

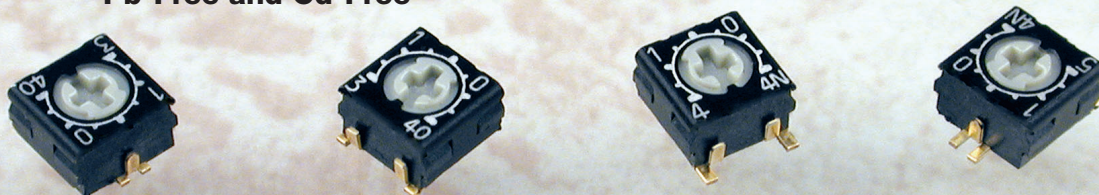
G32 Series

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, VECC 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%

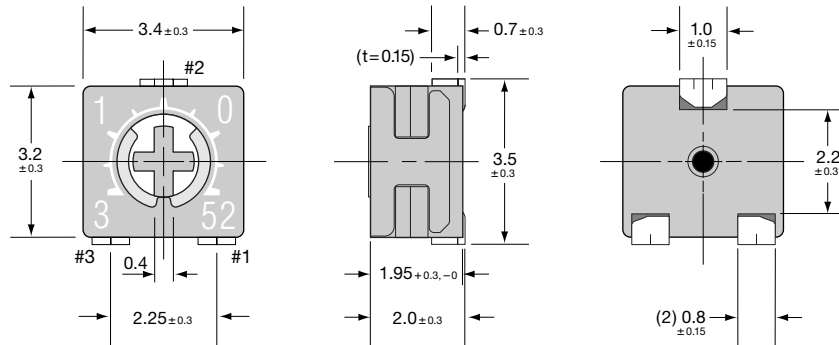
ΔT/R = Total Resistance Change; S.S. = Setting Stability (voltage ratio)

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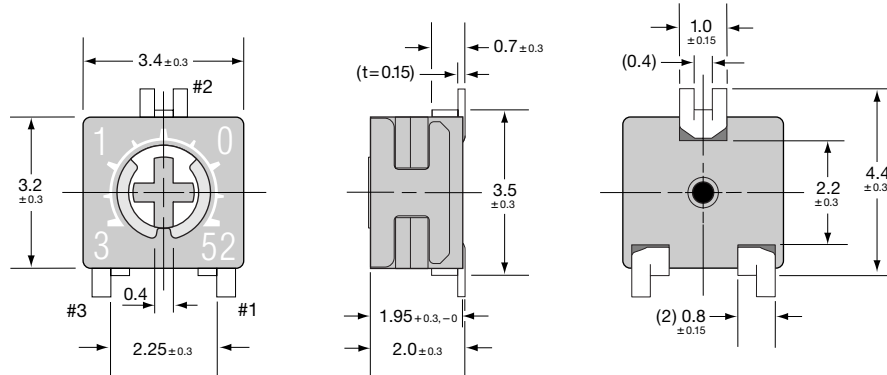
Dimensions

G32A J-Hook, Cross-Slot, Top Adjust

Unit: mm



G32B Gull-Wing, Cross-Slot, Top Adjust

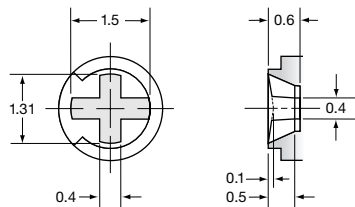


Cross-Slot Dimensions

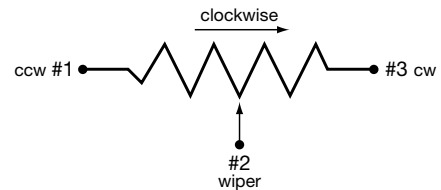
Electrical Schematic

All G32 Models

Unit: mm



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

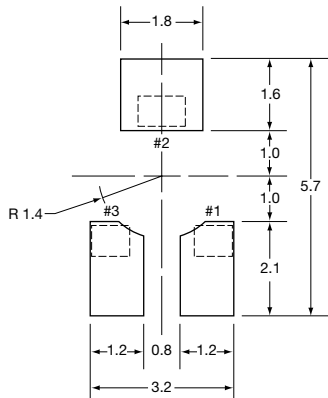


Recommended Land Patterns

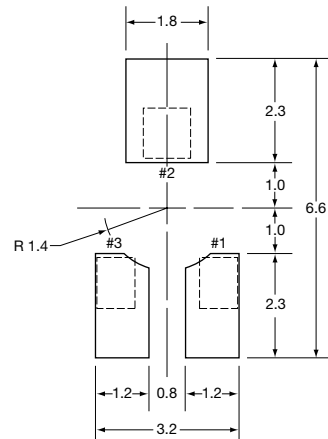
Unit: mm

Flow Soldering Method

G32A

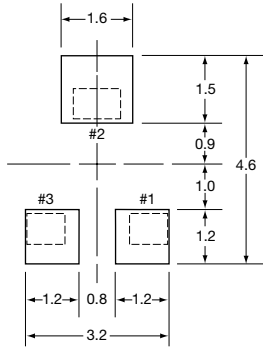


G32B

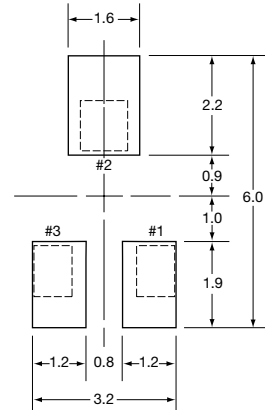


Reflow Soldering Method

G32A

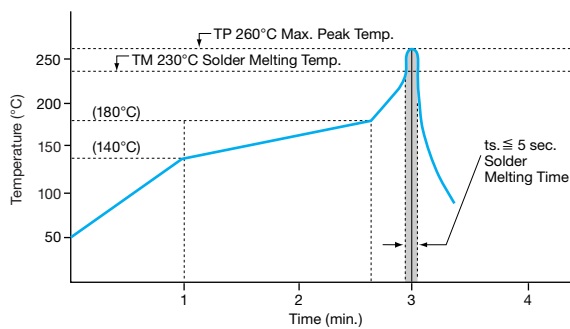


G32B

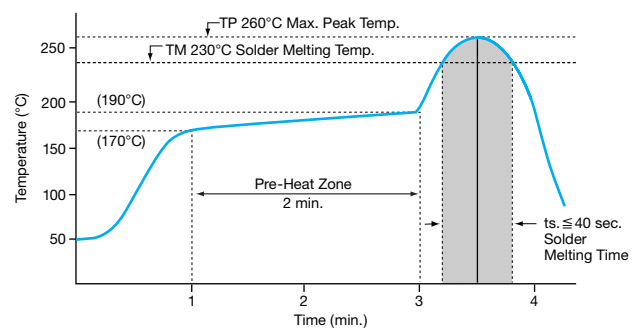


Recommended Soldering Profiles

Flow Soldering Profile



Reflow Soldering Profile



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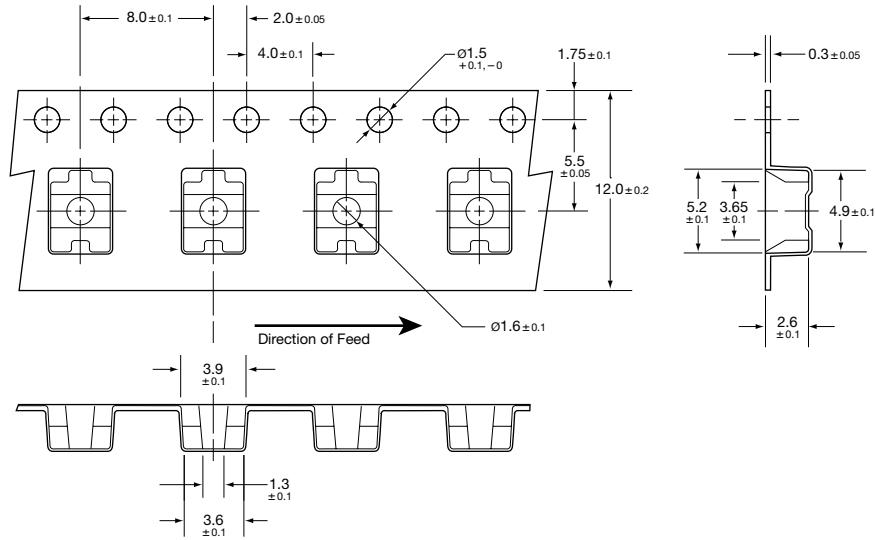
Tape & Reel Specifications

Embossed Tape Dimensions

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

Unit: mm

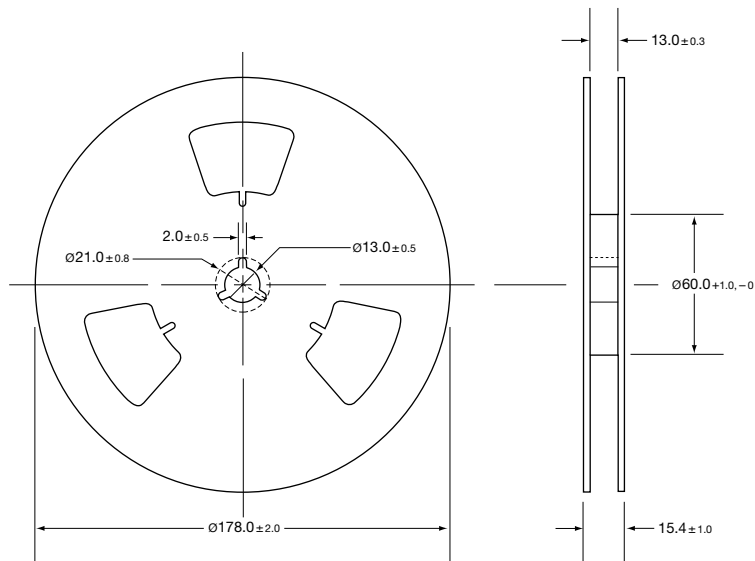
G32AT, G32BT



Reel Dimensions

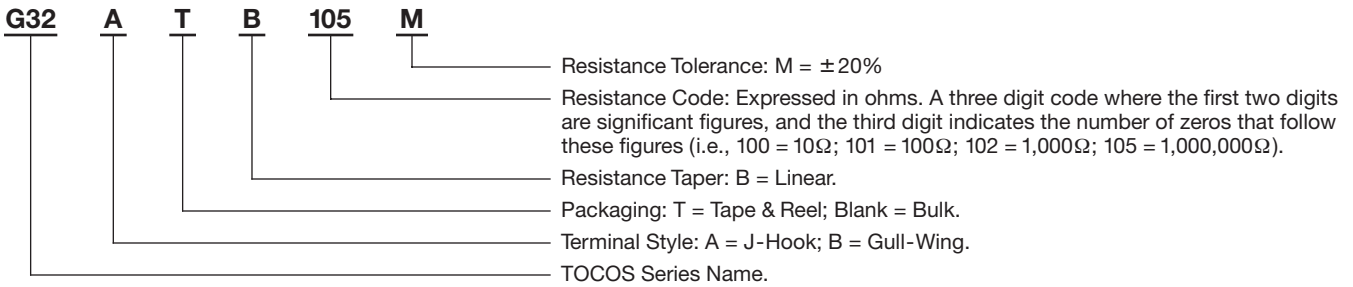
Conforms to EIA-481, JIS-C-0806 and EIAJ-RC-1009B

G32AT, G32BT



500 Pieces Per 7" Reel

G32 Series Part Numbering System



Part Numbers

Nominal Resistance		Resistance Tolerance ±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.
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Cleaning Guidelines

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