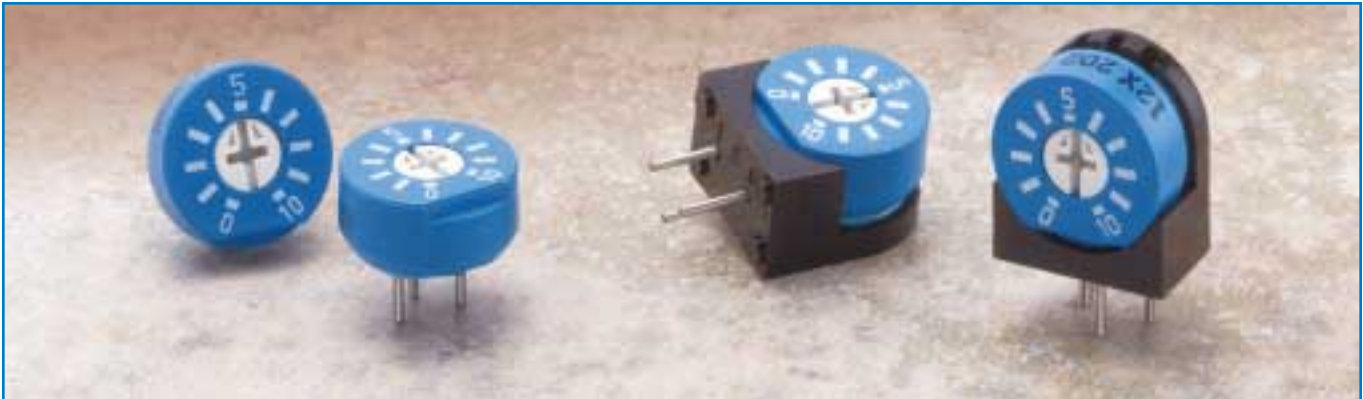


1/2" Round, Single-Turn, Through-Hole Sealed Cermet Trimmers



Features

- 1/2" round, single-turn, through-hole, sealed cermet trimmers
- Dial markings for quick adjustment
- 3 standard models, top and side adjust
- Cross-slot adjustment flush with housing
- PC board stand-offs
- 1.0 watt power rating
- Low noise and low TC
- Wide temperature range of -55°C to $+125^{\circ}\text{C}$
- Meets UL 94V-0 flammability requirements
- Sealed to withstand wave soldering and immersion cleaning processes

Specifications

Electrical

Standard Resistance Range	10 Ω to 1M Ω (standard 1, 2 & 5 sequence)
Resistance Tolerance	$\pm 10\%$ and $\pm 20\%$
End Resistance	1% or 3 Ω , whichever is greater
Resistance Taper	Linear
Peak Noise (C.R.V.)	1% or 1 Ω , whichever is greater
Power Rating	1.0 watt at $+70^{\circ}\text{C}$, 0 watt at $+125^{\circ}\text{C}$
Maximum Input Voltage	300VDC or power rating, whichever is smaller
Temperature Coefficient	$\pm 100\text{ppm}/^{\circ}\text{C}$, 200 Ω to 500k Ω $\pm 250\text{ppm}/^{\circ}\text{C}$, other values
Insulation Resistance	1,000M Ω minimum at 500VDC
Dielectric Strength	900VAC, 1 minute
Adjustment Travel	$270^{\circ} \pm 10^{\circ}$

Mechanical

Mechanical Travel	$300^{\circ} \pm 10^{\circ}$
Shaft Torque	350 gf \cdot cm (4.85 oz \cdot in) max.
Stop Strength	2 kgf \cdot cm (27.73 oz \cdot in) min.
Flammability of Plastic Materials	Meets UL 94V-0
Nominal Weight	1.5g (P); 2.4g (S, X)
Marking	Resistance code, date code, model type, terminal identification (side adjust only)

Environmental

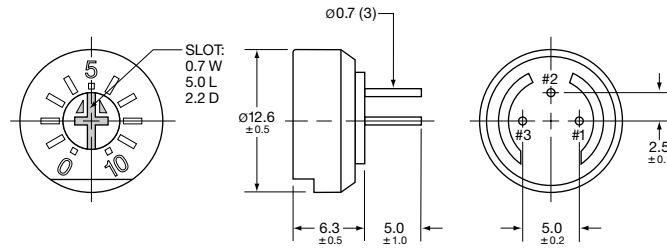
Temperature Range	-55°C to $+125^{\circ}\text{C}$
Low Temperature Exposure	-55°C , 2 hours $\Delta\text{T/R} \leq \pm 1\%$
High Temperature Exposure	$+125^{\circ}\text{C}$, 250 hours $\Delta\text{T/R} \leq \pm 2\%$, S.S. $\leq \pm 1\%$
Load Life	$+70^{\circ}\text{C}$, 1.0 watt, 1,000 hours $\Delta\text{T/R} \leq \pm 3\%$, S.S. $\leq \pm 1\%$
Thermal Shock	-55°C , $+125^{\circ}\text{C}$, 30 minutes each, 5 cycles $\Delta\text{T/R} \leq \pm 1\%$, S.S. $\leq \pm 1\%$
Shock	50G, 6ms, 6 directions, 3 times each $\Delta\text{T/R} \leq \pm 2\%$, S.S. $\leq \pm 1\%$
Vibration	10-2,000Hz, 1.5mm amplitude, 20G, 12 hours $\Delta\text{T/R} \leq \pm 1\%$, S.S. $\leq \pm 1\%$
Humidity	$+40^{\circ}\text{C}$, 90-95% RH, 1.0 watt, 500 hours $\Delta\text{T/R} \leq \pm 3\%$, S.S. $\leq \pm 1\%$
Moisture Resistance	-10°C to $+65^{\circ}\text{C}$, 80-98% RH, 1.0 watt, 10 cycles, 240 hours $\Delta\text{T/R} \leq \pm 3\%$
Soldering Heat Resistance	350°C , 3 seconds $\Delta\text{T/R} \leq \pm 1\%$
Seal Test	$+85^{\circ}\text{C}$, hot water for 1 minute
Rotational Life	100 cycles without discontinuity $\Delta\text{T/R} \leq \pm 2\%$

$\Delta\text{T/R}$ = Total Resistance Change; S.S. = Setting Stability (voltage ratio)

G12P

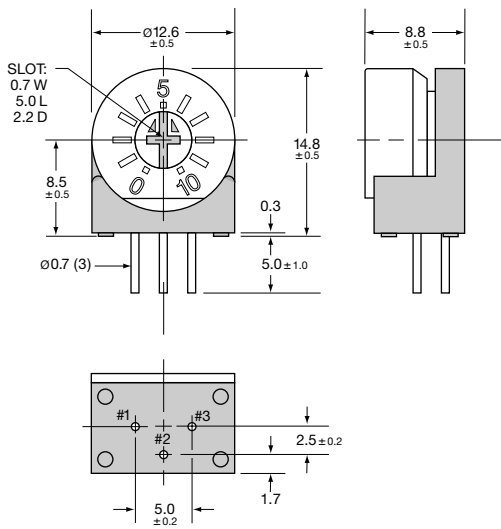
P Terminal Style, Cross-Slot, Top Adjust

Unit: mm



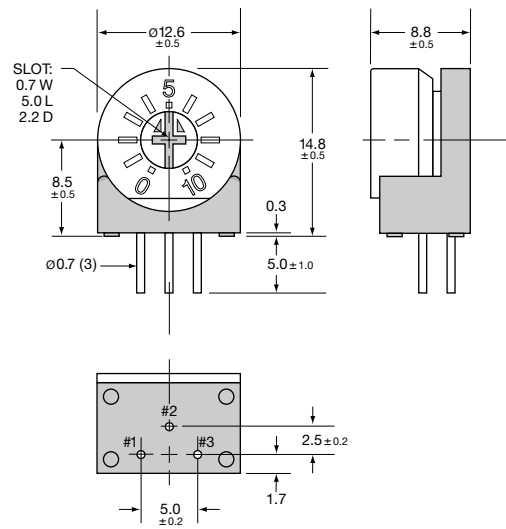
G12S

S Terminal Style, Cross-Slot, Side Adjust



G12X

X Terminal Style, Cross-Slot, Side Adjust

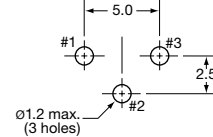
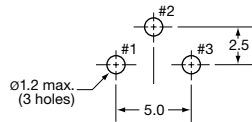


Recommended PCB Layouts

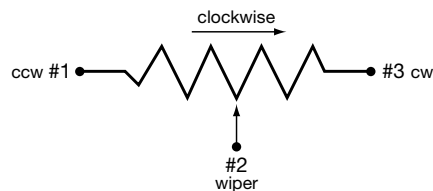
P & S Pin-Out

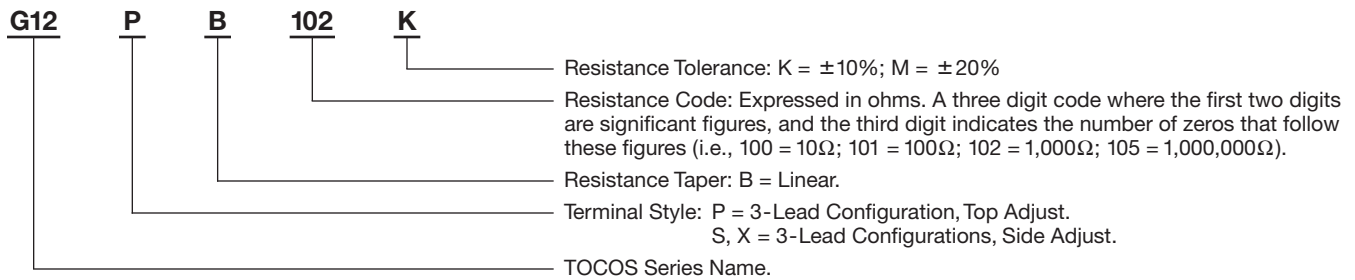
X Pin-Out

Unit: mm



Electrical Schematic






Part Numbers

Nominal Resistance		Catalog No. Bulk		Potentiometer Styles
Value (Ω)	Code	Resistance Tolerance $\pm 10\%$	Resistance Tolerance $\pm 20\%$	

G12P Through-Hole, P Terminal Style, Cross-Slot, Top Adjust

Value (Ω)	Code	Resistance Tolerance $\pm 10\%$	Resistance Tolerance $\pm 20\%$	 G12P
10	100	G12P B 100 K	G12P B 100 M	
20	200	G12P B 200 K	G12P B 200 M	
50	500	G12P B 500 K	G12P B 500 M	
100	101	G12P B 101 K	G12P B 101 M	
200	201	G12P B 201 K	G12P B 201 M	
500	501	G12P B 501 K	G12P B 501 M	
1,000	102	G12P B 102 K	G12P B 102 M	
2,000	202	G12P B 202 K	G12P B 202 M	
5,000	502	G12P B 502 K	G12P B 502 M	
10,000	103	G12P B 103 K	G12P B 103 M	
20,000	203	G12P B 203 K	G12P B 203 M	
50,000	503	G12P B 503 K	G12P B 503 M	
100,000	104	G12P B 104 K	G12P B 104 M	
200,000	204	G12P B 204 K	G12P B 204 M	
500,000	504	G12P B 504 K	G12P B 504 M	
1,000,000	105	G12P B 105 K	G12P B 105 M	

G12S Through-Hole, S Terminal Style, Cross-Slot, Side Adjust

Value (Ω)	Code	Resistance Tolerance $\pm 10\%$	Resistance Tolerance $\pm 20\%$	 G12S
10	100	G12S B 100 K	G12S B 100 M	
20	200	G12S B 200 K	G12S B 200 M	
50	500	G12S B 500 K	G12S B 500 M	
100	101	G12S B 101 K	G12S B 101 M	
200	201	G12S B 201 K	G12S B 201 M	
500	501	G12S B 501 K	G12S B 501 M	
1,000	102	G12S B 102 K	G12S B 102 M	
2,000	202	G12S B 202 K	G12S B 202 M	
5,000	502	G12S B 502 K	G12S B 502 M	
10,000	103	G12S B 103 K	G12S B 103 M	
20,000	203	G12S B 203 K	G12S B 203 M	
50,000	503	G12S B 503 K	G12S B 503 M	
100,000	104	G12S B 104 K	G12S B 104 M	
200,000	204	G12S B 204 K	G12S B 204 M	
500,000	504	G12S B 504 K	G12S B 504 M	
1,000,000	105	G12S B 105 K	G12S B 105 M	

G12 Series

Part Numbers

Nominal Resistance		Catalog No. Bulk		Potentiometer Styles
Value (Ω)	Code	Resistance Tolerance $\pm 10\%$	Resistance Tolerance $\pm 20\%$	

G12X Through-Hole, X Terminal Style, Cross-Slot, Side Adjust

10	100	G12X B 100 K	G12X B 100 M
20	200	G12X B 200 K	G12X B 200 M
50	500	G12X B 500 K	G12X B 500 M
100	101	G12X B 101 K	G12X B 101 M
200	201	G12X B 201 K	G12X B 201 M
500	501	G12X B 501 K	G12X B 501 M
1,000	102	G12X B 102 K	G12X B 102 M
2,000	202	G12X B 202 K	G12X B 202 M
5,000	502	G12X B 502 K	G12X B 502 M
10,000	103	G12X B 103 K	G12X B 103 M
20,000	203	G12X B 203 K	G12X B 203 M
50,000	503	G12X B 503 K	G12X B 503 M
100,000	104	G12X B 104 K	G12X B 104 M
200,000	204	G12X B 204 K	G12X B 204 M
500,000	504	G12X B 504 K	G12X B 504 M
1,000,000	105	G12X B 105 K	G12X B 105 M



G12X

Packaging

Standard:	Bulk Packaging	Quantity 10 pieces per vinyl bag. 200 pieces per box.
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Soldering and Cleaning Guidelines

For soldering, cleaning and other information, refer to Guidelines and Precautions for Using Potentiometers.