



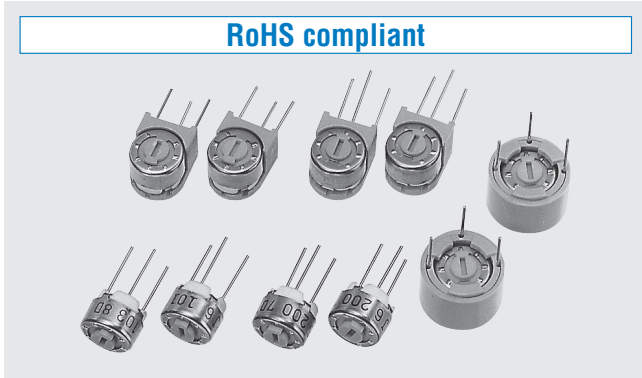
THE DATASHEET OF RJ6S202



SINGLE TURN CERMET TRIMMERS

RJ-6

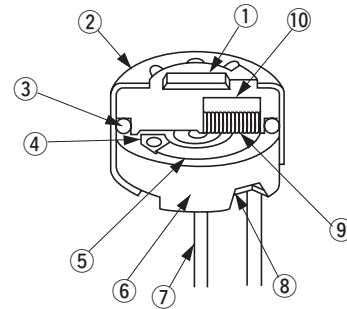
RoHS compliant



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 | UL94HB |
| ② | Cover | Stainless steel | — |
| ③ | “O” ring | Silicone rubber | UL94HB |
| 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 | |

PART NUMBER DESIGNATION

R J - 6 P 1 0 k Ω (1 0 3)

Series name

Resistance code

Product shape








Resistance value

P : Top adjustment
W : Top adjustment
F : Rear adjustment

S : Side adjustment
X : Side adjustment

※ 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-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 | (B) 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 k Ω | 2 k Ω | 5 k Ω | 10 k Ω |
| 20 k Ω |  25 k Ω | 50 k Ω | 100 k Ω | 200 k Ω |  250 k Ω | 500 k Ω | 1 M Ω | 2 M Ω |  5 M Ω |

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 [Δ R/R ≤ ± (0.5 Ω + 3 %)] 500 Ω ~ 5 MΩ [Δ R/R ≤ ± (0.5 Ω + 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 | [Δ R/R ≤ 1 %] [S.S. ≤ 1 %] |
| Humidity | − 10 ~ 65 °C (80 ~ 98 %), 10 cycles, 240 h | [Δ R/R ≤ 1 %] |
| Shock | 981 m/s ² , 6 ms 6 directions for 3 times each | [Δ R/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 | [Δ R/R ≤ 2 %] [S.S. ≤ 1 %] |
| Low temp. operation | − 55 °C, 2 h | [Δ R/R ≤ 1 %] [S.S. ≤ 2 %] |
| High temp. exposure | 120 °C, 250 h | [Δ R/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 | [Δ R/R ≤ 1 %] |
| | Manual soldering 380 ± 10 °C, 3 ~ 4 s | |

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

RJ-6

CERMET TRIMMERS

MAXIMUM INPUT RATINGS

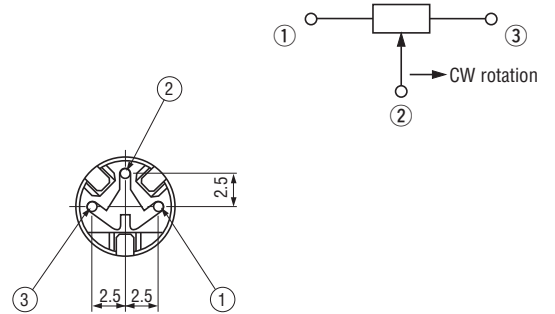
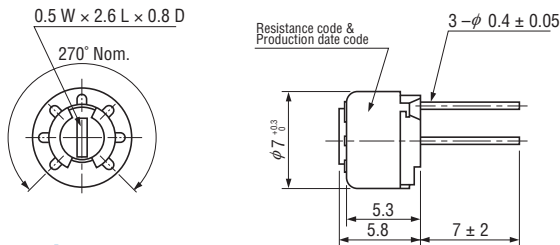
| Nominal resistance values (Ω) | Resistance code | Maximum input voltage (V) | Maximum wiper current (mA) |
|---|---|---|--|
| <ul style="list-style-type: none"> ↻ 10 ↻ 20 50 100 200 500 | <ul style="list-style-type: none"> 100 200 500 101 201 501 | <ul style="list-style-type: none"> 1.00 2.00 5.00 7.07 10.0 15.8 | <ul style="list-style-type: none"> 100 100 100 70.7 50.0 31.6 |
| <ul style="list-style-type: none"> 1 k 2 k 5 k 10 k 20 k ↻ 25 k 50 k | <ul style="list-style-type: none"> 102 202 502 103 203 253 503 | <ul style="list-style-type: none"> 22.4 31.6 50.0 70.7 100 112 158 | <ul style="list-style-type: none"> 22.4 15.8 10.0 7.07 5.00 4.48 3.16 |
| <ul style="list-style-type: none"> 100 k 200 k ↻ 250 k 500 k 1 M 2 M ↻ 5 M | <ul style="list-style-type: none"> 104 204 254 504 105 205 505 | <ul style="list-style-type: none"> 200 200 200 200 200 200 200 | <ul style="list-style-type: none"> 2.00 1.00 0.80 0.40 0.20 0.10 0.04 |

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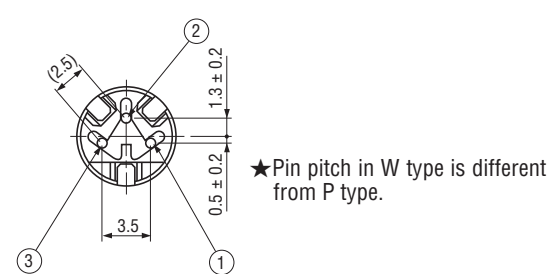
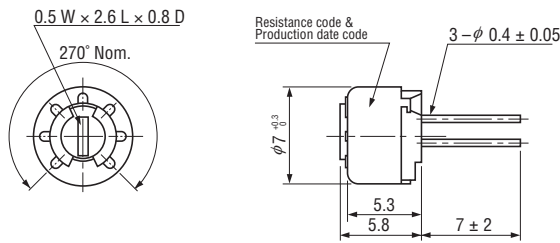
OUTLINE DIMENSIONS

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

● RJ-6P Top adjustment

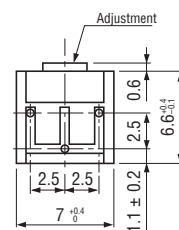
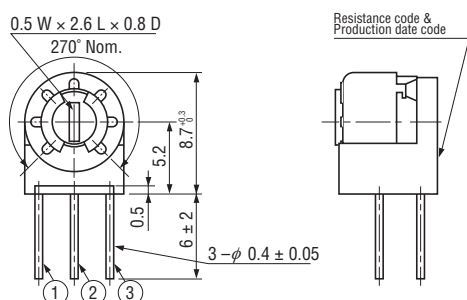


● RJ-6W Top adjustment



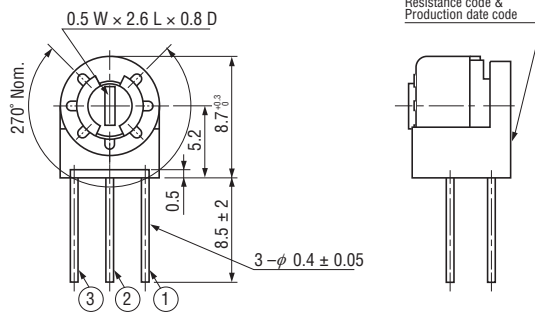
★ Pin pitch in W type is different from P type.

● RJ-6S Side adjustment

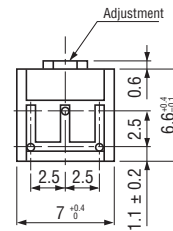
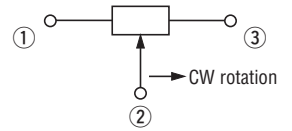


OUTLINE DIMENSIONS

RJ-6X Side adjustment



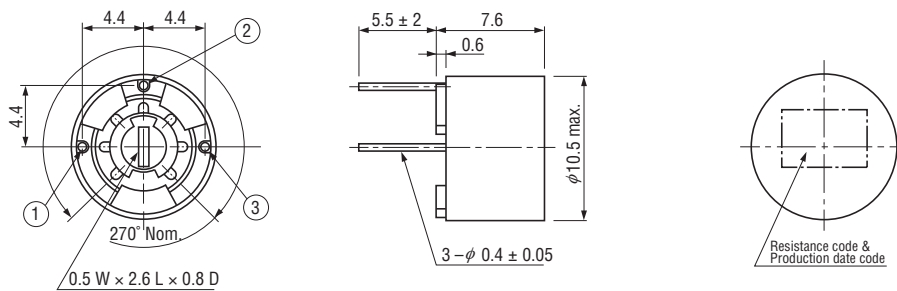
Unless otherwise specified, tolerance: ± 0.3 (Unit: mm)



★ 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.

Looking for pricing, stock, or lifecycle information?

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