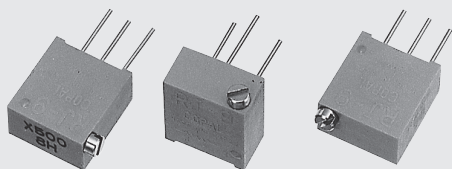


18 TURNS CERMET TRIMMERS **RJ-9**

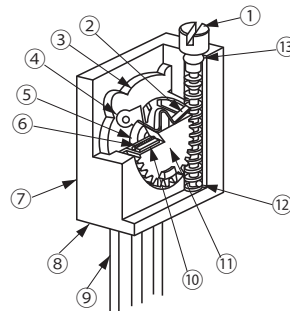
RoHS compliant



FEATURES

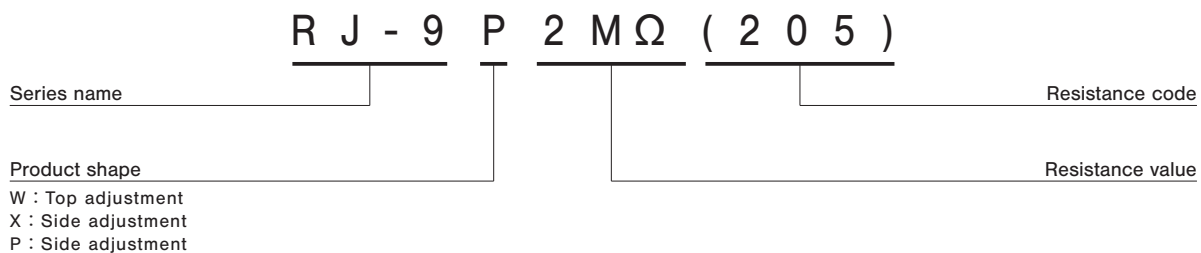
- RoHS compliant
- Wide resistance range from 10 Ω to 5 M Ω
- Precious metal alloy wiper
- Resin material is UL Recognized 94V-0

INTERNAL STRUCTURE




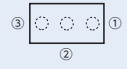

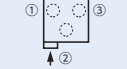
Part name	Material
① Shaft	Brass, Nickel-plated
② Clutch spring	Stainless steel
③ Base element	Ceramic
④ Electrode	Ag-Pd cermet
⑤ Resistive element	RuO ₂ cermet
⑥ Wiper	Multi metal alloy
⑦ Adhesive	Epoxy
⑧ Housing	PBT (Polybutyleneterephthalate)
⑨ Terminal pin	Nickel, Gold-plated
⑩ Rubber cushion	Silicone rubber
⑪ Rotor gear	PA(Polyamide)
⑫ Stop ball	Stainless steel
⑬ "O" ring	Silicone rubber

PART NUMBER DESIGNATION



※ Please refer to the LIST OF PART NUMBERS when placing orders.

LIST OF PART NUMBERS

Adjustment position	Shape of terminal (Top view)	Form of packaging	Pieces in package
		Plastic bag	
Top adjustment 		RJ-9W	50 pcs./pack
Side adjustment (↑ Adjustment direction)		RJ-9X	
		RJ-9P	

ELECTRICAL CHARACTERISTICS

Nominal resistance range	10 Ω ~ 5 MΩ
Resistance tolerance	± 10 %
Power ratings	0.5 W (70 °C) 0 W (120 °C)
Resistance law	Linear law (B)
Maximum input voltage	DC300 V or power rating, whichever is smaller
Maximum wiper current	100 mA or power rating, whichever is smaller
Effective electrical turn	15 turns
End resistance	1 % or 2 Ω, whichever is greater
C.R.V.	1 % or 3 Ω, whichever is greater
Operating temp. range	-55 ~ 120 °C
Temp. coefficient	10 Ω, 20 Ω, 5 MΩ : ± 250 10 ⁻⁶ /°C maximum 50 Ω ~ 2 MΩ : ± 100 10 ⁻⁶ /°C maximum
Insulation resistance	1000 MΩ minimum (DC500 V)
Dielectric strength	AC900 V, 60 s
Net weight	Approx. 0.75 g

Nominal resistance values

⊖ 10 Ω	⊖ 20 Ω	50 Ω	100 Ω	200 Ω	500 Ω	1 kΩ	2 kΩ	5 kΩ	10 kΩ
20 kΩ	⊖ 25 kΩ	50 kΩ	100 kΩ	200 kΩ	⊖ 250 kΩ	500 kΩ	1 MΩ	2 MΩ	⊖ 5 MΩ

Fig.1

- ※ The above part numbers are all available with the respective combination of <Nominal resistance values> (Fig. 1).
- ※ Verify the above part numbers when placing orders.

The products indicated by ⊖ mark are manufactured upon receipt of order basis.

MECHANICAL CHARACTERISTICS

Mechanical turn	18 turns
Operating torque	35 mN·m {357 gf·cm} maximum
Mecahanical stop	Clutch action
Rotational life	200 cycles 10 Ω ~ 200 Ω [ΔR/R ≤ ± (0.5 Ω +3 %)] 500 Ω ~ 5 MΩ [ΔR/R ≤ ± (0.5 Ω +2 %)]
Terminal strength	10 N {1.02 kgf} minimum (Tensile strength)
Thrust to rotor	10 N {1.02 kgf} minimum
Solderability	245 ± 3 °C, 2 ~ 3 s

{ } : Reference only

ENVIRONMENTAL CHARACTERISTICS

Test item	Test conditions	Specifications
Thermal shock	-65 ~ 125 °C (0.5 h), 5 cycles	[ΔR/R ≤ 1 %] [S.S. ≧ 1 %]
Humidity	-10 ~ 65 °C (Relative humidity 80 ~ 98 %), 10 cycles, 240 h	[ΔR/R ≤ 1 %]
Shock	981 m/s ² , 6 ms 6 directions for 3 times each	[ΔR/R ≤ 1 %] [S.S. ≧ 1 %]
Vibration	Amplitude 1.52 mm or Acceleration 196 m/s ² , 10 ~ 2000 Hz, 3 directions, 12 times each	
Load life	70 °C, 0.5 W, 1000 h	[ΔR/R ≤ 2 %] [S.S. ≧ 1 %]
Low temp. operation	-55 °C, 2 h	[ΔR/R ≤ 1 %] [S.S. ≧ 2 %]
High temp. exposure	120 °C, 250 h	[ΔR/R ≤ 2 %] [S.S. ≧ 2 %]
Immersion seal	85 °C, 60 s	No leaks (No continuous bubbles)
Soldering heat	Flow : 260 ± 3 °C, 5 ~ 6 s, two times maximum	[ΔR/R ≤ 1 %]
	Manual soldering : 380 ± 10 °C, 3 ~ 4 s	

ΔR/R : Change in total resistance
S.S. : Setting stability

RJ-9

CERMET TRIMMERS

MAXIMUM INPUT RATINGS

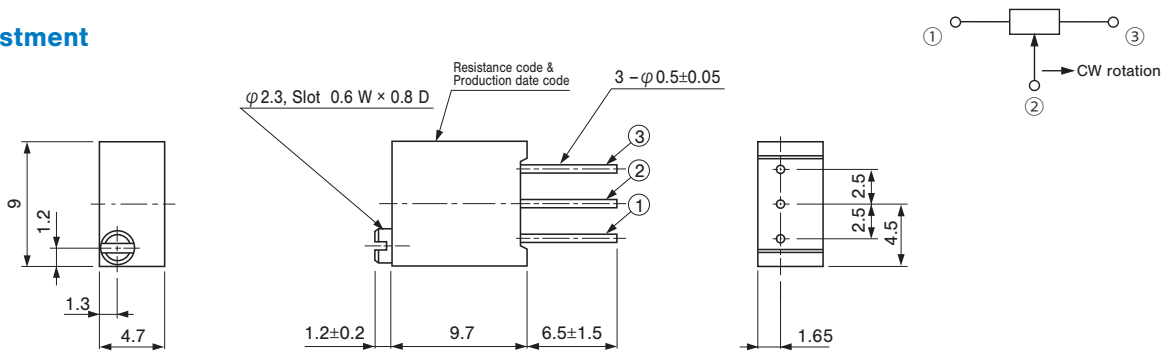
Nominal resistance values (Ω)	Resistance code	Maximum input voltage (V)	Maximum wiper current (mA)
\odot 10 \odot 20 50 100 200 500	100 200 500 101 201 501	1.00 2.00 5.00 7.07 10.0 15.8	100 100 100 70.7 50.0 31.6
1 k 2 k 5 k 10 k 20 k \odot 25 k 50 k	102 202 502 103 203 253 503	22.4 31.6 50.0 70.7 100 112 158	22.4 15.8 10.0 7.07 5.00 4.48 3.16
100 k 200 k 250 k 500 k \odot 1 M 2 M \odot 5 M	104 204 254 504 105 205 505	224 300 300 300 300 300 300	2.24 1.50 1.20 0.60 0.30 0.15 0.06

The products indicated by \odot mark are manufactured upon receipt of order basis.

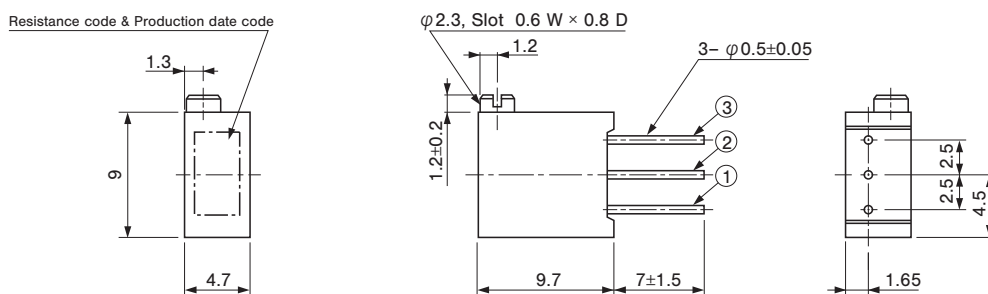
OUTLINE DIMENSIONS

Unless otherwise specified, tolerance: ± 0.3 (Unit: mm)

RJ-9W Top adjustment



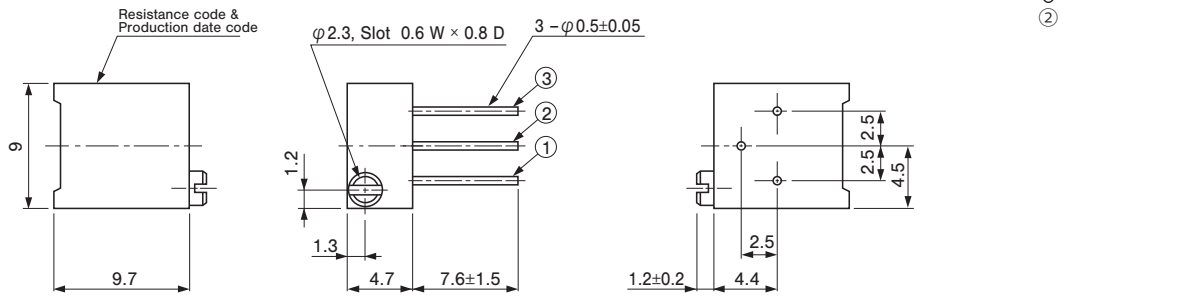
RJ-9X Side adjustment



OUTLINE DIMENSIONS

RJ-9P Side adjustment

Unless otherwise specified, tolerance: ± 0.3 (Unit: mm)



PACKAGING SPECIFICATIONS

<Bulk pack specifications>

- Unit of bulk in a plastic bag is 50 pcs. per pack.
- Boxing of bulk in a plastic bag is performed with 100 pcs. per box.