

Sulfur Tolerant Chip Resistors

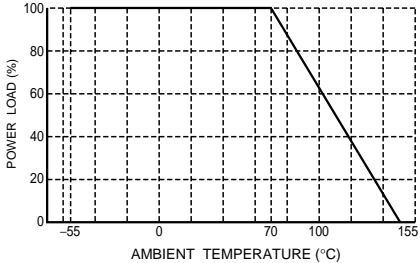
TRR01 (0402 size)

●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.
- 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.  <p style="text-align: center;">Fig.1</p> | 0.063W (1 / 16W) at 70°C |
| Rated voltage | The voltage rating is calculated by the following equation. If the value obtained exceeds the limiting element voltage, the voltage rating is equal to the maximum operating voltage. $E = \sqrt{P \times R}$ E: Rated voltage (V) P: Rated power (W) R: Nominal resistance (Ω) | Limiting element voltage 50V |
| Nominal resistance | See Table 1. | |
| Operating temperature | | -55°C to +155°C |

Jumper type

| | |
|-----------------------|-----------------|
| Resistance | Max. 50mΩ |
| Rated current | 1A |
| Operating temperature | -55°C to +155°C |

Table 1

| Resistance tolerance | Resistance range (Ω) | Resistance temperature coefficient (ppm/°C) |
|----------------------|------------------------|---|
| J (±5%) | 1.0 ≤ R ≤ 9.1 (E24) | +500 / -250 |
| | 10 ≤ R ≤ 10M (E24) | ±200 |
| F (±1%) | 10 ≤ R ≤ 2.2M (E24,96) | ±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.

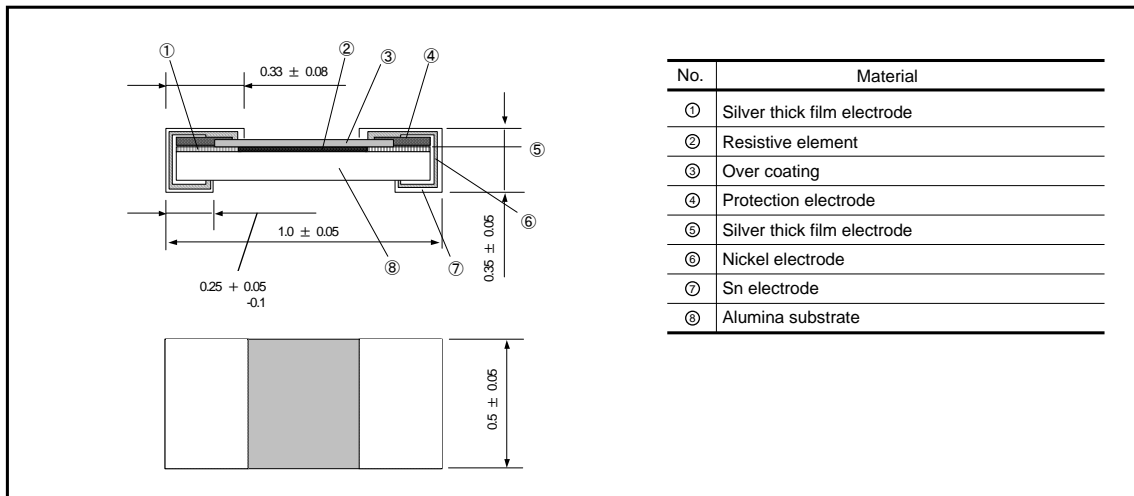
Resistors

●Characteristics

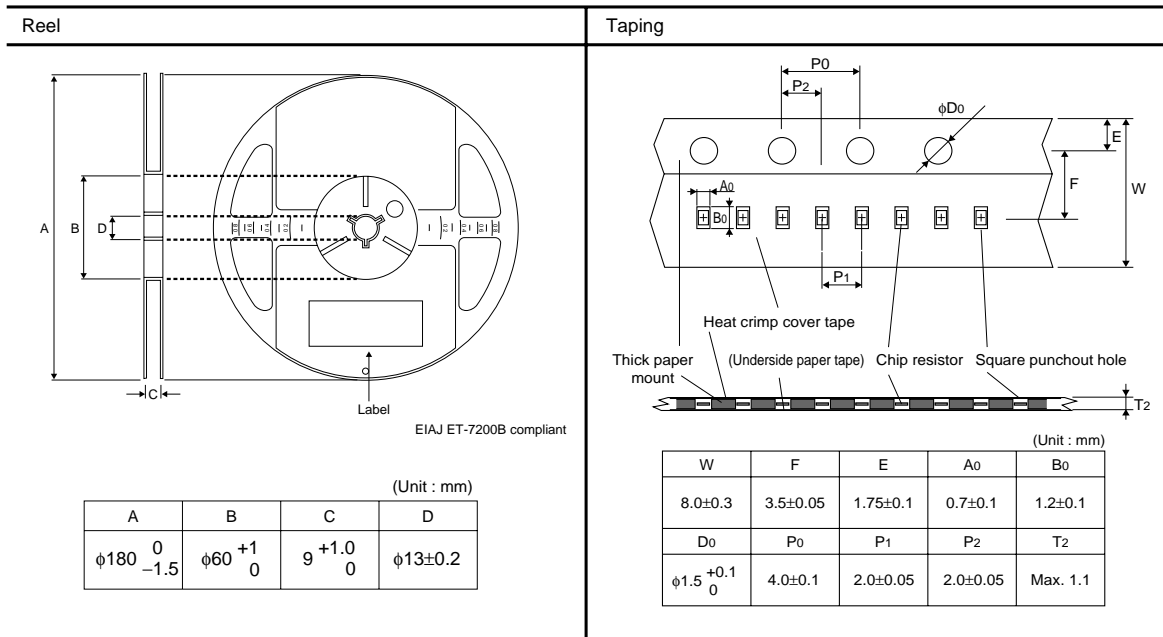
| Item | Guaranteed value | | Test conditions (JIS C 5201-1) |
|--|--|--------------------|--|
| | Resistor type | Jumper type | |
| Resistance | J : $\pm 5\%$ F : $\pm 1\%$ | Max. 50m Ω | JIS C 5201-1 4.5 |
| Variation of resistance with temperature | See <u>Table.1</u> | | JIS C 5201-1 4.8 Measurement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

Resistors

●Dimensions (Unit : mm)

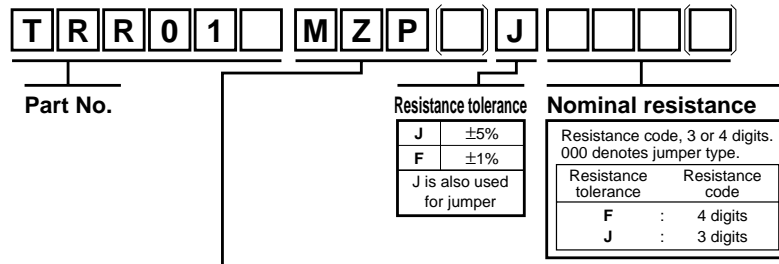


●Packaging



Resistors

●Part No. Explanation



Packaging Specifications Code

| Part No. | Code | Resistance tolerance | | Packaging specifications | Reel | Basic ordering unit (pcs) |
|----------|------|----------------------|---------|--------------------------|----------------|---------------------------|
| | | J(±5%) | FX(±1%) | | | |
| TRR01 | MZP | ◎ | ◎ | Paper tape (2mm Pitch) | φ180mm (7inch) | 10,000 |

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

Notes

- No technical content pages of this document may be reproduced in any form or transmitted by any means without prior permission of ROHM CO.,LTD.
- The contents described herein are subject to change without notice. The specifications for the product described in this document are for reference only. Upon actual use, therefore, please request that specifications to be separately delivered.
- Application circuit diagrams and circuit constants contained herein are shown as examples of standard use and operation. Please pay careful attention to the peripheral conditions when designing circuits and deciding upon circuit constants in the set.
- Any data, including, but not limited to application circuit diagrams information, described herein are intended only as illustrations of such devices and not as the specifications for such devices. ROHM CO.,LTD. disclaims any warranty that any use of such devices shall be free from infringement of any third party's intellectual property rights or other proprietary rights, and further, assumes no liability of whatsoever nature in the event of any such infringement, or arising from or connected with or related to the use of such devices.
- Upon the sale of any such devices, other than for buyer's right to use such devices itself, resell or otherwise dispose of the same, no express or implied right or license to practice or commercially exploit any intellectual property rights or other proprietary rights owned or controlled by
- ROHM CO., LTD. is granted to any such buyer.
- Products listed in this document are no antiradiation design.

The products listed in this document are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electronic toys).

Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

It is our top priority to supply products with the utmost quality and reliability. However, there is always a chance of failure due to unexpected factors. Therefore, please take into account the derating characteristics and allow for sufficient safety features, such as extra margin, anti-flammability, and fail-safe measures when designing in order to prevent possible accidents that may result in bodily harm or fire caused by component failure. ROHM cannot be held responsible for any damages arising from the use of the products under conditions out of the range of the specifications or due to non-compliance with the NOTES specified in this catalog.

Thank you for your accessing to ROHM product informations.

More detail product informations and catalogs are available, please contact your nearest sales office.

ROHM Customer Support System

THE AMERICAS / EUROPE / ASIA / JAPAN

www.rohm.com

Contact us : webmaster@rohm.co.jp