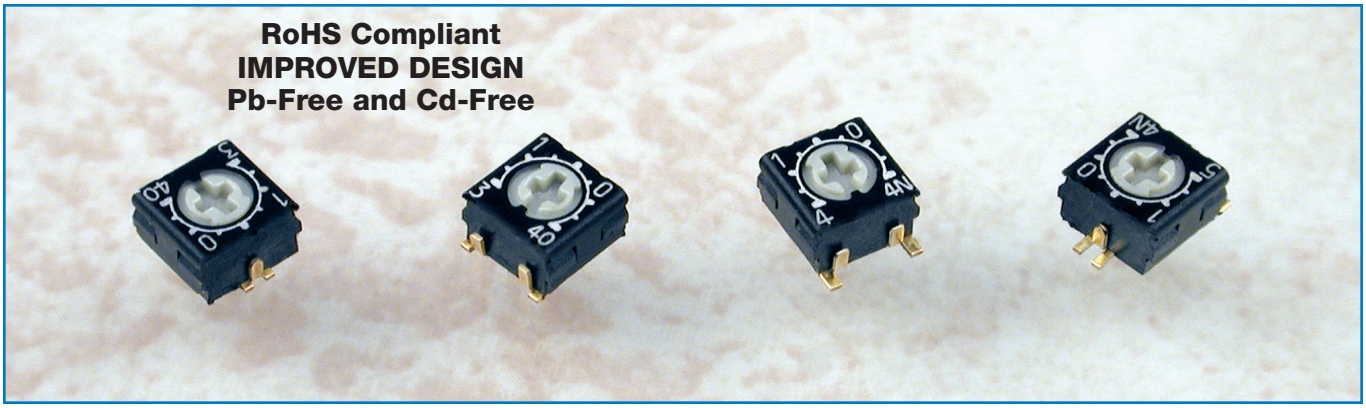
G32 Series

TOCOS® POTENTIOMETERS

3mm Surface Mount, Single-Turn, Sealed Cermet Trimmers



Features

- 3mm square SMD, single-turn, sealed cermet trimmers
- Available in J-hook and gull-wing terminal configurations
- Meets EIA, EIAJ, IPC, VECI standard SMD trimmer designs
- Pb-free and Cd-free construction
- RoHS compliant
- Gold-plated leads provide high conductivity, low contact resistance, high corrosion resistance and good solderability
- Top cross-slot adjustment (top single-slot models available as special order)
- Tape and reel packaging

Specifications

Electrical

Standard Resistance Range . . . . . 50Ω to 2MΩ (standard 1, 2 & 5 sequence)

Resistance Tolerance . . . . . ±20% standard

End Resistance . . . . . 1% or 3Ω, whichever is greater

Resistance Taper . . . . . B = Linear

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

Power Rating . . . . . 0.125 watt at +70°C; 0 watt at +125°C

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

Temperature Coefficient . . . . ±100ppm/°C, 200Ω to 1MΩ ±250ppm/°C, other values

Insulation Resistance . . . . . 100MΩ minimum at 500VDC

Dielectric Strength . . . . . 500VAC, 1 minute

Adjustment Travel . . . . . 220°±10°

Mechanical

Mechanical Travel . . . . . 250°±10°

Shaft Torque . . . . . 50 gf•cm (0.69 oz•in) max.

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

Flammability of Plastic Materials . . . . . Meets UL 94V-0

Nominal Weight 0.068g

Marking . . . . . Resistance value or code, date code

Environmental

Temperature Range . . . . . −55°C to +125°C

Low Temperature Operation . . . −55°C, 0.125 watt, 1 hour
ΔT/R ≦±2%, S.S. ≦±2%

High Temperature Exposure . . . . . +125°C, 250 hours
ΔT/R ≦±2%, S.S. ≦±2%

Load Life . . . . . +70°C, 0.125 watt, 1,000 hours
ΔT/R ≦±3%, S.S. ≦±2%

Thermal Shock . . . . . −55°C, +125°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, 0.125 watt, 500 hours
ΔT/R ≦±3%, S.S. ≦±2%

Moisture Resistance . . . . . −10°C to +65°C, 80-98%RH, 0.125 watt, 10 cycles, 240 hours
ΔT/R ≦±3%

Soldering Heat Resistance . . . . . 240°C, 10 seconds
ΔT/R ≦±1%

Seal Test . . . . . +85°C, hot water for 1 minute

Rotational Life . . . . 100 cycles without discontinuity, no load
ΔT/R ≦±5%

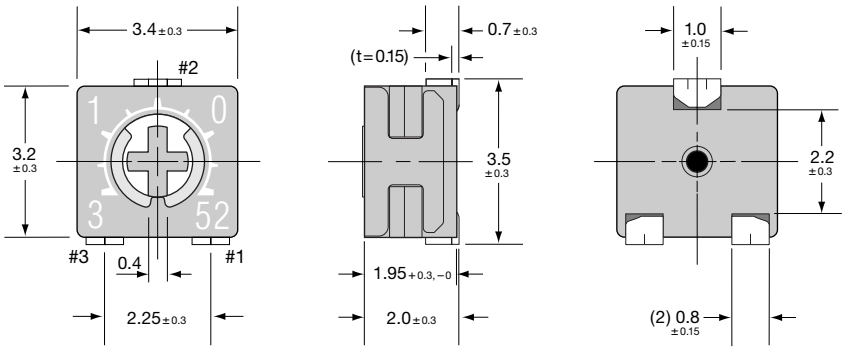
ΔT/R = Total Resistance Change; S.S. = Setting Stability (voltage ratio)

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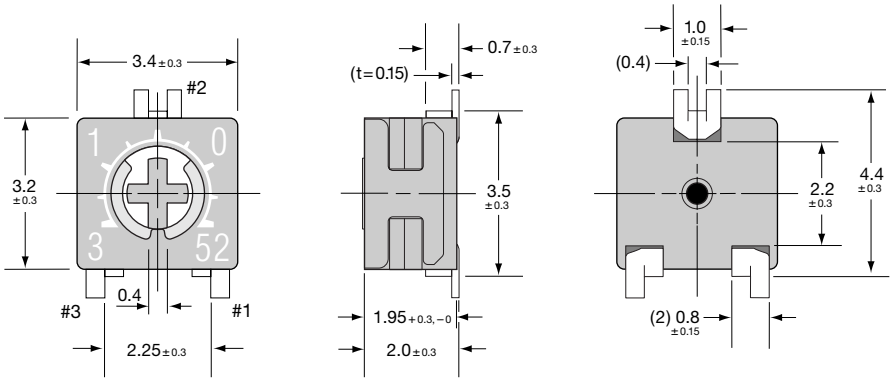
G32 Series Dimensions

G32A J-Hook, Cross-Slot, Top Adjust

Unit: mm



G32B Gull-Wing, Cross-Slot, Top Adjust

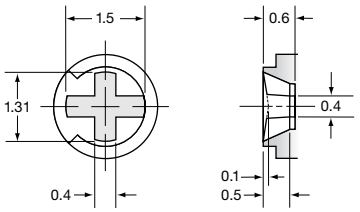


Cross-Slot Dimensions

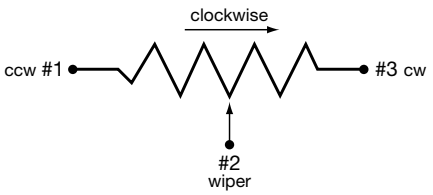
Electrical Schematic

All G32 Models

Unit: mm



Cross-Slot accepts both Philips and single blade adjustment tools.



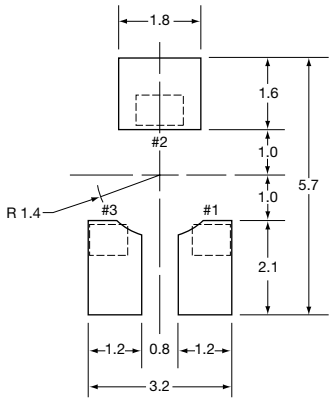
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Recommended Land Patterns

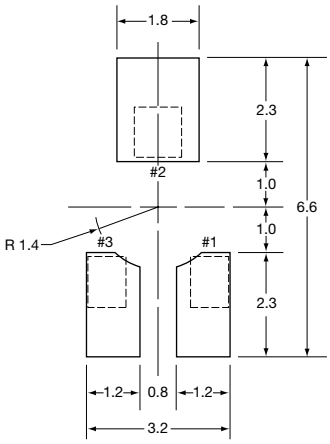
Unit: mm

Flow Soldering Method

G32A

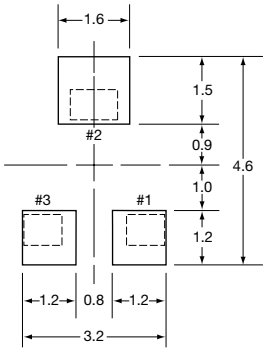


G32B

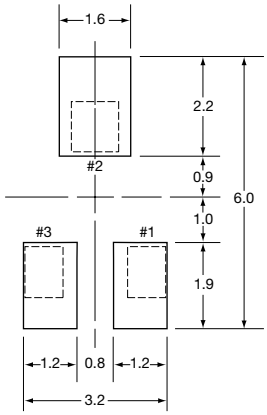


Reflow Soldering Method

G32A

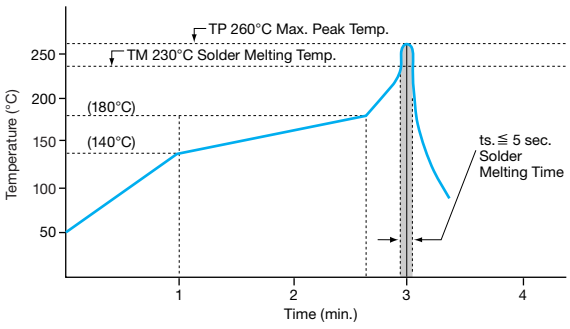


G32B

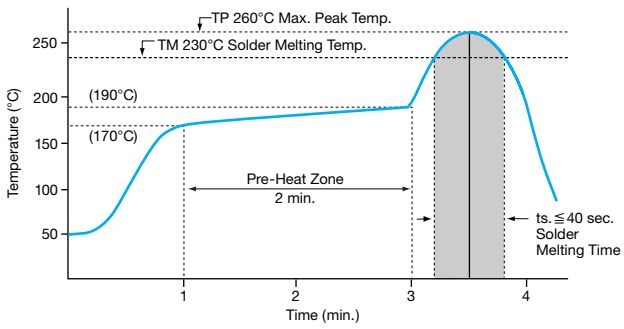


Recommended Soldering Profiles

Flow Soldering Profile



Reflow Soldering Profile



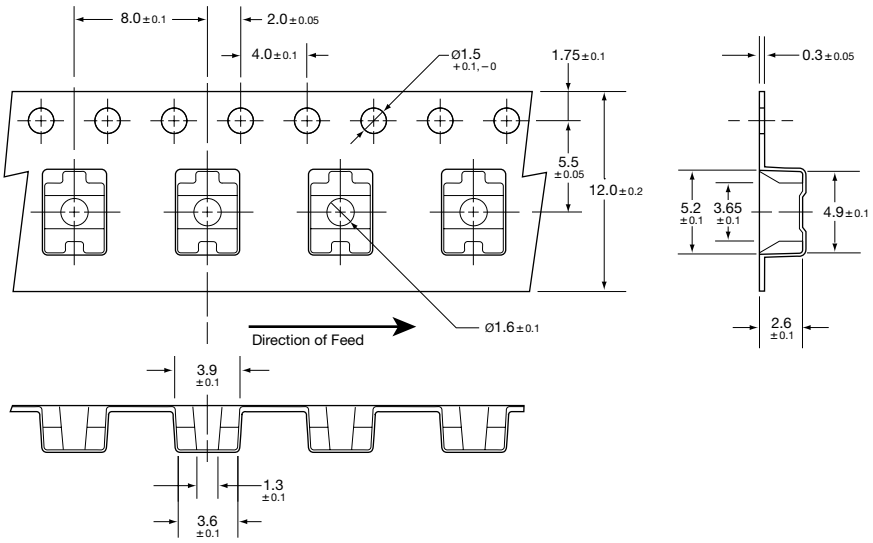
G32 Series — Tape & Reel Specifications

Embossed Tape Dimensions

Unit: mm

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

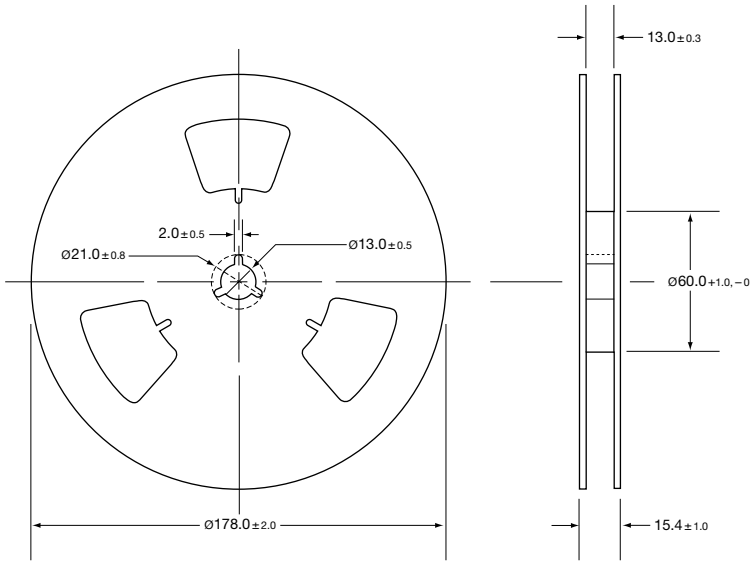
G32AT, G32BT



Reel Dimensions

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

G32AT, G32BT



500 Pieces Per 7" Reel

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G32 Series — Part Numbering System

G32 A T B 105 M

- **M** — Resistance Tolerance: M = ±20%
- **105** — Resistance Code: Expressed in ohms. A three digit code where the first two digits are significant figures, and the third digit indicates the number of zeros that follow these figures (i.e., 100 = 10Ω; 101 = 100Ω; 102 = 1,000Ω; 105 = 1,000,000Ω).
- **B** — Resistance Taper: B = Linear.
- **T** — Packaging: T = Tape & Reel; Blank = Bulk.
- **A** — Terminal Style: A = J-Hook; B = Gull-Wing.
- **G32** — TOCOS Series Name.

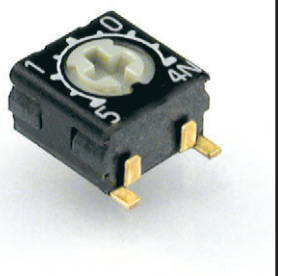
Part Numbers

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

G32A J-Hook, Cross-Slot, Top Adjust

50	500	G32AT B 500 M	G32A B 500 M	 G32A
100	101	G32AT B 101 M	G32A B 101 M	
200	201	G32AT B 201 M	G32A B 201 M	
500	501	G32AT B 501 M	G32A B 501 M	
1,000	102	G32AT B 102 M	G32A B 102 M	
2,000	202	G32AT B 202 M	G32A B 202 M	
5,000	502	G32AT B 502 M	G32A B 502 M	
10,000	103	G32AT B 103 M	G32A B 103 M	
20,000	203	G32AT B 203 M	G32A B 203 M	
50,000	503	G32AT B 503 M	G32A B 503 M	
100,000	104	G32AT B 104 M	G32A B 104 M	
200,000	204	G32AT B 204 M	G32A B 204 M	
500,000	504	G32AT B 504 M	G32A B 504 M	
1,000,000	105	G32AT B 105 M	G32A B 105 M	
2,000,000	205	G32AT B 205 M	G32A B 205 M	

G32B Gull-Wing, Cross-Slot, Top Adjust

50	500	G32BT B 500 M	G32B B 500 M	 G32B
100	101	G32BT B 101 M	G32B B 101 M	
200	201	G32BT B 201 M	G32B B 201 M	
500	501	G32BT B 501 M	G32B B 501 M	
1,000	102	G32BT B 102 M	G32B B 102 M	
2,000	202	G32BT B 202 M	G32B B 202 M	
5,000	502	G32BT B 502 M	G32B B 502 M	
10,000	103	G32BT B 103 M	G32B B 103 M	
20,000	203	G32BT B 203 M	G32B B 203 M	
50,000	503	G32BT B 503 M	G32B B 503 M	
100,000	104	G32BT B 104 M	G32B B 104 M	
200,000	204	G32BT B 204 M	G32B B 204 M	
500,000	504	G32BT B 504 M	G32B B 504 M	
1,000,000	105	G32BT B 105 M	G32B B 105 M	
2,000,000	205	G32BT B 205 M	G32B B 205 M	

Packaging

Standard:

Tape & Reel Packaging
500 pieces per 7" reel.

Bulk Packaging
100 pieces per vinyl bag.
1,000 pieces per box.

Cleaning Guidelines

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