

Current Sensing Resistors, Metal Plate Type

Type: **ERJM1W**



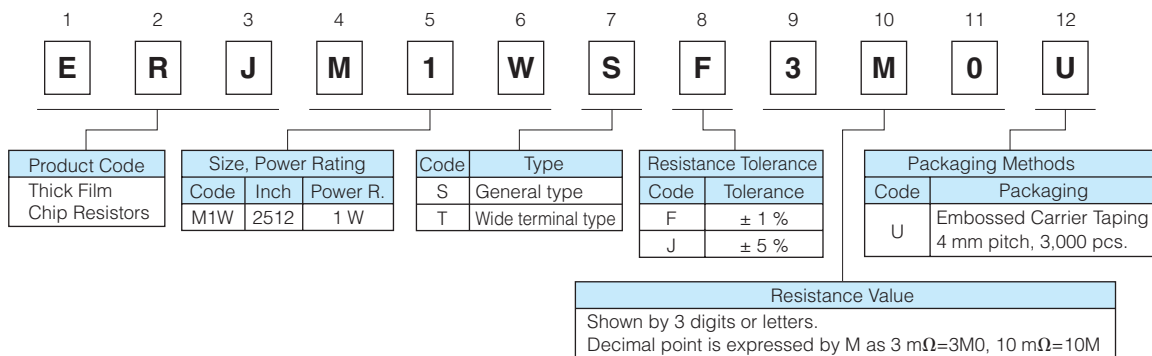
Features

- Low resistance values and high precision (1 mΩ to 20 mΩ)
- Stable resistance not influenced by measurement position
- High heat emission
- Low profile, strong body
- Inductance less than 1.0 nH for the metal plate structure
- RoHS compliant

As for Packaging Methods, Soldering Conditions and Safety Precautions,

Please see Data Files

Explanation of Part Numbers



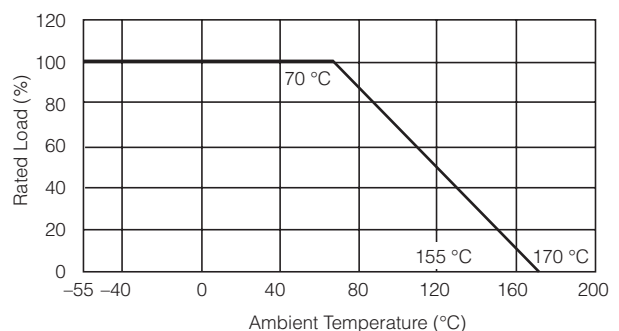
Ratings

| Part No. (inch size) | Power Rating at 70 °C (W) | Standard Resistance (mΩ) | Resistance Tolerance (%) | T.C.R. (×10 ⁻⁶ /°C) | Category Temperature Range (°C) | Circuit board of use |
|-------------------------|------------------------------|-----------------------------|-----------------------------|-----------------------------------|---------------------------------------|---|
| ERJM1WS (2512) | 1 | 3, 4 | F: ±1, J: ±5 | ±350 | -55 to +170 | You should use the aluminum substrate when the added wattage exceeds 0.5 W. |
| | | 5, 6, 10, 15, 20 | | ±100 | | |
| ERJM1WT (2512) | | 1, 1.5 | | 350±100 | | |
| | | 2, 3, 4 | | 100±50 | | |

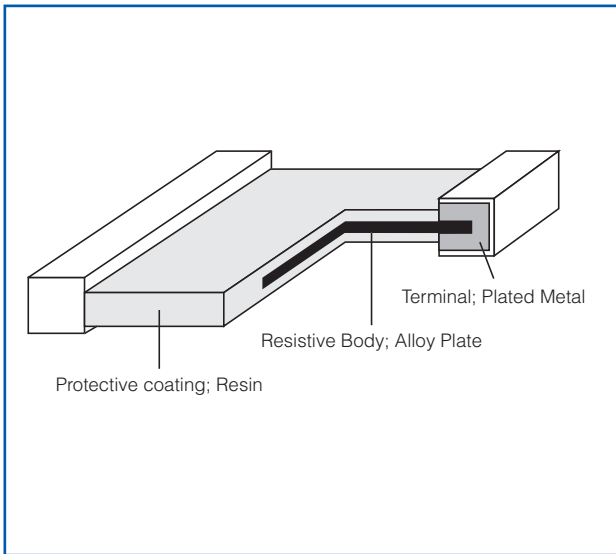
* Please contact the factory for other values and the range

Power Derating Curve

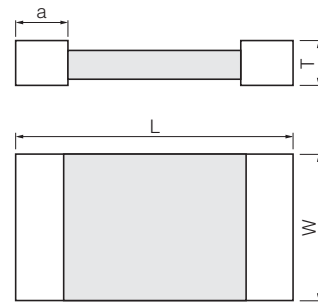
For resistors operated in ambient temperatures above 70 °C, power rating shall be derated in accordance with the figure on the right.



Construction



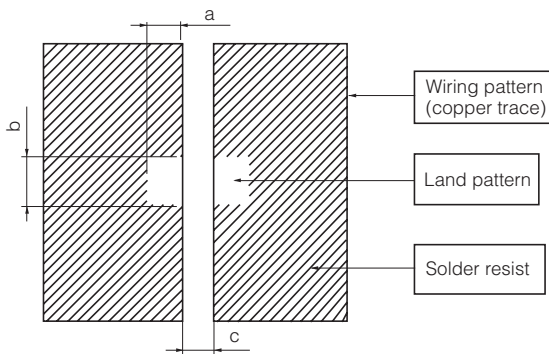
Dimensions in mm (not to scale)



| Type | Part No. (inch size) | Dimensions (mm) | | | | Mass (Weight) [g/1000 pcs.] |
|--------|-------------------------|-----------------|-----------------|-----------------|-----------------|--------------------------------|
| | | L | W | T | a | |
| S Type | ERJM1WS (2512) | 6.40 \pm 0.25 | 3.20 \pm 0.25 | 0.80 \pm 0.30 | 1.00 \pm 0.25 | 70 |
| T Type | ERJM1WT (2512) | 6.40 \pm 0.40 | | | 2.10 \pm 0.30 | |

Recommended Land Pattern

- An example of a land pattern



| Part No. | Dimensions (mm) | | |
|----------|-----------------|-----|-----|
| | a | b | c |
| ERJM1WS | 2.1 | 3.4 | 4.2 |
| ERJM1WT | 3.1 | 3.4 | 2.2 |