

1/4" Square, Multi-Turn, Through-Hole Sealed Cermet Trimmers



Features

- 1/4" square, multi-turn, through-hole, sealed cermet trimmers
- Top and side adjust styles available
- 2-turn adjustment travel for quick setting
- Space-saving, low profile design
- Excellent stability and low noise
- Wide temperature range of -55°C to $+125^{\circ}\text{C}$
- Meets UL 94V-0 flammability requirements
- Sealed to withstand wave soldering and immersion cleaning
- Taping available, reel or ammo packaging

Specifications

Electrical

| | |
|---------------------------|---|
| Standard Resistance Range | 10 Ω to 1M Ω (standard 1, 2 & 5 sequence) |
| Resistance Tolerance | $\pm 10\%$ and $\pm 20\%$ |
| End Resistance | 1% or 3 Ω , whichever is greater |
| Resistance Taper | Linear |
| Peak Noise (C.R.V.) | 1% or 1 Ω , whichever is greater |
| Power Rating | 0.5 watt at $+70^{\circ}\text{C}$, 0 watt at $+125^{\circ}\text{C}$ |
| Maximum Input Voltage | 250VDC or power rating, whichever is smaller |
| Temperature Coefficient | ± 100 ppm/ $^{\circ}\text{C}$, 200 Ω to 1M Ω ± 250 ppm/ $^{\circ}\text{C}$, other values |
| Insulation Resistance | 100M Ω minimum at 500VDC |
| Dielectric Strength | 500VAC, 1 minute |
| Adjustment Travel | 2 turns ($735^{\circ} \pm 10^{\circ}$) |

Mechanical

| | |
|-----------------------------------|--|
| Mechanical Travel | 2 turns ($735^{\circ} \pm 10^{\circ}$) |
| Shaft Torque | 200 gf·cm (2.77 oz·in) max. |
| Stop Strength | 300 gf·cm (4.16 oz·in) min. |
| Flammability of Plastic Materials | Meets UL 94V-0 |
| Nominal Weight | 0.5g (P, U); 0.6g (S, V) |
| Marking | Resistance code, date code |

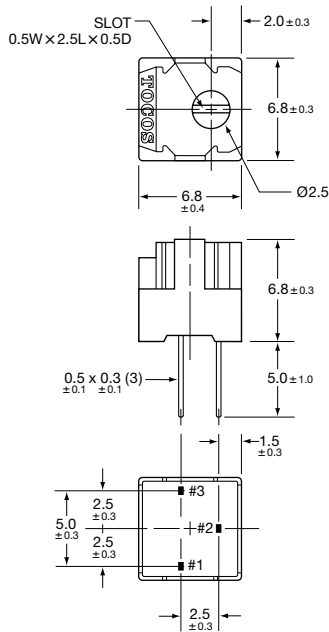
Environmental

| | |
|---------------------------|--|
| Temperature Range | -55°C to $+125^{\circ}\text{C}$ |
| Low Temperature Operation | -55°C , 0.5 watt, 1 hour $\Delta\text{T/R} \leq \pm 2\%$ |
| High Temperature Exposure | $+125^{\circ}\text{C}$, 250 hours $\Delta\text{T/R} \leq \pm 2\%$, S.S. $\leq \pm 1\%$ |
| Load Life | $+70^{\circ}\text{C}$, 0.5 watt, 1,000 hours $\Delta\text{T/R} \leq \pm 3\%$, S.S. $\leq \pm 1\%$ |
| Thermal Shock | -55°C , $+125^{\circ}\text{C}$, 30 minutes each, 5 cycles $\Delta\text{T/R} \leq \pm 1\%$, S.S. $\leq \pm 1\%$ |
| Shock | 100G, 6ms, 6 directions, 3 times each $\Delta\text{T/R} \leq \pm 2\%$, S.S. $\leq \pm 1\%$ |
| Vibration | 10-2,000Hz, 1.5mm amplitude, 20G, 12 hours $\Delta\text{T/R} \leq \pm 1\%$, S.S. $\leq \pm 1\%$ |
| Humidity | $+40^{\circ}\text{C}$, 90-95% RH, 0.5 watt, 500 hours $\Delta\text{T/R} \leq \pm 3\%$, S.S. $\leq \pm 1\%$ |
| Moisture Resistance | -10°C to $+65^{\circ}\text{C}$, 80-98% RH, 0.5 watt, 10 cycles, 240 hours $\Delta\text{T/R} \leq \pm 3\%$ |
| Soldering Heat Resistance | 350°C , 3 seconds $\Delta\text{T/R} \leq \pm 1\%$ |
| Seal Test | $+85^{\circ}\text{C}$, hot water for 1 minute |
| Rotational Life | 200 cycles without discontinuity $\Delta\text{T/R} \leq \pm 5\%$ |

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

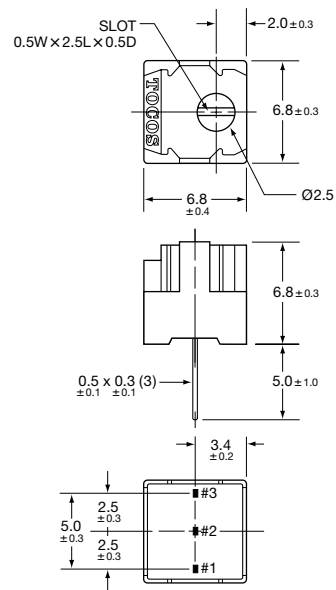
GV6P

P Terminal Style, Single-Slot, Top Adjust



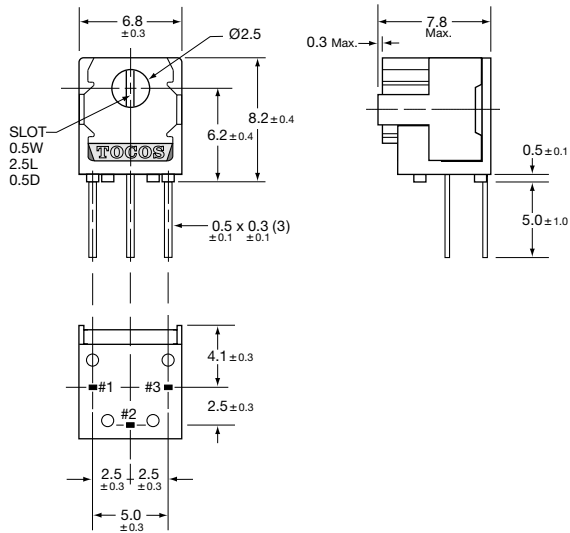
GV6U

U Terminal Style, Single-Slot, Top Adjust



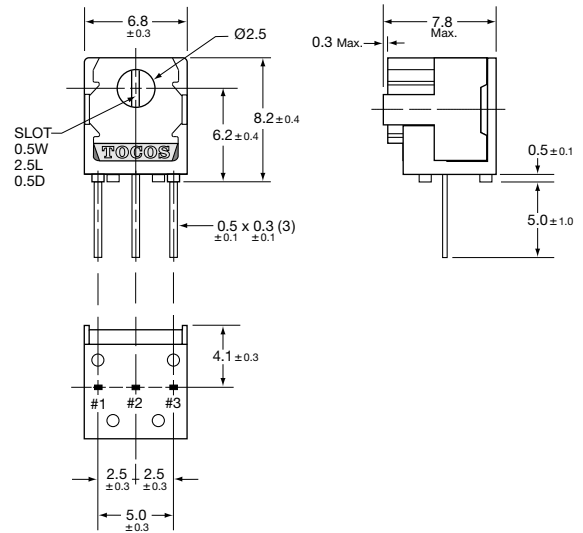
GV6S

S Terminal Style, Single-Slot, Side Adjust



GV6V

V Terminal Style, Single-Slot, Side Adjust



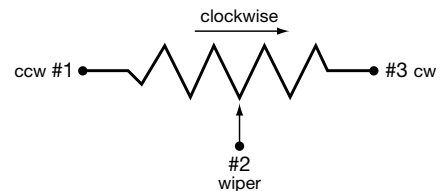
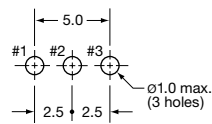
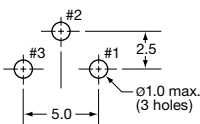
Recommended PCB Layout

Electrical Schematic

P & S Pin-Out

U & V Pin-Out

Unit: mm

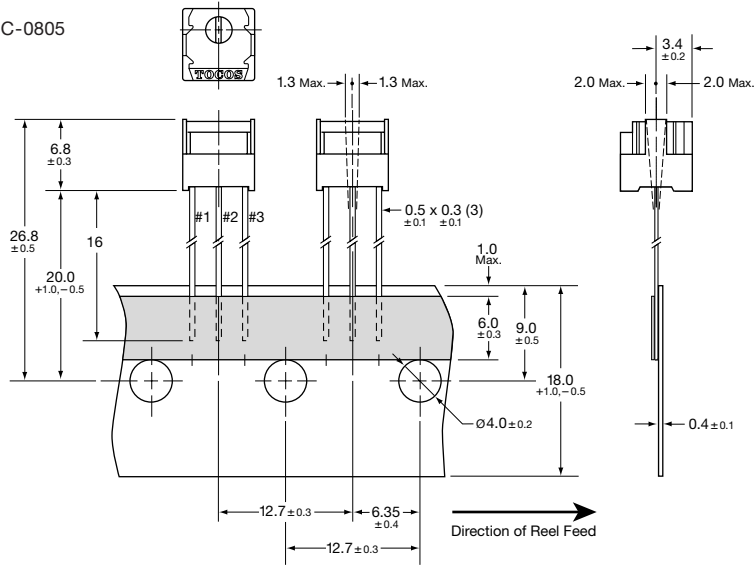


Unit: mm

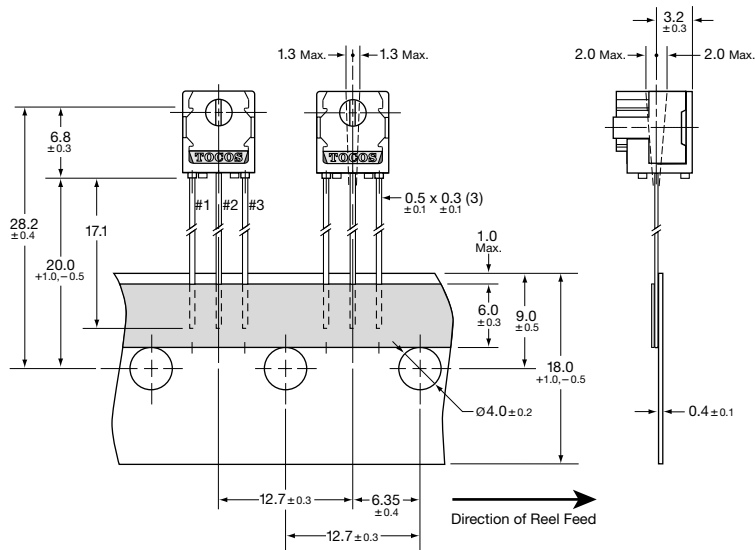
Tape Dimensions

Conforms to EIA-468-B and JIS-C-0805

GV6UT & GV6UT2



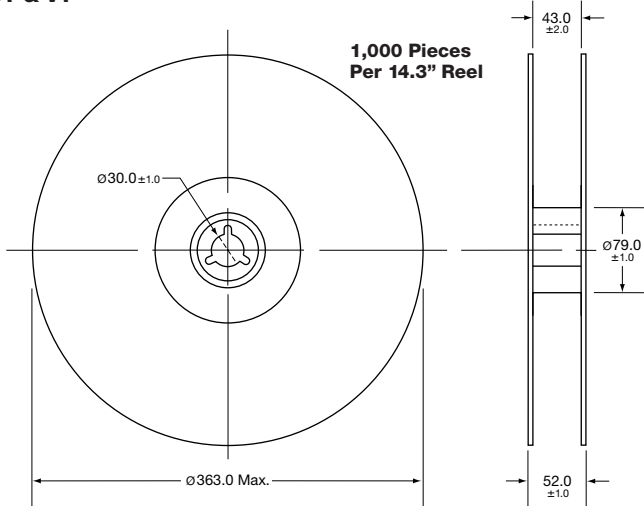
GV6VT & GV6VT2



Reel Dimensions

Conforms to EIA-468-B and JIS-C-0805

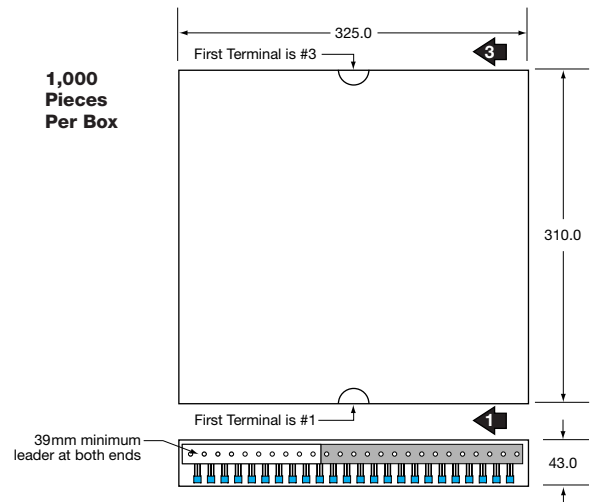
UT & VT

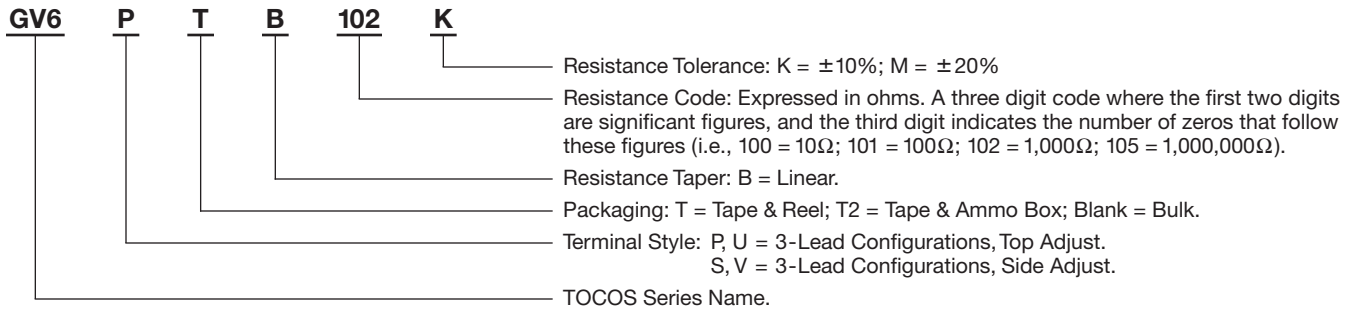


Ammo Box Dimensions

Conforms to EIA-468-B and JIS-C-0805

UT2 & VT2





Part Numbers

| Nominal Resistance | | Resistance Tolerance: K = $\pm 10\%$ (see footnote for M = $\pm 20\%$) | | | Potentiometer Styles |
|--------------------|------|---|---------------------------------|----------------------|----------------------|
| Value (Ω) | Code | Catalog No.* Tape & Reel | Catalog No.* Tape & Ammo Box | Catalog No.* Bulk | |

GV6P Through-Hole, P Terminal Style, Single-Slot, Top Adjust


| | | | | |
|-----------|-----|---|---|--------------|
| 10 | 100 | — | — | GV6P B 100 K |
| 20 | 200 | — | — | GV6P B 200 K |
| 50 | 500 | — | — | GV6P B 500 K |
| 100 | 101 | — | — | GV6P B 101 K |
| 200 | 201 | — | — | GV6P B 201 K |
| 500 | 501 | — | — | GV6P B 501 K |
| 1,000 | 102 | — | — | GV6P B 102 K |
| 2,000 | 202 | — | — | GV6P B 202 K |
| 5,000 | 502 | — | — | GV6P B 502 K |
| 10,000 | 103 | — | — | GV6P B 103 K |
| 20,000 | 203 | — | — | GV6P B 203 K |
| 50,000 | 503 | — | — | GV6P B 503 K |
| 100,000 | 104 | — | — | GV6P B 104 K |
| 200,000 | 204 | — | — | GV6P B 204 K |
| 500,000 | 504 | — | — | GV6P B 504 K |
| 1,000,000 | 105 | — | — | GV6P B 105 K |



GV6P

GV6U Through-Hole, U Terminal Style, Single-Slot, Top Adjust

| | | | | |
|-----------|-----|---------------|----------------|--------------|
| 10 | 100 | GV6UT B 100 K | GV6UT2 B 100 K | GV6U B 100 K |
| 20 | 200 | GV6UT B 200 K | GV6UT2 B 200 K | GV6U B 200 K |
| 50 | 500 | GV6UT B 500 K | GV6UT2 B 500 K | GV6U B 500 K |
| 100 | 101 | GV6UT B 101 K | GV6UT2 B 101 K | GV6U B 101 K |
| 200 | 201 | GV6UT B 201 K | GV6UT2 B 201 K | GV6U B 201 K |
| 500 | 501 | GV6UT B 501 K | GV6UT2 B 501 K | GV6U B 501 K |
| 1,000 | 102 | GV6UT B 102 K | GV6UT2 B 102 K | GV6U B 102 K |
| 2,000 | 202 | GV6UT B 202 K | GV6UT2 B 202 K | GV6U B 202 K |
| 5,000 | 502 | GV6UT B 502 K | GV6UT2 B 502 K | GV6U B 502 K |
| 10,000 | 103 | GV6UT B 103 K | GV6UT2 B 103 K | GV6U B 103 K |
| 20,000 | 203 | GV6UT B 203 K | GV6UT2 B 203 K | GV6U B 203 K |
| 50,000 | 503 | GV6UT B 503 K | GV6UT2 B 503 K | GV6U B 503 K |
| 100,000 | 104 | GV6UT B 104 K | GV6UT2 B 104 K | GV6U B 104 K |
| 200,000 | 204 | GV6UT B 204 K | GV6UT2 B 204 K | GV6U B 204 K |
| 500,000 | 504 | GV6UT B 504 K | GV6UT2 B 504 K | GV6U B 504 K |
| 1,000,000 | 105 | GV6UT B 105 K | GV6UT2 B 105 K | GV6U B 105 K |



GV6U

*Substitute code letter M in place of K at end of catalog part number for $\pm 20\%$ resistance tolerance.

| Nominal Resistance | | Resistance Tolerance: K = $\pm 10\%$ (see footnote for M = $\pm 20\%$) | | | Potentiometer Styles |
|--------------------|------|---|---------------------------------|----------------------|----------------------|
| Value (Ω) | Code | Catalog No.* Tape & Reel | Catalog No.* Tape & Ammo Box | Catalog No.* Bulk | |

GV6S Through-Hole, S Terminal Style, Single-Slot, Side Adjust

| | | | | |
|-----------|-----|---|---|--------------|
| 10 | 100 | — | — | GV6S B 100 K |
| 20 | 200 | — | — | GV6S B 200 K |
| 50 | 500 | — | — | GV6S B 500 K |
| 100 | 101 | — | — | GV6S B 101 K |
| 200 | 201 | — | — | GV6S B 201 K |
| 500 | 501 | — | — | GV6S B 501 K |
| 1,000 | 102 | — | — | GV6S B 102 K |
| 2,000 | 202 | — | — | GV6S B 202 K |
| 5,000 | 502 | — | — | GV6S B 502 K |
| 10,000 | 103 | — | — | GV6S B 103 K |
| 20,000 | 203 | — | — | GV6S B 203 K |
| 50,000 | 503 | — | — | GV6S B 503 K |
| 100,000 | 104 | — | — | GV6S B 104 K |
| 200,000 | 204 | — | — | GV6S B 204 K |
| 500,000 | 504 | — | — | GV6S B 504 K |
| 1,000,000 | 105 | — | — | GV6S B 105 K |



GV6S

GV6V Through-Hole, V Terminal Style, Single-Slot, Side Adjust

| | | | | |
|-----------|-----|---------------|----------------|--------------|
| 10 | 100 | GV6VT B 100 K | GV6VT2 B 100 K | GV6V B 100 K |
| 20 | 200 | GV6VT B 200 K | GV6VT2 B 200 K | GV6V B 200 K |
| 50 | 500 | GV6VT B 500 K | GV6VT2 B 500 K | GV6V B 500 K |
| 100 | 101 | GV6VT B 101 K | GV6VT2 B 101 K | GV6V B 101 K |
| 200 | 201 | GV6VT B 201 K | GV6VT2 B 201 K | GV6V B 201 K |
| 500 | 501 | GV6VT B 501 K | GV6VT2 B 501 K | GV6V B 501 K |
| 1,000 | 102 | GV6VT B 102 K | GV6VT2 B 102 K | GV6V B 102 K |
| 2,000 | 202 | GV6VT B 202 K | GV6VT2 B 202 K | GV6V B 202 K |
| 5,000 | 502 | GV6VT B 502 K | GV6VT2 B 502 K | GV6V B 502 K |
| 10,000 | 103 | GV6VT B 103 K | GV6VT2 B 103 K | GV6V B 103 K |
| 20,000 | 203 | GV6VT B 203 K | GV6VT2 B 203 K | GV6V B 203 K |
| 50,000 | 503 | GV6VT B 503 K | GV6VT2 B 503 K | GV6V B 503 K |
| 100,000 | 104 | GV6VT B 104 K | GV6VT2 B 104 K | GV6V B 104 K |
| 200,000 | 204 | GV6VT B 204 K | GV6VT2 B 204 K | GV6V B 204 K |
| 500,000 | 504 | GV6VT B 504 K | GV6VT2 B 504 K | GV6V B 504 K |
| 1,000,000 | 105 | GV6VT B 105 K | GV6VT2 B 105 K | GV6V B 105 K |



GV6V

*Substitute code letter M in place of K at end of catalog part number for $\pm 20\%$ resistance tolerance.

Packaging**Standard:****Tape & Reel Packaging****UT & VT**

1,000 pieces per 14.3" reel.

Tape & Ammo Packaging**UT2 & VT2**

1,000 pieces per ammo box.

Bulk Packaging**All GV6 Models**

50 pieces per vinyl bag.

500 pieces per box.

Soldering and Cleaning Guidelines

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