

4mm Surface Mount, Multi-Turn, Sealed Cermet Trimmers



Features

- 4mm square SMD, multi-turn, sealed cermet trimmers
- Available in J-hook and gull-wing terminal configurations
- Top or side adjustment, flush with housing
- Meets EIA, EIAJ, IPC, VECI standard SMD trimmer designs
- Wide temperature range of -65°C to +150°C
- TCR = ±100ppm/°C; Low CRV = 1%
- Tape and reel packaging
- Designed for flow, reflow or infrared reflow soldering
- Sealed to withstand immersion cleaning processes

Specifications

Electrical

Standard Resistance Range 10Ω to 2MΩ
(standard 1, 2 & 5 sequence)

Resistance Tolerance ±10% standard

End Resistance 1% or 2Ω, whichever is greater

Resistance Taper Linear

Peak Noise (C.R.V.) 1% or 3Ω, whichever is greater

Power Rating 0.25 watt at +85°C; 0 watt at +150°C

Maximum Input Voltage 300VDC or power rating,
whichever is smaller

Temperature Coefficient ±100ppm/°C

Insulation Resistance 100MΩ minimum at 500VDC

Dielectric Strength 600VAC, 1 minute

Adjustment Travel 12 ± 2 turns nominal

Mechanical

Mechanical Travel 13 ± 1 turns

Shaft Torque 180 gf·cm (2.49 oz·in) max.

Stop Strength Clutch action or wiper idles

Flammability of Plastic Materials Meets UL 94V-0

Nominal Weight 0.2g

Marking Resistance value or code, date code

Environmental

Temperature Range -65°C to +150°C

Low Temperature Operation -65°C, 0.25 watt, 2 hours
ΔT/R ≤ ±1%, S.S. ≤ ±1%

High Temperature Exposure +150°C, 250 hours
ΔT/R ≤ ±2%, S.S. ≤ ±1%

Load Life +85°C, 0.25 watt, 1,000 hours
ΔT/R ≤ ±3% or ΔR = 3Ω, S.S. ≤ ±2%

Thermal Shock -65°C, +150°C,
30 minutes each, 5 cycles
ΔT/R ≤ ±2%, S.S. ≤ ±1%

Shock 100G, 6ms, 6 directions, 3 times each
ΔT/R ≤ ±1%, S.S. ≤ ±1%

Vibration 10-2,000Hz, 1.5mm amplitude,
20G, 12 hours
ΔT/R ≤ ±1%, S.S. ≤ ±1%

Humidity +40°C, 90-95% RH,
0.25 watt, 500 hours
ΔT/R ≤ ±3%, S.S. ≤ ±2%

Moisture Resistance -10°C to +65°C, 80-98% RH,
0.25 watt, 10 cycles, 240 hours
ΔT/R ≤ ±3%

Soldering Heat Resistance 260°C, 4 sec. in, 2 sec. out
ΔT/R ≤ ±1%

Seal Test +85°C, Fluorinert® for 1 minute

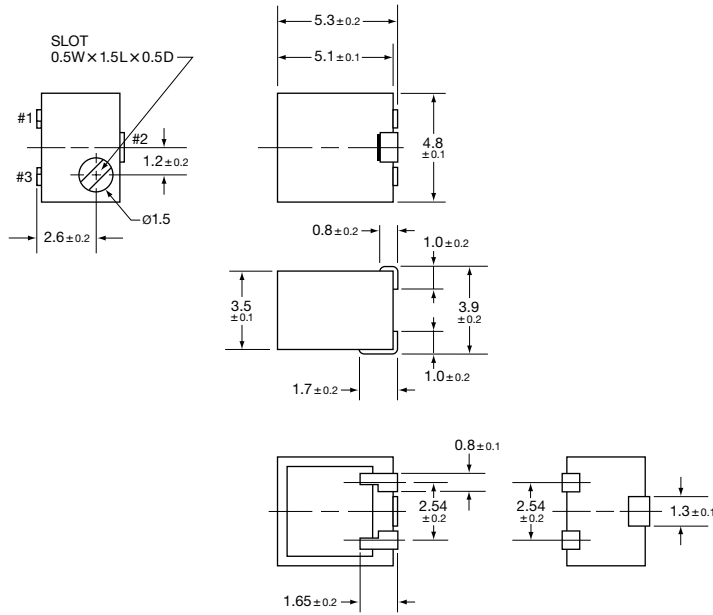
Rotational Life . . . 100 cycles (< 100Ω), 200 cycles (≥ 100Ω)
without discontinuity, no load
ΔT/R ≤ ±3% or ΔR = 3Ω

ΔT/R = Total Resistance Change; S.S. = Setting Stability (voltage ratio)

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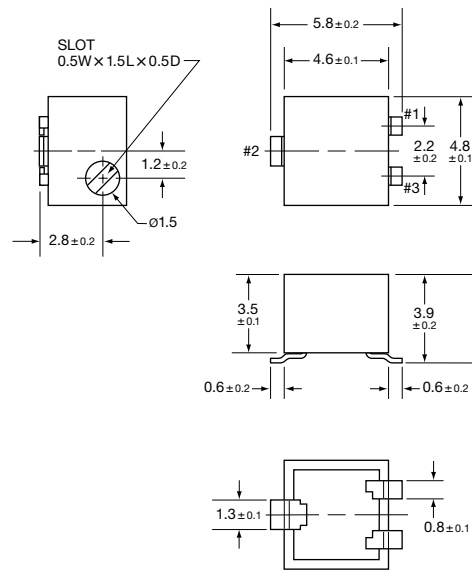
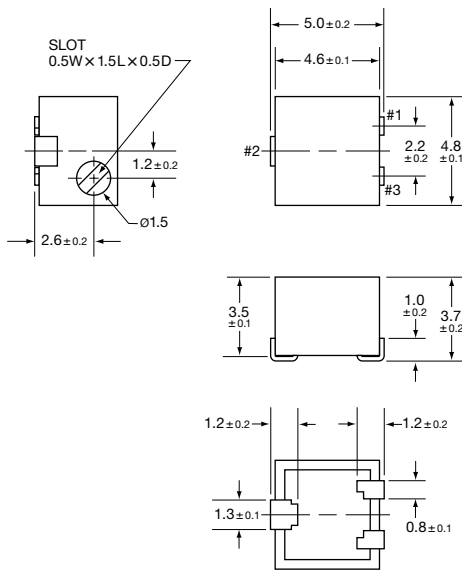
GV4W J-Hook, Single-Slot, Top Adjust

Unit: mm



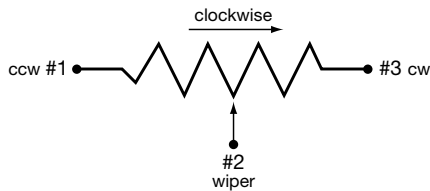
GV4J J-Hook, Single-Slot, Side Adjust

GV4G Gull-Wing, Single-Slot, Side Adjust



Electrical Schematic

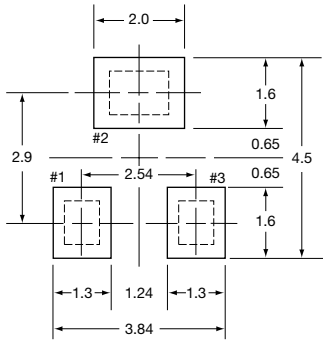
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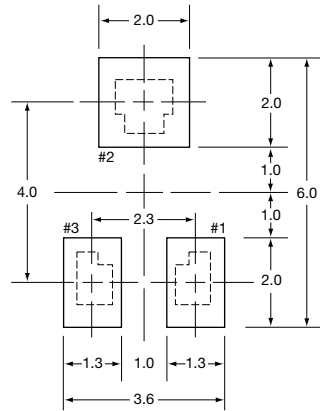
Recommended Land Patterns

Flow or Reflow Soldering Methods

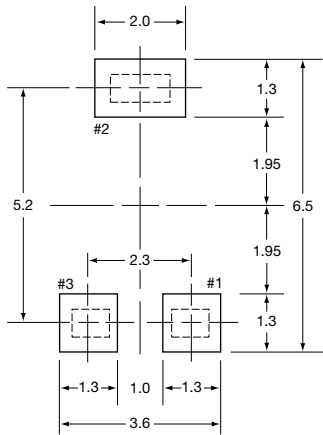
GV4W



GV4J

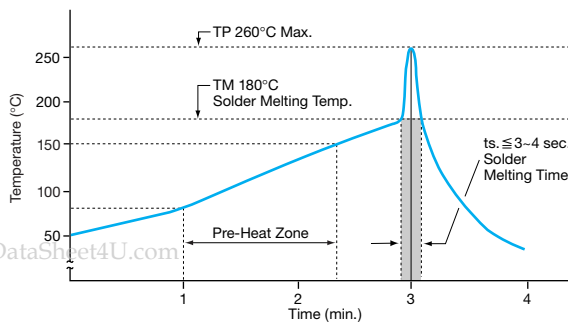


GV4G

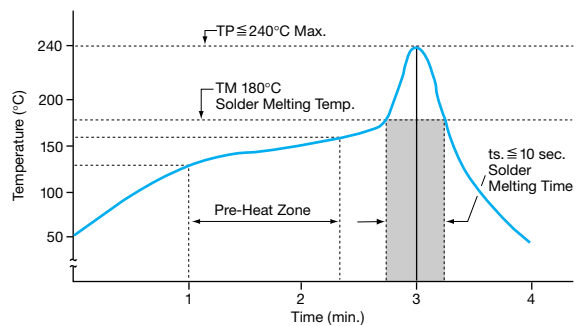


Recommended Soldering Profiles

Flow Soldering Profile



Reflow Soldering Profile

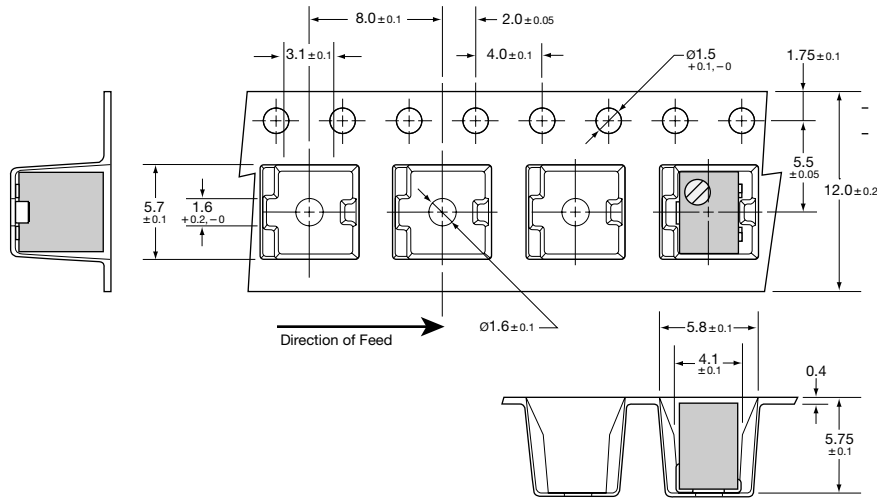


Embossed Tape Dimensions

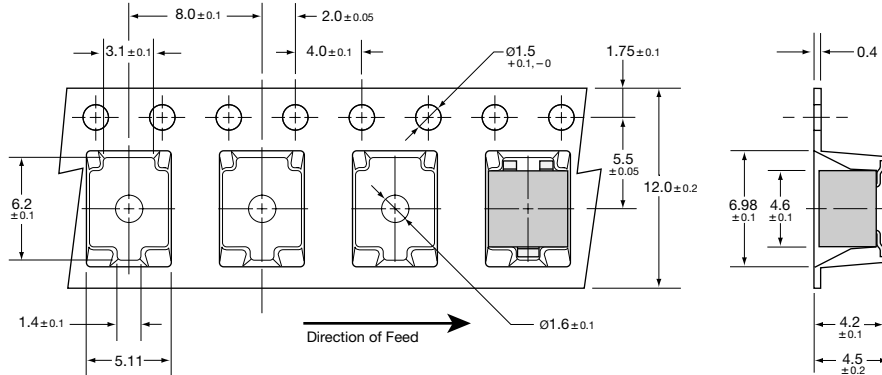
Conforms to EIA-481, JIS-C-0806 and EIAJ-RC-1009B

Unit: mm

GV4WT



GV4JT, GV4GT

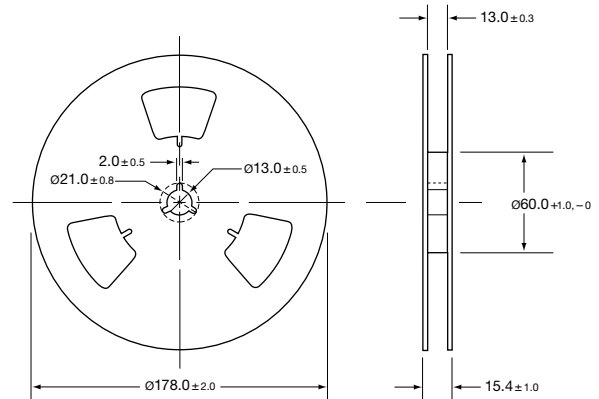
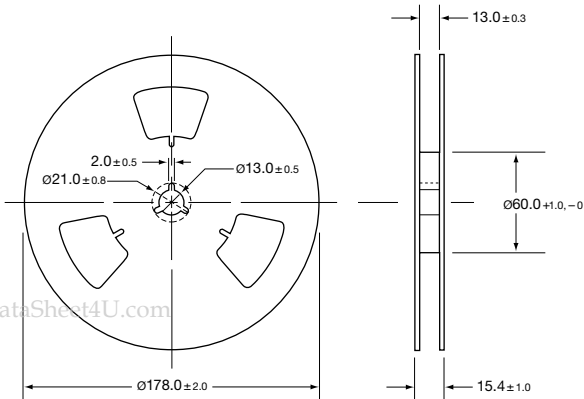


Reel Dimensions

Conforms to EIA-481, JIS-C-0806 and EIAJ-RC-1009B

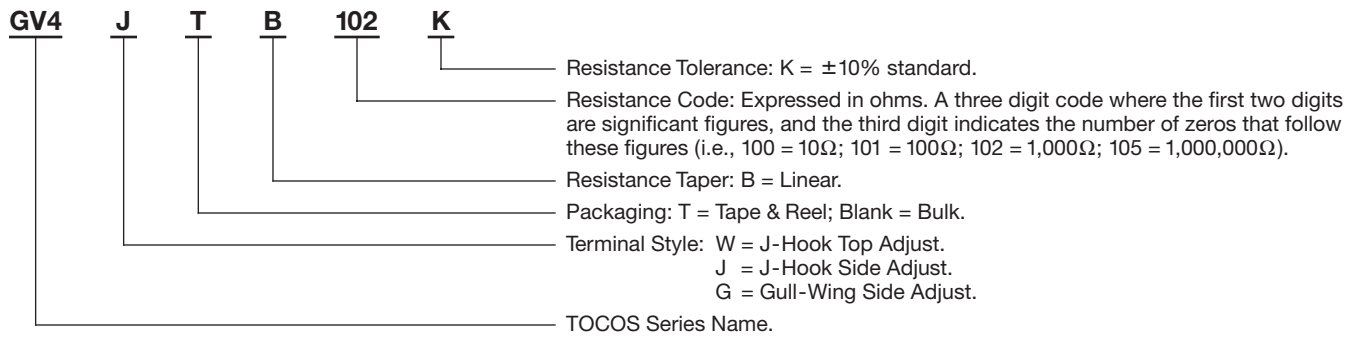
GV4WT

GV4JT, GV4GT



250 Pieces Per 7" Reel

500 Pieces Per 7" Reel



Part Numbers

Nominal Resistance		Single-Slot		Maximum Input Ratings		Potentiometer Styles
Value (Ω)	Code	Catalog No. Tape & Reel	Catalog No. Bulk	Maximum Wiper Current (mA)	Maximum Input Voltage (V)	

GV4W J-Hook, Single-Slot, Top Adjust

10	100	GV4WT B 100 K	GV4W B 100 K	100.0	1.00
20	200	GV4WT B 200 K	GV4W B 200 K	100.0	2.00
50	500	GV4WT B 500 K	GV4W B 500 K	70.7	3.53
100	101	GV4WT B 101 K	GV4W B 101 K	50.0	5.00
200	201	GV4WT B 201 K	GV4W B 201 K	35.4	7.07
500	102	GV4WT B 501 K	GV4W B 501 K	22.4	11.18
1,000	202	GV4WT B 102 K	GV4W B 102 K	15.8	15.80
2,000	502	GV4WT B 202 K	GV4W B 202 K	11.2	22.36
5,000	502	GV4WT B 502 K	GV4W B 502 K	7.07	35.35
10,000	103	GV4WT B 103 K	GV4W B 103 K	5.00	50.00
20,000	203	GV4WT B 203 K	GV4W B 203 K	3.54	70.70
50,000	503	GV4WT B 503 K	GV4W B 503 K	2.24	111.8
100,000	104	GV4WT B 104 K	GV4W B 104 K	1.58	158.11
200,000	204	GV4WT B 204 K	GV4W B 204 K	1.00	223.60
500,000	504	GV4WT B 504 K	GV4W B 504 K	0.40	300.00
1,000,000	105	GV4WT B 105 K	GV4W B 105 K	0.20	300.00
2,000,000	205	GV4WT B 205 K	GV4W B 205 K	0.10	300.00



GV4W

GV4J J-Hook, Single-Slot, Side Adjust

10	100	GV4JT B 100 K	GV4J B 100 K	100.0	1.00
20	200	GV4JT B 200 K	GV4J B 200 K	100.0	2.00
50	500	GV4JT B 500 K	GV4J B 500 K	70.7	3.53
100	101	GV4JT B 101 K	GV4J B 101 K	50.0	5.00
200	201	GV4JT B 201 K	GV4J B 201 K	35.4	7.07
500	102	GV4JT B 501 K	GV4J B 501 K	22.4	11.18
1,000	202	GV4JT B 102 K	GV4J B 102 K	15.8	15.80
2,000	502	GV4JT B 202 K	GV4J B 202 K	11.2	22.36
5,000	502	GV4JT B 502 K	GV4J B 502 K	7.07	35.35
10,000	103	GV4JT B 103 K	GV4J B 103 K	5.00	50.00
20,000	203	GV4JT B 203 K	GV4J B 203 K	3.54	70.70
50,000	503	GV4JT B 503 K	GV4J B 503 K	2.24	111.8
100,000	104	GV4JT B 104 K	GV4J B 104 K	1.58	158.11
200,000	204	GV4JT B 204 K	GV4J B 204 K	1.00	223.60
500,000	504	GV4JT B 504 K	GV4J B 504 K	0.40	300.00
1,000,000	105	GV4JT B 105 K	GV4J B 105 K	0.20	300.00
2,000,000	205	GV4JT B 205 K	GV4J B 205 K	0.10	300.00



GV4J

Nominal Resistance		Single-Slot		Maximum Input Ratings		Potentiometer Styles
Value (Ω)	Code	Catalog No. Tape & Reel	Catalog No. Bulk	Maximum Wiper Current (mA)	Maximum Input Voltage (V)	

GV4G Gull-Wing, Single-Slot, Side Adjust

10	100	GV4GT B 100 K	GV4G B 100 K	100.0	1.00
20	200	GV4GT B 200 K	GV4G B 200 K	100.0	2.00
50	500	GV4GT B 500 K	GV4G B 500 K	70.7	3.53
100	101	GV4GT B 101 K	GV4G B 101 K	50.0	5.00
200	201	GV4GT B 201 K	GV4G B 201 K	35.4	7.07
500	102	GV4GT B 501 K	GV4G B 501 K	22.4	11.18
1,000	202	GV4GT B 102 K	GV4G B 102 K	15.8	15.80
2,000	502	GV4GT B 202 K	GV4G B 202 K	11.2	22.36
5,000	502	GV4GT B 502 K	GV4G B 502 K	7.07	35.35
10,000	103	GV4GT B 103 K	GV4G B 103 K	5.00	50.00
20,000	203	GV4GT B 203 K	GV4G B 203 K	3.54	70.70
50,000	503	GV4GT B 503 K	GV4G B 503 K	2.24	111.8
100,000	104	GV4GT B 104 K	GV4G B 104 K	1.58	158.11
200,000	204	GV4GT B 204 K	GV4G B 204 K	1.00	223.60
500,000	504	GV4GT B 504 K	GV4G B 504 K	0.40	300.00
1,000,000	105	GV4GT B 105 K	GV4G B 105 K	0.20	300.00
2,000,000	205	GV4GT B 205 K	GV4G B 205 K	0.10	300.00



GV4G

Packaging**Standard:****Tape & Reel Packaging****GV4WT**

250 pieces per 7" reel.

GV4JT, GV4GT

500 pieces per 7" reel.

Bulk Packaging**All GV4 Models**

100 pieces per vinyl bag.

1,000 pieces per box.

For additional information, refer to Guidelines and Precautions for Using Potentiometers.