J9 Series

TOCOS® POTENTIOMETERS

3/8" Square, Multi-Turn, Through-Hole Sealed Cermet Trimmers

Features

- 3/8" square, 20-turn, sealed cermet trimmers
- Excellent stability and low noise
- Top or side adjust, vertical or horizontal mount
- Single-slot, metal adjustment screw
- Through-hole terminals, triangular or inline patterns
- Sealed for wave soldering and immersion cleaning

Electrical

Standard Resistance Range . . . . . 10Ω to 2MΩ

Standard Resistance Tolerance . . . ±10% (±20% for ≦50Ω)

End Resistance . . . . . 2Ω max.

Resistance Taper . . . . . B = Linear

Peak Noise (C.R.V. Max.) . . . . 1% or 1Ω, whichever is greater

Power Rating . . . . . 0.5 watt at 85°C, 0 watt at 125°C

Maximum Input Voltage . . . . . 200VDC or rms not to exceed power rating

Maximum Wiper Current . . . . . 100mA or within rated power, whichever is less

Temperature Coefficient . . . ±100 ppm/°C for 100Ω to 2MΩ ±250 ppm/°C for 10 to 50Ω

Insulation Resistance . . . . . 1,000MΩ minimum

Dielectric Strength . . . . . 900 Vrms

Resolution . . . . . Essentially infinite

Adjustment Travel . . . . . 20 turns nominal

Environmental

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

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

Load Life . . . . . +70°C, 0.5 watt, 1,000 hours ΔT/R ≦±2%

Thermal Shock . . . . . −55°C ⇄ +125°C, 5 cycles ΔT/R ≦±1%, S.S. ≦±1%

Shock . . . . . 6ms sawtooth, 100G ΔT/R ≦±1%, S.S. ≦±1%

Vibration . . . . . 20G, 10-2,000Hz, ΔT/R ≦±1%, S.S. ≦±1%

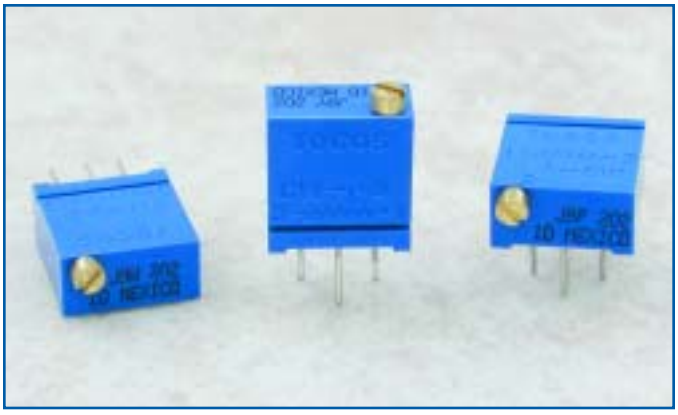
Moisture Resistance . . . . . Ten 24 hour cycles ΔT/R ≦±1%, IR 1,000MΩ minimum

Soldering Heat Resistance . . . . 260°C, 10 sec., ΔT/R ≦±1%

Seal Test . . . . . +85°C, Fluorinert® (no leaks)

Rotational Life . . . . . .200 cycles without discontinuity ΔT/R ≦±3%

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



Mechanical

Mechanical Travel . . . . . 20 turns nominal

Shaft Torque . . . . . 360.7 gf•cm (5.0 oz•in) max.

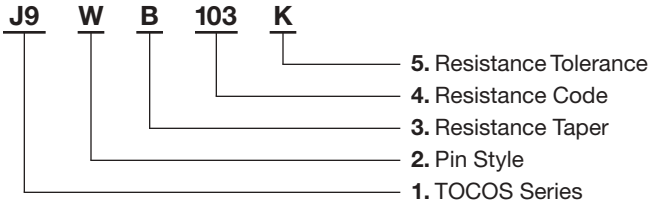
Stop Strength . . . . . Clutch action, both ends

Flammability . . . . . Meets UL94V-0

Nominal Weight . . . . . 1.13g (0.04 oz.)

Marking . . . . . Model type, resistance code, date code terminal identification and circuit diagram

How To Order



1. Series Name: Indicates Basic Series Design
2. Pin Configurations: P, W, X, Y, Z (see diagrams)
3. Resistance Taper: B = Linear
4. Standard Resistance: See Table for Codes.
5. Resistance Tolerance: K = ±10%; M = ±20% for ≦50Ω

Standard Resistance Values and Ordering Codes

Nominal Resistance (Ω)	Code	Nominal Resistance (Ω)	Code
10	100	10,000	103
20	200	20,000	203
50	500	25,000	253
100	101	50,000	503
200	201	100,000	104
500	501	200,000	204
1,000	102	250,000	254
2,000	202	500,000	504
5,000	502	1,000,000	105
		2,000,000	205

See Reverse Side

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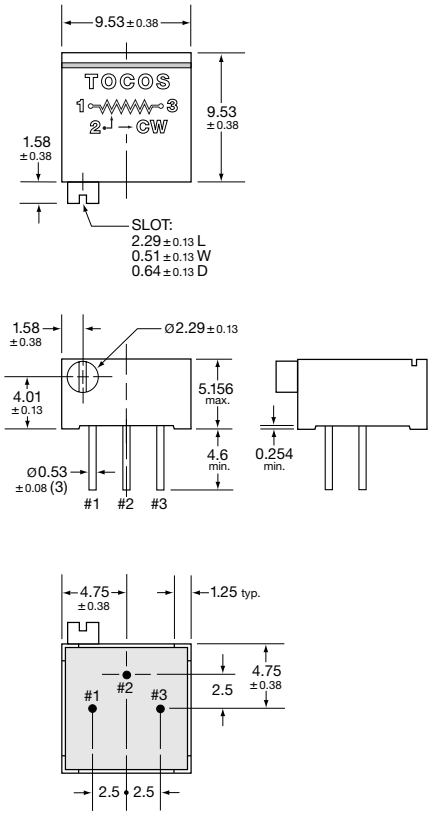
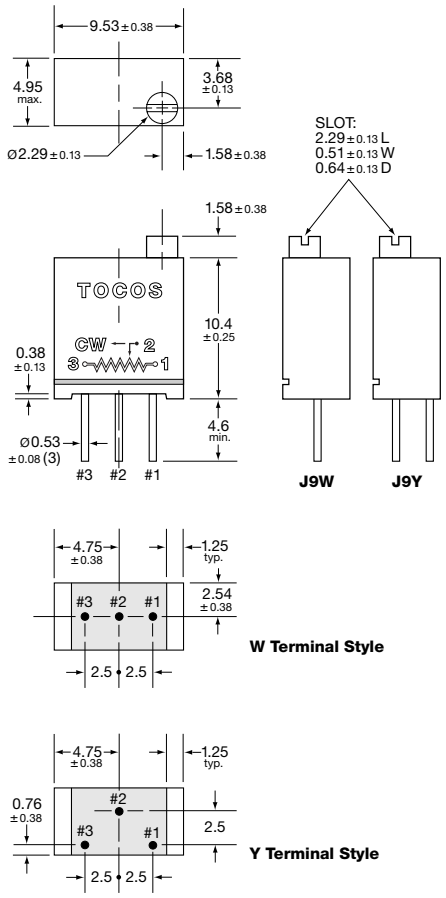
J9 Series — Dimensions

Unit: mm

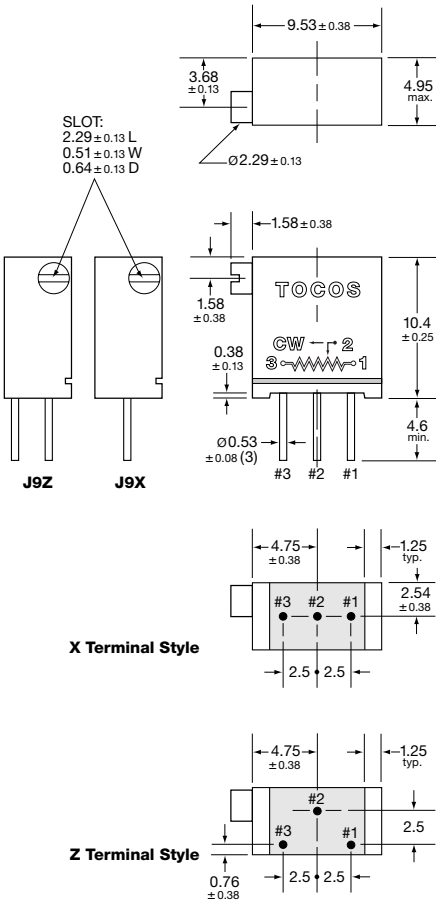
J9P Horizontal Mount
Single-Slot, Top Adjust
P Terminal Style



J9W & J9Y Vertical Mount
Single-Slot, Top Adjust
W & Y Terminal Styles



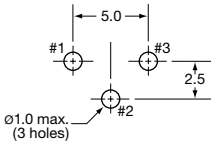
J9X & J9Z Vertical Mount
Single-Slot, Side Adjust
X & Z Terminal Styles



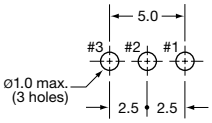
Recommended PCB Layouts

Unit: mm

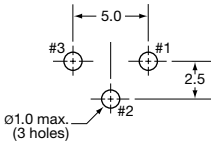
P Pin-Out



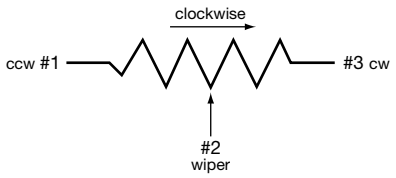
W & X Pin-Out



Y & Z Pin-Out



Electrical Schematic



Cross Reference

3/8" Square, Multi-Turn, Through-Hole Sealed Cermet Trimmers

Bourns		BC Components		BI Technologies	Murata		Spectrol/Vishay	TOCOS®
3296P	3299P*	CT-94P	CT-9P*	67P	PV36P	POT3106P	64P	**J9P**
3296W	3299W*	CT-94W	CT-9W*	67W	PV36W	POT3106W	64W	**J9W**
3296X	3299X*	CT-94X	CT-9X*	67X	PV36X	POT3106X	64X	**J9X**
3296Y	3299Y*	CT-94Y	CT-9Y*	67Y	PV36Y	POT3106Y	64Y	**J9Y**
3296Z	3299Z*	CT-94Z	CT-9Z*	67Z	PV36Z	POT3106Z	64Z	**J9Z**

***** Wider body size, same pin-out.

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