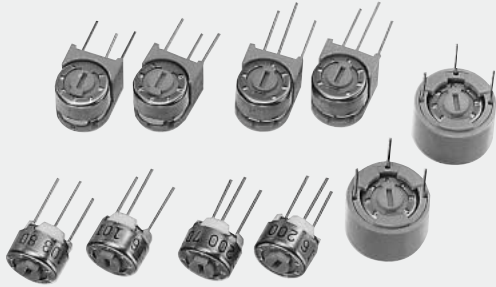


SINGLE TURN CERMET TRIMMERS

RJ-6

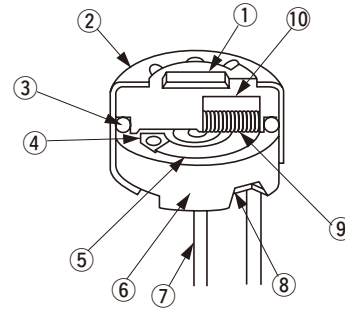
RoHS compliant



FEATURES

- RoHS compliant
- Wide resistance range from 10 Ω to 5 M Ω
- Low contact resistance variation (1 % maximum)
- Precious metal alloy wiper

INTERNAL STRUCTURE



	Part name	Material	Flammability
①	Rotor	Polybutyleneterephthalate	UL-94HB
②	Cover	Stainless steel	—
③	“O” ring	Silicone rubber	UL-94HB
④	Electrode	Ag-Pd cermet	—
⑤	Resistive element	RuO ₂ cermet	
⑥	Base element	Ceramic	
⑦	Terminal pin	Nickel, Gold-plated	
⑧	Adhesive	Epoxy	
⑨	Wiper	Multi metal alloy	
⑩	Rubber cushion	Silicone rubber	

CFCs, Halon, Carbon tetrachloride and designated bromic flame retardant PBBOs and PBBs are not used in our products.

PART NUMBER DESIGNATION

Series name		R J - 6	P	1 0 k Ω (1 0 3)	Resistance code
Product shape		P : Top adjustment W : Top adjustment F : Rear adjustment		S : Side adjustment X : Side adjustment	
				Resistance value	

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

RJ-6

CERMET TRIMMERS

LIST OF PART NUMBERS

Adjustment position	Shape of terminal (Top view)	Form of packaging	Pieces in package
		Plastic bag	
Top adjustment 		RJ-6P	50 pcs./pack
		RJ-6W	
Side adjustment (↑ Adjustment direction)		RJ-6S	
		RJ-6X	
Rear adjustment		 RJ-6F	

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
Maximum input voltage	DC200 V or power rating, whichever is smaller
Maximum wiper current	100 mA or power rating, whichever is smaller
Effective electrical angle	230 ° (1 turn)
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, 20Ω, 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. 0.60 g (RJ-6P,W) Approx. 0.80 g (RJ-6S, X) Approx. 1.01 g (RJ-6F)

<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 angle	270 ° (1 turn)
Operating torque	2~ 15 mN·m {20 ~ 153 gf·cm}
Stop strength	50 mN·m {510 gf·cm} minimum
Rotational life	200 cycles 10 Ω ~ 200 Ω [$\Delta R/R \leq \pm (0.5 \Omega + 3 \%)$] 500 Ω ~ 5 MΩ [$\Delta R/R \leq \pm (0.5 \Omega + 2 \%)$]
Terminal to strength	10 N {1.02 kgf} minimum (Tensile strength)
Thrust 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	[$\Delta R/R \leq 1 \%$] [S.S. $\leq 1 \%$]
Humidity	−10 ~ 65 °C (80 ~ 98 %), 10 cycles, 240 h	[$\Delta R/R \leq 1 \%$]
Shock	981 m/s ² , 6 ms 6 directions for 3 times each	[$\Delta R/R \leq 1 \%$] [S.S. $\leq 1 \%$]
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	[$\Delta R/R \leq 2 \%$] [S.S. $\leq 1 \%$]
Low temp. operation	−55 °C, 2 h	[$\Delta R/R \leq 1 \%$] [S.S. $\leq 2 \%$]
High temp. exposure	120 °C, 250 h	[$\Delta R/R \leq 2 \%$] [S.S. $\leq 2 \%$]
Immersion seal	85 °C, 60 s	No leaks (No continuous bubbles)
Soldering heat	Flow soldering : 260 ± 3 °C, 5 ~ 6 s, two times maximum	[$\Delta R/R \leq 1 \%$]
	Manual soldering : 380 ± 10 °C, 3 ~ 4 s	

$\Delta R/R$: Change in total resistance
S.S. : Setting stability

RJ-6

CERMET TRIMMERS

MAXIMUM INPUT RATINGS

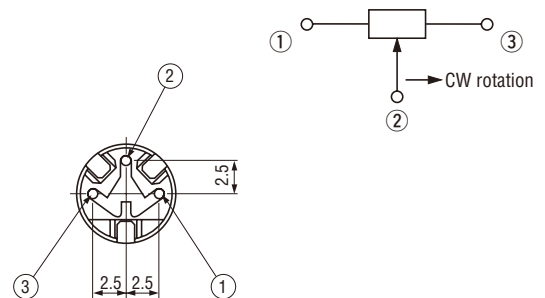
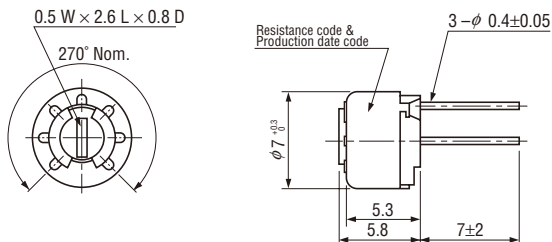
Nominal resistance values (Ω)	Resistance code	Maximum input voltage (V)	Maximum wiper current (mA)
$\rightarrow$ 10 $\rightarrow$ 20 50 100 200 500	100 200 500 101 201 501	1.00 2.00 5.00 7.07 10.0 15.8	100 100 100 70.7 50.0 31.6
1 k 2 k 5 k 10 k 20 k 25 k 50 k	102 202 502 103 203 253 503	22.4 31.6 50.0 70.7 100 112 158	22.4 15.8 10.0 7.07 5.00 4.48 3.16
$\rightarrow$ 100 k $\rightarrow$ 200 k $\rightarrow$ 250 k $\rightarrow$ 500 k 1 M 2 M 5 M	104 204 254 504 105 205 505	200 200 200 200 200 200 200	2.00 1.00 0.80 0.40 0.20 0.10 0.04

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

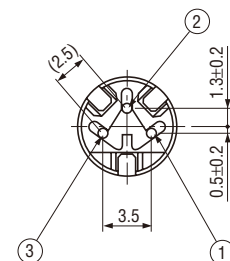
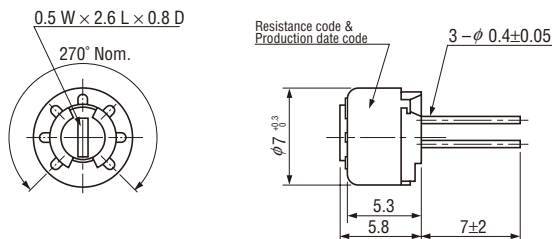
OUTLINE DIMENSIONS

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

RJ-6P Top adjustment

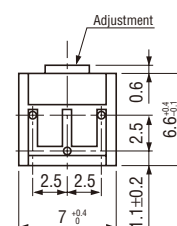
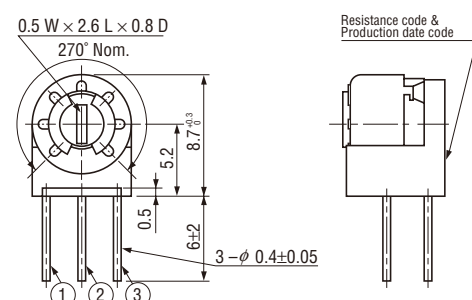


RJ-6W Top adjustment



★ Pin pitch in W type is different from P type.

RJ-6S Side adjustment

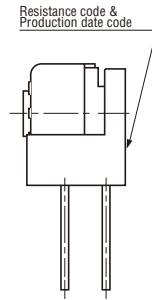
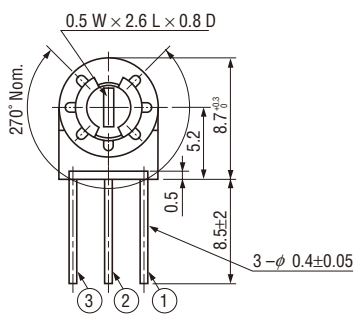


RJ-6

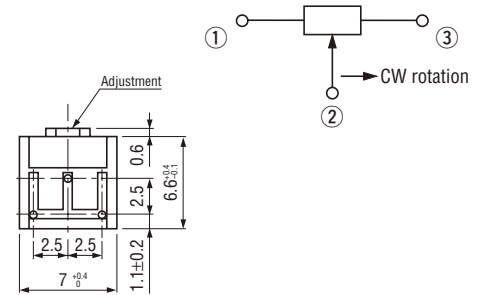
CERMET TRIMMERS

OUTLINE DIMENSIONS

● RJ-6X Side adjustment



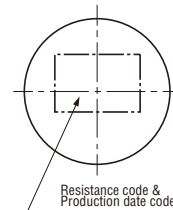
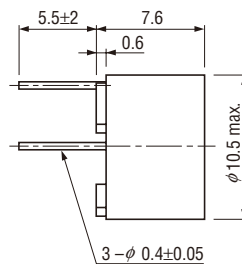
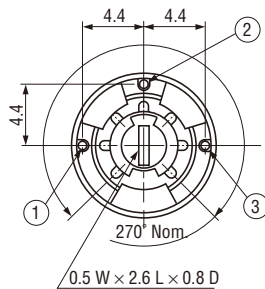
Unless otherwise specified, tolerance: ± 0.3 (Unit: mm)



★ Pin position & stopper position of X type are different from S type.

● RJ-6F Rear adjustment

< Semi-standard products >



PACKAGING SPECIFICATIONS

<Bulk pack specifications>

- Unit of bulk pack in a plastic bag is 50 pcs. per pack.
- Boxing of bulk in a plastic bag is performed with 200 pcs. (RJ-6F is 100 pcs.) per box.