

# Sulfur Tolerant Chip Resistors

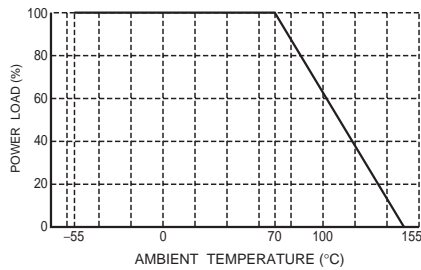
TRR10 (2012size (0805inch) )

●Features

- 1) Unique protect materials prevent from silver sulfide occurrence under sulfur environment.
- 2) Highly recommended for automotive, industrial and Power supply applications under sulfur environment.
- 3) Realize the good cost performance not like the Au terminal components from other suppliers.
- 4) ROHM resistors have approved ISO9001 / ISO/TS 16949 certification.

Design and specifications are subject to change without notice. Carefully check the specification sheet supplied with the product before using or ordering it.

●Ratings

| Item                  | Conditions   | Specifications                |
|-----------------------|--|-------------------------------|
| Rated power           | Power must be derated according to the power derating curve in Figure 1 when ambient temperature exceeds 70°C.<br><br>Fig.1  | 0.125W (1 / 8W)<br>at 70°C    |
| Rated voltage         | The voltage rating is calculated by the following equation.<br>If the value obtained exceeds the limiting element voltage, the voltage rating is equal to the maximum operating voltage.<br>$E = \sqrt{P \times R}$ E: Rated voltage (V) P: Rated power (W)<br>R: Nominal resistance (Ω) | Limiting element voltage 150V |
| Nominal resistance    | See Table 1.   |                               |
| Operating temperature |  | -55°C to +155°C               |

Jumper type

|                       |                 |
|-----------------------|-----------------|
| Resistance            | Max. 50mΩ       |
| Rated current         | 2A              |
| Operating temperature | -55°C to +155°C |

Table 1

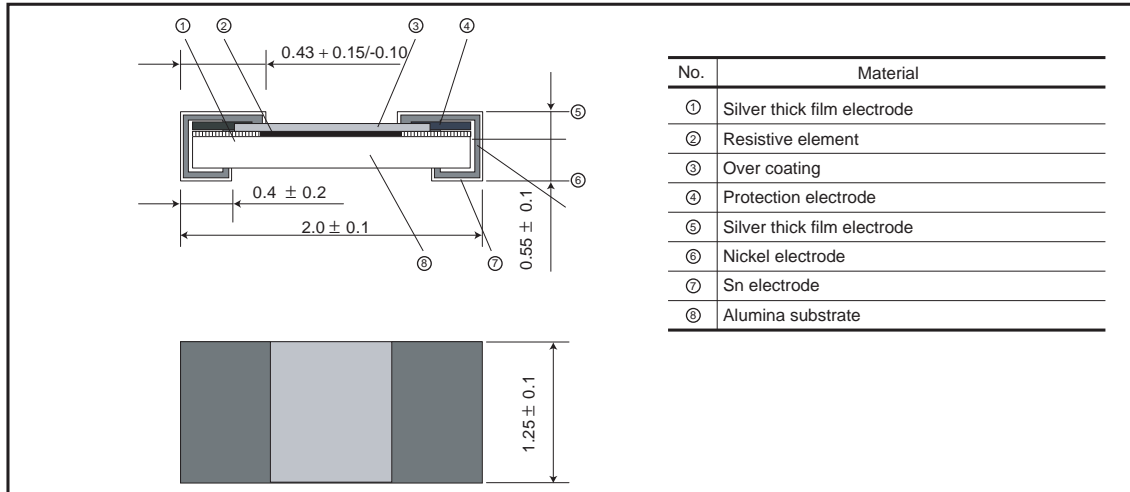
| Resistance tolerance | Resistance range (Ω) | Resistance temperature coefficient (ppm/°C) |
|----------------------|----------------------|---|
| J (±5%)              | 1.0 to 9.1 (E24)     | ±400  |
|                      | 10 to 10M (E24)      | ±200  |
| F (±1%)              | 10 to 2.2M (E24)     | ±100  |

●Before using components in circuits where they will be exposed to transients such as pulse loads (short-duration, high-level loads), be certain to evaluate the component in the mounted state. In addition, the reliability and performance of this component cannot be guaranteed if it is used with a steady state voltage that is greater than its rated voltage.

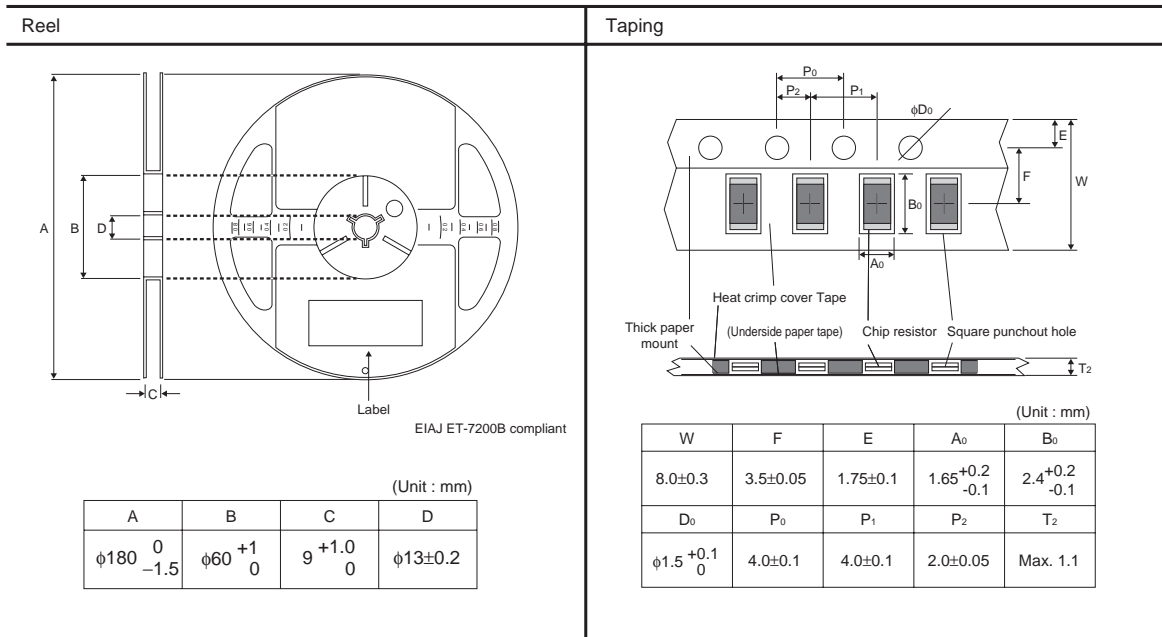
## ●Characteristics

| Item                                     | Guaranteed value   |                    | Test conditions (JIS C 5201-1)  |
|--|--|--------------------|---|
|  | Resistor type  | Jumper type        |   |
| Resistance                               | J : $\pm 5\%$<br>F : $\pm 1\%$   | Max. 50m $\Omega$  | JIS C 5201-1 4.5  |
| Variation of resistance with temperature | See Table.1  |                    | JIS C 5201-1 4.8<br>Measurement : +25 / +125°C  |
| Overload                                 | $\pm (2.0\%+0.1\Omega)$  | Max. 50m $\Omega$  | JIS C 5201-1 4.13<br>Rated voltage (current) $\times 2.5$ , 2s.<br>Maximum overload voltage : 200V  |
| Solderability                            | A new uniform coating of minimum of 95% of the surface being immersed and no soldering damage. |                    | JIS C 5201-1 4.17<br>Rosin-Ethanol (25%WT)<br>Soldering condition : 235 $\pm 5^\circ\text{C}$<br>Duration of immersion : 2.0 $\pm 0.5$ s. |
| Resistance to soldering heat             | $\pm (1.0\%+0.05\Omega)$<br>No remarkable abnormality on the appearance.                       | Max. 50m $\Omega$  | JIS C 5201-1 4.18<br>Soldering condition : 260 $\pm 5^\circ\text{C}$<br>Duration of immersion : 10 $\pm 1$ s.                             |
| Rapid change of temperature              | $\pm (1.0\%+0.05\Omega)$   | Max. 50m $\Omega$  | JIS C 5201-1 4.19<br>Test temp. : -55°C to +125°C 5cyc  |
| Damp heat, steady state                  | $\pm (3.0\%+0.1\Omega)$  | Max. 100m $\Omega$ | JIS C 5201-1 4.24<br>40°C, 93%RH<br>Test time : 1,000h to 1,048h  |
| Endurance at 70°C                        | $\pm (3.0\%+0.1\Omega)$  | Max. 100m $\Omega$ | JIS C 5201-1 4.25.1<br>Rated voltage (current), 70°C<br>1.5h : ON – 0.5h : OFF<br>Test time : 1,000h to 1,048h                            |
| Endurance                                | $\pm (3.0\%+0.1\Omega)$  | Max. 100m $\Omega$ | JIS C 5201-1 4.25.3<br>155°C<br>Test time : 1,000h to 1,048h  |
| Resistance to solvent                    | $\pm (1.0\%+0.05\Omega)$   | Max. 50m $\Omega$  | JIS C 5201-1 4.29<br>23 $\pm 5^\circ\text{C}$ , Immersion cleaning, 5 $\pm 0.5$ min.<br>Solvent : 2-propanol                              |
| Bend strength of the end face plating    | $\pm (1.0\%+0.05\Omega)$<br>Without mechanical damage such as breaks.                          | Max. 50m $\Omega$  | JIS C 5201-1 4.33   |

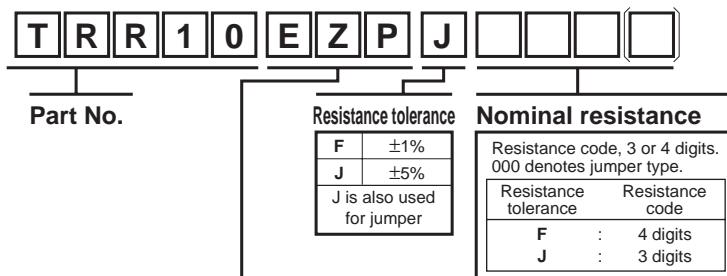
●Dimensions (Unit : mm)



●Packaging



●Part No. Explanation



Packaging Specifications Code

| Part No. | Code | Resistance tolerance |        | Packaging specifications | Reel           | Basic ordering unit (pcs) |
|----------|------|----------------------|--------|--------------------------|----------------|---------------------------|
|          |      | J(±5%)               | F(±1%) |                          |                |                           |
| TRR10    | EZP  | ⊙                    | ⊙      | Paper tape (4mm Pitch)   | φ180mm (7inch) | 5,000                     |

Reel (φ180) : JEITA ET-7200B  
 ⊙ : Standard product

## Notes

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