

4mm Round, Single-Turn, Through-Hole Sealed Cermet Trimmers



Features

- 4mm round, single-turn, through-hole, sealed cermet trimmers
- Top and side adjust models
- Compact with high 0.5 watt power rating
- High setting stability with precious metal multi-contacts
- Low noise and low temperature coefficient
- 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 100Ω to $1\text{M}\Omega$
(standard 1, 2 & 5 sequence)

Resistance Tolerance $\pm 10\%$ and $\pm 20\%$

End Resistance 1% or 3Ω , whichever is greater

Resistance Taper Linear

Peak Noise (C.R.V.) 2% or 3Ω , whichever is greater

Power Rating 0.5 watt at $+70^{\circ}\text{C}$, 0 watt at $+125^{\circ}\text{C}$

Maximum Input Voltage 200VDC or power rating,
whichever is smaller

Temperature Coefficient ... $\pm 100\text{ppm}/^{\circ}\text{C}$, 200Ω to $500\text{k}\Omega$
 $\pm 250\text{ppm}/^{\circ}\text{C}$, other values

Insulation Resistance $1,000\text{M}\Omega$ minimum at 500VDC

Dielectric Strength 500VAC, 1 minute

Adjustment Travel 190°

Mechanical

Mechanical Travel $230^{\circ} \pm 10^{\circ}$

Shaft Torque 150 gf•cm (2.08 oz•in) max.

Stop Strength 200 gf•cm (2.77 oz•in) min.

Flammability of Plastic Materials Meets UL 94V-0

Nominal Weight 0.2g (W, U); 0.3g (S, V)

Marking Resistance code, date code

Environmental

Temperature Range -55°C to $+125^{\circ}\text{C}$

Low Temperature Operation -55°C , 0.5 watt, 2 hours
 $\Delta T/R \leq \pm 3\%$

High Temperature Exposure $+125^{\circ}\text{C}$, 250 hours
 $\Delta T/R \leq \pm 2\%$, S.S. $\leq \pm 1\%$

Load Life $+70^{\circ}\text{C}$, 0.5 watt, 100 hours
 $\Delta T/R \leq \pm 3\%$, S.S. $\leq \pm 2\%$

Thermal Shock -55°C , $+125^{\circ}\text{C}$,
30 minutes each, 5 cycles
 $\Delta T/R \leq \pm 2\%$, S.S. $\leq \pm 2\%$

Shock 100G, 6ms, 6 directions, 3 times each
 $\Delta T/R \leq \pm 1\%$, S.S. $\leq \pm 1\%$

Vibration 10-2,000Hz, 1.5mm amplitude,
20G, 12 hours
 $\Delta T/R \leq \pm 1\%$, S.S. $\leq \pm 1\%$

Humidity $+40^{\circ}\text{C}$, 90-95%RH,
0.5 watt, 500 hours
 $\Delta T/R \leq \pm 3\%$, S.S. $\leq \pm 1\%$

Moisture Resistance -10°C to $+65^{\circ}\text{C}$, 80-98%RH,
0.5 watt, 10 cycles, 240 hours
 $\Delta T/R \leq \pm 3\%$

Soldering Heat Resistance 350°C , 3 seconds
 $\Delta T/R \leq \pm 2\%$

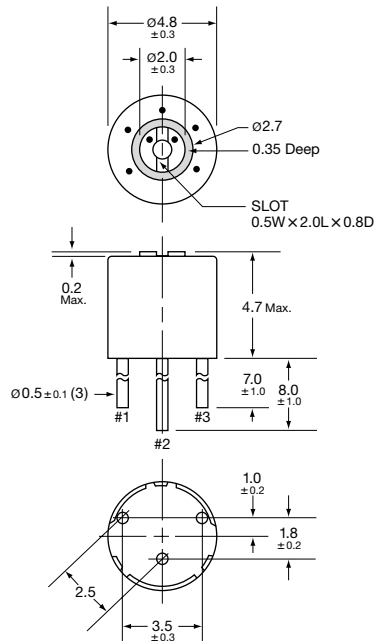
Seal Test $+85^{\circ}\text{C}$, hot water for 1 minute

Rotational Life 200 cycles without discontinuity
 $\Delta T/R \leq \pm 5\%$

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

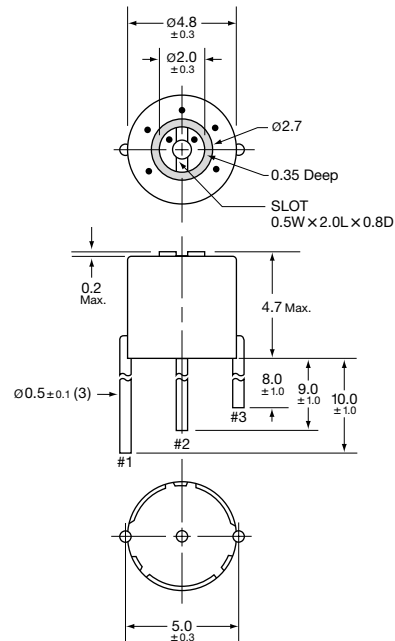
GF04W

W Terminal Style, Single-Slot, Top Adjust



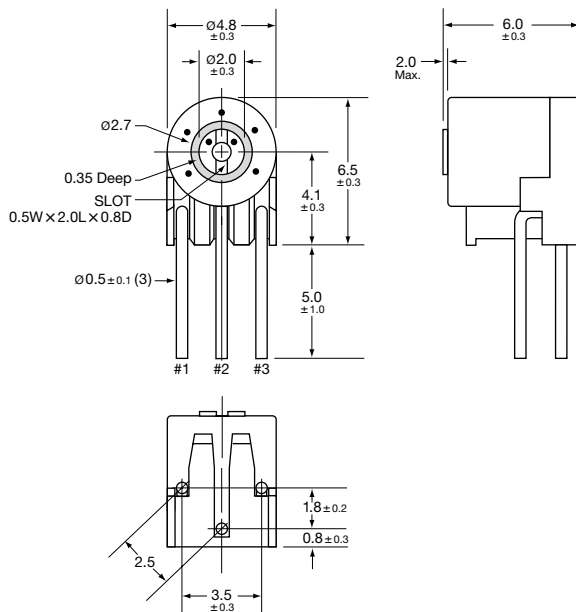
GF04U

U Terminal Style, Single-Slot, Top Adjust



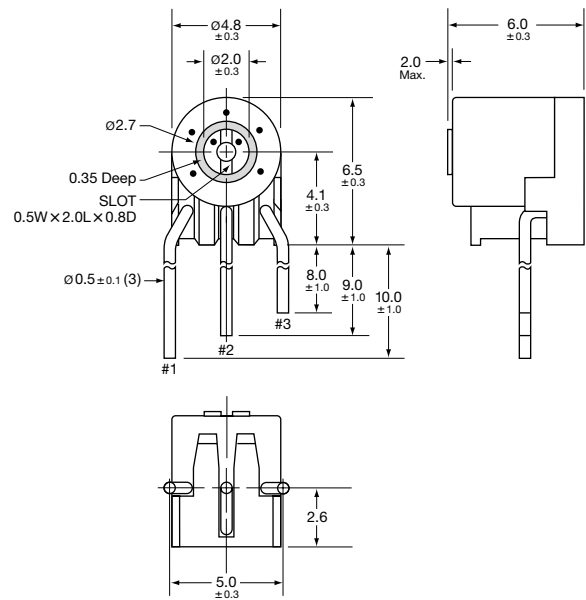
GF04S

S Terminal Style, Single-Slot, Side Adjust



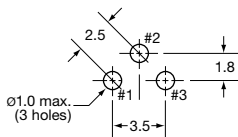
GF04V

V Terminal Style, Single-Slot, Side Adjust

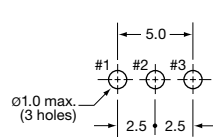


Recommended PCB Layout

W & S Pin-Out

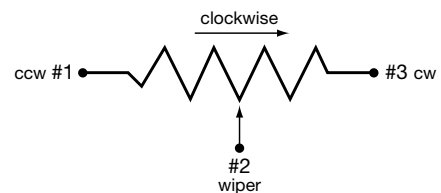


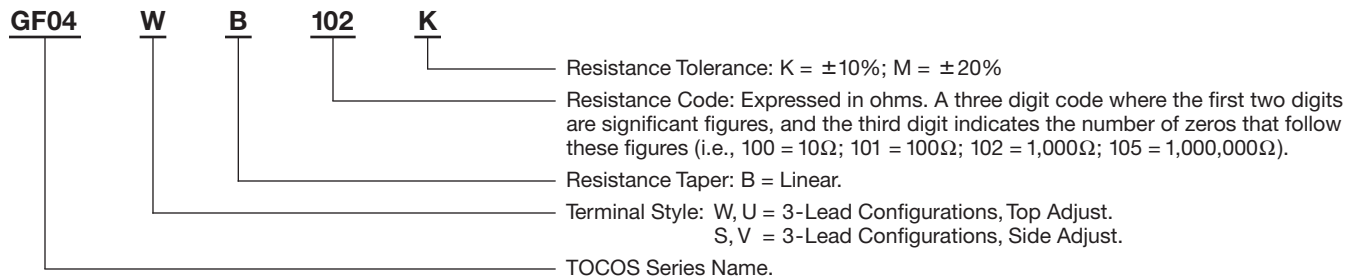
U & V Pin-Out



Unit: mm

Electrical Schematic





Part Numbers

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

GF04W Through-Hole, W Terminal Style, Single-Slot, Top Adjust

100	101	GF04W B 101 K	GF04W B 101 M	
200	201	GF04W B 201 K	GF04W B 201 M	
500	501	GF04W B 501 K	GF04W B 501 M	
1,000	102	GF04W B 102 K	GF04W B 102 M	
2,000	202	GF04W B 202 K	GF04W B 202 M	
5,000	502	GF04W B 502 K	GF04W B 502 M	
10,000	103	GF04W B 103 K	GF04W B 103 M	
20,000	203	GF04W B 203 K	GF04W B 203 M	
50,000	503	GF04W B 503 K	GF04W B 503 M	
100,000	104	GF04W B 104 K	GF04W B 104 M	
200,000	204	GF04W B 204 K	GF04W B 204 M	
500,000	504	GF04W B 504 K	GF04W B 504 M	
1,000,000	105	GF04W B 105 K	GF04W B 105 M	

GF04W

GF04U Through-Hole, U Terminal Style, Single-Slot, Top Adjust

100	101	GF04U B 101 K	GF04U B 101 M	
200	201	GF04U B 201 K	GF04U B 201 M	
500	501	GF04U B 501 K	GF04U B 501 M	
1,000	102	GF04U B 102 K	GF04U B 102 M	
2,000	202	GF04U B 202 K	GF04U B 202 M	
5,000	502	GF04U B 502 K	GF04U B 502 M	
10,000	103	GF04U B 103 K	GF04U B 103 M	
20,000	203	GF04U B 203 K	GF04U B 203 M	
50,000	503	GF04U B 503 K	GF04U B 503 M	
100,000	104	GF04U B 104 K	GF04U B 104 M	
200,000	204	GF04U B 204 K	GF04U B 204 M	
500,000	504	GF04U B 504 K	GF04U B 504 M	
1,000,000	105	GF04U B 105 K	GF04U B 105 M	

GF04U

GF04S Through-Hole, S Terminal Style, Single-Slot, Side Adjust

100	101	GF04S B 101 K	GF04S B 101 M	
200	201	GF04S B 201 K	GF04S B 201 M	
500	501	GF04S B 501 K	GF04S B 501 M	
1,000	102	GF04S B 102 K	GF04S B 102 M	
2,000	202	GF04S B 202 K	GF04S B 202 M	
5,000	502	GF04S B 502 K	GF04S B 502 M	
10,000	103	GF04S B 103 K	GF04S B 103 M	
20,000	203	GF04S B 203 K	GF04S B 203 M	
50,000	503	GF04S B 503 K	GF04S B 503 M	
100,000	104	GF04S B 104 K	GF04S B 104 M	
200,000	204	GF04S B 204 K	GF04S B 204 M	
500,000	504	GF04S B 504 K	GF04S B 504 M	
1,000,000	105	GF04S B 105 K	GF04S B 105 M	

GF04S

GF04 Series

Part Numbers

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

GF04V Through-Hole, V Terminal Style, Single-Slot, Side Adjust

100	101	GF04V B 101 K	GF04V B 101 M	
200	201	GF04V B 201 K	GF04V B 201 M	
500	501	GF04V B 501 K	GF04V B 501 M	
1,000	102	GF04V B 102 K	GF04V B 102 M	
2,000	202	GF04V B 202 K	GF04V B 202 M	
5,000	502	GF04V B 502 K	GF04V B 502 M	
10,000	103	GF04V B 103 K	GF04V B 103 M	
20,000	203	GF04V B 203 K	GF04V B 203 M	
50,000	503	GF04V B 503 K	GF04V B 503 M	
100,000	104	GF04V B 104 K	GF04V B 104 M	
200,000	204	GF04V B 204 K	GF04V B 204 M	
500,000	504	GF04V B 504 K	GF04V B 504 M	
1,000,000	105	GF04V B 105 K	GF04V B 105 M	

Packaging

Standard:

Bulk Packaging

Quantity

50 pieces per vinyl bag.

500 pieces per box.

Soldering and Cleaning Guidelines

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