

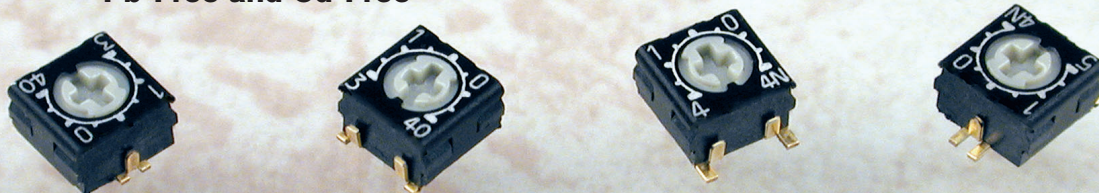
G32 Series

TOCOS[®]

POTENTIOMETERS

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

RoHS Compliant
IMPROVED DESIGN
Pb-Free and Cd-Free



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	±100 ppm/°C, 200Ω to 1MΩ ±250 ppm/°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%

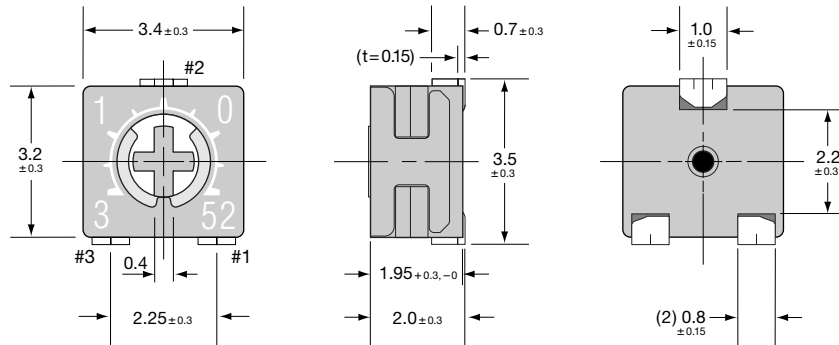
ΔT/R = Total Resistance Change; S.S. = Setting Stability (voltage ratio)

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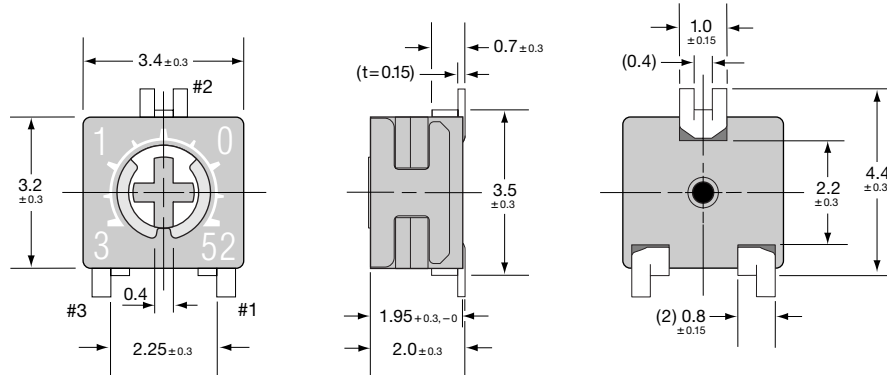
Dimensions

G32A J-Hook, Cross-Slot, Top Adjust

Unit: mm



G32B Gull-Wing, Cross-Slot, Top Adjust

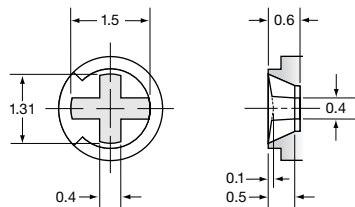


Cross-Slot Dimensions

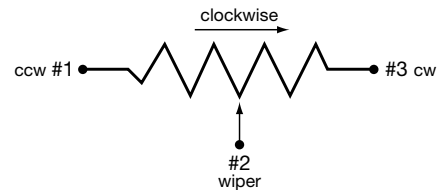
Electrical Schematic

All G32 Models

Unit: mm



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

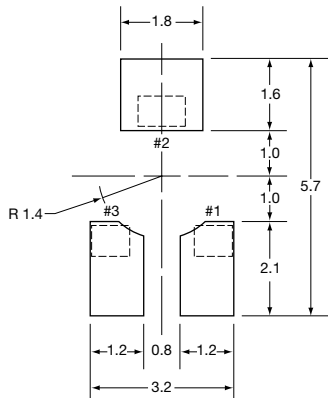


Recommended Land Patterns

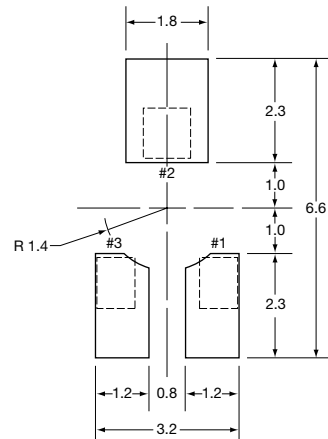
Unit: mm

Flow Soldering Method

G32A

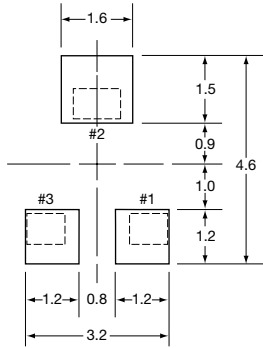


G32B

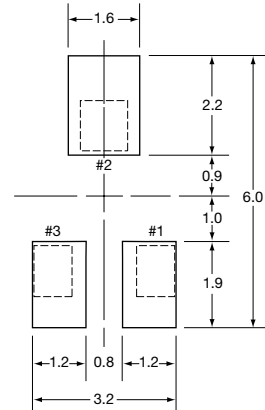


Reflow Soldering Method

G32A

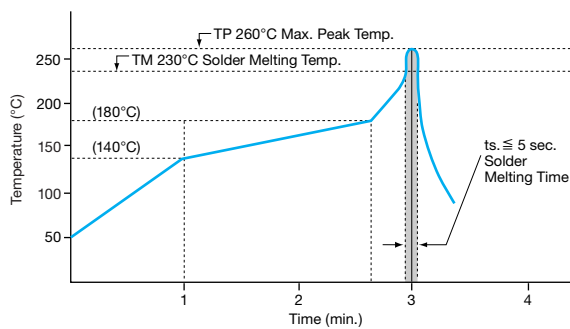


G32B

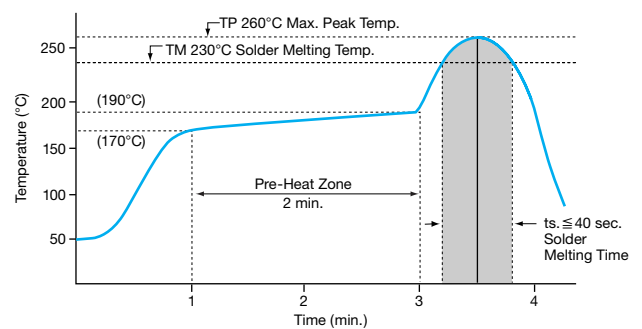


Recommended Soldering Profiles

Flow Soldering Profile



Reflow Soldering Profile



G32 Series

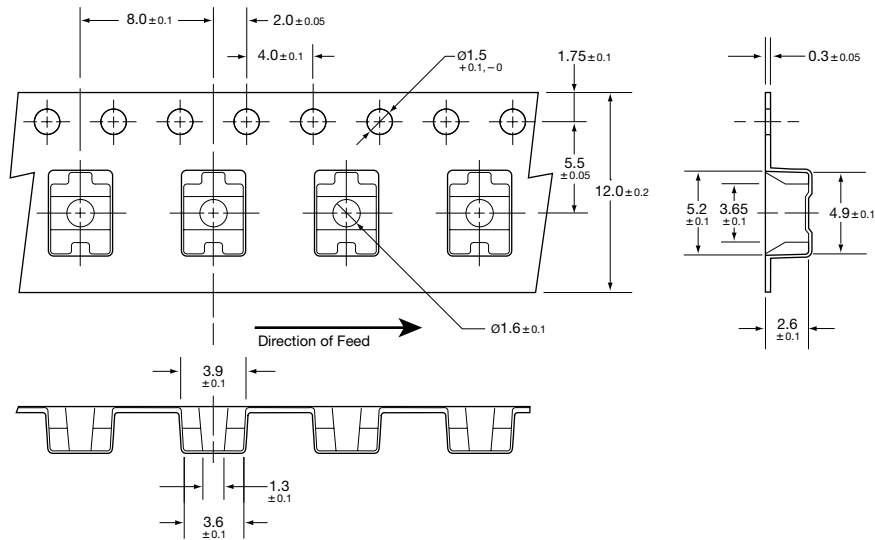
Tape & Reel Specifications

Unit: mm

Embossed Tape Dimensions

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

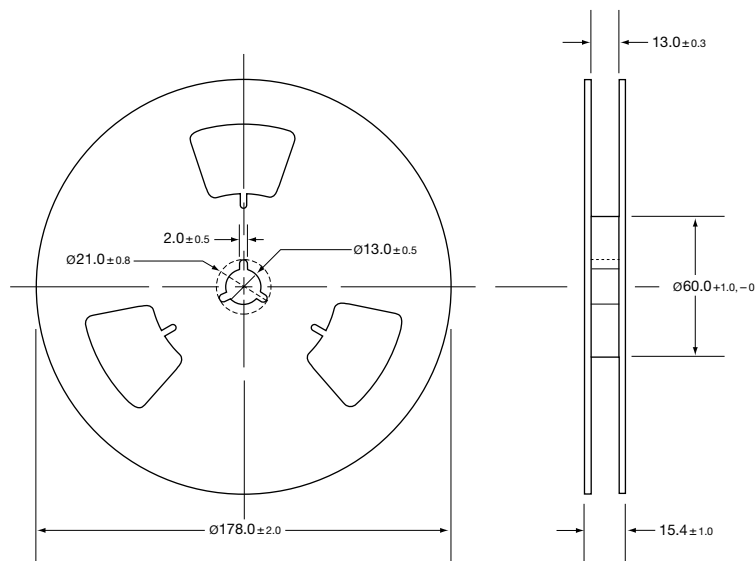
G32AT, G32BT



Reel Dimensions

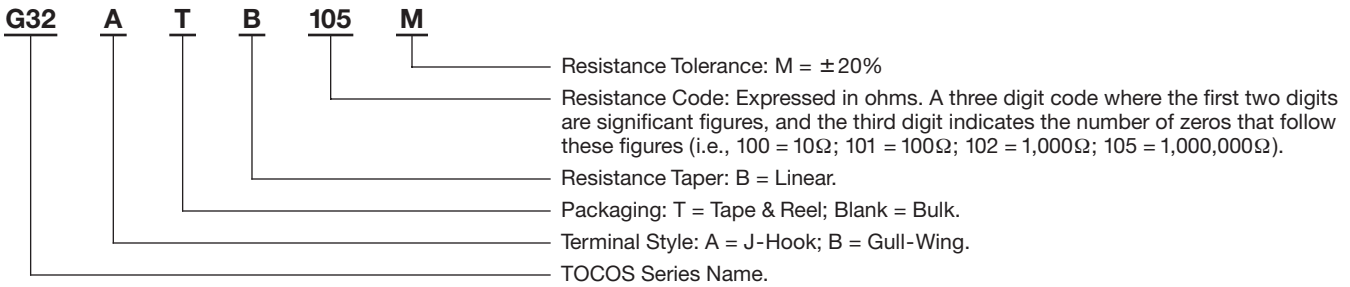
Conforms to EIA-481, JIS-C-0806 and EIAJ-RC-1009B

G32AT, G32BT



500 Pieces Per 7" Reel

G32 Series Part Numbering System



Part Numbers

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

G32A J-Hook, Cross-Slot, Top Adjust


Value (Ω)	Code	Catalog No. Tape & Reel	Catalog No. Bulk
50	500	G32AT B 500 M	G32A B 500 M
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



G32A

G32B Gull-Wing, Cross-Slot, Top Adjust

Value (Ω)	Code	Catalog No. Tape & Reel	Catalog No. Bulk
50	500	G32BT B 500 M	G32B B 500 M
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



G32B

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.