielectric Strength: Sea Level: 600 vac (1 minute). Adjustment Angle: 5 turns nom.

ENVIRONMENTAL CHARACTERISTICS: Power Rating (300 volts max.): 85°C : 0.25 watt, 150°C : 0 watt. Temperature Range: -65°C to $+150^\circ\text{C}$. Temperature Coefficient: $\pm 100\text{ppm}/^\circ\text{C}$. Humidity: MIL-STD 202 Method 106, TRS $\pm 2\%$; IR 10 megohms. Vibration: 20G TRS $\pm 1\%$; VRS $\pm 1\%$. Shock: 100G TRS $\pm 1\%$; VRS $\pm 1\%$. Load Life (@ 85°C Rated Power 1000 Hours): TRS 3 ohms or 3% (whichever is greater). Rotational Cycling: 200 cycles, TRS 3 ohms or 3% (whichever is greater). Thermal Shock: 5 cycles, TRS $\pm 2\%$; VRS $\pm 1\%$.

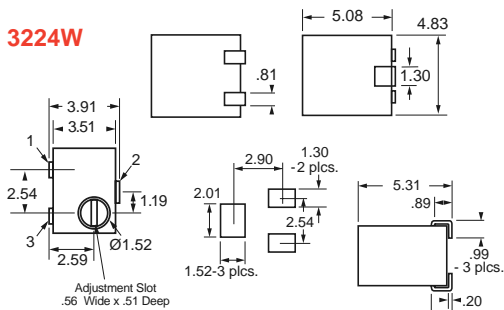
PHYSICAL CHARACTERISTICS: Mechanical Stop: wiper idles. Torque: 180g-cm max. Weight: approximately 0.01 oz. Marking: Manufacturer's code, resistance code and date code. Solderability: Per MIL-STD-202, Method 208. Wiper: Set at 50% nominal. Flammability: UL94V0

Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.
100	3214J-101E□□-ND	3214W-101E□□-ND
200	3214J-201E□□-ND	3214W-201E□□-ND
500	3214J-501E□□-ND	3214W-501E□□-ND
1K	3214J-102E□□-ND	3214W-102E□□-ND
2K	3214J-202E□□-ND	3214W-202E□□-ND
5K	3214J-502E□□-ND	3214W-502E□□-ND
10K	3214J-103E□□-ND	3214W-103E□□-ND
20K	3214J-203E□□-ND	3214W-203E□□-ND
50K	3214J-503E□□-ND	3214W-503E□□-ND
100K	3214J-104E□□-ND	3214W-104E□□-ND

Series	Part No.	Cut Tape Pricing			Part No.	Tape & Reel Pricing
		1	10	100		250
3214J	Add "CT-ND"	3.22	27.60	239.20	Add "TR-ND"	750.00
3214W	Add "CT-ND"	3.22	27.60	239.20	Add "TR-ND"	414.00

SERIES 3224 SMT 4mm Multi-Turn (11) Top Adjust/Cermet

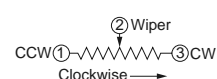
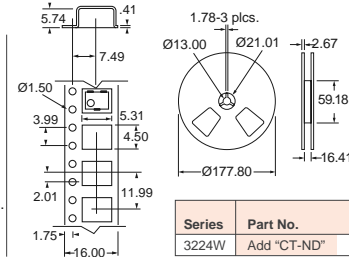
3224W



3224W ELECTRICAL CHARACTERISTICS: Resistance Tolerance: $\pm 10\%$ std. Absolute Minimum Resistance: 1% or 2.0 ohms (whichever is greater). Contact Resistance Variation: 1% or 3 ohms max. Resolution: Essentially Infinite. Insulation Resistance: 500 vdc., 100 megohms min. Dielectric Strength: Sea Level: 600 vac (1 minute). Adjustment Angle: 11 turns nom.

ENVIRONMENTAL CHARACTERISTICS: Power Rating (300 volts max.): 85°C : 0.25 watt, 150°C : 0 watt. Temperature Range: -65°C to $+150^\circ\text{C}$. Temperature Coefficient: $\pm 100\text{ppm}/^\circ\text{C}$. Humidity: MIL-STD 202 Method 106, TRS $\pm 2\%$; IR 10 megohms. Vibration: 20G TRS $\pm 1\%$; VRS $\pm 1\%$. Shock: 100G TRS $\pm 1\%$; VRS $\pm 1\%$. Load Life (@ 85°C Rated Power 1000 Hours): TRS 3 ohms or 3% (whichever is greater). Rotational Cycling: 200 cycles, TRS 3 ohms or 3% (whichever is greater). Thermal Shock: 5 cycles, TRS $\pm 2\%$; VRS $\pm 1\%$.

PHYSICAL CHARACTERISTICS: Mechanical Stop: Wiper idles. Torque: 180g-cm Max. Weight: approximately 0.01 oz. Marking: Manufacturer's code, resistance code and date code.



Res. (Ohms)	Digi-Key Part No.
2K	3224W-202E□□-ND
5K	3224W-502E□□-ND
10K	3224W-103E□□-ND
20K	3224W-203E□□-ND

Series	Part No.	Cut Tape Pricing			Part No.	Tape & Reel Pricing
		1	10	100		250
3224W	Add "CT-ND"	5.22	44.70	387.40	Add "TR-ND"	670.50

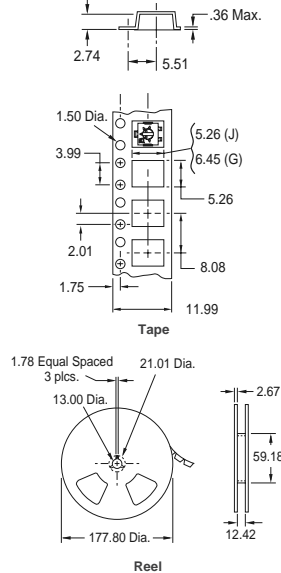
1-800-344-4539

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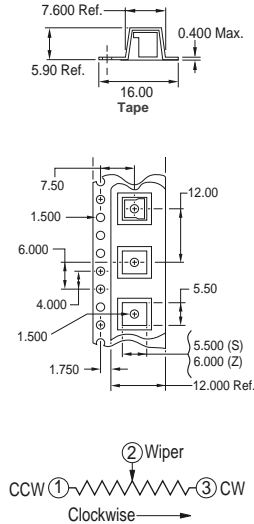
BOURNS Trimmer Potentiometers

SERIES SMD 4mm Square/Single-Turn 3314 Cermet/Industrial/Sealed

(J, G Styles)

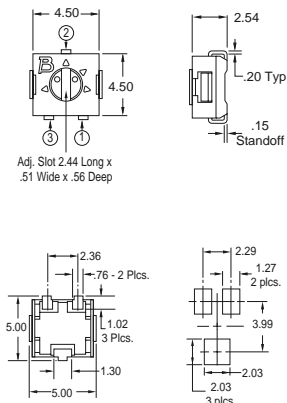


(S, Z Style)

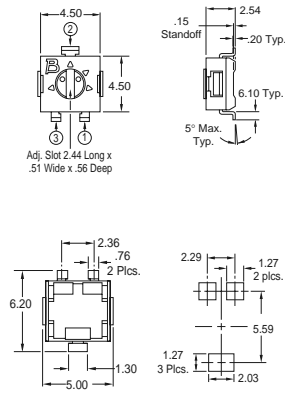


• Compatible with all surface mount soldering processes. • Very low CRV — 1%. • Standoffs facilitate boardwashing and mechanical stability. **Resistance Tolerance:** ±20% std. **Insulation Resistance:** 500Vdc, 100 megohms min. **Adjustment Angle:** 210° nom. **Soldering Heat:** 260°C, 10 seconds, TRS ±1%. **Power Rating** (300 volts max.): 70°C — 0.25 watt; 125°C — 0 watt. **Temperature Range:** -55°C to +125°C. **Temperature Coefficient:** ±100ppm/°C. **Load Life:** (@ 70°C Rated Power 1,000 hours) TRS ±3%. **Rotational Life:** 100 cycles TRS ±3%. **Mechanical Angle:** 240° nom. **Torque:** 180 g-cm, typical. **Stop Strength:** 300 g-cm, typical.

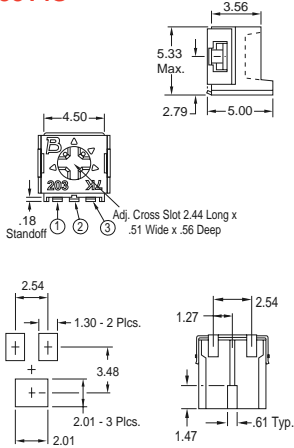
3314J



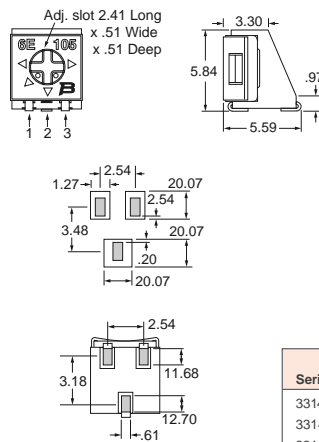
3314G



3314S



3314Z

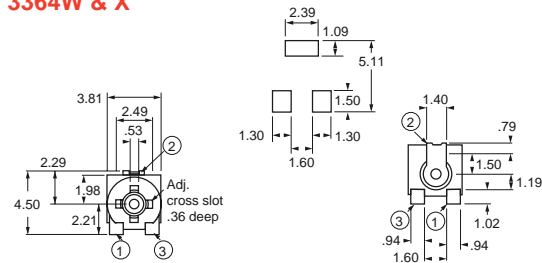


Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.
100	3314G-101E□□-ND	3314J-101E□□-ND	3314S-101E□□-ND	3314Z-101E□□-ND
200	3314G-201E□□-ND	3314J-201E□□-ND	3314S-201E□□-ND	3314Z-201E□□-ND
500	3314G-501E□□-ND	3314J-501E□□-ND	3314S-501E□□-ND	3314Z-501E□□-ND
1K	3314G-102E□□-ND	3314J-102E□□-ND	3314S-102E□□-ND	3314Z-102E□□-ND
2K	3314G-202E□□-ND	3314J-202E□□-ND	3314S-202E□□-ND	3314Z-202E□□-ND
5K	3314G-502E□□-ND	3314J-502E□□-ND	3314S-502E□□-ND	3314Z-502E□□-ND
10K	3314G-103E□□-ND	3314J-103E□□-ND	3314S-103E□□-ND	3314Z-103E□□-ND
20K	3314G-203E□□-ND	3314J-203E□□-ND	—	3314Z-203E□□-ND
25K	3314G-253E□□-ND	3314J-253E□□-ND	—	3314Z-253E□□-ND
50K	3314G-503E□□-ND	3314J-503E□□-ND	3314S-503E□□-ND	3314Z-503E□□-ND
100K	3314G-104E□□-ND	3314J-104E□□-ND	3314S-104E□□-ND	3314Z-104E□□-ND
200K	3314G-204E□□-ND	3314J-204E□□-ND	3314S-204E□□-ND	3314Z-204E□□-ND
250K	3314G-254E□□-ND	3314J-254E□□-ND	3314S-254E□□-ND	3314Z-254E□□-ND
500K	3314G-504E□□-ND	3314J-504E□□-ND	3314S-504E□□-ND	3314Z-504E□□-ND
1M	3314G-105E□□-ND	3314J-105E□□-ND	3314S-105E□□-ND	3314Z-105E□□-ND
2M	3314G-205E□□-ND	3314J-205E□□-ND	3314S-205E□□-ND	3314Z-205E□□-ND

Series	Part No.	Cut Tape Pricing		Tape & Reel Pricing		
		5	100	Part No.	200	500
3314G/3314J	Add "CT-ND"	9.00	156.00	Add "TR-ND"	—	489.00
3314S	Add "CT-ND"	9.90	170.28	Add "TR-ND"	244.20	—
3314Z	Add "CT-ND"	9.90	170.28	Add "TR-ND"	244.20	—

SERIES SMD 4mm Square/Single-Turn 3364 Cermet/Industrial/Open Frame

3364W & X



• Cross-slot rotor designs suitable for automatic adjustment equipment • Supplied in 12mm embossed tape, compatible with automatic pick-and-place assembly equipment • Rear adjust versions available. **Resistance Tolerance:** ±25% std. **Adjustment Angle:** 260°±20°. **Power Rating** (50 volts max.): 70°C — 0.2 watt. **Temp. Range:** -40°C to +100°C. **Temp. Coefficient:** ±250ppm/°C. **Load Life:** 1,000 hours 0.2 watt @ 70°C (5% ΔTR). **Rotational Life:** 20 cycles (15% ΔTR). **Torque:** 20 to 200g-cm. **Mechanical Angle:** Continuous.

Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.
500	3364W-501E□□-ND	3364X-501E□□-ND	3364X-501E□□-ND
1K	3364W-102E□□-ND	3364X-102E□□-ND	3364X-102E□□-ND
2K	3364W-202E□□-ND	3364X-202E□□-ND	3364X-202E□□-ND
5K	3364W-502E□□-ND	3364X-502E□□-ND	3364X-502E□□-ND
10K	3364W-103E□□-ND	3364X-103E□□-ND	3364X-103E□□-ND
20K	3364W-203E□□-ND	3364X-203E□□-ND	3364X-203E□□-ND
50K	3364W-503E□□-ND	3364X-503E□□-ND	3364X-503E□□-ND
100K	3364W-104E□□-ND	3364X-104E□□-ND	3364X-104E□□-ND
200K	3364W-204E□□-ND	3364X-204E□□-ND	3364X-204E□□-ND
500K	3364W-504E□□-ND	3364X-504E□□-ND	3364X-504E□□-ND
1M	3364W-105E□□-ND	3364X-105E□□-ND	3364X-105E□□-ND

Series	Part No.	Cut Tape Pricing		Tape & Reel Pricing	
		5	100	Part No.	1,000
3364W/3364X	Add "CT-ND"	4.23	56.55	Add "TR-ND"	321.00

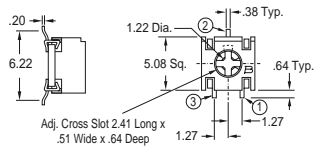
* 3364W-KIT-ND Digi-Key® Series 3364W Trimmer Potentiometers Kit 5 each of all values (65 total pieces)..... \$39.95

1-800-344-4539

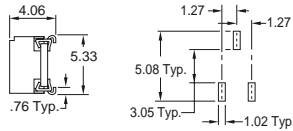
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SERIES 3335 SMD 5mm Square/Single-Turn Cermet/Industrial/Sealed 3335

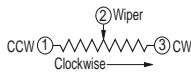
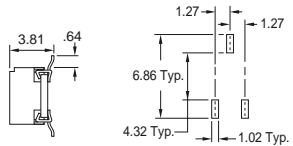
Common Dimensions 3335A, B



3335A

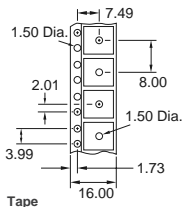
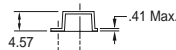
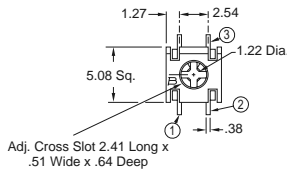
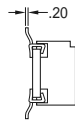


3335B



Common Dimensions 3335W, X

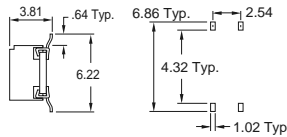
3335-4 Pad



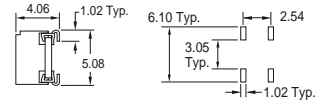
Meets EIA specification 481

• Available in 3 and 4 pad SMD design • Auto adjust rotor design, packaged in 16mm wide (7' reel) embossed tape, compatible with automatic placement equipment • Rugged lead frame construction • Multi-wire hottip wiper • Recommended for reflow processing only. **Resistance Tolerance:** ±20% std. **Insulation Resistance:** 500vdc, 1,000 megohms min. **Adjustment Travel:** 240° nom. **Maximum Exposure (Temp./Time):** +215°C/3 min. **Power Rating (100 volts max.):** 85°C — 0.2 watt; 150°C — 0 watt. **Temperature Range:** -55°C to +150°C. **Temperature Coefficient:** ±100ppm/°C. **Load Life:** 1,000 hours 0.2 watt @ 85°C (3% ΔTR; CRV, 3% or 3 ohms, whichever is greater). **Rotational Life:** 200 cycles (4% ΔTR; CRV, 3% or 3 ohms, whichever is greater). **Mechanical Angle:** 270° nom. **Torque:** 3.0 oz-in. max. **Stop Strength:** 4.0 oz-in. min.

3335W



3335X

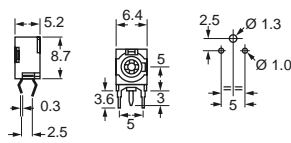


Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.	Digi-Key Part No.
100	3335A-101E□□-ND	3335B-101E□□-ND	3335W-101E□□-ND	3335X-101E□□-ND
200	3335A-201E□□-ND	—	3335W-201E□□-ND	3335X-201E□□-ND
500	3335A-501E□□-ND	3335B-501E□□-ND	—	3335X-501E□□-ND
1K	3335A-102E□□-ND	3335B-102E□□-ND	3335W-102E□□-ND	3335X-102E□□-ND
2K	3335A-202E□□-ND	3335B-202E□□-ND	3335W-202E□□-ND	3335X-202E□□-ND
5K	3335A-502E□□-ND	3335B-502E□□-ND	3335W-502E□□-ND	3335X-502E□□-ND
10K	3335A-103E□□-ND	—	3335W-103E□□-ND	3335X-103E□□-ND
20K	3335A-203E□□-ND	3335B-203E□□-ND	3335W-203E□□-ND	3335X-203E□□-ND
25K	3335A-253E□□-ND	3335B-253E□□-ND	3335W-253E□□-ND	3335X-253E□□-ND
50K	3335A-503E□□-ND	3335B-503E□□-ND	—	3335X-503E□□-ND
100K	3335A-104E□□-ND	3335B-104E□□-ND	3335W-104E□□-ND	3335X-104E□□-ND
200K	3335A-204E□□-ND	3335B-204E□□-ND	3335W-204E□□-ND	3335X-204E□□-ND
250K	3335A-254E□□-ND	3335B-254E□□-ND	3335W-254E□□-ND	3335X-254E□□-ND
500K	3335A-504E□□-ND	3335B-504E□□-ND	—	3335X-504E□□-ND

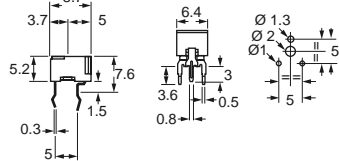
Series	Part No.	Cut Tape Pricing		Part No.	T & R Pricing
		5	100		500
3335A/3335B/3335W/3335X	Add "CT"-ND	36.00	518.40	Add "TR"-ND	1836.00

SERIES 6mm Single-Turn Carbon TC76

TC76B



TC76Z



- Resistance Tolerance: ±30%
- Adjustment Angle: 280°
- Power Rating: .1 watt
- Temperature Range: -25°C to +70°C
- Temperature Coefficient: ±300ppm/°C
- Rotational Life: 100 turns
- Rotational Torque: .2 to 3 Ncm max.

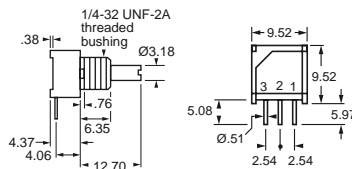
Series	Pricing		
	1	10	100
TC76B	.20	1.65	14.40
TC76Z	.20	1.65	14.40

Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.
100	TC76B-101-ND	TC76Z-101-ND
1K	TC76B-102-ND	TC76Z-102-ND
2K	TC76B-202-ND	TC76Z-202-ND
5K	TC76B-502-ND	TC76Z-502-ND
10K	TC76B-103-ND	TC76Z-103-ND
20K	TC76B-203-ND	TC76Z-203-ND
50K	YC76B-503-ND	TC76Z-503-ND
100K	TC76B-104-ND	TC76Z-104-ND

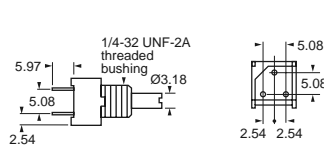
SERIES 9mm Square Panel Control Conductive Plastic, Sealed 3310

• Conductive plastic • Linear • PC board and bushing mount • Plastic bushing and plastic shaft • Withstands typical industrial washing processes • Compact package saves board and panel space • Standard Resistance Range (Linear): 1K ohms to 1 megohm • Total Resistance Tolerance (Linear Tapers): ±20% • Independent Linearity: ±5% • Absolute Minimum Resistance: 2 ohms maximum • Effective Electrical Angle: 270° ±15° • Contact Resistance Variation: 1% or 1 ohm (whichever is greater) • Dielectric Withstanding Voltage: (Sea Level) 900 VAC min.; (70,000 Feet) 350 VAC min. • Insulation Resistance: 1,000 megohms min. • Power Rating @ 70°C (Derate to 0 at 125°C - Voltage limited by power dissipation or 200 VAC, whichever is less): 0.25 watts • Stop Strength: 5.65 nom. • Mechanical Angle: 300° nominal • Torque (Running): 3.53 nom.

3310C



3310Y

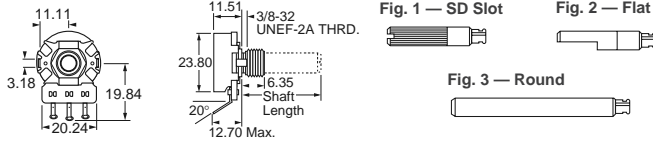


Res. (Ohms)	Digi-Key Part No.	Digi-Key Part No.
1K	3310C-1-102-ND	3310Y-1-102-ND
2K	3310C-1-202-ND	3310Y-1-202-ND
5K	3310C-1-502-ND	3310Y-1-502-ND
10K	3310C-1-103-ND	3310Y-1-103-ND
20K	3310C-1-203-ND	3310Y-1-203-ND
50K	3310C-1-503-ND	3310Y-1-503-ND
100K	3310C-1-104-ND	3310Y-1-104-ND
200K	3310C-1-204-ND	3310Y-1-204-ND
500K	3310C-1-504-ND	3310Y-1-504-ND
1M	3310C-1-105-ND	3310Y-1-105-ND

Series	Pricing		
	1	10	50
3310C/3310Y	2.59	22.94	96.20

CTS "Stock Pot" Potentiometers 23.81mm Diameter

Series 450



To determine shaft length, use appropriate variable (1-8) shown below.

Shaft Length (mm)	12.70	15.88	19.05	22.23	25.40	50.80
Figure 1 - Slot	1	2	3	4	5	—
Figure 2 - Flat	—	—	—	6	7	—
Figure 3 - Round	—	—	—	—	—	8

Res. Ohms	Digi-Key Part No. *	Pricing					
		1	10	100	250	500	1,000
500	450D501-□-ND	3.18	28.62	243.80	503.50	848.00	1409.80
1K	450D102-□-ND	3.18	28.62	243.80	503.50	848.00	1409.80
2.5K	450D252-□-ND	3.18	28.62	243.80	503.50	848.00	1409.80
5K	450D502-□-ND	3.18	28.62	243.80	503.50	848.00	1409.80
10K	450D103-□-ND	3.18	28.62	243.80	503.50	848.00	1409.80
25K	450D253-□-ND	3.18	28.62	243.80	503.50	848.00	1409.80
50K	450D503-□-ND	3.18	28.62	243.80	503.50	848.00	1409.80
100K	450D104-□-ND	3.18	28.62	243.80	503.50	848.00	1409.80
250K	450D254-□-ND	3.18	28.62	243.80	503.50	848.00	1409.80
500K	450D504-□-ND	3.18	28.62	243.80	503.50	848.00	1409.80

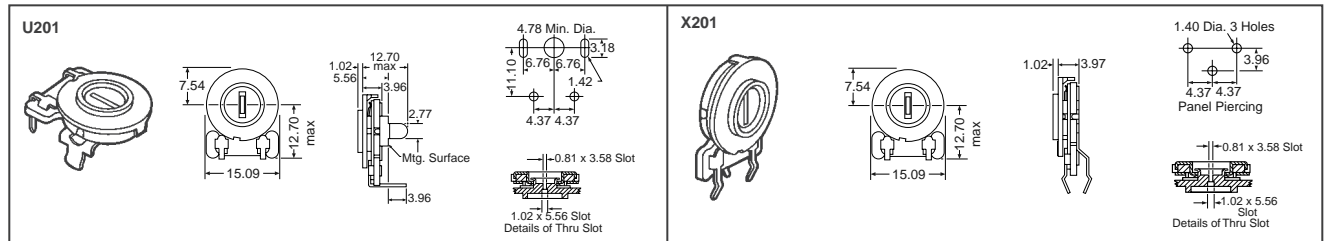
*For complete part number, substitute corresponding variable (from chart above) for □.

Features:
 • Off the shelf availability • Wide Resistance Range • Available with three shaft styles: knurled & slotted, flattened or round • Economical in limited volume applications

Electrical and Mechanical Specifications:
 • **Resistance Range:** 500Ω through 500KΩ • **Resistance Tolerance:** ±20% • **Power Rating, Watt:** Through 10KΩ, 1/2 watt; above 10KΩ through 100KΩ, 1/3 watt; above 100KΩ, 1/4 watt • **Voltage Rating:** Bushing to terminals: High pot test, one minute - 1080 VAC • **Shaft Information:** Diameter: 6.35mm (Dia. over knurl 6.10mm - 6.25mm) • **Angle of Rotation:** Total rotation - 300° ±5°; Effective Rotation approximately 300° • **Bushing Information:** Material - Diecast zinc; Diameter - EIA st. 3/8" - 32 UNEF-2A thread; Length - 6.35mm ± .40mm • **Terminal Information:** Solder lug, formed to rear • **Locating Lug:** Left side, terminals down
 Mounting hardware included

CTS Miniature 15.08mm Trimmer Potentiometers

Series 201



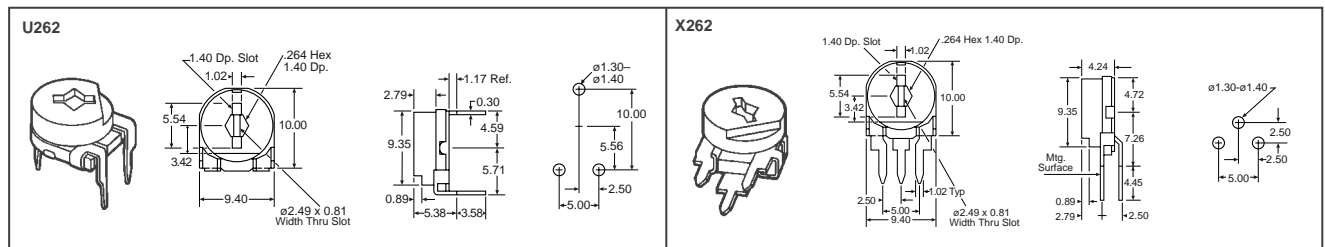
Features:
 • Miniature size — knob 15.08mm diameter • Rim to guide screwdriver • Printed circuit mounting with knob parallel or perpendicular to printed circuit board • Wide resistance range • Knob slotted for front or rear screwdriver adjustment • Reliable CTS composition resistance element • Press fit self-supporting mounting

Electrical and Mechanical Specifications:
 • **Resistance Range:** 100Ω through 1 Megohm • **Resistance Tolerance:** ±20% • **Power Rating, Watts:** Below 5000Ω — 1/4 watt @ 40°C; 5000Ω and above — 1/4 watt @ 55°C • **Voltage Rating:** 350 VDC • **Resistance Tapers:** Linear • **Adjusting Knob Information:** Blue nylon knob, 15.08mm diameter, slotted for front or rear screwdriver adjustment with rim to guide screwdriver. • **Angle of Rotation:** Total rotation — 260° ± 5°

Res. Ohms.	Digi-Key Part No. Laydown Version	Digi-Key Part No. Standup Version	Pricing						CTS Part No. Laydown Version	CTS Part No. Standup Version
			1	100	500	1,000	5,000	10,000		
100	201UR101B-ND	201XR101B-ND	.50	41.70	161.94	264.10	222.40/M	180.70/M	201UR101B	201XR101B
250	201UR251B-ND	201XR251B-ND	.50	41.70	161.94	264.10	222.40/M	180.70/M	201UR251B	201XR251B
500	201UR501B-ND	201XR501B-ND	.50	41.70	161.94	264.10	222.40/M	180.70/M	201UR501B	201XR501B
1K	201UR102B-ND	201XR102B-ND	.50	41.70	161.94	264.10	222.40/M	180.70/M	201UR102B	201XR102B
2.5K	201UR252B-ND	201XR252B-ND	.50	41.70	161.94	264.10	222.40/M	180.70/M	201UR252B	201XR252B
5K	201UR502B-ND	201XR502B-ND	.50	41.70	161.94	264.10	222.40/M	180.70/M	201UR502B	201XR502B
10K	201UR103B-ND	201XR103B-ND	.50	41.70	161.94	264.10	222.40/M	180.70/M	201UR103B	201XR103B
25K	201UR253B-ND	201XR253B-ND	.50	41.70	161.94	264.10	222.40/M	180.70/M	201UR253B	201XR253B
50K	201UR503B-ND	201XR503B-ND	.50	41.70	161.94	264.10	222.40/M	180.70/M	201UR503B	201XR503B
100K	201UR104B-ND	201XR104B-ND	.50	41.70	161.94	264.10	222.40/M	180.70/M	201UR104B	201XR104B
250K	201UR254B-ND	201XR254B-ND	.50	41.70	161.94	264.10	222.40/M	180.70/M	201UR254B	201XR254B
500K	201UR504B-ND	201XR504B-ND	.50	41.70	161.94	264.10	222.40/M	180.70/M	201UR504B	201XR504B
1M	201UR105B-ND	201XR105B-ND	.50	41.70	161.94	264.10	222.40/M	180.70/M	201UR105B	201XR105B

CTS Miniature 10mm Trimmer Potentiometers

Series 262



Features:
 • Miniature size • Adjustment knob slotted for front or rear screwdriver adjustment • P.C. mounting with knob parallel or perpendicular to printed circuit board • Low height profile • Wide resistance range • Reliable screened CTS composition element

Electrical and Mechanical Specifications:
 • **Resistance Range:** Standard — 500 ohms through 1 megohm • **Resistance Tolerance:** Standard — ±20% • **Power Rating Watts:** 0.15 watts @ 40°C • **Voltage Rating:** Operating maximum — 350 VDC. • **Resistance Tapers:** Linear • **Adjustment Knob:** Color coded nylon knob with hex hole for top adjustment plus slot for either top or bottom screwdriver adjustment. • **Angle of Rotation:** Total rotation — 265° ±5% • **Rotational Torque:** .3 to 5 inch ounces • **Stop Strength:** .16 inch ounces

Res. Ohms.	Color	Digi-Key Part No. Laydown Version	Digi-Key Part No. Standup Version	Pricing						CTS Part No. Laydown Version	CTS Part No. Standup Version
				1	100	500	1,000	5,000	10,000		
500	Green	U262R501B-ND	X262R501B-ND	.51	42.90	166.60	271.70	228.80/M	185.90/M	U262R501B	X262R501B
1K	Yellow	U262R102B-ND	X262R102B-ND	.51	42.90	166.60	271.70	228.80/M	185.90/M	U262R102B	X262R102B
2.5K	Red	U262R252B-ND	X262R252B-ND	.51	42.90	166.60	271.70	228.80/M	185.90/M	U262R252B	X262R252B
5K	Blue	U262R502B-ND	X262R502B-ND	.51	42.90	166.60	271.70	228.80/M	185.90/M	U262R502B	X262R502B
10K	White	U262R103B-ND	X262R103B-ND	.51	42.90	166.60	271.70	228.80/M	185.90/M	U262R103B	X262R103B
25K	Black	U262R253B-ND	X262R253B-ND	.51	42.90	166.60	271.70	228.80/M	185.90/M	U262R253B	X262R253B
50K	Orange	U262R503B-ND	X262R503B-ND	.51	42.90	166.60	271.70	228.80/M	185.90/M	U262R503B	X262R503B
100K	Gray	U262R104B-ND	X262R104B-ND	.51	42.90	166.60	271.70	228.80/M	185.90/M	U262R104B	X262R104B
250K	Violet	U262R254B-ND	X262R254B-ND	.51	42.90	166.60	271.70	228.80/M	185.90/M	U262R254B	X262R254B
500K	Brown	U262R504B-ND	X262R504B-ND	.51	42.90	166.60	271.70	228.80/M	185.90/M	U262R504B	X262R504B
1M	Lt. Blue	U262R105B-ND	X262R105B-ND	.51	42.90	166.60	271.70	228.80/M	185.90/M	U262R105B	X262R105B

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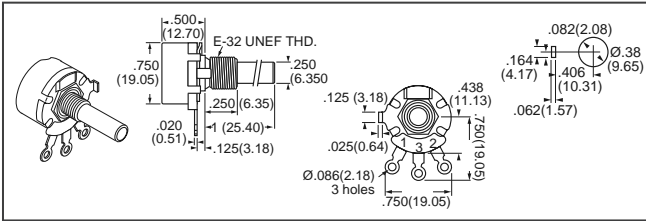
CTS Cermet Potentiometers - 2 Watt

Series 550

SPECIFICATIONS:

Resistance Range: 500 ohms through 5 megohm (linear taper). **Resistance Tolerance:** ±20%
Power Rating Watts: 2 Watts @ 70°C Derated to No Load @ 150°C. **Voltage Rating:** Operating Max: 500VDC. **Temperature Coefficient:** ±250/°C **Angle of Rotation:** Total Rotation: 280° ±5°

Effective Electrical Rotation: 256° ±3°. **Resistance Taper:** Linear. **Locating Lug:** Left Side, Terminals Down. **Bushing Information:** Diameter: 3/8" -32 UNEF-2A Thread. Length: 1/4" (6.35mm). **Shaft Information:** 1" FMS x .250" (25.40mm FMS x 6.35mm) Diameter, Metal Plain Round



Ohms	Digi-Key Part No.	Pricing				CTS Part No.
		1	10	50	100	
500	CT2350-ND	11.46	106.60	442.39	799.50	550T232R501B11
1K	CT2351-ND	11.46	106.60	442.39	799.50	550T232R102B11
2.5K	CT2352-ND	11.46	106.60	442.39	799.50	550T232R252B11
5K	CT2353-ND	11.46	106.60	442.39	799.50	550T232R502B11
10K	CT2354-ND	11.46	106.60	442.39	799.50	550T232R103B11
25K	CT2355-ND	11.46	106.60	442.39	799.50	550T232R253B11
50K	CT2356-ND	11.46	106.60	442.39	799.50	550T232R503B11
100K	CT2357-ND	11.46	106.60	442.39	799.50	550T232R104B11
250K	CT2358-ND	11.46	106.60	442.39	799.50	550T232R254B11
500K	CT2359-ND	11.46	106.60	442.39	799.50	550T232R504B11
1MEG	CT2360-ND	11.46	106.60	442.39	799.50	550T232R105B11
5MEG	CT2361-ND	11.46	106.60	442.39	799.50	550T232R505B11

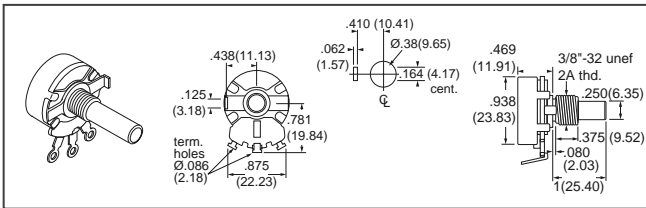
CTS Wirewound Potentiometers - 5 Watt

Series 026

SPECIFICATIONS:

Resistance Range: 5Ω through 25KΩ **Resistance Tolerance:** ±20% **Power Rating Watts:** 5 Watts @ 25°C Derated to No Load @ 105°C **Voltage Rating:** Operating Max: 500VDC **Shaft Information:** 1" FMS x .250" (25.40mm FMS x 6.35mm) Diameter, Metal, Plain Round **Angle of Rotation:** 300° ±5°

Bushing Information: Diameter: EIA Std. 3/8"-32, UNEF-2A Thread Length: 3/8" ± 1/64" (9.52mm ± .40mm) **Terminal Information:** Solder Lug, Formed to Rear **Locating Lug:** Left Side, Terminals Down



Ohms	Digi-Key Part No.	Pricing				CTS Part No.
		1	10	50	100	
5	CT2150-ND	3.46	32.20	133.63	241.50	026T332R5A0B1A4
10	CT2151-ND	3.46	32.20	133.63	241.50	026T332R100B1A4
25	CT2152-ND	3.46	32.20	133.63	241.50	026T332R250B1A4
50	CT2153-ND	3.46	32.20	133.63	241.50	026T332R500B1A4
100	CT2154-ND	3.46	32.20	133.63	241.50	026T332R101B1A4
250	CT2155-ND	3.46	32.20	133.63	241.50	026T332R251B1A4
500	CT2156-ND	3.46	32.20	133.63	241.50	026T332R501B1A4
1K	CT2157-ND	3.46	32.20	133.63	241.50	026T332R102B1A4
5K	CT2158-ND	3.46	32.20	133.63	241.50	026T332R502B1A4
10K	CT2159-ND	3.46	32.20	133.63	241.50	026T332R103B1A4
25K	CT2160-ND	3.46	32.20	133.63	241.50	026T332R253B1A4

CTS Carbon Potentiometers - 1/8 Watt

Series 296

SPECIFICATIONS:

Resistance Range: 500 ohms through 1 megohm. **Resistance tolerance:** ±20%. **Power Rating Watts:** 0.15 Watts @ 40°C derated to no load @ 85°C. **Voltage Rating:** Across End Terminals: 250VDC. **Rotational Torque:** 20-144gcm. **Angle of Rotation:** Total rotation: 300° ±5°, Effective Rotation: 280° (Approx.) **Stops:** 0.57 N-m Minimum Stop Strength. **Shaft Information:** Length: 13.72mm Beyond Cover, Style: Knurled, Diameter: 6mm. **Mounting Information:** P.C. Board Mounting.

Fig. 1 - Vertical Adjust

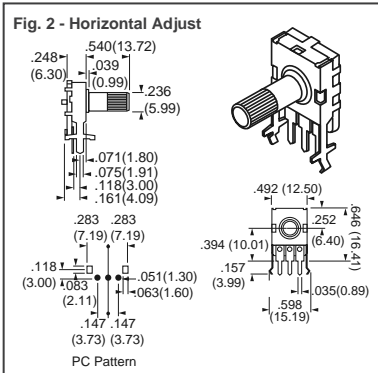
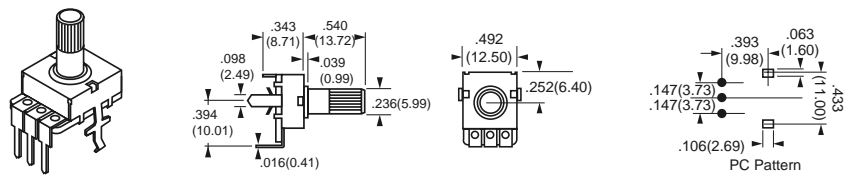


Fig.	Value	Description	Digi-Key Part No.	Pricing				CTS Part No.
				1	10	50	100	
1	500	Vertical	CT2261-ND	1.44	12.00	50.00	80.00	296UD501B1N
	1K	Vertical	CT2262-ND	1.44	12.00	50.00	80.00	296UD102B1N
	2.5K	Vertical	CT2263-ND	1.44	12.00	50.00	80.00	296UD252B1N
	5K	Vertical	CT2264-ND	1.44	12.00	50.00	80.00	296UD502B1N
	10K	Vertical	CT2265-ND	1.44	12.00	50.00	80.00	296UD103B1N
1	25K	Vertical	CT2266-ND	1.44	12.00	50.00	80.00	296UD253B1N
	50K	Vertical	CT2267-ND	1.44	12.00	50.00	80.00	296UD503B1N
	100K	Vertical	CT2268-ND	1.44	12.00	50.00	80.00	296UD104B1N
	250K	Vertical	CT2269-ND	1.44	12.00	50.00	80.00	296UD254B1N
	500K	Vertical	CT2270-ND	1.44	12.00	50.00	80.00	296UD504B1N
2	1MEG	Vertical	CT2271-ND	1.44	12.00	50.00	80.00	296UD105B1N
	500	Horizontal	CT2250-ND	1.44	12.00	50.00	80.00	296XD501B1N
	1K	Horizontal	CT2251-ND	1.44	12.00	50.00	80.00	296XD102B1N
	2.5K	Horizontal	CT2252-ND	1.44	12.00	50.00	80.00	296XD252B1N
	5K	Horizontal	CT2253-ND	1.44	12.00	50.00	80.00	296XD502B1N
2	10K	Horizontal	CT2254-ND	1.44	12.00	50.00	80.00	296XD103B1N
	25K	Horizontal	CT2255-ND	1.44	12.00	50.00	80.00	296XD253B1N
	50K	Horizontal	CT2256-ND	1.44	12.00	50.00	80.00	296XD503B1N
	100K	Horizontal	CT2257-ND	1.44	12.00	50.00	80.00	296XD104B1N
	250K	Horizontal	CT2258-ND	1.44	12.00	50.00	80.00	296XD254B1N
2	500K	Horizontal	CT2259-ND	1.44	12.00	50.00	80.00	296XD504B1N
	1MEG	Horizontal	CT2260-ND	1.44	12.00	50.00	80.00	296XD105B1N

KEYSTONE Instrumentation Knobs

Knobs have a spun aluminum inlay with a clear coat finish.

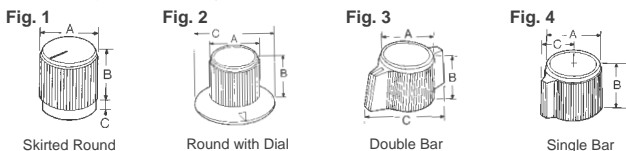


Fig.	Shaft Dia.	Dimensions			Digi-Key Part No.	Pricing		
		A	B	C		1	10	100
1	3.18	12.70	12.95	3.81	8554K-ND	3.24	28.80	254.40
	6.35	17.78	15.49	4.32	8555K-ND	3.38	30.00	265.00
	6.35	22.86	20.07	5.59	8556K-ND	3.49	31.00	274.00
2	3.18	12.70	13.97	22.86	8558K-ND	4.07	36.20	319.00
	6.35	17.78	18.03	29.21	8559K-ND	4.86	43.20	382.00
	6.35	22.86	22.10	38.74	8560K-ND	5.54	49.20	436.00
3	6.35	17.78	15.49	29.21	8565K-ND	4.14	36.80	324.00
	6.35	22.86	16.26	38.74	8566K-ND	4.41	39.20	345.00
4	3.18	12.70	12.95	8.89	8567K-ND	4.88	43.40	385.00
	6.35	17.78	15.49	11.68	8568K-ND	5.63	50.00	442.00
4	6.35	22.86	20.07	14.99	8569K-ND	6.08	54.00	478.00

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Fig. 1 - Vertical

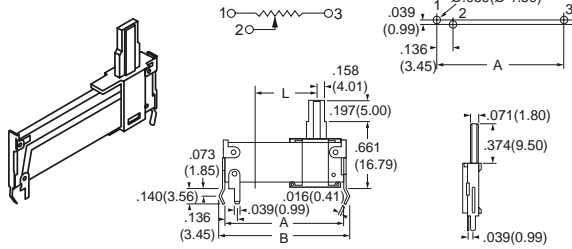
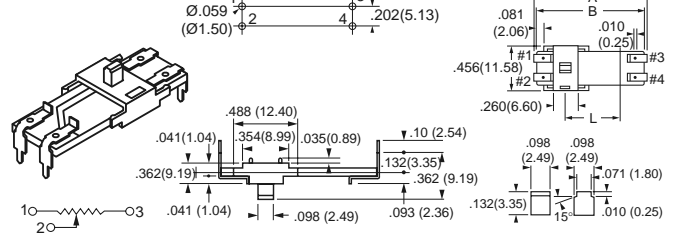


Fig. 2 - Horizontal



Vertical Version

Specifications:

Resistance Range: 5K ohms through 1 megohm **Resistance Tolerance:** ±20% **Power Rating Watts:** 0.2 Watts @ 55°C Derated to No Load @ 85°C **Voltage Rating:** Across End Terminals: 300VDC **Operating Life:** 10,000 Cycles **Stop Strength:** Maximum: 3K gf **Resistance Taper:** Linear **Slide Travel:** Mechanical - 20, 30, 45mm. **Terminal Information:** Printed Circuit: Vertical or Horizontal Mounting Available **Mounting Information:** Type "X" - Vertical Mount, See figure 1 for Dimensional Details.

Digi-Key Part No.	1	10	50	100	500
CT2301-ND - CT2308-ND	1.40	11.70	48.75	78.00	323.70
CT2309-ND - CT2316-ND	1.44	12.00	50.00	80.00	332.00
CT2317-ND - CT2324-ND	1.51	12.60	52.50	84.00	348.60

Ohms	Dimensions - In. (mm) L x A x B (L = Travel)	Digi-Key Part No.	CTS Part No.	Ohms	Dimensions - In. (mm) L x A x B (L = Travel)	Digi-Key Part No.	CTS Part No.	Ohms	Dimensions - In. (mm) L x A x B (L = Travel)	Digi-Key Part No.	CTS Part No.
5K		CT2301-ND	448XC2502BDN	5K		CT2309-ND	448XD2502BDN	5K		CT2317-ND	448XE2502BDN
10K		CT2302-ND	448XC2103BDN	10K		CT2310-ND	448XD2103BDN	10K		CT2318-ND	448XE2103BDN
25K		CT2303-ND	448XC2253BDN	25K		CT2311-ND	448XD2253BDN	25K		CT2319-ND	448XE2253BDN
50K	.787 x 1.358 x 1.440	CT2304-ND	448XC2503BDN	50K	1.18 x 1.751 x 1.834	CT2312-ND	448XD2503BDN	50K	1.77 x 2.324 x 2.245	CT2320-ND	448XE2503BDN
100K	(19.90 x 34.49 x 36.58)	CT2305-ND	448XC2104BDN	100K	(29.97 x 44.48 x 46.58)	CT2313-ND	448XD2104BDN	100K	(44.96 x 59.03 x 57.02)	CT2321-ND	448XE2104BDN
250K		CT2306-ND	448XC2254BDN	250K		CT2314-ND	448XD2254BDN	250K		CT2322-ND	448XE2254BDN
500K		CT2307-ND	448XC2504BDN	500K		CT2315-ND	448XD2504BDN	500K		CT2323-ND	448XE2504BDN
1MEG		CT2308-ND	448XC2105BDN	1MEG		CT2316-ND	448XD2105BDN	1MEG		CT2324-ND	448XE2105BDN

Horizontal Version

Specifications: **Resistance Range:** 5K ohms through 1 megohm **Resistance Tolerance:** ±20% **Power Rating Watts:** 0.2 Watts @ 55°C Derated to No Load @ 85°C **Voltage Rating:** Across End Terminals: 300VDC **Operating Life:** 10,000 Cycles **Stop Strength:** Maximum: 3K gf **Resistance Taper:** Linear **Slide Travel:** Mechanical - 10, 15mm. **Terminal Information:** Printed Circuit: Vertical or Horizontal Mounting Available **Mounting Information:** Type "V" - Horizontal Mount, See figure Figure 2 for Dimensional Details.

Ohms	Dimensions - In. (mm) L x A x B (L = Travel)	Digi-Key Part No.	CTS Part No.	Ohms	Dimensions - In. (mm) L x A x B (L = Travel)	Digi-Key Part No.	CTS Part No.
5K		CT2326-ND	448VA1502BDN	5K		CT2334-ND	448VB1502BDN
10K		CT2327-ND	448VA1103BDN	10K		CT2335-ND	448VB1103BDN
25K		CT2328-ND	448VA1253BDN	25K		CT2336-ND	448VB1253BDN
50K	.393 x 1.188 x 1.129	CT2329-ND	448VA1503BDN	50K	.590 x 1.385 x 1.326	CT2337-ND	448VB1503BDN
100K	(9.98 x 30.18 x 28.68)	CT2330-ND	448VA1104BDN	100K	(14.99 x 35.18 x 33.68)	CT2338-ND	448VB1104BDN
250K		CT2331-ND	448VA1254BDN	250K		CT2339-ND	448VB1254BDN
500K		CT2332-ND	448VA1504BDN	500K		CT2340-ND	448VB1504BDN
1MEG		CT2333-ND	448VA1105BDN	1MEG		CT2341-ND	448VB1105BDN

Digi-Key Part No.	1	10	50	100	500
CT2326-ND - CT2333-ND	1.51	12.60	52.50	84.00	348.60
CT2334-ND - CT2341-ND	1.51	12.60	52.50	84.00	348.60

Fig. 1

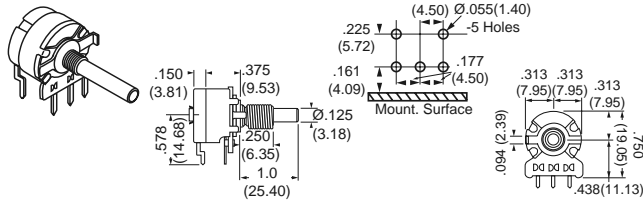
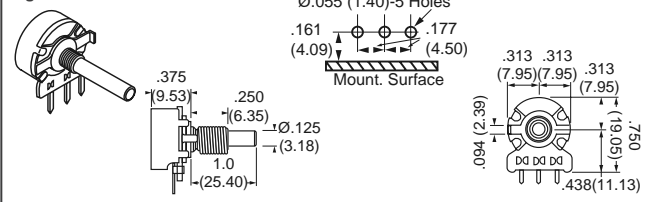


Fig. 2



Specifications:

Resistance Range: 500 ohms through 1 megohm **Resistance Tolerance:** ±20% **Power Rating Watts:** 1/4 Watt through 100K, 1/5 Watt above 100K **Voltage Rating:** Operating Maximum: 500 VDC **Mechanical Rotation:** 300° ±5° **Available Power Switch:** Type: Rotary Rating: 3A @ 125VAC (UL Approved) **Effective Rotation:** Without Switch 300° (Approximate), with Switch 290° (Approximate) **Resistance Taper:** Linear, Logarithmic **Locating Lug:** Left Side, Terminals Down **Bushing Information:** Length: 1/4" (6.35mm), Thread Size: 1/4"-32, diameter: 1/4" (6.35mm) **Shaft Information:** Length: 1" (25.40mm) including bushing, Diameter: .125" (3.18mm)

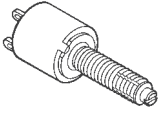
Digi-Key Part No.	1	10	50	100	250
CT2223-ND - CT2233-ND	3.33	31.00	128.65	232.50	515.38
CT2201-ND - CT2211-ND	2.60	24.20	100.43	181.50	402.33
CT2212-ND - CT2222-ND	3.38	31.40	130.31	235.50	522.03
CT2234-ND - CT2244-ND	2.64	24.60	102.09	184.50	408.98

Linear Taper with Switch Fig. 1			Linear Taper without Switch Fig. 2			Logarithmic Taper with Switch Fig. 1			Logarithmic Taper without Switch Fig. 2		
Ohms	Digi-Key Part No.	CTS Part No.	Ohms	Digi-Key Part No.	CTS Part No.	Ohms	Digi-Key Part No.	CTS Part No.	Ohms	Digi-Key Part No.	CTS Part No.
500	CT2223-ND	270-XS8773	500	CT2201-ND	270-XS8784	500	CT2212-ND	270-XS8762	500	CT2234-ND	270-XS8751
1K	CT2224-ND	270-XS8774	1K	CT2202-ND	270-XS8785	1K	CT2213-ND	270-XS8763	1K	CT2235-ND	270-XS8752
2.5K	CT2225-ND	270-XS8775	2.5K	CT2203-ND	270-XS8786	2.5K	CT2214-ND	270-XS8764	2.5K	CT2236-ND	270-XS8753
5K	CT2226-ND	270-XS8776	5K	CT2204-ND	270-XS8787	5K	CT2215-ND	270-XS8765	5K	CT2237-ND	270-XS8754
10K	CT2227-ND	270-XS8777	10K	CT2205-ND	270-XS8788	10K	CT2216-ND	270-XS8766	10K	CT2238-ND	270-XS8755
25K	CT2228-ND	270-XS8778	25K	CT2206-ND	270-XS8789	25K	CT2217-ND	270-XS8767	25K	CT2239-ND	270-XS8756
50K	CT2229-ND	270-XS8779	50K	CT2207-ND	270-XS8790	50K	CT2218-ND	270-XS8768	50K	CT2240-ND	270-XS8757
100K	CT2230-ND	270-XS8780	100K	CT2208-ND	270-XS8791	100K	CT2219-ND	270-XS8769	100K	CT2241-ND	270-XS8758
250K	CT2231-ND	270-XS8781	250K	CT2209-ND	270-XS8792	250K	CT2220-ND	270-XS8770	250K	CT2242-ND	270-XS8759
500K	CT2232-ND	270-XS8782	500K	CT2210-ND	270-XS8793	500K	CT2221-ND	270-XS8771	500K	CT2243-ND	270-XS8760
1MEG	CT2233-ND	270-XS8783	1MEG	CT2211-ND	270-XS8794	1MEG	CT2222-ND	270-XS8772	1MEG	CT2244-ND	270-XS8761

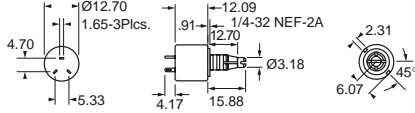


Precision Electronic Components Ltd.

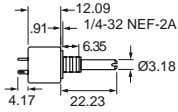
MIL Style RV6 - 1/2 Watt Carbon Potentiometer



RV6L Series



RV6N Series



Specifications:

- **Resistance Tolerance:** ±10% through 500K, ±20% from 1 Meg
 - **Resistance Taper:** Linear
 - **Power Rating:** .5 Watts @ 70°C
 - **Dielectric Strength:** 750V RMS
 - **Working Voltage:** 350VDC Maximum, but power not to exceed rating
 - **Operating Temperature:** -55°C to 120°C
 - **Mechanical Rotation:** 295°
- QPL listed under MIL R 94 Specifications. Metal housing, stainless steel shaft

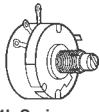
Resistance Code Chart

Code (Value)	Code (Value)	Code (Value)	Code (Value)	Code (Value)
101 (100)	102 (1K)	103 (10K)	104 (100K)	105 (1Meg)
251 (250)	252 (2.5K)	253 (25K)	254 (250K)	255 (5Meg)
501 (500)	502 (5K)	503 (50K)	504 (500K)	

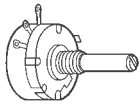
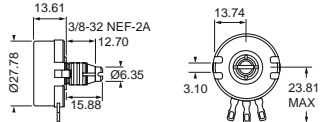
Resistance Range (Ohms)	Digi-Key* Part No.	1	10	50	100	250	Precision Part No.
100-5Meg	RV6L □□□ C-ND	6.84	61.81	263.00	436.58	953.38	RV6LAYSA(Code)A
100-5Meg	RV6N □□□ C-ND	6.16	55.70	237.00	393.42	859.13	RV6NAYSJ(Code)A

* For complete number, substitute corresponding code (from Resistance Code Chart) for □□□.

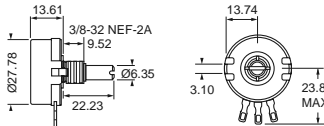
MIL Style RV4 - 2 Watt Carbon Potentiometer



RV4L Series



RV4N Series



Specifications:

- **Resistance Tolerance:** ±10% through 500K, ±20% from 1 Meg
 - **Resistance Taper:** Linear
 - **Power Rating:** 2 Watts @ 70°C, Derate to 0 Watt @ 120°C
 - **Dielectric Strength:** 900V RMS
 - **Working Voltage:** 500 volts, but power not to exceed rating
 - **Operating Temperature:** -55°C to 120°C
 - **Mechanical Rotation:** 314°
- QPL listed under MIL R 94 Specifications. Metal housing, stainless steel shaft.

Resistance Code Chart

RV4L SERIES

Code (Value)	Code (Value)	Code (Value)	Code (Value)
500 (50)	102 (1K)	153 (15K)	104 (100K)
101 (100)	252 (2.5K)	253 (25K)	254 (250K)
251 (250)	502 (5K)	353 (35K)	504 (500K)
501 (500)	103 (10K)	503 (50K)	105 (1 Meg)

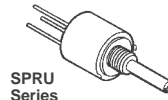
RV4N SERIES

Code (Value)	Code (Value)	Code (Value)	Code (Value)	Code (Value)
500 (50)	501 (500)	502 (5K)	253 (25K)	254 (250K)
101 (100)	102 (1K)	752 (7.5K)	353 (35K)	504 (500K)
151 (150)	152 (1.5K)	103 (10K)	503 (50K)	105 (1 Meg)
251 (250)	252 (2.5K)	153 (15K)	104 (100K)	

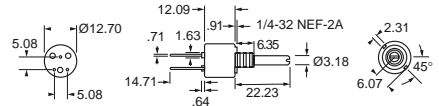
Resistance Range (Ohms)	Digi-Key* Part No.	1	10	50	100	250	Precision Part No.
50-1Meg	RV4L □□□ C-ND	5.90	53.35	227.00	376.82	822.88	RV4LAYSA(Code)A
50-1Meg	RV4N □□□ C-ND	5.62	50.76	216.00	358.56	783.00	RV4NAYSJ(Code)A

* For complete number, substitute corresponding code (from Resistance Code Chart) for □□□.

Type SPR Washable, 1/2 Watt - Carbon Potentiometer



SPRU Series



Specifications:

- **Resistance Tolerance:** ±10% through 500K, ±20% from 1Meg to 5Meg
 - **Resistance Taper:** Linear
 - **Power Rating:** .5 Watts @ 70°C
 - **Dielectric Strength:** 750V RMS
 - **Working Voltage:** 350VDC Maximum, but power not to exceed rating
 - **Operating Temperature:** -55°C to 120°C
 - **Mechanical Rotation:** 295°
- Meets or exceeds MIL R 94 Specifications. Metal housing, stainless steel shaft.

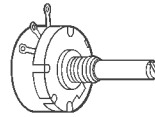
Resistance Code Chart

Code (Value)	Code (Value)	Code (Value)	Code (Value)
101 (100)	252 (2.5K)	503 (50K)	105 (1Meg)
251 (250)	502 (5K)	104 (100K)	255 (2.5Meg)
501 (500)	103 (10K)	254 (250K)	505 (5Meg)
102 (1K)	253 (25K)	504 (500K)	

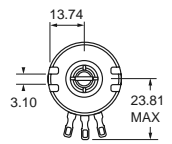
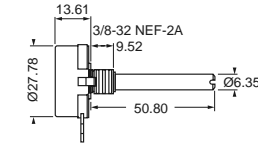
Resistance Range (Ohms)	Digi-Key* Part No.	1	10	50	100	250	Precision Part No.
100-5Meg	SPRU □□□ C-ND	6.42	58.05	247.00	410.02	895.38	SPRU(Code)1S28

* For complete number, substitute corresponding code (from Resistance Code Chart) for □□□.

MIL Style RV4 - 2 Watt Carbon Potentiometer



RV4NJ Series



Specifications:

- **Resistance Tolerance:** ±10% through 500K, ±20% for 1 Meg
 - **Resistance Taper:** Linear
 - **Power Rating:** 2 Watts @ 70°C, derate to 0 Watt @ 120°C
 - **Dielectric Strength:** 900V RMS
 - **Working Voltage:** 500VDC Max., but power not to exceed rating
 - **Operating Temperature:** -55°C to 120°C
 - **Mechanical Rotation:** 314°
- QPL listed under MIL R 94 Specifications. Metal housing, stainless steel shaft

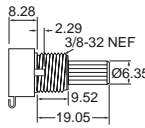
Resistance Code Chart

Code (Value)	Code (Value)
500 (50)	502 (5K)
101 (100)	103 (10K)
251 (250)	253 (25K)
501 (500)	104 (100K)
102 (1K)	504 (500K)
252 (2.5K)	105 (1Meg)

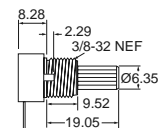
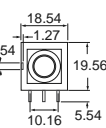
Resistance Range (Ohms)	Digi-Key* Part No.	1	10	50	100	250	Precision Part No.
50-1Meg	RV4NJ □□□ C-ND	5.62	50.76	216.00	358.56	783.00	RV4NAYSJ(Code)A

* For complete number, substitute corresponding code (from Resistance Code Chart) for □□□.

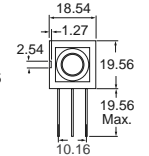
Style V - 2 Watt Cermet Potentiometer



VU Series



VPU Series



Specifications:

- **Resistance Tolerance:** ±10%
- **Resistance Taper:** Linear
- **Power Rating:** 2 Watts @ 70°C, derate to 0 Watts @ 120°C
- **Dielectric Strength:** 2500V RMS at sea level
- **Operating Voltage:** 1000 V, subject to power rating
- **Operating Temperature:** -50°C to +110°C
- **Mechanical Rotation:** 274°

Resistance Code Chart

Code (Value)	Code (Value)
101 (100)	502 (5K)
251 (250)	103 (10K)
501 (500)	253 (25K)
102 (1K)	503 (50K)
252 (2.5K)	104 (100K)

Resistance Range (Ohms)	Digi-Key* Part No.	1	10	50	100	250	Precision Part No.
100-100K	VU □□□ -ND	5.75	51.94	221.00	366.86	801.13	VU(Code)1SS24
100-100K	VPU □□□ -ND	5.23	47.24	201.00	333.66	728.63	VPU(Code)1SS24

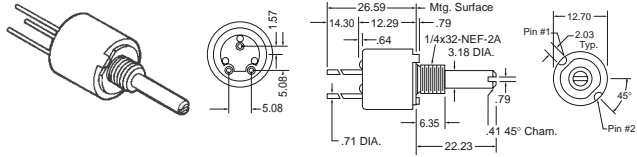
* For complete number, substitute corresponding code (from Resistance Code Chart) for □□□.

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

CLAROSTAT Washable, Conductive Plastic Potentiometers — 1/2 Watt

SERIES:
392JA
392JB



Series
392JA: Metal Shaft and Bushing
392JB: Plastic Shaft and Bushing

RESISTANCE CODE CHART (Resistance Value — Linear)

Code (Value)	Code (Value)	Code (Value)
101 (100)	502 (5K)*	254 (250K)
251 (250)	103 (10K)	504 (500K)
501 (500)*	253 (25K)	105 (1 Meg.)
102 (1K)	503 (50K)	255 (2.5 Meg.)
252 (2.5K)*	104 (100K)	

* Values not available in 392JA Series

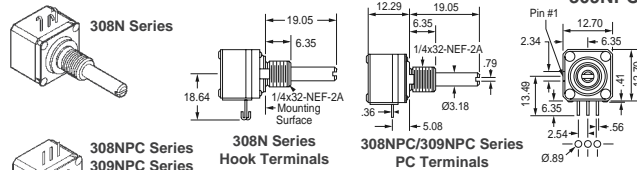
SPECIFICATIONS:
Power Rating: .5 Watts at 70 C. voltage not to exceed rating.
Electrical Rotation: 295° ±5°
Effective Rotation: 265° +0°, -10°.
Mechanical Rotation: 295° ±5°.
Resistance Tolerance: ±10% through 500k. ±20% 1 Meg.-5 Meg.
Dielectric Strength: 750 VAC for 60 sec., @ ATM pressure. 350 VAC for 60 sec., in. Hg.
Working Voltage: 350 VDC across terminals, but power not to exceed rating.
Operational Temperature Range: -40 C. to +120 C.

Resistance Range (Ohms)	Digi-Key* Part No.	Pricing					Clarostat Part No.	
		1	10	50	100	250		500
2.5 Meg.	392JA □□□-ND	9.85	86.30	373.00	492.00	1040.00	1800.00	392JA (Value)
100-1 Meg.	392JB □□□-ND	7.74	66.90	290.00	382.00	810.00	1385.00	392JB (Value)

* For complete number, substitute corresponding code (from chart above) for □□□.

Conductive Plastic Potentiometers — 1/2 Watt, 1 Watt

SERIES:
308N
308NPC
309NPC



RESISTANCE CODE CHART (Resistance Value — Linear)

Code (Value)	Code (Value)	Code (Value)
101 (100)	502 (5K)	254 (250K)
251 (250)	103 (10K)	504 (500K)
501 (500)	253 (25K)	105 (1 Meg.)
102 (1K)	503 (50K)	255 (2.5 Meg.)
252 (2.5K)	104 (100K)	505 (5 Meg.)

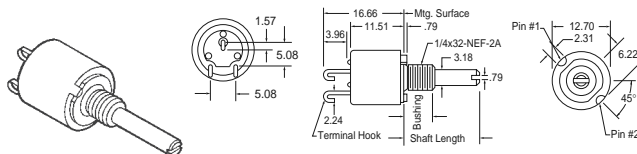
SPECIFICATIONS:
Resistance Tolerance: ±10% up to 500K, ±20% above.
Electrical and Mechanical Rotation: 295° ±5°
Dielectric Strength: 750 VAC (308 Series), 900 VAC (309 Series), for 60 SEC. ATM.
Working Voltage: 350 VDC across terminals.
Power Rating: .5 watt at 70°C (308 Series), 1 watt at 150°C (309 Series).
Operating Temperature: -40° to +120°C (308 Series), -40°C to +150°C (309 Series).
Rotational Life: 50,000 cycles under load (308 Series), 25,000 cycles under load (309 Series).

Resistance Range (Ohms)	Digi-Key* Part No.	Pricing					Clarostat Part No.
		1	10	50	100	250	
100-5 Meg.	308N □□□-ND	9.72	76.30	324.00	523.00	902.50	308N (Value)
100-5 Meg.	308NPC □□□-ND	9.93	77.40	329.50	486.00	902.50	308NPC (Value)
100-5 Meg.	309NPC □□□-ND	10.30	81.00	342.50	601.00	1072.50	309NPC (Value)

* For complete number, substitute corresponding code (from chart above) for □□□.
 N = Shaft: 1/8 in. (3.18mm) diameter x 3/4 in. (19.05mm)

Conductive Plastic Military Potentiometers — 1/2 Watt

SERIES:
RV6L
RV6N

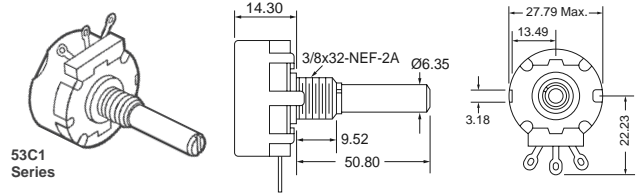


RV6L: Locking Bushing: 1/2" (12.70mm) (length).
 Shaft: 5/8" (15.88mm) (length).
 RV6N: Standard Bushing: 1/4" (6.35mm) (length).
 Shaft: 7/8" (22.23mm) (length).

RV6L□□□: "P" suffix denotes sealed version.
 RV6N□□□: "P" suffix denotes sealed version.

Conductive Plastic Potentiometers — 2 Watt

SERIES:
53C1



53C1 Series

RESISTANCE CODE CHART (Resistance Value — Linear)

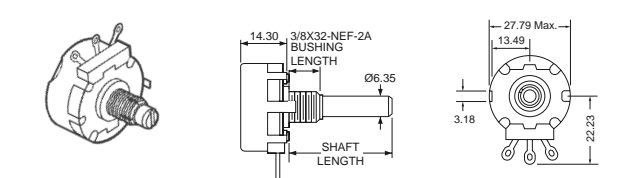
Code (Value)	Code (Value)
050 (50)	251 (250)
101 (100)	102 (1K)

Resistance Range (Ohms)	Digi-Key* Part No.	Pricing					Clarostat Part No.	
		1	10	50	100	250		500
50-25K	53C1 □□□-ND	9.16	80.73	343.64	469.09	981.82	1636.37	53C1 (Value)

* For complete number, substitute corresponding code (from chart above) for □□□.

Conductive Plastic Military Potentiometers — 2 Watt

SERIES:
RV4L



RV4L: Locking Bushing: 1/2" (12.70mm) (length).
 Shaft: 5/8" (15.88mm) (length).

RESISTANCE CODE CHART (Resistance Value — Linear)

Code (Value)
503 (50K)
104 (100K)

Resistance Range (Ohms)	Digi-Key* Part No.	Pricing					Clarostat Part No.
		1	10	50	100	250	
50-100K	RV4L □□□-ND	8.77	77.39	330.17	443.68	928.63	RV4LAYS□□□A

* For complete number, substitute corresponding code (from chart above) for □□□.

RESISTANCE CODE CHART (Resistance Value — Linear)

Code (Value)	Code (Value)	Code (Value)	Code (Value)	Code (Value)
101 (100)	252 (2.5K)*	153 (15K)*	104 (100K)	504 (500K)
501 (500)	502 (5K)	253 (25K)	154 (150K)*	105 (1 Meg.)
102 (1K)	103 (10K)	503 (50K)	254 (250K)	

* Available in RV6L□□□□ and RV6N□□□□ series only.

SPECIFICATIONS:
Resistance Tolerance: ±10%.
Power Rating: 0.5 watt at 70°C. Derated to zero power at 120°C.
Electrical and Mechanical Rotation: 295° ±3°
Effective Rotation: 265° +0°, -10°.
Dielectric Strength: 750 VAC for 60 Seconds at ATM. 350 VAC for 60 Seconds 3.44 in. H.g.
Working Voltage: 350 VDC maximum, but power not to exceed rating.

Resistance Range (Ohms)	Digi-Key* Part No.	Pricing				Clarostat Part No.
		1	10	50	100	
2.5K-50K, 150K, 500K	RV6L □□□-ND	14.73	128.71	550.91	895.86	RV6LAYS□□□□A
100-2.5K, 15K, 50K-150K, 500K	RV6N □□□-ND	14.07	123.27	529.09	861.82	RV6NAYS□□□□A
100-1 Meg.	RV6L □□□P-ND	10.87	94.70	410.50	554.00	RV6LAYS□□□□A-P
100-1 Meg.	RV6N □□□P-ND	10.14	88.90	381.50	507.00	RV6NAYS□□□□A-P

* For complete number, substitute corresponding code (from chart above) for □□□.

Concentric Scale Dials

SERIES: 400, 500, 600, 3400

400 SERIES: 1" (25.40mm) Calibrated dials designed for multi-turn potentiometers up to ten turns or other rotary devices. The knob attaches directly to the shaft, and the body of the dial is mounted rigidly to the panel, therefore, accurate readings with a ratio of 1,000 to one for ten turns are provided with zero backlash and reading error.

500 SERIES: 1" (25.40mm) Single turn calibrated scale dial.

600 SERIES: 1" (25.40mm) Uncalibrated dial.

All models available in black or clear anodized construction. Mounting Requirements: 1/4" (6.35mm) shaft with 3/8" x 32-NEF-2A Bushing. Made in the USA

3400 SERIES: Readout and Operation: Unit shall register a total count of 20 turns. The number in the window (0 thru 19) indicates completed number of turns of the drive sleeve. Graduated circular dial indicates the percent of a partial turn of the drive sleeve. Transfer point: The number in center of window shall change as graduated dial rotates between 94 and 0. Rotation: Readout shall increase with clockwise and decrease with counterclockwise rotation. Brake Lever Operation: Positive Detent. Accuracy: Backlash shall be zero between graduated dial and drive sleeve. Mounting: Install mounting bracket between panel and panel nut. The dials mount directly to shaft with No. 4-40 spline socket set screw, located adjacent to No. 95 on graduated dial. 7/8" (22.23mm) diameter.

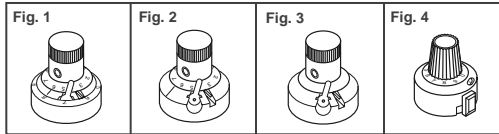


Fig.	Description	Digi-Key Part No.	Pricing			Kilo Part No.
			1	5	10	
1	Commercial 10 Turn, Black Anodize, 1/4" (6.35mm) Shaft, No Lock	411KL-ND	14.91	69.23	127.80	411
1	Commercial 10 Turn, Black Anodize, 1/4" (6.35mm) Shaft, With Lock	412KL-ND	15.75	73.13	135.00	412
1	Commercial 10 Turn, Clear Anodize, 1/4" (6.35mm) Shaft, No Lock	461KL-ND	14.91	69.23	127.80	461
1	Commercial 10 Turn, Clear Anodize, 1/4" (6.35mm) Shaft, With Lock	462KL-ND	15.75	73.13	135.00	462
2	Commercial Single Turn, Clear Anodize, 1/4" (6.35mm) Shaft, No Lock	561KL-ND	10.44	48.72	92.80	561
2	Commercial Single Turn, Clear Anodize, 1/4" (6.35mm) Shaft, With Lock	562KL-ND	10.44	48.72	92.80	562
3	Commercial Single Turn, Black Anodize, 1/4" (6.35mm) Shaft, With Lock	612KL-ND	9.09	42.42	80.80	612
3	Commercial Single Turn, Clear Anodize, 1/4" (6.35mm) Shaft, With Lock	662KL-ND	9.09	42.42	80.80	662
4	Commercial 20 Turn, Black Anodize, 1/4" (6.35mm) Shaft, With Lock	3412KL-ND	11.55	53.63	99.00	3412
4	Commercial 20 Turn, Clear Anodize, 1/4" (6.35mm) Shaft, With Lock	3462KL-ND	11.55	53.63	99.00	3462

Machined Aluminum Instrumentation Knobs

Knobs are black anodized in construction. Made in the USA.

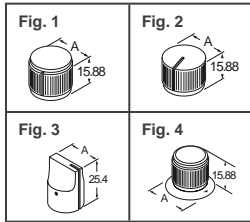
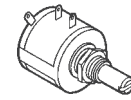


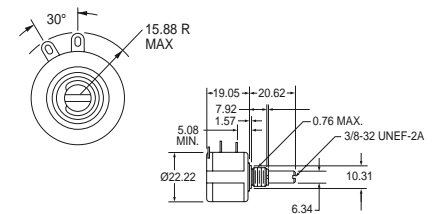
Fig.	Shaft Dim. Inch (mm)	Dim. A Inch (mm)	Digi-Key Part No.	Pricing			Kilo Part No.
				1	10	50	
1	.125 (3.18)	.50 (12.70)	226-1005-ND	3.40	30.20	124.58	DD-50-2-6
	.250 (6.35)	.75 (19.05)	226-1006-ND	3.62	32.20	132.83	DD-75-2-5
	.250 (6.35)	.925 (23.50)	226-1007-ND	3.94	35.00	144.38	DD-90-2-5
	.236 (6.00)	.50 (12.70)	226-1008-ND	3.96	35.20	145.20	DD-50-2-6MM
	.236 (6.00)	.75 (19.05)	226-1009-ND	4.19	37.20	153.45	DD-75-2-6MM
2	.125 (3.18)	.50 (12.70)	226-1010-ND	3.40	30.20	124.58	JD-50-2-6
	.250 (6.35)	.75 (19.05)	226-1011-ND	3.62	32.20	132.83	JD-75-2-5
	.250 (6.35)	.925 (23.50)	226-1012-ND	3.94	35.00	144.38	JD-90-2-5
	.236 (6.00)	.50 (12.70)	226-1013-ND	3.96	35.20	145.20	JD-50-2-6MM
	.236 (6.00)	.75 (19.05)	226-1014-ND	4.19	37.20	153.45	JD-75-2-6MM
3	.125 (3.18)	.50 (12.70)	226-1015-ND	4.05	36.00	148.50	HD-50-2-6
	.250 (6.35)	.75 (19.05)	226-1016-ND	4.91	43.60	179.85	HD-75-2-5
	.250 (6.35)	.925 (23.50)	226-1017-ND	5.51	49.00	202.13	HD-90-2-5
	.236 (6.00)	.50 (12.70)	226-1018-ND	4.61	41.00	169.13	HD-50-2-6MM
	.236 (6.00)	.75 (19.05)	226-1019-ND	5.47	48.60	200.48	HD-75-2-6MM
4	.125 (3.18)	.50 (12.70)	226-1020-ND	3.94	35.00	144.38	DDS-50-2-6
	.250 (6.35)	1.00 (25.40)	226-1021-ND	4.68	41.60	171.60	DDS-75-2-5
	.250 (6.35)	1.25 (31.75)	226-1022-ND	5.09	45.20	186.45	DDS-90-2-5
	.236 (6.00)	.50 (12.70)	226-1023-ND	5.06	45.00	185.63	DDS-50-2-6MM
	.236 (6.00)	.75 (19.05)	226-1024-ND	5.24	46.60	192.23	DDS-75-2-6MM

Wirewound Precision Ten-Turn Potentiometers — 2 Watt

SERIES:
73JA
73JB



73JA: Stainless Steel Shaft
73JB: Nylon Shaft



RESISTANCE CODE CHART

Code (Value)	Code (Value)	Code (Value)
101 (100)	202 (2K)	253 (25K)
201 (200)	502 (5K)	503 (50K)
501 (500)	103 (10K)	104 (100K)
102 (1K)	203 (20K)	

SPECIFICATIONS:

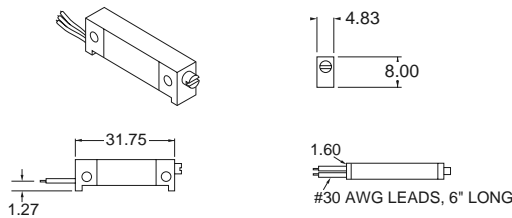
- Resistance Tolerance: ±5%.
- Electrical/Mechanical Rotation: 3600° +10° -0°.
- Effective Rotation: 3600° nominal.
- Dielectric Strength: 1000 VAC for 60 seconds at ATM.
- Working Voltage: 500 volts max.
- Power Rating: 2 watt at 70°C.
- Shaft Length and Size: 13/16" (20.64mm) FMS screwdriver slotted, stainless steel (73JA), nylon shaft (73JB).
- Bushing Style: 5/16" (7.95mm) Plain.
- Temp. Coefficient of Wire: ±20 PPM/°C wire.

Resistance Range (Ohms)	Digi-Key* Part No.	Pricing			Clarostat Part No.
		1	10	50	
100-20K	73JA□□□-ND	16.23	134.00	629.00	73JA (Value)
25K-50K	73JA□□□-ND	20.80	172.00	805.00	73JA (Value)
100K	73JA□□□-ND	21.75	179.30	839.00	73JA (Value)
100-20K	73JB□□□-ND	13.81	113.60	533.00	73JB (Value)
25K-50K	73JB□□□-ND	14.12	116.50	547.00	73JB (Value)
100K	73JB□□□-ND	13.64	112.40	525.50	73JB (Value)

* For complete number, substitute corresponding code (from chart above) for □□□.

High-Stability, Multi-Turn Cermet Potentiometers — 1 Watt

SERIES:
370



RESISTANCE CODE CHART

Code (Value)	Code (Value)	Code (Value)	Code (Value)	Code (Value)
102 (1K)	202 (2K)	502 (5K)	103 (10K)	503 (50K)

SPECIFICATIONS:

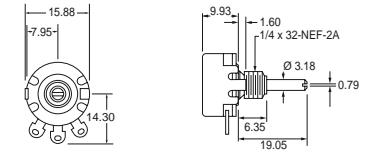
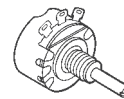
- Standard Resistance Tolerance: 10%
- Actual Effective Electrical Travel: 20 turns nominal
- Contact Resistance Variation: 3% or 3, whichever is greater
- Dielectric Withstanding Voltage: 1000 VAC at sea level, 350 VAC at 80,000 feet
- Power Rating: 1.0 watt at 85°C derated linearly to zero watts at 150°C (para. 3.5) max. voltage not to exceed 400 volts

Resistance Range (Ohms)	Digi-Key* Part No.	1	Pricing 10	100	Clarostat Part No.
100-1 Meg.	370L□□□-ND	7.75	70.44	569.88	370L (Value)

* For complete number, substitute corresponding code (from chart above) for □□□.

Conductive Plastic Potentiometers — 1 Watt

SERIES:
381



RESISTANCE CODE CHART (Value — Linear)

Code (Value)	Code (Value)	Code (Value)	Code (Value)	Code (Value)
101 (100)	102 (1K)	103 (10K)	104 (100K)	105 (1 Meg.)
251 (250)	252 (2.5K)	253 (25K)	254 (250K)	255 (2.5 Meg.)
501 (500)	502 (5K)	503 (50K)	504 (500K)	505 (5 Meg.)

The "Quiet One" with 1% dynamic noise and 5% independent linearity. Manufactured to MIL-R-94D specification. 381N — Bushing, Plain, 1/4" (6.35mm) long. Shaft 3/4" (19.05mm) FMS screwdriver slotted.

SPECIFICATIONS:

- Resistance Tolerance: Linear, up to 500K, ±10%, above 500K, ±20%
- Power Rating (Watts): 1 watt maximum continuous power rating for linear taper, but voltage not to exceed rating. Full rating at 70°C, derated linearly to zero watts at 120°C
- Mechanical and Electrical Rotation: 300° ±5° without switch
- Working Voltage: 350 VDC across end terminals, but power not to exceed rating
- Effective Rotation: 270° +0° -10°
- Dielectric Strength: 1,000 VAC for 60 Sec. ATM.

Resistance Range (Ohms)	Digi-Key* Part No.	1	Pricing 10	50	Clarostat Part No.
100-5 Meg.	381N□□□-ND	11.29	99.30	428.50	1381N (Value)

* For complete number, substitute corresponding code (from chart above) for □□□.

Panasonic Audio Potentiometers

9mm Potentiometers

Specifications: Resistance Range: 5K ohm through 50K ohm • Tolerance: ±20%
 • Power Rating: .05w @ 50°C • Voltage Rating: E = √PR but E ≤ 50VAC/20VDC
 • Rotation Angle: 300° ±5° • Life: 10000 turns min. • Application: Audio mixer

Fig. 1

Shaft: Ø 6.0 mm

Fig. 2

Shaft: Ø 6.0 mm

* Hardware Included

Fig. 4

Shaft: Ø 6.0 mm

Footprint Applies to Figures 4, 5, & 6

Fig. 3

Shaft: Ø 6.0 mm

Fig. 5

Shaft: Ø 6.0 mm

* Hardware Included

Fig. 6

Shaft: Ø 6.0 mm

* Hardware for Fig. 2 and Fig. 5

12mm Potentiometers

Specifications: Resistance Range: 5K ohm through 50K ohm • Tolerance: ±20%
 • Power Rating: .05w @ 50°C • Voltage Rating: E = √PR but E ≤ 50VAC/20VDC
 (Do not use DC Voltage) • Rotation Angle: 300° ±5° • Life: 15000 turns min.
 • Application: Audio mixer

Fig. 7

Shaft: Ø 6.0 mm

Fig. 8

Shaft: Ø 6.0 mm

* Hardware Included

Fig. 9

Shaft: Ø 6.0 mm

Fig. 10

Shaft: Ø 6.0 mm

Fig. 11

Shaft: Ø 6.0 mm

* Hardware Included

Fig. 12

Shaft: Ø 6.0 mm

* Hardware for Fig. 8 and Fig. 11

Thumbwheel Potentiometers

Resistance Code Chart (Resistance Value)

Code (Value)	Code (Value)
502 (5K)	203 (20K)
103 (10K)	503 (50K)

Footprint Applies to both Fig. 13 & 14

(View from mtg. side)

Resistance Code Chart (Resistance Value)

Code (Value)	Code (Value)
502 (5K)	103 (10K)
203 (20K)	503 (50K)

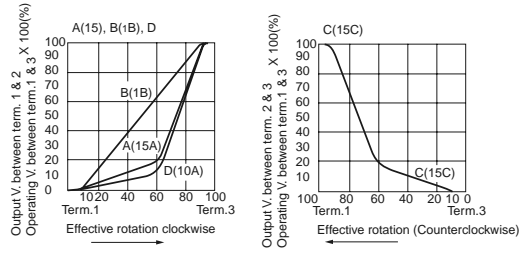


Fig.	Taper	Center Detent	Bushing	Digi-Key Part No.	Pricing				Panasonic* Part No.
					1	10	100	1,000	
<i>9MM Audio Potentiometers</i>									
1	B	Y	None	P3A1□□□-ND	.88	7.36	55.19	407.16	EVU-F3AF30B□□
	D	Y	None	P3B2□□□-ND	.88	7.36	55.19	407.16	EVU-F3AF30D□□
	B	N	None	P3C3□□□-ND	.83	6.92	51.91	383.00	EVU-F2AF30B□□
	D	N	None	P3D4□□□-ND	.83	6.92	51.91	383.00	EVU-F2AF30D□□
2	B	Y	Metal	P3E5□□□-ND	1.60	13.34	100.04	738.10	EVU-F3MFL3B□□
	D	Y	Metal	P3F6□□□-ND	1.60	13.34	100.04	738.10	EVU-F3MFL3D□□
	B	N	Metal	P3G7□□□-ND	1.55	12.90	96.77	713.93	EVU-F2MFL3B□□
	D	N	Metal	P3H8□□□-ND	1.55	12.90	96.77	713.93	EVU-F2MFL3D□□
3	B	Y	Plastic	P3I9□□□-ND	1.06	8.80	66.02	487.11	EVU-F3LFL3B□□
	D	Y	Plastic	P3J0□□□-ND	1.06	8.80	66.02	487.11	EVU-F3LFL3D□□
	B	N	Plastic	P3K1□□□-ND	1.00	8.33	62.50	461.08	EVU-F2LFL3B□□
	D	N	Plastic	P3L2□□□-ND	1.00	8.33	62.50	461.08	EVU-F2LFL3D□□
4	B	Y	None	P3M3□□□-ND	.91	7.59	56.95	420.18	EVU-E3AF25B□□
	D	Y	None	P3N4□□□-ND	.91	7.59	56.95	420.18	EVU-E3AF25D□□
	B	N	None	P3P5□□□-ND	.86	7.16	53.68	396.01	EVU-E2AF25B□□
	D	N	None	P3Q6□□□-ND	.86	7.16	53.68	396.01	EVU-E2AF25D□□
5	B	Y	Metal	P3R7□□□-ND	1.63	13.61	102.06	752.98	EVU-E3JFK4B□□
	D	Y	Metal	P3S8□□□-ND	1.63	13.61	102.06	752.98	EVU-E3JFK4D□□
	B	N	Metal	P3T9□□□-ND	1.58	13.14	98.53	726.95	EVU-E2JFK4B□□
	D	N	Metal	P3U0□□□-ND	1.58	13.14	98.53	726.95	EVU-E2JFK4D□□
6	B	Y	Plastic	P3W1□□□-ND	1.09	9.07	68.04	501.98	EVU-E3KFK4B□□
	D	Y	Plastic	P3X2□□□-ND	1.09	9.07	68.04	501.98	EVU-E3KFK4D□□
	B	N	Plastic	P3Y3□□□-ND	1.03	8.60	64.51	475.96	EVU-E2KFK4B□□
	D	N	Plastic	P3Z4□□□-ND	1.03	8.60	64.51	475.96	EVU-E2KFK4D□□
<i>12MM Audio Potentiometers</i>									
7	B	Y	None	P2A5□□□-ND	1.99	16.56	124.24	916.59	EVJ-Y81F30B□□
	AC	Y	None	P2B6□□□-ND	1.99	16.56	124.24	916.59	EVJ-YE1F30□□□
	A	N	None	P2C7□□□-ND	1.93	16.09	120.71	890.56	EVJ-Y00F30□□□
	D	N	None	P2D8□□□-ND	1.93	16.09	120.71	890.56	EVJ-Y00F30D□□
8	B	Y	Metal	P2E9□□□-ND	2.27	18.88	141.62	1044.87	EVJ-Y91F03B□□
	AC	Y	Metal	P2F0□□□-ND	2.27	18.88	141.62	1044.87	EVJ-YK1F03□□□
	A	N	Metal	P2G1□□□-ND	2.21	18.41	138.10	1018.84	EVJ-Y10F03□□□
	D	N	Metal	P2H2□□□-ND	2.21	18.41	138.10	1018.84	EVJ-Y10F03D□□
9	B	Y	Plastic	P2I3□□□-ND	2.16	18.01	135.07	996.53	EVJ-Y96F03B□□
	AC	Y	Plastic	P2J4□□□-ND	2.16	18.01	135.07	996.53	EVJ-YK6F03□□□
	A	N	Plastic	P2K5□□□-ND	2.11	17.57	131.80	972.36	EVJ-Y15F03□□□
	D	N	Plastic	P2L6□□□-ND	2.11	17.57	131.80	972.36	EVJ-Y15F03D□□
10	B	Y	None	P2M7□□□-ND	2.02	16.80	126.00	929.60	EVJ-C31F25B□□
	AC	Y	None	P2N8□□□-ND	2.02	16.80	126.00	929.60	EVJ-CV1F25□□□
	A	N	None	P2P9□□□-ND	1.96	16.33	122.47	903.57	EVJ-C00F25□□□
	D	N	None	P2Q0□□□-ND	1.96	16.33	122.47	903.57	EVJ-C00F25D□□
11	B	Y	Metal	P2R1□□□-ND	2.29	19.12	143.39	1057.88	EVJ-C51F02B□□
	AC	Y	Metal	P2S2□□□-ND	2.29	19.12	143.39	1057.88	EVJ-CC1F02□□□
	A	N	Metal	P2T3□□□-ND	2.24	18.65	139.86	1031.86	EVJ-C20F02□□□
	D	N	Metal	P2U4□□□-ND	2.24	18.65	139.86	1031.86	EVJ-C20F02D□□
12	B	Y	Plastic	P2W5□□□-ND	2.19	18.24	136.84	1009.55	EVJ-C56F02B□□
	AC	Y	Plastic	P2X6□□□-ND	2.19	18.24	136.84	1009.55	EVJ-CC6F02□□□
	A	N	Plastic	P2Y7□□□-ND	2.13	17.77	133.31	983.52	EVJ-C25F02□□□
	D	N	Plastic	P2Z8□□□-ND	2.13	17.77	133.31	983.52	EVJ-C25F02D□□

For complete number, substitute corresponding code (from above chart) for □□□□.
 * Call Digi-Key for help in assembling manufacturer part number.

Resistance Range: 5K ohm through 50K ohm • Tolerance: ±20% • Power Rating: B taper - .03W, All others .01W • Voltage Rating: 50VAC/20VDC • Rotation Angle: 260° ±10° • Life: 10000 turns min.

Fig.	Taper	Center Detent	Digi-Key Part No.	Pricing				Panasonic* Part No.	
					1	10	100	1,000	
13	A	N	P4A9□□□-ND	1.74	14.52	108.86	803.17	EVL-HFAA01A□□	
	B	N	P4B0□□□-ND	1.74	14.52	108.86	803.17	EVL-HFAA01B□□	
14	A	N	P4C1□□□-ND	1.74	14.52	108.86	803.17	EVL-HFAA06A□□	
	B	N	P4D2□□□-ND	1.74	14.52	108.86	803.17	EVL-HFAA06B□□	
13	A	Y	P4E3□□□-ND	1.95	16.26	121.97	899.85	EVL-HFKA01A□□	
	B	Y	P4F4□□□-ND	1.95	16.26	121.97	899.85	EVL-HFKA01B□□	

For complete number, substitute corresponding code (from chart at left) for □□□□.
 * Call Digi-Key for help in assembling manufacturer part number.

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

Panasonic Slide Potentiometers for Audio Mixer Applications

Fig. 1 – Rail Guide Type

Features: • Wobbleless, smooth travel with wet slide feel • High reliability due to exclusive specular glossing resistive elements for low distortion and precise precious metal contacts • Precise attenuation characteristics • Long life 100,000 cycles min. **Recommended Applications:** • Fader controls for audio mixers • Audio Equipment

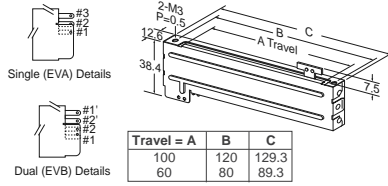


Fig. 2 – Thin Type

Features: • Thin and compact design with 8mm body height and 15mm width • Light sliding force and excellent operation • Highly accurate attenuation characteristics, maximum attenuation of more than 100dB, and low noise **Recommended Applications:** • Fade control for common type audio mixers

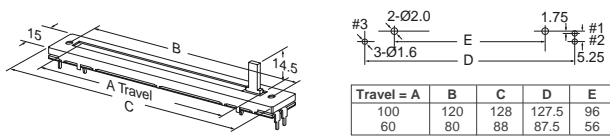


Fig. 3 – Mono Type

Features: • Slim type fader, 9mm width, 8mm height • Excellent cost performance applicable to audio mixers for amateur use **Recommended Applications:** • Fade control for audio mixers • Multi-Track Recorders • Paper position sensors for copiers

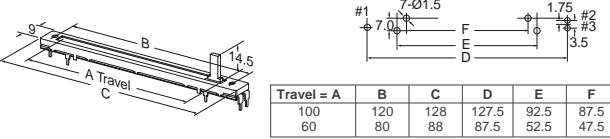


Fig. 4 – Standard Type

Features: • Excellent operational feeling • Low noise, long operational life, highly accurate attenuation **Recommended Applications:** • Fade control for audio mixers and musical key boards • Heat control or mode switching for car air conditioners • Measurement instruments

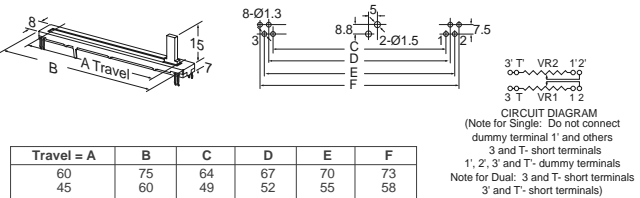


Fig. 5 – Motor Type

Features: • Excellent operation feeling, high speed driving and power saving design • Dust-proof mounting possible by 90° off set lever design **Recommended Application:** • Automated Audio Mixers (Common/Amateur Type)

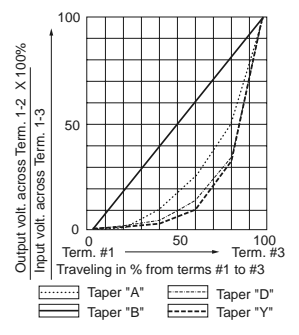
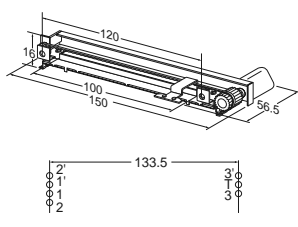
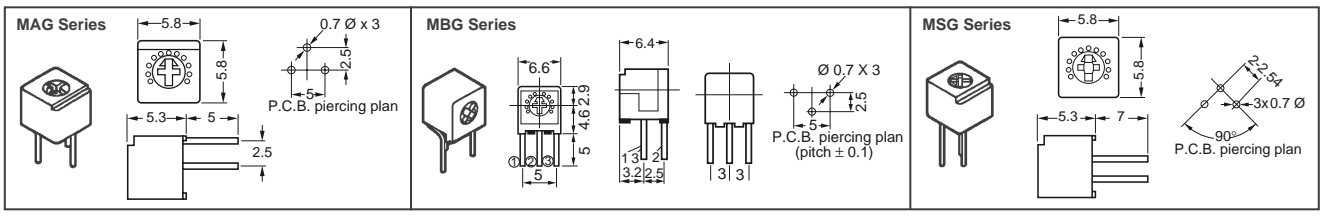


Fig.	Resist. (ohms)	Style	Travel (mm)	Single/Dual	Taper	Digi-Key Part No.	1	10	50	100	Panasonic Part No.
1	10K	Rail	100	S	Y	PJY100SY-ND	31.72	28.67	26.76	25.42	EVA-JYBP08Y14
	10K	Rail	100	S	B	PJY100SB-ND	31.72	28.67	26.76	25.42	EVA-JYMP08B14
	10K	Rail	60	S	Y	PJY100DY-ND	39.65	35.83	33.45	31.77	EVB-JYBP08Y14
	10K	Rail	60	S	Y	PJX060DY-ND	26.44	23.89	22.30	21.19	EVA-JXCP08Y14
2	10K	Rail	60	D	Y	PJX060DY-ND	34.37	31.06	28.99	27.54	EVB-JXCP08Y14
	10K	Thin	100	S	Y	PJO100SY-ND	7.17	5.74	4.76	4.30	EVA-JOKR15Y14
	10K	Thin	100	S	A	PJO100SA-ND	7.17	5.74	4.76	4.30	EVA-JOKR15A14
	10K	Thin	100	S	D	PJO100SD-ND	7.17	5.74	4.76	4.30	EVA-JOKR15D14
	10K	Thin	100	S	B	PJO100SB-ND	7.17	5.74	4.76	4.30	EVA-JOKR15B14
	10K	Thin	100	D	Y	PJO100DY-ND	9.16	7.33	6.09	5.50	EVB-JOKR15Y14
	10K	Thin	100	D	A	PJO100DA-ND	9.16	7.33	6.09	5.50	EVB-JOKR15A14
	10K	Thin	100	D	D	PJO100DD-ND	9.16	7.33	6.09	5.50	EVB-JOKR15D14
	10K	Thin	60	S	Y	PNA060SY-ND	6.77	5.42	4.50	4.07	EVA-NADR15Y14
	10K	Thin	60	S	A	PNA060SA-ND	6.77	5.42	4.50	4.07	EVA-NADR15A14
	10K	Thin	60	S	D	PNA060SD-ND	6.77	5.42	4.50	4.07	EVA-NADR15D14
	10K	Thin	60	S	B	PNA060SB-ND	6.77	5.42	4.50	4.07	EVA-NADR15B14
3	10K	Mono	100	S	Y	PNF100SY-ND	5.97	4.78	3.97	3.59	EVA-NF4R15Y14
	10K	Mono	100	S	A	PNF100SA-ND	5.97	4.78	3.97	3.59	EVA-NF4R15A14
	10K	Mono	100	S	D	PNF100SD-ND	5.97	4.78	3.97	3.59	EVA-NF4R15D14
	10K	Mono	100	S	B	PNF100SB-ND	5.97	4.78	3.97	3.59	EVA-NF4R15B14
	10K	Mono	60	S	Y	PNE060SY-ND	5.17	4.14	3.44	3.11	EVA-NE4R15Y14
	10K	Mono	60	S	A	PNE060SA-ND	5.17	4.14	3.44	3.11	EVA-NE4R15A14
4	10K	Mono	60	S	D	PNE060SD-ND	5.17	4.14	3.44	3.11	EVA-NE4R15D14
	10K	Mono	60	S	B	PNE060SB-ND	5.17	4.14	3.44	3.11	EVA-NE4R15B14
	10K	Std.	60	S	A	PO1060SA-ND	2.79	2.23	1.85	1.68	EWA-O10C15A14
	10K	Std.	60	S	D	PO1060SD-ND	2.79	2.23	1.85	1.68	EWA-O10C15D14
	10K	Std.	60	S	B	PO1060SB-ND	2.79	2.23	1.85	1.68	EWA-O10C15B14
	10K	Std.	60	D	A	PO3060DA-ND	3.39	2.71	2.25	2.04	EWA-O30C15A14
	10K	Std.	60	D	D	PO3060DD-ND	3.39	2.71	2.25	2.04	EWA-O30C15D14
	10K	Std.	45	S	A	PP1045SA-ND	2.39	1.92	1.59	1.44	EWA-P10C15A14
	10K	Std.	45	S	D	PP1045SD-ND	2.39	1.92	1.59	1.44	EWA-P10C15D14
	10K	Std.	45	S	B	PP1045SB-ND	2.39	1.92	1.59	1.44	EWA-P10C15B14
5	10K	Std.	45	D	A	PP3045DA-ND	2.98	2.39	1.99	1.80	EWA-P30C15A14
	10K	Std.	45	D	D	PP3045DD-ND	2.98	2.39	1.99	1.80	EWA-P30C15D14
5	10K	Motor	100	S	Y	PNC100SY-ND	39.65	35.83	33.45	31.77	EVB-NC2P08BBL

Panasonic 5mm Square Single-Turn Cermet Potentiometers



SPECIFICATIONS: • **Mechanical Characteristics:** • Total rotation angle: Adjustment angle 200° nom. • Soldering: Within 5 seconds max. at 300°C • **Electrical Characteristics:** • Resistance Range: 100Ω to 2 MΩ • Tolerance: ±20% • Power Rating: 0.5W at 70°C • Maximum Voltage: 200V • Dielectric Withstanding Voltage: 600V AC for one minute • Temperature Coefficient: ±10ppm/°C • Insulation Resistance: 100MΩ • **Environmental Characteristics:** • Operating Temperature Range: -55°C to +125°C • Vibration: 20G • Shock: 180G • Seal: MIL-R-22097 Immersion

§ MBG-KIT-ND Digi-Key® Side Adjust Pots. Kits 10 each of MBG sizes. ... \$129.95
 † MSG-KIT-ND Digi-Key® Top Adjust Pots. Kits 10 each of MSG sizes. ... \$129.95
 Notebook style storage case and bin storage guide included.

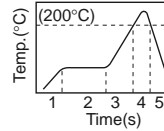
Panasonic/Matsushita Electric has announced a change in the Corporate Trademark. Present trademark: ▲. New trademark: ☒.

Res. (Ohms)	Digi-Key Part No. Top Adjust †	Digi-Key Part No. Side Adjust §	Digi-Key Part No. Top Adjust †	1	10	Pricing 100	1,000	5,000	Panasonic Part No. Top Adjust	Panasonic Part No. Side Adjust	Panasonic Part No. Top Adjust
100	—	MBG12-ND	—	1.59	13.23	121.67	814.00	756.00/M	—	EVM-MBGA01B12	—
500	—	MBG52-ND	—	1.59	13.23	121.67	814.00	756.00/M	—	EVM-MBGA01B52	—
1K	—	—	MSG13-ND	1.59	13.23	121.67	814.00	756.00/M	—	—	EVM-MSG01B13
2K	MAG23-ND	MBG23-ND	—	1.59	13.23	121.67	814.00	756.00/M	EVM-MAGA01B23	EVM-MBGA01B23	—
5K	MAG53-ND	MBG53-ND	—	1.59	13.23	121.67	814.00	756.00/M	EVM-MAGA01B53	EVM-MBGA01B53	—
20K	—	MBG24-ND	—	1.59	13.23	121.67	814.00	756.00/M	—	EVM-MBGA01B24	—
100K	—	—	MSG15-ND	1.59	13.23	121.67	814.00	756.00/M	—	—	EVM-MSG01B15
200K	MAG25-ND	MBG25-ND	MSG25-ND	1.59	13.23	121.67	814.00	756.00/M	EVM-MAGA01B25	EVM-MBGA01B25	—
500K	MAG55-ND	—	MSG55-ND	1.59	13.23	121.67	814.00	756.00/M	EVM-MAGA01B55	—	EVM-MSG01B55
1M	MAG16-ND	MBG16-ND	—	1.59	13.23	121.67	814.00	756.00/M	EVM-MAGA01B16	—	EVM-MSG01B16
2M	—	MBG26-ND	MSG26-ND	1.59	13.23	121.67	814.00	756.00/M	—	EVM-MBGA01B26	—

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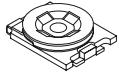
Surface Mount Trimmer Potentiometers



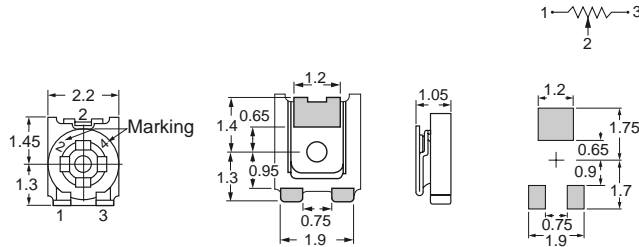
Profile for Reflow Soldering

1. Heat-Up Zone: Room Temperature- (Preheat Zone 30-60s)
2. Pre-Heat Zone: 140° - 160°C (60-120s)
3. Heat-Up Zone: Preheat Zone -200°C (20-40s)
4. Melting-Heat Zone: Peak Temperature (5s max.)
5. Cooling Zone: 200-100°C (1-4C/s)

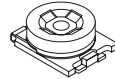
Series P2W – Panasonic Series #EVM-2WSX80BXX



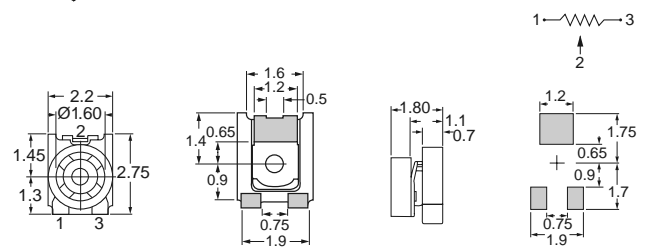
Features: • 2mm open frame type for reflow soldering; Resistance Range: 200-1M OHM; Tolerance: ±25%; Taper: Linear; Power Rating: .15W; Adjustment Angle: 260 ±20; Rotation Torque: 10-150 gF; Operating Temperature: -20° to +85°C; Temperature Coefficient: ±250 ppm/C (-20° to +85°C); Rotation Life: 20; Soldering Heat: 240C 5s



Series P2X – Panasonic Series #EVM-2XSX50BXX



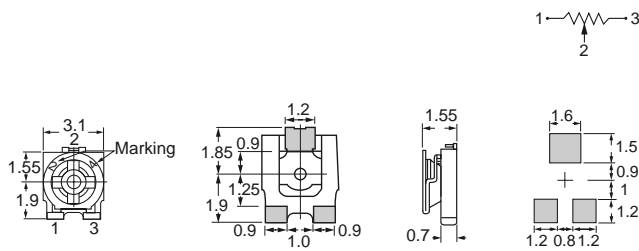
Features: • 2mm open frame type for reflow soldering; Resistance Range: 200-1M OHM; Tolerance: ±25%; Taper: Linear; Power Rating: .15W; Adjustment Angle: 260 ±20; Rotation Torque: 10-150 gF; Operating Temperature: -20° to +85°C; Temperature Coefficient: ±250 ppm/C (-20° to +85°C); Rotation Life: 20; Soldering Heat: 240C 5s



Series P3Y – Panasonic Series #EVM-3YSX50BXX



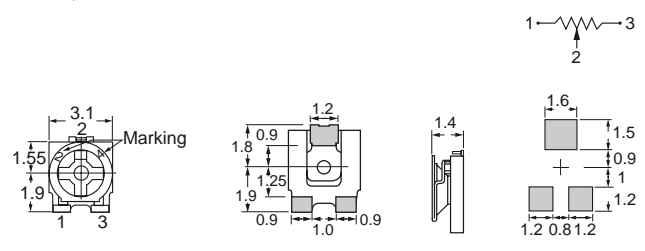
Features: • 3mm open frame type for reflow soldering; Resistance Range: 100-1M OHM; Tolerance: ±25%; Taper: Linear; Power Rating: .15W; Adjustment Angle: 260 ±20; Rotation Torque: 20-200 gF; Operating Temperature: -20° to +85°C; Temperature Coefficient: ±250 ppm/C (-20° to +85°C); Rotation Life: 20; Soldering Heat: 240C 5s



Series P3V – Panasonic Series #EVM-3VSX50BXX



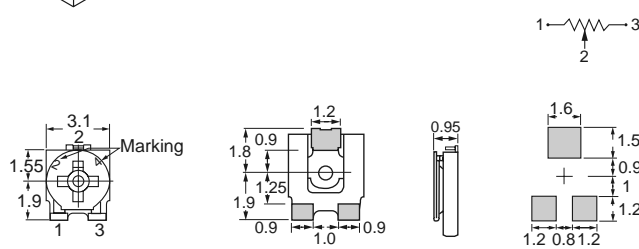
Features: • 3mm open frame type for reflow soldering • Rotation stopper feature; Resistance Range: 500-1M OHM; Tolerance: ±25%; Taper: Linear; Power Rating: .15W; Adjustment Angle: 240 ±20; Rotation Torque: 20-100 gF; Operating Temperature: -20° to +85°C; Temperature Coefficient: ±250 ppm/C (-20° to +85°C); Rotation Life: 20; Soldering Heat: 240C 5s



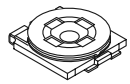
Series P3W – Panasonic Series #EVM-3WSX80BXX



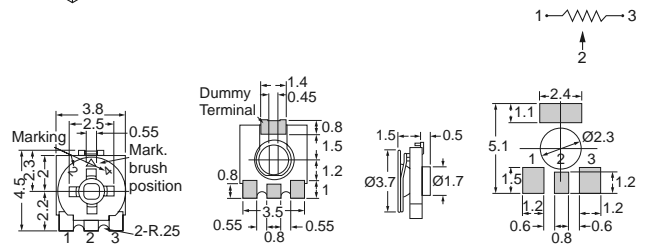
Features: • 3mm open frame type for reflow soldering; Resistance Range: 100-1M OHM; Tolerance: ±25%; Taper: Linear; Power Rating: .15W; Adjustment Angle: 240 ±20; Rotation Torque: 20-200 gF; Operating Temperature: -20° to +85°C; Temperature Coefficient: ±250 ppm/C (-20° to +85°C); Rotation Life: 20; Soldering Heat: 240C 5s



Series P1U – Panasonic Series #EVM-1USX30BXX



Features: • 4mm open frame type for reflow soldering; Resistance Range: 100-1M OHM; Tolerance: ±25%; Taper: Linear; Power Rating: .2W; Adjustment Angle: 260 ±20; Rotation Torque: 20-200 gF; Operating Temperature: -20° to +100°C; Temperature Coefficient: ±250 ppm/C(±25° to +100°C); Rotation Life: 20; Soldering Heat: 240C 5s



Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape & Reel Pricing			Panasonic Part No.
	1	10	100		1,000	2,000	3,000	
P2W□□□CT-ND†	.53	4.42	40.70	P2W□□□TR-ND†	—	—	272.00/M	EVM-2WSX80BXX*
P2X□□□CT-ND†	.51	4.26	39.16	P2X□□□TR-ND†	—	262.00/M	—	EVM-2XSX50BXX*
P3Y□□□CT-ND†	.34	2.83	25.99	P3Y□□□TR-ND†	—	174.00/M	—	EVM-3YSX50BXX*
P3V□□□CT-ND†	.44	3.67	33.75	P3V□□□TR-ND†	—	226.00/M	—	EVM-3VSX50BXX*
P3W□□□CT-ND†	.44	3.67	33.75	P3W□□□TR-ND†	—	—	226.00/M	EVM-3WSX80BXX*
P1U□□□CT-ND†	.51	4.26	39.16	P1U□□□TR-ND†	262.00	—	—	EVM-1USX30BXX*

* For assistance with Panasonic Part Number please call Digi-Key.

† For complete number, substitute corresponding code (from chart) for □□□.

Code Resistance Value For P2W / P2X Series						
201 (200)	501 (500)	102 (1.0K)	202 (2.0K)	502 (5.0K)	103 (10K)	
203 (20K)	503 (50K)	104 (100K)	204 (200K)	504 (500K)	105 (1.0M)	
Code Resistance Value For P3Y / P3W / P1U Series						
101 (100)	201 (200)	501 (500)	102 (1.0K)	202 (2.0K)	502 (5.0K)	103 (10K)
203 (20K)	503 (50K)	104 (100K)	204 (200K)	504 (500K)	105 (1.0M)	
Code Resistance Value For P3V Series						
501 (500)	102 (1K)	202 (2K)	502 (5K)	103 (10K)	203 (20K)	503 (50K)
104 (100K)	204 (200K)	504 (500K)	105 (1M)			

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Panasonic 6mm Square Ceramic Trimmer Potentiometers

EVM-EAG / EAS / EGG / EGS Series:

Dustproof Type with Knob Protection: Features: • No readjustment needed through knob protected construction • Excellent mounting efficiency due to cubic shape • Automated adjustment available. Face side: Standard cross slot screwdriver suited to automatic adjustment applicable. Back side: Penetrated slot for easy driving. **Applications:** • Audio visual equipment, home appliances.

Specifications: • Rotation Torque: 20 to 300gf-cm. • Stopper Strength: 500gf-cm. • Rotation Angle: 210° ± 20°. • TCR: ± 200ppm (-30°C - 100°C) • Nominal Total Resistance & Tolerance: ± 25% • Power Rating & Max. Operating Voltage: 0.3W, 100V (70°C) • Residual Resistance: 10Ω max. for R51KΩ, 1% max. for 1KΩ-R-100KΩ, 5% max. for R2100KΩ • Soldering Heat: 5s max. 240 to 280°C, 3s max. 280 to 300°C • Rotation Life: 50 turns.

EVM-EYG and EVM-EYS Series:

Specifications: • Rotation Torque: 20 to 300gf-cm. • Stopper Strength: 500gf-cm. • Rotation Angle: 210° ± 20°. • TCR: ± 100ppm (-40°C - 120°C) • Nominal Total Resistance & Tolerance: ± 20% • Power Rating & Max. Operating Voltage: 0.5W, 200V (70°C) • Residual Resistance: 2% • Soldering Heat: 260°C ± 5°C for 5 ± 1 Sec. • Rotation Life: 50 turns.

EVM-AAS Series:

Specifications: • Resistance Range: 100Ω - 1MΩ • Tolerance: ± 25% • Taper: Linear • Residual Resistance: 2% • Wattaage Rating: 0.3W • Volt Rating: 100V • TCR: ± 200ppm • Torque: 20 to 300gf • Stopper Strength: 350gf • Rotational Angle: 240°C ± 20°C • Operational Temperature: -30°C - +100°C.

EVM-F6S Series:

Features: • Higher performance dustproof type. • Excellent reliability for heat and humidity. • High speed radial automatic mounting and excellent mounting performance.

Applications: • Audio visual equipment, home appliances.

Specifications: • Rotation Torque: 20 to 300gf cm. • Stopper Strength: 350gf cm. • Rotation Angle: 240° ± 20°. • TCR: ± 300ppm (-30°C - 100°C) • Nominal Total Resistance & Tolerance: ± 25% • Power Rating & Max. Operating Voltage: 0.3W, 100V (70°C) • Residual Resistance: 10Ω max. for R51KΩ, 1% max. for 1KΩ-R-100KΩ, 5% max. for R2100KΩ • Soldering Heat: 5s max. 240 to 280°C, 3s max. 280 to 300°C • Rotation Life: 50 turns.

Fig. 1 - Top Adjust

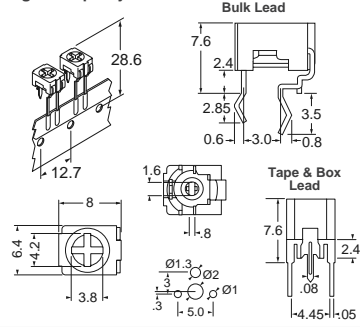


Fig. 2 - Side Adjust

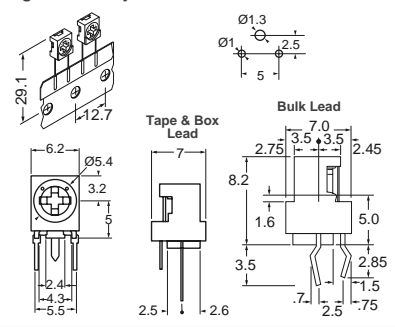


Fig. 3 - Top Adjust

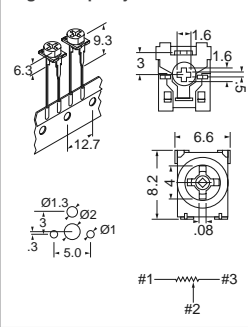
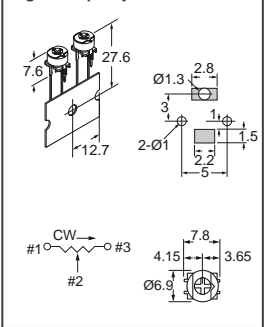


Fig. 4 - Top Adjust NEW



EVM-EAG Series - Top Adjust (Bulk)

Fig.	Res. (Ω)	Digi-Key Part No.	Pricing			Panasonic Part No.	
			1	10	100		500
1	100	EAG12BK-ND	.59	4.90	45.08	196.00	EVM-EAG00B12
	200	EAG22BK-ND	.59	4.90	45.08	196.00	EVM-EAG00B22
	500	EAG52BK-ND	.59	4.90	45.08	196.00	EVM-EAG00B52
	1K	EAG13BK-ND	.59	4.90	45.08	196.00	EVM-EAG00B13
	2K	EAG23BK-ND	.59	4.90	45.08	196.00	EVM-EAG00B23
	5K	EAG53BK-ND	.59	4.90	45.08	196.00	EVM-EAG00B53
	10K	EAG14BK-ND	.59	4.90	45.08	196.00	EVM-EAG00B14
	20K	EAG24BK-ND	.59	4.90	45.08	196.00	EVM-EAG00B24
	50K	EAG54BK-ND	.59	4.90	45.08	196.00	EVM-EAG00B54
	100K	EAG15BK-ND	.59	4.90	45.08	196.00	EVM-EAG00B15
	200K	EAG25BK-ND	.59	4.90	45.08	196.00	EVM-EAG00B25
500K	EAG55BK-ND	.59	4.90	45.08	196.00	EVM-EAG00B55	
1M	EAG16BK-ND	.65	5.41	49.81	216.50	EVM-EAG00B16	

EVM-EGG Series - Side Adjust (Bulk)

Fig.	Res. (Ω)	Digi-Key Part No.	Pricing			Panasonic Part No.	
			1	10	100		500
1	100	EGG12BK-ND	.59	4.93	45.31	197.00	EVM-EGGA00B12
	200	EGG22BK-ND	.59	4.93	45.31	197.00	EVM-EGGA00B22
	500	EGG52BK-ND	.59	4.93	45.31	197.00	EVM-EGGA00B52
	1K	EGG13BK-ND	.59	4.93	45.31	197.00	EVM-EGGA00B13
	2K	EGG23BK-ND	.59	4.93	45.31	197.00	EVM-EGGA00B23
	5K	EGG53BK-ND	.59	4.93	45.31	197.00	EVM-EGGA00B53
	10K	EGG14BK-ND	.59	4.93	45.31	197.00	EVM-EGGA00B14
	20K	EGG24BK-ND	.59	4.93	45.31	197.00	EVM-EGGA00B24
	50K	EGG54BK-ND	.59	4.93	45.31	197.00	EVM-EGGA00B54
	100K	EGG15BK-ND	.59	4.93	45.31	197.00	EVM-EGGA00B15
	200K	EGG25BK-ND	.59	4.93	45.31	197.00	EVM-EGGA00B25
500K	EGG55BK-ND	.59	4.93	45.31	197.00	EVM-EGGA00B55	
1M	EGG16BK-ND	.74	6.20	56.99	248.00	EVM-EGGA00B16	

EVM-EAS Series - Top Adjust (Tape)

Fig.	Res. (Ω)	Digi-Key Part No.	Cut Tape Pricing			Tape & Box Pricing		Panasonic Part No.	
			1	10	100	1,000	5,000		
1	100	EAS12CT-ND	.59	4.90	45.08	EAS12TB-ND	302.00	280.00/M	EVM-EASA00B12
	200	EAS22CT-ND	.59	4.90	45.08	EAS22TB-ND	302.00	280.00/M	EVM-EASA00B22
	500	EAS52CT-ND	.59	4.90	45.08	EAS52TB-ND	302.00	280.00/M	EVM-EASA00B52
	1K	EAS13CT-ND	.59	4.90	45.08	EAS13TB-ND	302.00	280.00/M	EVM-EASA00B13
	2K	EAS23CT-ND	.59	4.90	45.08	EAS23TB-ND	302.00	280.00/M	EVM-EASA00B23
	5K	EAS53CT-ND	.59	4.90	45.08	EAS53TB-ND	302.00	280.00/M	EVM-EASA00B53
	10K	EAS14CT-ND	.59	4.90	45.08	EAS14TB-ND	302.00	280.00/M	EVM-EASA00B14
	20K	EAS24CT-ND	.59	4.90	45.08	EAS24TB-ND	302.00	280.00/M	EVM-EASA00B24
	50K	EAS54CT-ND	.59	4.90	45.08	EAS54TB-ND	302.00	280.00/M	EVM-EASA00B54
	100K	EAS15CT-ND	.59	4.90	45.08	EAS15TB-ND	302.00	280.00/M	EVM-EASA00B15
	200K	EAS25CT-ND	.59	4.90	45.08	EAS25TB-ND	302.00	280.00/M	EVM-EASA00B25
500K	EAS55CT-ND	.59	4.90	45.08	EAS55TB-ND	302.00	280.00/M	EVM-EASA00B55	
1M	EAS16CT-ND	.66	5.49	50.48	EAS16TB-ND	338.00	314.00/M	EVM-EASA00B16	

EVM-EGS Series - Side Adjust (Tape)

Fig.	Res. (Ω)	Digi-Key Part No.	Cut Tape Pricing			Tape & Box Pricing		Panasonic Part No.	
			1	10	100	1,000	5,000		
1	100	EGS12CT-ND	.65	5.40	49.68	EGS12TB-ND	332.00	309.00/M	EVM-EGSA00B12
	200	EGS22CT-ND	.65	5.40	49.68	EGS22TB-ND	332.00	309.00/M	EVM-EGSA00B22
	500	EGS52CT-ND	.65	5.40	49.68	EGS52TB-ND	332.00	309.00/M	EVM-EGSA00B52
	1K	EGS13CT-ND	.65	5.40	49.68	EGS13TB-ND	332.00	309.00/M	EVM-EGSA00B13
	2K	EGS23CT-ND	.65	5.40	49.68	EGS23TB-ND	332.00	309.00/M	EVM-EGSA00B23
	5K	EGS53CT-ND	.65	5.40	49.68	EGS53TB-ND	332.00	309.00/M	EVM-EGSA00B53
	10K	EGS14CT-ND	.65	5.40	49.68	EGS14TB-ND	332.00	309.00/M	EVM-EGSA00B14
	20K	EGS24CT-ND	.65	5.40	49.68	EGS24TB-ND	332.00	309.00/M	EVM-EGSA00B24
	50K	EGS54CT-ND	.65	5.40	49.68	EGS54TB-ND	332.00	309.00/M	EVM-EGSA00B54
	100K	EGS15CT-ND	.65	5.40	49.68	EGS15TB-ND	332.00	309.00/M	EVM-EGSA00B15
	200K	EGS25CT-ND	.65	5.40	49.68	EGS25TB-ND	332.00	309.00/M	EVM-EGSA00B25
500K	EGS55CT-ND	.65	5.40	49.68	EGS55TB-ND	332.00	309.00/M	EVM-EGSA00B55	
1M	EGS16CT-ND	.74	6.20	56.99	EGS16TB-ND	356.00	330.00/M	EVM-EGSA00B16	

EVM-EYS Series — High Grade, Top Adjust (Bulk)

Fig.	Res. (Ω)	Digi-Key Part No.	Pricing			Panasonic Part No.	
			1	10	100		500
1	1K	EYS13TB-ND	.67	5.59	51.46	223.50	EVM-EYGA00B13
	2K	EYS23TB-ND	.67	5.59	51.46	223.50	EVM-EYGA00B23
	5K	EYS53TB-ND	.67	5.59	51.46	223.50	EVM-EYGA00B53
	10K	EYS14TB-ND	.67	5.59	51.46	223.50	EVM-EYGA00B14
	20K	EYS24TB-ND	.67	5.59	51.46	223.50	EVM-EYGA00B24
	50K	EYS54TB-ND	.67	5.59	51.46	223.50	EVM-EYGA00B54
	100K	EYS15TB-ND	.67	5.59	51.46	223.50	EVM-EYGA00B15
	200K	EYS25TB-ND	.67	5.59	51.46	223.50	EVM-EYGA00B25
	500K	EYS55TB-ND	.67	5.59	51.46	223.50	EVM-EYGA00B55
	1M	EYS16TB-ND	.67	5.59	51.46	223.50	EVM-EYGA00B16
	2M	EYS26TB-ND	.67	5.59	51.46	223.50	EVM-EYGA00B26

EVM-F6S Series — Top Adjust (Tape)

Fig.	Res. (Ω)	Digi-Key Part No.	Cut Tape Pricing			Tape & Box Pricing		Panasonic Part No.	
			1	10	100	1,000	5,000		
3	500	F6SA52CT-ND	.38	3.28	27.20	F6SA52TB-ND	213.00	197.00/M	EVM-F6SA00B52
	1K	F6SA13CT-ND	.38	3.28	27.20	F6SA13TB-ND	213.00	197.00/M	EVM-F6SA00B13
	2K	F6SA23CT-ND	.38	3.28	27.20	F6SA23TB-ND	213.00	197.00/M	EVM-F6SA00B23
	5K	F6SA53CT-ND	.38	3.28	27.20	F6SA53TB-ND	213.00	197.00/M	EVM-F6SA00B53
	10K	F6SA14CT-ND	.38	3.28	27.20	F6SA14TB-ND	213.00	197.00/M	EVM-F6SA00B14
	20K	F6SA24CT-ND	.38	3.28	27.20	F6SA24TB-ND	213.00	197.00/M	EVM-F6SA00B24
	50K	F6SA54CT-ND	.38	3.28	27.20	F6SA54TB-ND	213.00	197.00/M	EVM-F6SA00B54
	100K	F6SA15CT-ND	.38	3.28	27.20	—	—	—	EVM-F6SA00B15
	200K	F6SA25CT-ND	.38	3.28	27.20	F6SA25TB-ND	213.00	197.00/M	EVM-F6SA00B25
	500K	F6SA55CT-ND	.38	3.28	27.20	F6SA55TB-ND	213.00	197.00/M	EVM-F6SA00B55
	1M	F6SA16CT-ND	.38	3.28	27.20	F6SA16TB-ND	213.00	197.00/M	EVM-F6SA00B16

EVM-EYS Series — High Grade, Top Adjust (Tape)

Fig.	Res. (Ω)	Digi-Key Part No.	Tape & Box Pricing			Panasonic Part No.
			1,000	5,000	10,000	
1	1K	EYS13TB-ND	344.00	319.00/M	298.00/M	EVM-EYSA00B13
	2K	EYS23TB-ND	344.00	319.00/M	298.00/M	EVM-EYSA00B23
	5K	EYS53TB-ND	344.00	319.00/M	298.00/M	EVM-EYSA00B53
	10K	EYS14TB-ND	344.00	319.00/M	298.00/M	EVM-EYSA00B14
	20K	EYS24TB-ND	344.00	319.00/M	298.00/M	EVM-EYSA00B24
	50K	EYS54TB-ND	344.00	319.00/M	298.00/M	EVM-EYSA00B54
	100K	EYS15TB-ND	344.00	319.00/M	298.00/M	EVM-EYSA00B15
	200K	EYS25TB-ND	344.00	319.00/M	298.00/M	EVM-EYSA00B25
	500K	EYS55TB-ND	344.00	319.00/M	298.00/M	EVM-EYSA00B55
	1M	EYS16TB-ND	344.00	319.00/M	298.00/M	EVM-EYSA00B16
	2M	EYS26TB-ND	344.00	319.00/M	298.00/M	EVM-EYSA00B26

EVM-AAS Series - Top Adjust (Tape)

Fig.	Res. (Ω)	Digi-Key Part No.	Cut Tape Pricing			Tape & Box Pricing		Panasonic Part No.
			1	10	100	1,000	5,000	
4	100	AAS12CT-ND	.40	3.35	30.82	AAS12TB-ND	206.00	EVM-AASA00B12
	200	AAS22CT-ND	.40	3.35	30.82	AAS22TB-ND	206.00	EVM-AASA00B22
	500	AAS52CT-ND	.40	3.35	30.82	AAS52TB-ND	206.00	EVM-AASA00B52
	1K	AAS13CT-ND	.40	3.35	30.82	AAS13TB-ND	206.00	EVM-AASA00B13
	2K	AAS23CT-ND	.40	3.35	30.82	AAS23TB-ND	206.00	EVM-AASA00B23
	5K	AAS53CT-ND	.40	3.35	30.82	AAS53TB-ND	206.00	EVM-AASA00B53
	10K	AAS14CT-ND	.40	3.35	30.82	AAS14TB-ND	206.00	EVM-AASA00B14
	20K	AAS24CT-ND	.40	3.35</				

Panasonic Ceramic Trimmer Potentiometers

Series EVM-L4G, EVM-L1G, EVM-5AG, and EVM-4LG

Specifications:

- Resistance Range: 100Ω – 1mΩ
- Tolerance: 25%
- Taper: Linear
- Residual: EVM-L4G and EVM-L1G: 5%
EVM-5AG and EVM-4LG: 2%
- Wattage Rating: EVM-L4G and EVM-L1G: .2W;
EVM-5AG and EVM-4LG: .3W
- Voltage Rating: EVM-L4G and EVM-L1G: 50V;
EVM-5AG and EVM-4LG: 100V
- TCR: EVM-L4G and EVM-L1G: ±30ppm;
EVM-5AG and EVM-4LG: ±20ppm
- Torque: 20-250 gf
- Stopper Strength: EVM-L4G and EVM-L1G: 400gF;
EVM-5AG and EVM-4LG: 300gF
- Angle of Rotation: 200° ±20°
- Operating Temperature: -30°C – +100°C

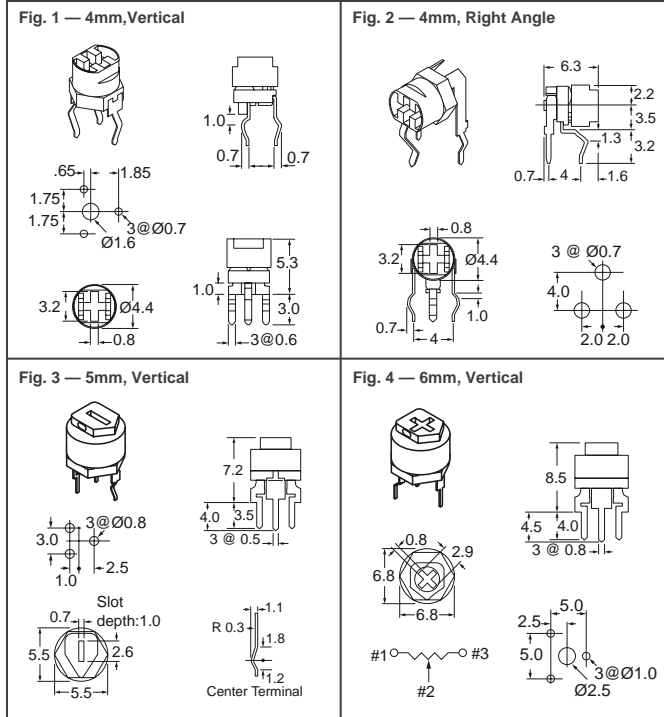
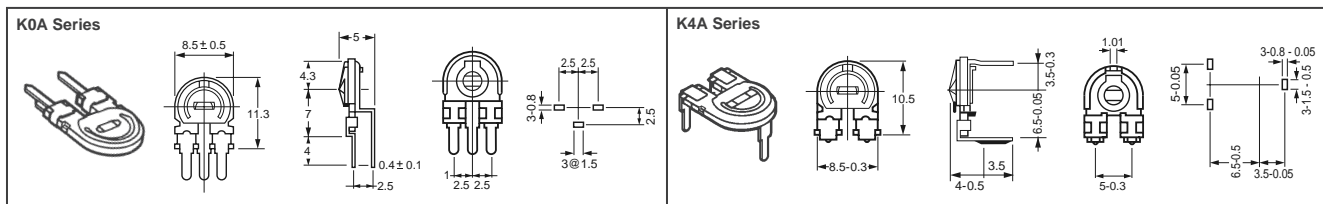


Fig.	Res. (Ohms)	Digi-Key Part No.	Pricing				Panasonic Part No.
			1	10	100	500	
<i>EVM-L4G Series — 4mm, Vertical, Top Adjust</i>							
1	100	L4G12BK-ND	.65	5.45	50.16	218.00	EVM-L4GA00B12
	200	L4G22BK-ND	.65	5.45	50.16	218.00	EVM-L4GA00B22
	500	L4G52BK-ND	.65	5.45	50.16	218.00	EVM-L4GA00B52
	1K	L4G13BK-ND	.65	5.45	50.16	218.00	EVM-L4GA00B13
	2K	L4G23BK-ND	.65	5.45	50.16	218.00	EVM-L4GA00B23
	5K	L4G53BK-ND	.65	5.45	50.16	218.00	EVM-L4GA00B53
	10K	L4G14BK-ND	.65	5.45	50.16	218.00	EVM-L4GA00B14
	20K	L4G24BK-ND	.65	5.45	50.16	218.00	EVM-L4GA00B24
	50K	L4G54BK-ND	.65	5.45	50.16	218.00	EVM-L4GA00B54
	100K	L4G15BK-ND	.65	5.45	50.16	218.00	EVM-L4GA00B15
	200K	L4G25BK-ND	.65	5.45	50.16	218.00	EVM-L4GA00B25
500K	L4G55BK-ND	.65	5.45	50.16	218.00	EVM-L4GA00B55	
1M	L4G16BK-ND	.65	5.45	50.16	218.00	EVM-L4GA00B16	
<i>EVM-L1G Series — 4mm, Right Angle, Side Adjust</i>							
2	100	L1G12BK-ND	.70	5.85	53.80	234.00	EVM-L1GA00B12
	200	L1G22BK-ND	.70	5.85	53.80	234.00	EVM-L1GA00B22
	500	L1G52BK-ND	.70	5.85	53.80	234.00	EVM-L1GA00B52
	1K	L1G13BK-ND	.70	5.85	53.80	234.00	EVM-L1GA00B13
	2K	L1G23BK-ND	.70	5.85	53.80	234.00	EVM-L1GA00B23
	5K	L1G53BK-ND	.70	5.85	53.80	234.00	EVM-L1GA00B53
	10K	L1G14BK-ND	.70	5.85	53.80	234.00	EVM-L1GA00B14
	20K	L1G24BK-ND	.70	5.85	53.80	234.00	EVM-L1GA00B24
	50K	L1G54BK-ND	.70	5.85	53.80	234.00	EVM-L1GA00B54
	100K	L1G15BK-ND	.70	5.85	53.80	234.00	EVM-L1GA00B15
	200K	L1G25BK-ND	.70	5.85	53.80	234.00	EVM-L1GA00B25
500K	L1G55BK-ND	.70	5.85	53.80	234.00	EVM-L1GA00B55	
1M	L1G16BK-ND	.70	5.85	53.80	234.00	EVM-L1GA00B16	
<i>EVM-5AG Series — 5mm, Vertical, Top Adjust</i>							
3	100	5AG12BK-ND	.61	5.06	46.52	202.50	EVM-5AGA00B12
	200	5AG22BK-ND	.61	5.06	46.52	202.50	EVM-5AGA00B22
	500	5AG52BK-ND	.61	5.06	46.52	202.50	EVM-5AGA00B52
	1K	5AG13BK-ND	.61	5.06	46.52	202.50	EVM-5AGA00B13
	2K	5AG23BK-ND	.61	5.06	46.52	202.50	EVM-5AGA00B23
	5K	5AG53BK-ND	.61	5.06	46.52	202.50	EVM-5AGA00B53
	10K	5AG14BK-ND	.61	5.06	46.52	202.50	EVM-5AGA00B14
	20K	5AG24BK-ND	.61	5.06	46.52	202.50	EVM-5AGA00B24
	50K	5AG54BK-ND	.61	5.06	46.52	202.50	EVM-5AGA00B54
	100K	5AG15BK-ND	.61	5.06	46.52	202.50	EVM-5AGA00B15
	200K	5AG25BK-ND	.61	5.06	46.52	202.50	EVM-5AGA00B25
500K	5AG55BK-ND	.61	5.06	46.52	202.50	EVM-5AGA00B55	
1M	5AG16BK-ND	.61	5.06	46.52	202.50	EVM-5AGA00B16	
<i>EVM-4LG Series — 6mm, Vertical, Top Adjust</i>							
4	100	4LG12BK-ND	.50	4.18	38.47	167.00	EVM-4LGA00B12
	200	4LG22BK-ND	.50	4.18	38.47	167.00	EVM-4LGA00B22
	500	4LG52BK-ND	.50	4.18	38.47	167.00	EVM-4LGA00B52
	1K	4LG13BK-ND	.50	4.18	38.47	167.00	EVM-4LGA00B13
	2K	4LG23BK-ND	.50	4.18	38.47	167.00	EVM-4LGA00B23
	5K	4LG53BK-ND	.50	4.18	38.47	167.00	EVM-4LGA00B53
	10K	4LG14BK-ND	.50	4.18	38.47	167.00	EVM-4LGA00B14
	20K	4LG24BK-ND	.50	4.18	38.47	167.00	EVM-4LGA00B24
	50K	4LG54BK-ND	.50	4.18	38.47	167.00	EVM-4LGA00B54
	100K	4LG15BK-ND	.50	4.18	38.47	167.00	EVM-4LGA00B15
	200K	4LG25BK-ND	.50	4.18	38.47	167.00	EVM-4LGA00B25
500K	4LG55BK-ND	.50	4.18	38.47	167.00	EVM-4LGA00B55	
1M	4LG16BK-ND	.50	4.18	38.47	167.00	EVM-4LGA00B16	

Panasonic 8mm Trimmer Potentiometers

EVN-SERIES



Specifications:

- Resistance Range: 300 to 2MΩ
- Taper: Linear
- Tolerance: ±30%
- Working Voltage: 200 V max.
- Power Rating: 0.1 W/50°C
- Residual Resistance: Up to 1kΩ; 10Ω max. Over 1kΩ: 5% of total resistance
- Rotation Angle: 260° ± 20°
- Rotation Torque: 0.4 to 4.2 in.-oz.
- Stop Strength: 1 in. lb.
- Operating Temperature: -25°C to 75°C

Panasonic Trimmer Potentiometers



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18 Popular Trimmers—Both
Laydown and Standup
Panasonic Quality

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180 Trimmer Potentiometers: Price includes convenient divided notebook style storage case with bin guide for easy storage and quick access.

Res. Ohms	Digi-Key Part No. Laydown Version	Digi-Key Part No. Standup Version	Pricing				Panasonic Part No. Laydown Version	Panasonic Part No. Standup Version		
			1	10	100	1,000				
300	K4A32-ND	K0A32-ND	.31	2.59	23.81	159.00	148.00/M	138.00/M	EVN-65AA00B32	EVN-64AA00B32
500	K4A52-ND	K0A52-ND	.31	2.59	23.81	159.00	148.00/M	138.00/M	EVN-65AA00B52	EVN-64AA00B52
1K	K4A13-ND*	K0A13-ND*	.31	2.59	23.81	159.00	148.00/M	138.00/M	EVN-65AA00B13	EVN-64AA00B13
2K	K4A23-ND*	K0A23-ND*	.31	2.59	23.81	159.00	148.00/M	138.00/M	EVN-65AA00B23	EVN-64AA00B23
5K	K4A53-ND*	K0A53-ND*	.31	2.59	23.81	159.00	148.00/M	138.00/M	EVN-65AA00B53	EVN-64AA00B53
10K	K4A14-ND*	K0A14-ND*	.31	2.59	23.81	159.00	148.00/M	138.00/M	EVN-65AA00B14	EVN-64AA00B14
20K	K4A24-ND*	K0A24-ND*	.31	2.59	23.81	159.00	148.00/M	138.00/M	EVN-65AA00B24	EVN-64AA00B24
50K	K4A54-ND*	K0A54-ND*	.31	2.59	23.81	159.00	148.00/M	138.00/M	EVN-65AA00B54	EVN-64AA00B54
100K	K4A15-ND*	K0A15-ND*	.31	2.59	23.81	159.00	148.00/M	138.00/M	EVN-65AA00B15	EVN-64AA00B15
200K	K4A25-ND*	K0A25-ND*	.31	2.59	23.81	159.00	148.00/M	138.00/M	EVN-65AA00B25	EVN-64AA00B25
500K	K4A55-ND*	K0A55-ND*	.31	2.59	23.81	159.00	148.00/M	138.00/M	EVN-65AA00B55	EVN-64AA00B55
1M	K4A16-ND	K0A16-ND	.31	2.59	23.81	159.00	148.00/M	138.00/M	EVN-65AA00B16	EVN-64AA00B16
2M	—	K0A26-ND	.31	2.59	23.81	159.00	148.00/M	138.00/M	—	EVN-64AA00B26

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