

TOCOS[®]

TRIMMER POTENTIOMETERS

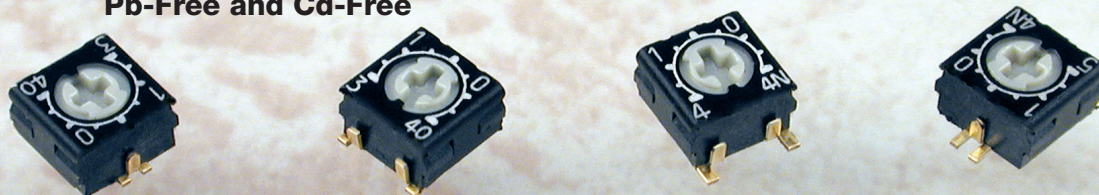


SURFACE MOUNT

SINGLE-TURN: G32 Series and G43 Series • MULTI-TURN: GV4 Series

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	±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

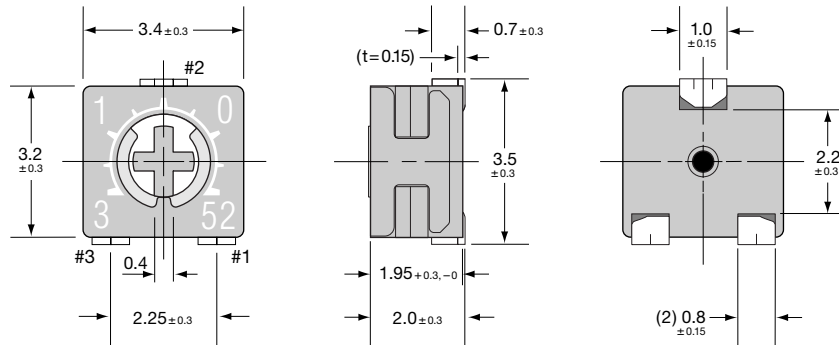
Environmental

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%

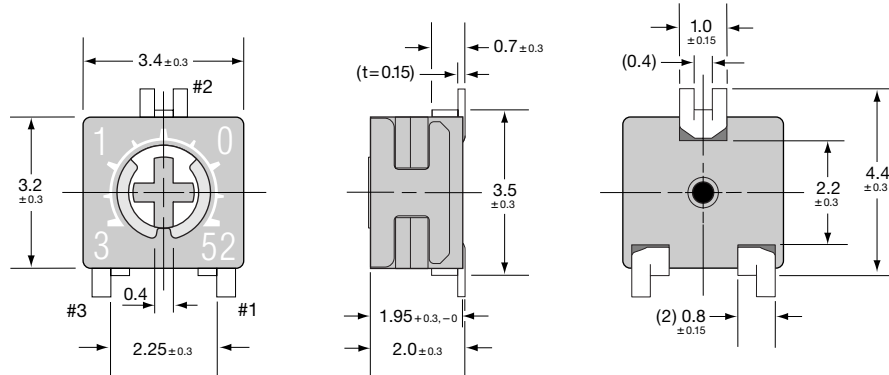
ΔT/R = Total Resistance Change; S.S. = Setting Stability (voltage ratio)

G32A J-Hook, Cross-Slot, Top Adjust

Unit: mm



G32B Gull-Wing, Cross-Slot, Top Adjust

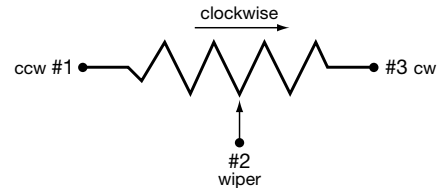
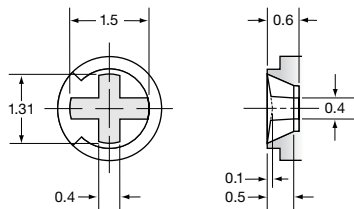


Cross-Slot Dimensions

Electrical Schematic

All G32 Models

Unit: mm

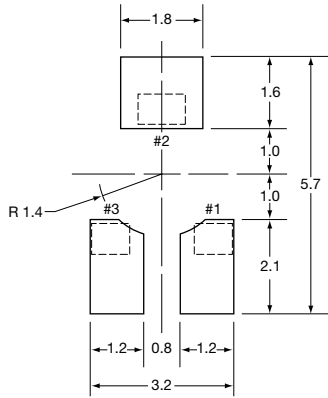


Cross-Slot accepts both Philips and single blade adjustment tools.

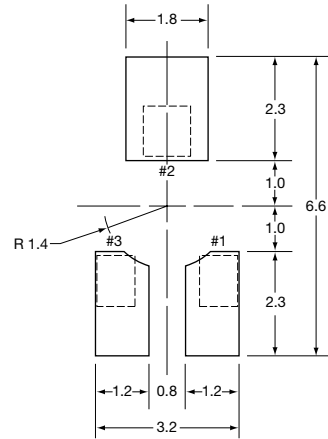
Recommended Land Patterns

Flow Soldering Method

G32A

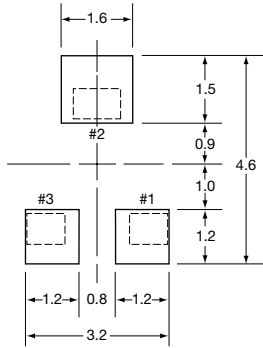


G32B

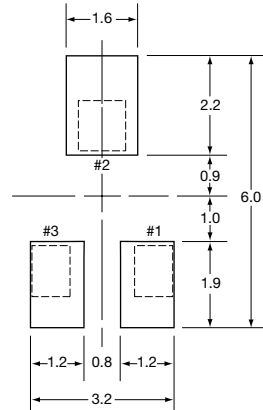


Reflow Soldering Method

G32A

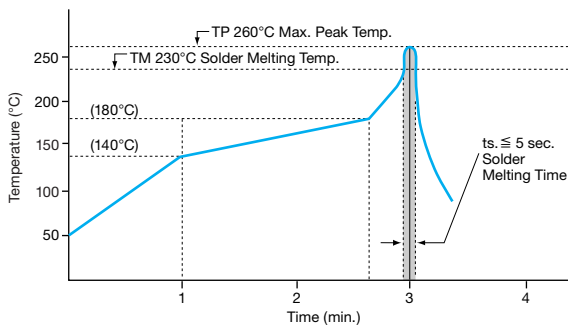


G32B

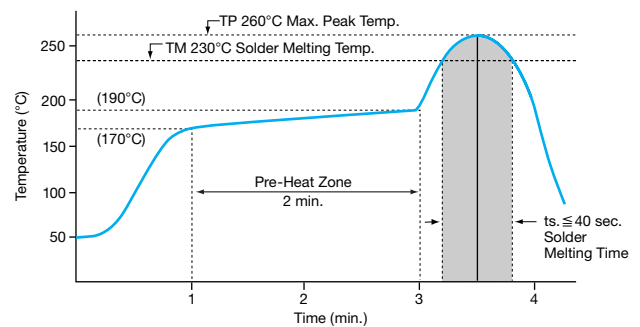


Recommended Soldering Profiles

Flow Soldering Profile



Reflow Soldering Profile

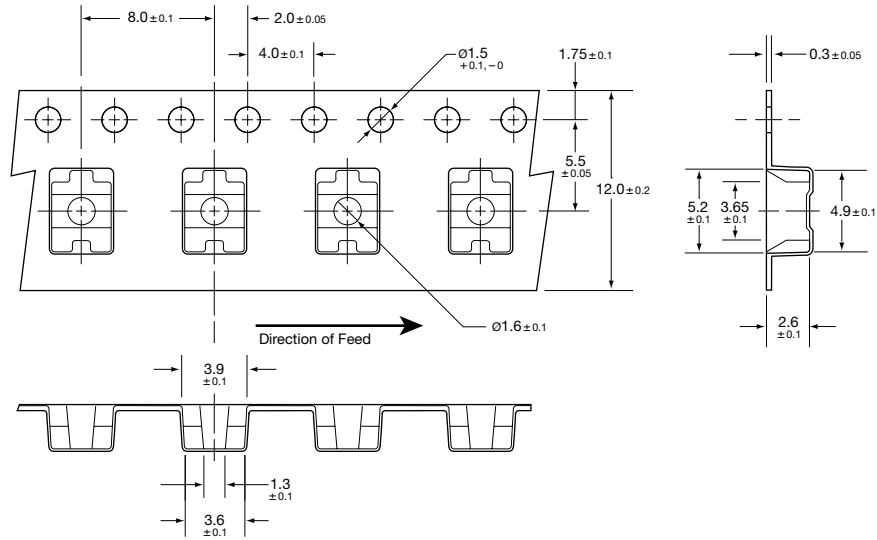


Embossed Tape Dimensions

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

Unit: mm

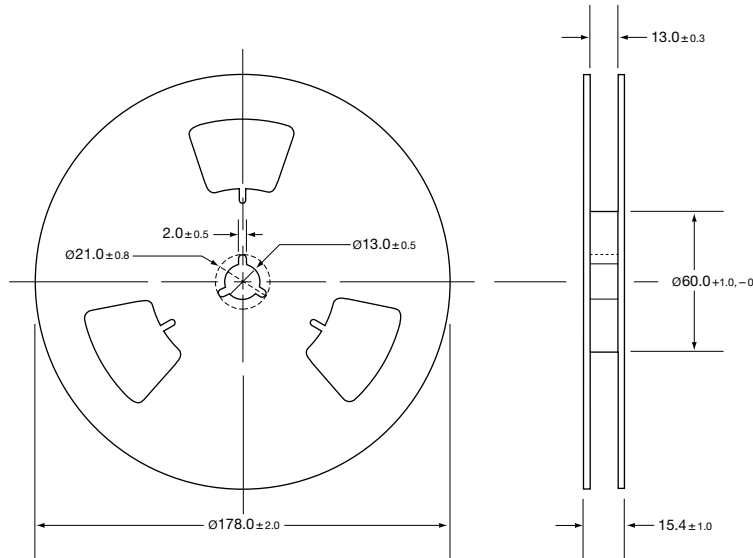
G32AT, G32BT



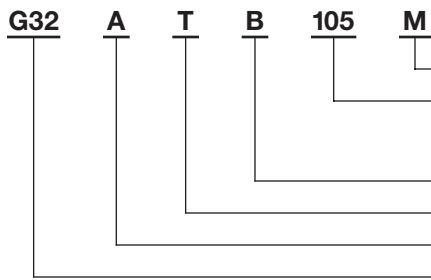
Reel Dimensions

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

G32AT, G32BT



500 Pieces Per 7" Reel



Resistance Tolerance: M = $\pm 20\%$
 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 = 10 Ω ; 101 = 100 Ω ; 102 = 1,000 Ω ; 105 = 1,000,000 Ω).
 Resistance Taper: B = Linear.
 Packaging: T = Tape & Reel; Blank = Bulk.
 Terminal Style: A = J-Hook; B = Gull-Wing.
 TOCOS Series Name.

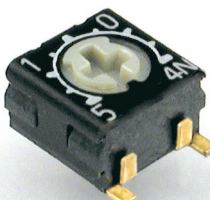
Part Numbers

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	 G32A
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	

G32B Gull-Wing, Cross-Slot, Top Adjust

Value (Ω)	Code	Catalog No. Tape & Reel	Catalog No. Bulk	 G32B
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	

Packaging

Standard:

Tape & Reel Packaging

500 pieces per 7" reel.

Bulk Packaging

100 pieces per vinyl bag.

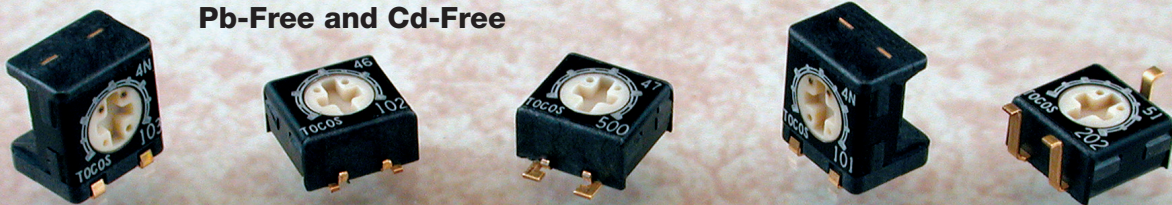
1,000 pieces per box.

Cleaning Guidelines

For cleaning and other information, refer to Guidelines and Precautions for Using Potentiometers on the TOCOS website at www.tocos.com.

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

**RoHS Compliant
IMPROVED DESIGN
Pb-Free and Cd-Free**



Features

- 4mm square SMD, single-turn, sealed cermet trimmers
- Available in J-hook and gull-wing terminal configurations
- Meets EIA, EIAJ, IPC, VECL 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, side or bottom cross-slot adjustment
- High setting accuracy, zero backlash
- Tape and reel packaging

Specifications

Electrical

Standard Resistance Range	10Ω 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	0.25 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	210° ±10°

Mechanical

Mechanical Travel	240° ±10°
Shaft Torque	150 gf·cm (2.08 oz·in) max.
Stop Strength	300 gf·cm (4.16 oz·in) min.
Flammability of Plastic Materials	Meets UL 94V-0
Nominal Weight	0.14g (A, B, D, E) 0.16g (BF); 0.24g (SA)
Marking	Resistance code, date code

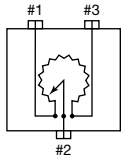
**For through-hole models of the G43 series,
refer to the G43C Series.**

Environmental

Temperature Range	-55°C to +125°C
Low Temperature Exposure	-55°C, 0.25 watt, 45 minutes ΔT/R ≤ ±2%, S.S. ≤ ±2%
High Temperature Exposure	+125°C, 250 hours ΔT/R ≤ ±2%, S.S. ≤ ±2%
Load Life	+70°C, 0.25 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, 0.25 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, 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%

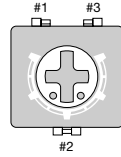
ΔT/R = Total Resistance Change; S.S. = Setting Stability (voltage ratio)

All A, B, D & E Models
Position of Rotor Inside



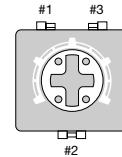
Position of the rotor inside is the same for both types of markings.

Standard Markings
Outside Positions



G43A & G43B

Reverse Markings
Outside Positions



G43D & G43E

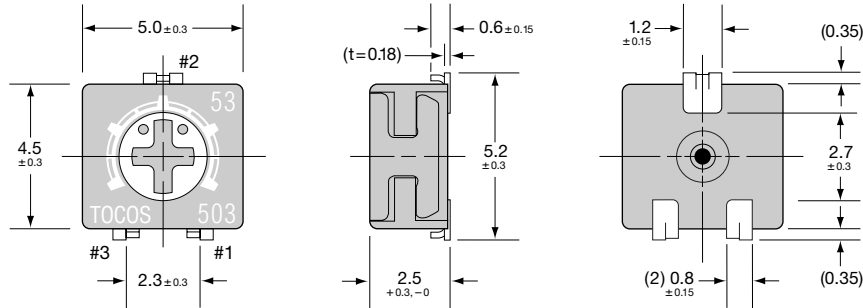
The D and E models are the same construction as the A and B models. The only difference is the reversed outside markings.

Dimensions

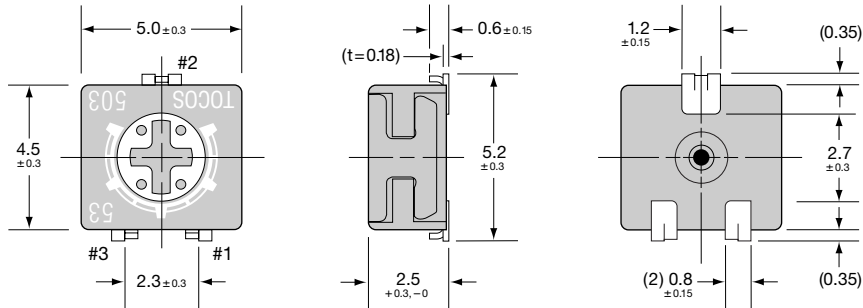
G43A J-Hook, Top Adjust

Unit: mm

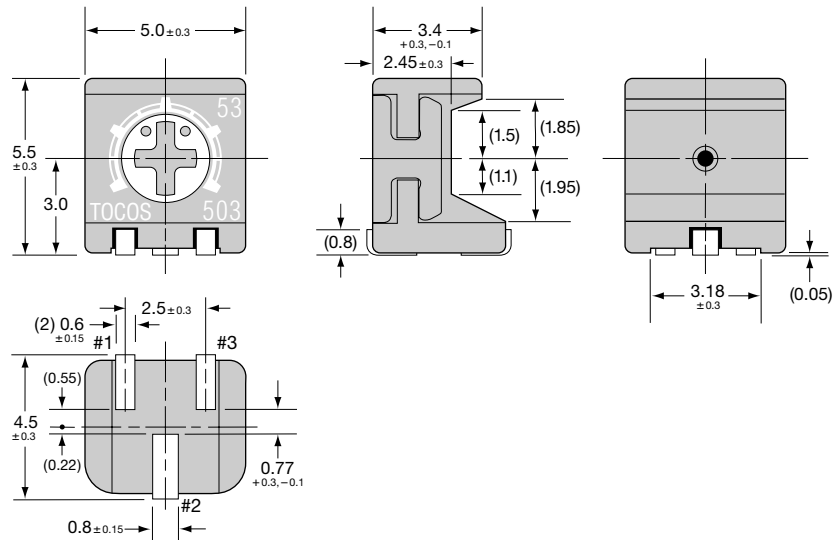
All G43 models:
Cross-Slot accepts
both Philips and
single blade
adjustment tools.



G43D Reverse Markings, J-Hook, Top Adjust

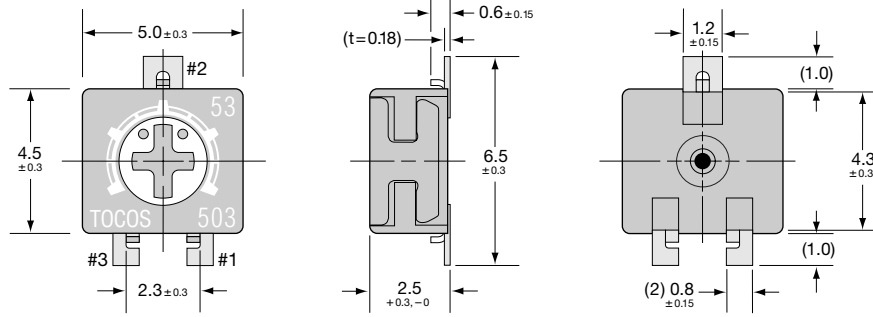


G43SA J-Hook, Side Adjust

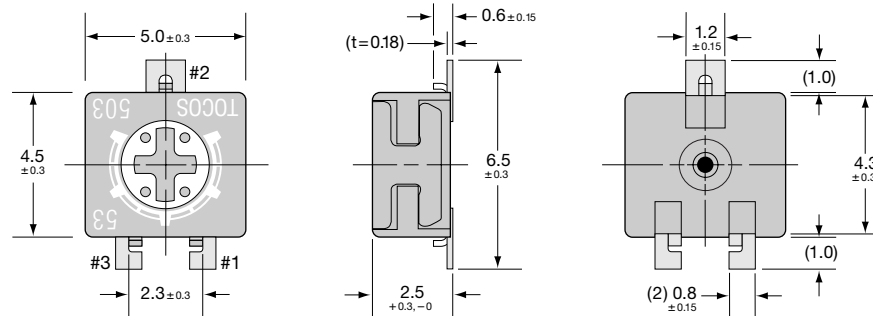


G43B Gull-Wing, Top Adjust

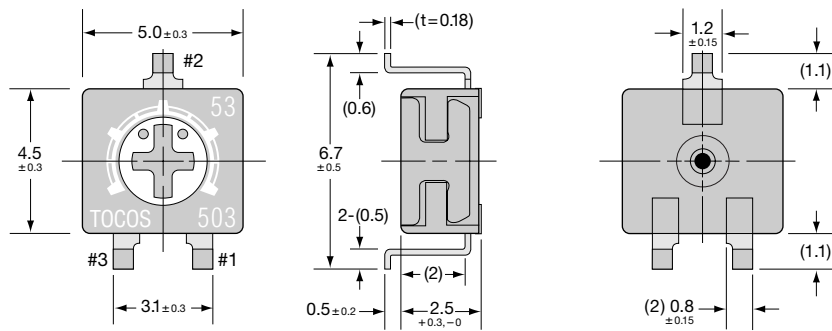
Unit: mm



G43E Reverse Markings, Gull-Wing, Top Adjust



G43BF Gull-Wing, Bottom Adjust

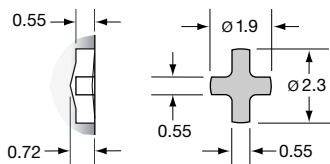


Cross-Slot Dimensions

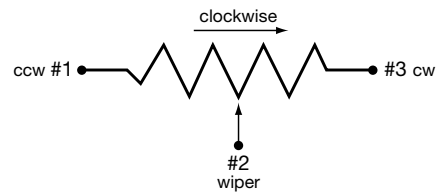
Electrical Schematic

All G43 Models

Unit: mm



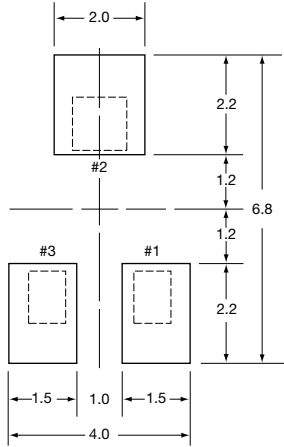
Cross-Slot accepts both Philips and single blade adjustment tools.



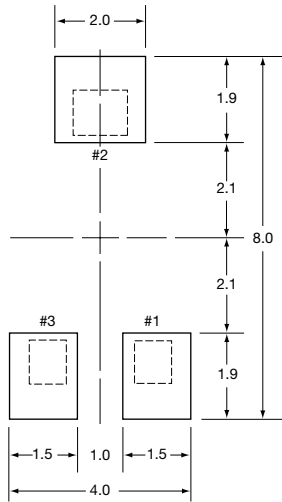
Recommended Land Patterns

Flow or Reflow Soldering Methods

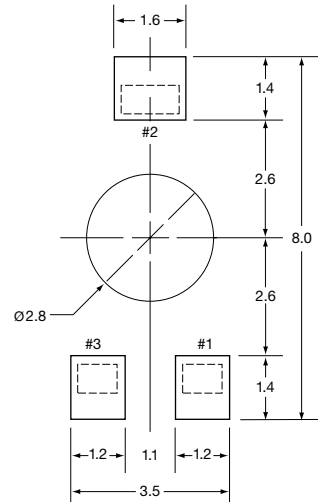
G43A, G43D



G43B, G43E

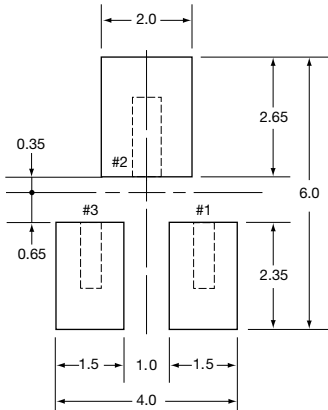


G43BF



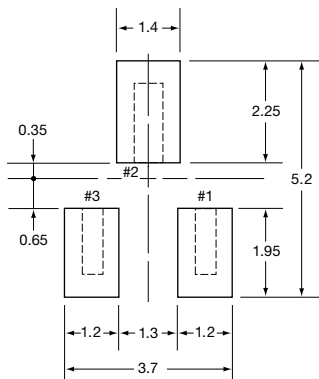
Flow Soldering Method

G43SA



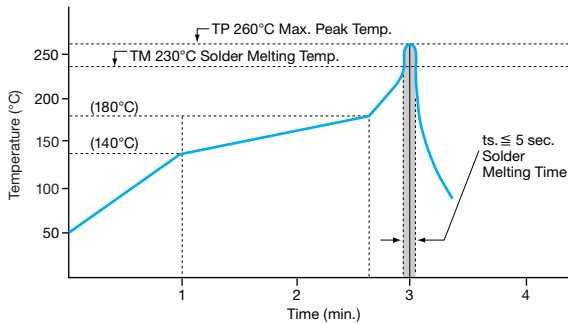
Reflow Soldering Method

G43SA

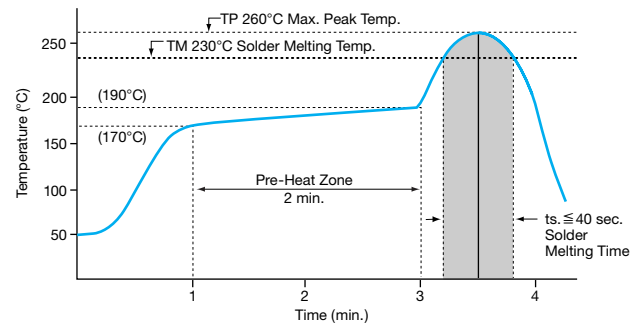


Recommended Soldering Profiles

Flow Soldering Profile



Reflow Soldering Profile

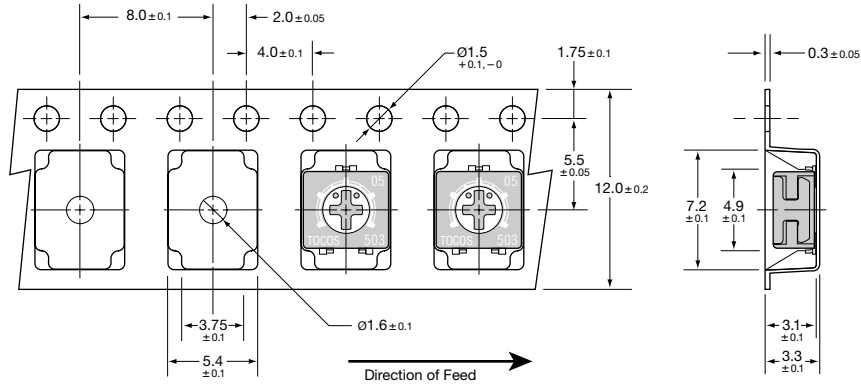


Embossed Tape Dimensions

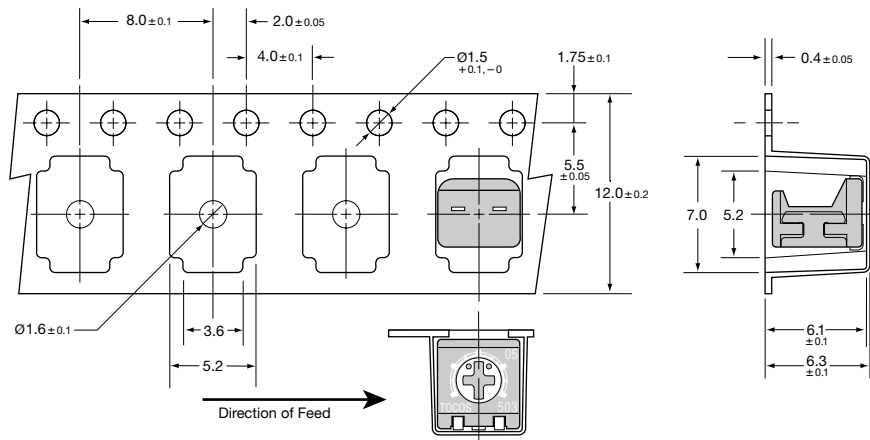
Conforms to EIA-481, JIS-C-0806 and EIAJ-RC-1009B

Unit: mm

G43AT, G43DT, G43BT, G43ET



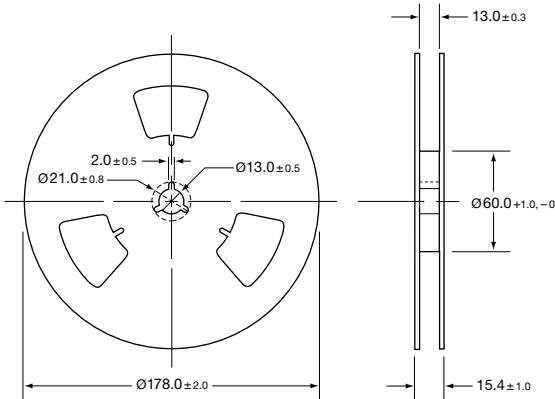
G43SAT1



Reel Dimensions

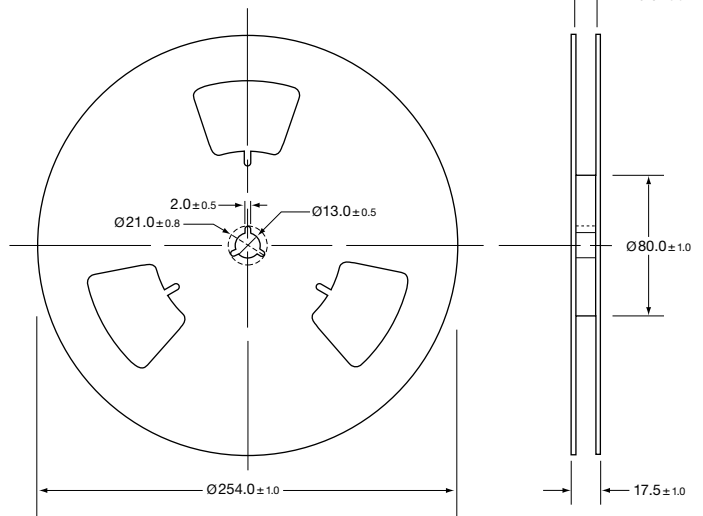
Conforms to EIA-481, JIS-C-0806 and EIAJ-RC-1009B

G43AT, G43DT, G43BT, G43ET



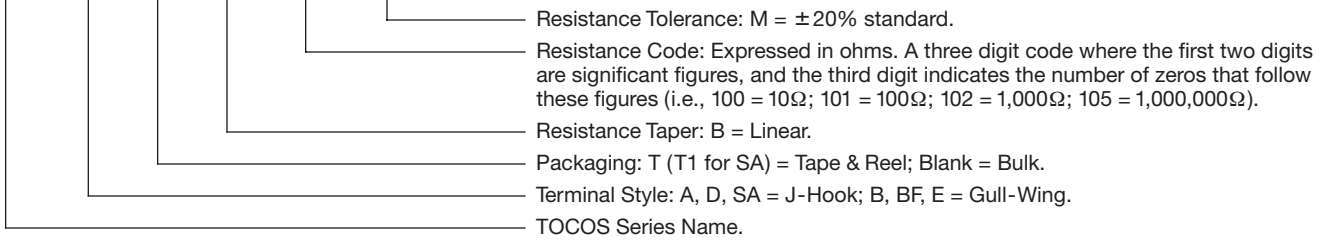
500 Pieces Per 7" Reel

G43SAT1



750 Pieces Per 10" Reel

G43 A T B 102 M

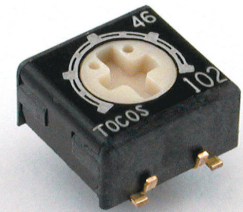


Part Numbers

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

G43A J-Hook, Top Adjust

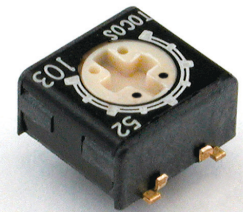
Value (Ω)	Code	Catalog No. Tape & Reel	Catalog No. Bulk
10	100	G43AT B 100 M	G43A B 100 M
20	200	G43AT B 200 M	G43A B 200 M
50	500	G43AT B 500 M	G43A B 500 M
100	101	G43AT B 101 M	G43A B 101 M
200	201	G43AT B 201 M	G43A B 201 M
500	501	G43AT B 501 M	G43A B 501 M
1,000	102	G43AT B 102 M	G43A B 102 M
2,000	202	G43AT B 202 M	G43A B 202 M
5,000	502	G43AT B 502 M	G43A B 502 M
10,000	103	G43AT B 103 M	G43A B 103 M
20,000	203	G43AT B 203 M	G43A B 203 M
50,000	503	G43AT B 503 M	G43A B 503 M
100,000	104	G43AT B 104 M	G43A B 104 M
200,000	204	G43AT B 204 M	G43A B 204 M
500,000	504	G43AT B 504 M	G43A B 504 M
1,000,000	105	G43AT B 105 M	G43A B 105 M
2,000,000	205	G43AT B 205 M	G43A B 205 M



G43A

G43D Reverse Markings, J-Hook, Top Adjust

Value (Ω)	Code	Catalog No. Tape & Reel	Catalog No. Bulk
10	100	G43DT B 100 M	G43D B 100 M
20	200	G43DT B 200 M	G43D B 200 M
50	500	G43DT B 500 M	G43D B 500 M
100	101	G43DT B 101 M	G43D B 101 M
200	201	G43DT B 201 M	G43D B 201 M
500	501	G43DT B 501 M	G43D B 501 M
1,000	102	G43DT B 102 M	G43D B 102 M
2,000	202	G43DT B 202 M	G43D B 202 M
5,000	502	G43DT B 502 M	G43D B 502 M
10,000	103	G43DT B 103 M	G43D B 103 M
20,000	203	G43DT B 203 M	G43D B 203 M
50,000	503	G43DT B 503 M	G43D B 503 M
100,000	104	G43DT B 104 M	G43D B 104 M
200,000	204	G43DT B 204 M	G43D B 204 M
500,000	504	G43DT B 504 M	G43D B 504 M
1,000,000	105	G43DT B 105 M	G43D B 105 M
2,000,000	205	G43DT B 205 M	G43D B 205 M

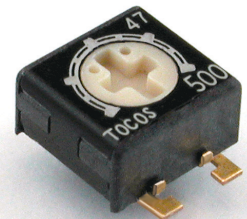


G43D

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

G43B Gull-Wing, Top Adjust

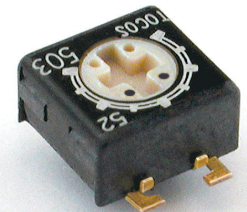
10	100	G43BT B 100 M	G43B B 100 M
20	200	G43BT B 200 M	G43B B 200 M
50	500	G43BT B 500 M	G43B B 500 M
100	101	G43BT B 101 M	G43B B 101 M
200	201	G43BT B 201 M	G43B B 201 M
500	501	G43BT B 501 M	G43B B 501 M
1,000	102	G43BT B 102 M	G43B B 102 M
2,000	202	G43BT B 202 M	G43B B 202 M
5,000	502	G43BT B 502 M	G43B B 502 M
10,000	103	G43BT B 103 M	G43B B 103 M
20,000	203	G43BT B 203 M	G43B B 203 M
50,000	503	G43BT B 503 M	G43B B 503 M
100,000	104	G43BT B 104 M	G43B B 104 M
200,000	204	G43BT B 204 M	G43B B 204 M
500,000	504	G43BT B 504 M	G43B B 504 M
1,000,000	105	G43BT B 105 M	G43B B 105 M
2,000,000	205	G43BT B 205 M	G43B B 205 M



G43B

G43E Reverse Markings, Gull-Wing, Top Adjust

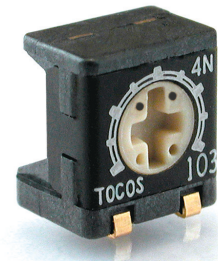
10	100	G43ET B 100 M	G43E B 100 M
20	200	G43ET B 200 M	G43E B 200 M
50	500	G43ET B 500 M	G43E B 500 M
100	101	G43ET B 101 M	G43E B 101 M
200	201	G43ET B 201 M	G43E B 201 M
500	501	G43ET B 501 M	G43E B 501 M
1,000	102	G43ET B 102 M	G43E B 102 M
2,000	202	G43ET B 202 M	G43E B 202 M
5,000	502	G43ET B 502 M	G43E B 502 M
10,000	103	G43ET B 103 M	G43E B 103 M
20,000	203	G43ET B 203 M	G43E B 203 M
50,000	503	G43ET B 503 M	G43E B 503 M
100,000	104	G43ET B 104 M	G43E B 104 M
200,000	204	G43ET B 204 M	G43E B 204 M
500,000	504	G43ET B 504 M	G43E B 504 M
1,000,000	105	G43ET B 105 M	G43E B 105 M
2,000,000	205	G43ET B 205 M	G43E B 205 M



G43E

G43SA J-Hook, Side Adjust

10	100	G43SAT1 B 100 M	G43SA B 100 M
20	200	G43SAT1 B 200 M	G43SA B 200 M
50	500	G43SAT1 B 500 M	G43SA B 500 M
100	101	G43SAT1 B 101 M	G43SA B 101 M
200	201	G43SAT1 B 201 M	G43SA B 201 M
500	501	G43SAT1 B 501 M	G43SA B 501 M
1,000	102	G43SAT1 B 102 M	G43SA B 102 M
2,000	202	G43SAT1 B 202 M	G43SA B 202 M
5,000	502	G43SAT1 B 502 M	G43SA B 502 M
10,000	103	G43SAT1 B 103 M	G43SA B 103 M
20,000	203	G43SAT1 B 203 M	G43SA B 203 M
50,000	503	G43SAT1 B 503 M	G43SA B 503 M
100,000	104	G43SAT1 B 104 M	G43SA B 104 M
200,000	204	G43SAT1 B 204 M	G43SA B 204 M
500,000	504	G43SAT1 B 504 M	G43SA B 504 M
1,000,000	105	G43SAT1 B 105 M	G43SA B 105 M
2,000,000	205	G43SAT1 B 205 M	G43SA B 205 M

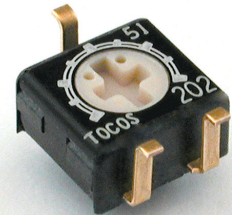


G43SA

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

G43BF Gull-Wing, Bottom Adjust

10	100	—	G43BF B 100 M
20	200	—	G43BF B 200 M
50	500	—	G43BF B 500 M
100	101	—	G43BF B 101 M
200	201	—	G43BF B 201 M
500	501	—	G43BF B 501 M
1,000	102	—	G43BF B 102 M
2,000	202	—	G43BF B 202 M
5,000	502	—	G43BF B 502 M
10,000	103	—	G43BF B 103 M
20,000	203	—	G43BF B 203 M
50,000	503	—	G43BF B 503 M
100,000	104	—	G43BF B 104 M
200,000	204	—	G43BF B 204 M
500,000	504	—	G43BF B 504 M
1,000,000	105	—	G43BF B 105 M
2,000,000	205	—	G43BF B 205 M

**G43BF****Packaging****Standard:****Tape & Reel Packaging**

G43AT, G43DT, G43BT, G43ET
500 pieces per 7" reel.

G43SAT1

750 pieces per 10" reel.

Bulk Packaging

All G43 Models
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 on the TOCOS website at www.tocos.com.

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
- RoHS compliant
- Wide temperature range of -65°C to $+150^{\circ}\text{C}$
- TCR = $\pm 100\text{ppm}/^{\circ}\text{C}$; 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	10 Ω to 2M Ω (standard 1, 2 & 5 sequence)
Resistance Tolerance	$\pm 10\%$ standard
End Resistance	1% or 2 Ω , whichever is greater
Resistance Taper	B = Linear
Peak Noise (C.R.V.)	1% or 3 Ω , whichever is greater
Power Rating	0.25 watt at $+85^{\circ}\text{C}$; 0 watt at $+150^{\circ}\text{C}$
Maximum Input Voltage	300VDC or power rating, whichever is smaller
Temperature Coefficient	$\pm 100\text{ppm}/^{\circ}\text{C}$
Insulation Resistance	100M Ω minimum at 500VDC
Dielectric Strength	600VAC, 1 minute
Adjustment Travel	12 turns ± 2 nominal

Mechanical

Mechanical Travel	13 turns ± 1
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

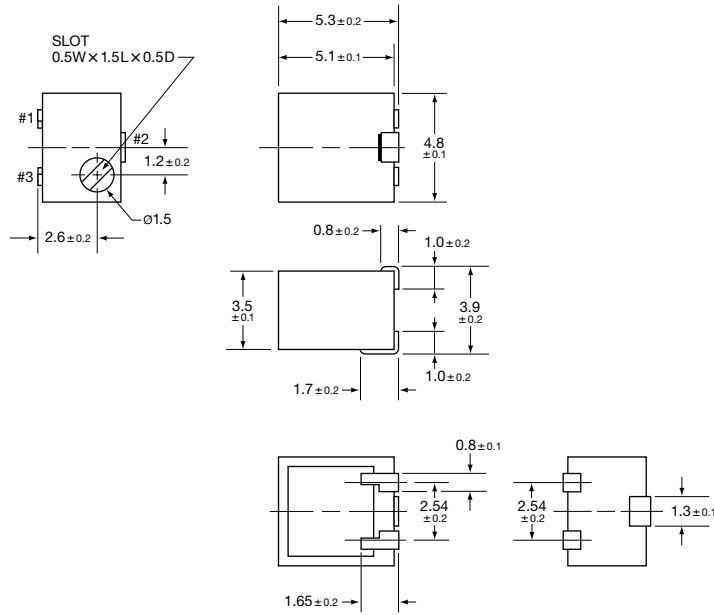
Environmental

Temperature Range	-65°C to $+150^{\circ}\text{C}$
Low Temperature Operation	-65°C , 0.25 watt, 2 hours $\Delta\text{T}/\text{R} \leq \pm 1\%$, S.S. $\leq \pm 1\%$
High Temperature Exposure	$+150^{\circ}\text{C}$, 250 hours $\Delta\text{T}/\text{R} \leq \pm 2\%$, S.S. $\leq \pm 1\%$
Load Life	$+85^{\circ}\text{C}$, 0.25 watt, 1,000 hours $\Delta\text{T}/\text{R} \leq \pm 3\%$ or $\Delta\text{R} = 3\Omega$, S.S. $\leq \pm 2\%$
Thermal Shock	-65°C , $+150^{\circ}\text{C}$, 30 minutes each, 5 cycles $\Delta\text{T}/\text{R} \leq \pm 2\%$, S.S. $\leq \pm 1\%$
Shock	100G, 6ms, 6 directions, 3 times each $\Delta\text{T}/\text{R} \leq \pm 1\%$, S.S. $\leq \pm 1\%$
Vibration	10-2,000Hz, 1.5mm amplitude, 20G, 12 hours $\Delta\text{T}/\text{R} \leq \pm 1\%$, S.S. $\leq \pm 1\%$
Humidity	$+40^{\circ}\text{C}$, 90-95% RH, 0.25 watt, 500 hours $\Delta\text{T}/\text{R} \leq \pm 3\%$, S.S. $\leq \pm 2\%$
Moisture Resistance	-10°C to $+65^{\circ}\text{C}$, 80-98% RH, 0.25 watt, 10 cycles, 240 hours $\Delta\text{T}/\text{R} \leq \pm 3\%$
Soldering Heat Resistance	260°C , 4 sec. in, 2 sec. out $\Delta\text{T}/\text{R} \leq \pm 1\%$
Rotational Life	100 cycles ($< 100\Omega$), 200 cycles ($\geq 100\Omega$) without discontinuity, no load $\Delta\text{T}/\text{R} \leq \pm 3\%$ or $\Delta\text{R} = 3\Omega$

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

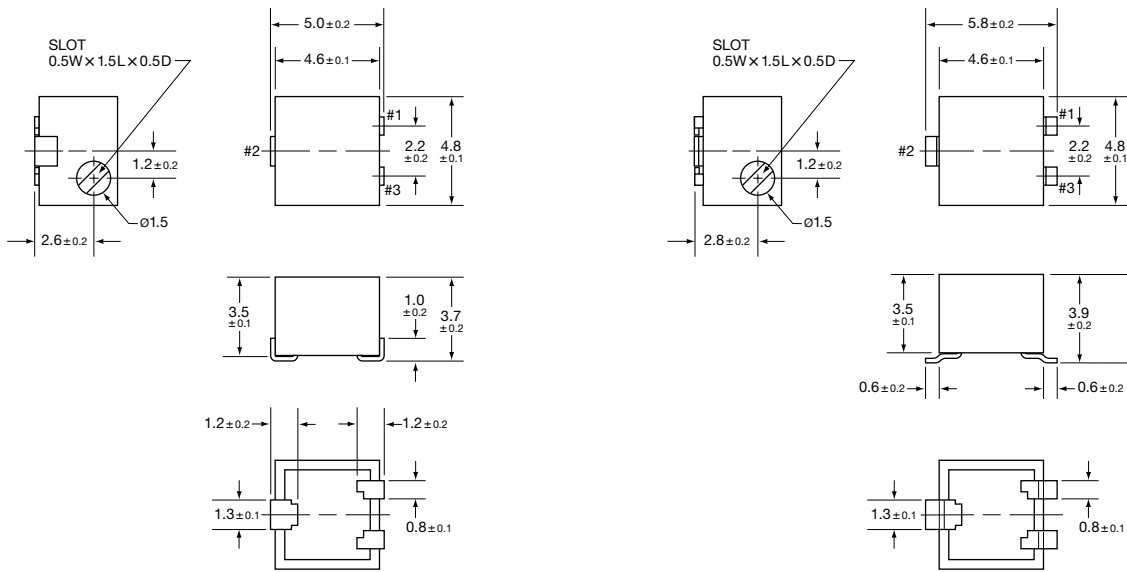
GV4W J-Hook, Single-Slot, Top Adjust

Unit: mm

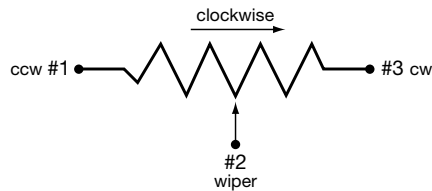


GV4J J-Hook, Single-Slot, Side Adjust

GV4G Gull-Wing, Single-Slot, Side Adjust



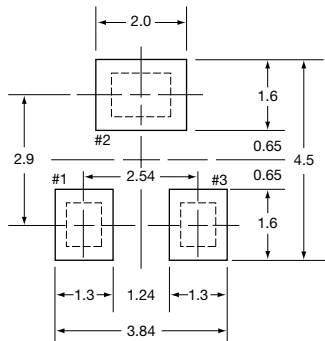
Electrical Schematic



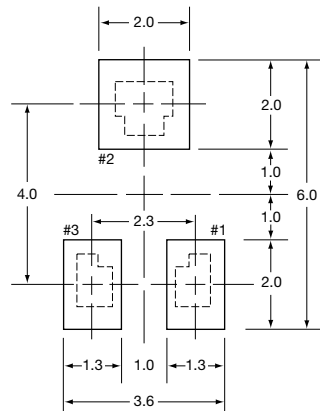
Recommended Land Patterns

Flow or Reflow Soldering Methods

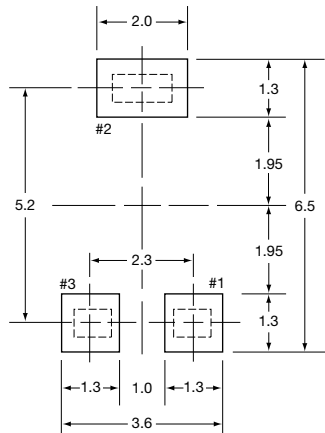
GV4W



GV4J

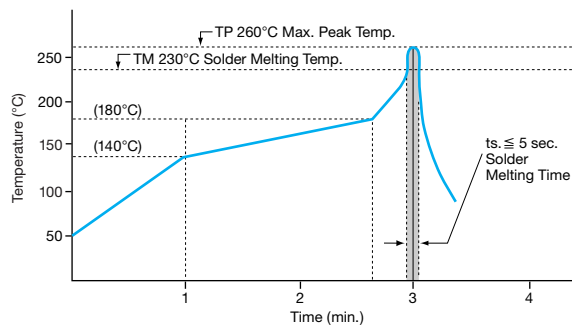


GV4G

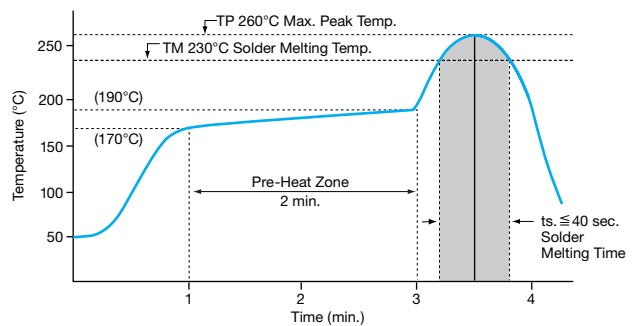


Recommended Soldering Profiles

Flow Soldering Profile



Reflow Soldering Profile

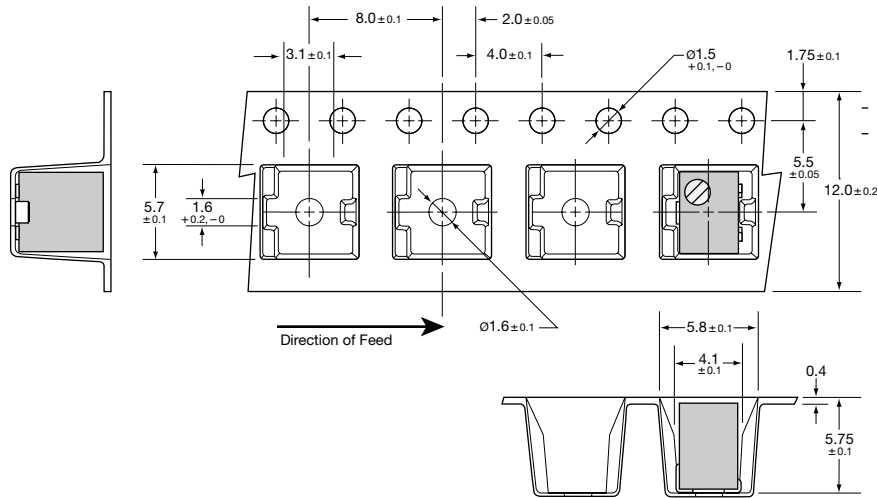


Embossed Tape Dimensions

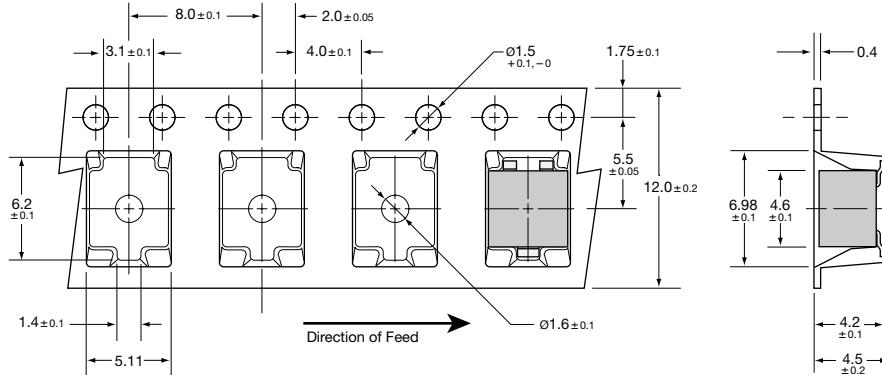
Conforms to EIA-481, JIS-C-0806 and EIAJ-RC-1009B

Unit: mm

GV4WT



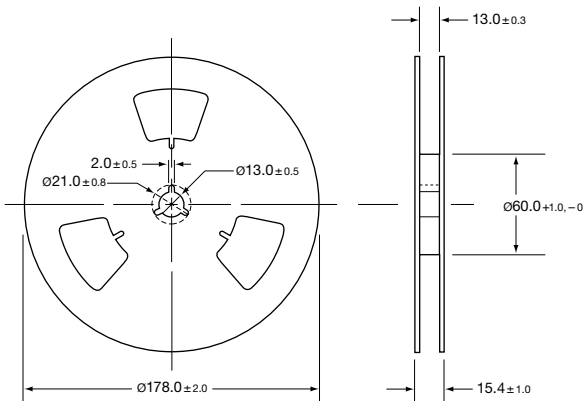
GV4JT, GV4GT



Reel Dimensions

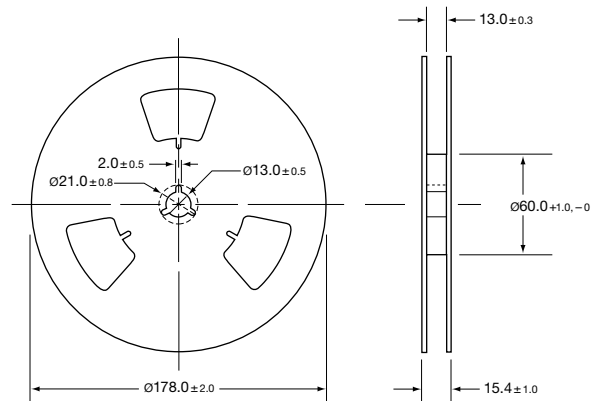
Conforms to EIA-481, JIS-C-0806 and EIAJ-RC-1009B

GV4WT

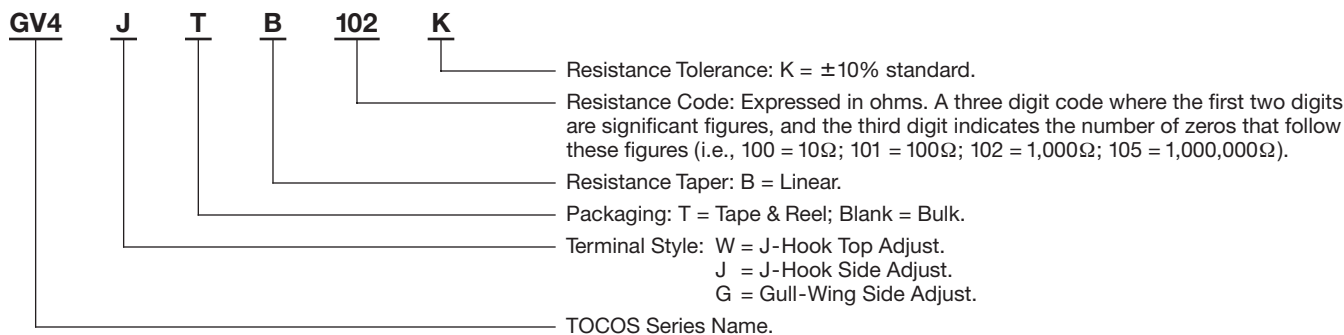


250 Pieces Per 7" Reel

GV4JT, GV4GT



500 Pieces Per 7" Reel



Part Numbers

Nominal Resistance		Resistance Tolerance $\pm 10\%$		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

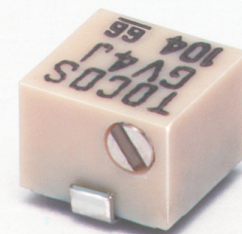
10	100	GV4WT B 100 K	GV4W B 100 K	100.0	1.00
20	200	GV4WT B 200 K	GV4W B 200 K	100.0	2.00
50	500	GV4WT B 500 K	GV4W B 500 K	70.7	3.53
100	101	GV4WT B 101 K	GV4W B 101 K	50.0	5.00
200	201	GV4WT B 201 K	GV4W B 201 K	35.4	7.07
500	102	GV4WT B 501 K	GV4W B 501 K	22.4	11.18
1,000	202	GV4WT B 102 K	GV4W B 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

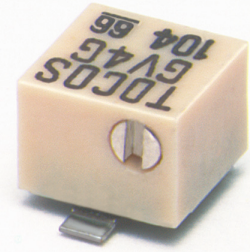


GV4J

Nominal Resistance		Resistance Tolerance $\pm 10\%$		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.

Cleaning Guidelines

For cleaning and other information, refer to Guidelines and Precautions for Using Potentiometers on the TOCOS website at www.tocos.com.

Warranty and Product Suitability

TOCOS warrants each product shipped to be free from defects. TOCOS agrees to remedy any defects or to furnish replacement part(s) in exchange, while under normal installation, use and service, provided that the defective material is sent, transportation prepaid, to TOCOS for confirmation of the defect.

It is the buyer/specifier's responsibility to determine suitable use of TOCOS products in or for their product application. TOCOS makes no warranties and assumes no liability as to the suitability or sufficiency for the buyer's application of TOCOS products.

The information in this publication is believed to be accurate and reliable with no guarantee as to its completeness. The components described herein are designed, tested and manufactured to meet and or exceed the specifications for each product. TOCOS reserves the right to make changes to the specifications, without notice.