

## Current Sensing Resistors, Metal Plate Type

Type: **ERJM1W**



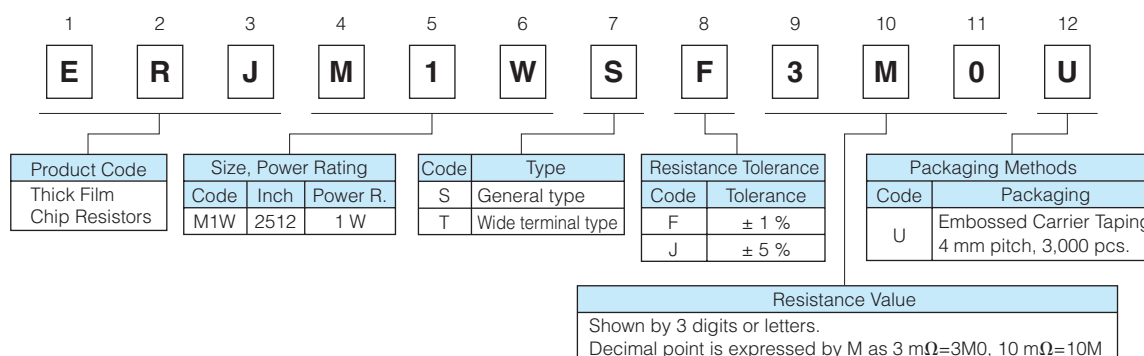
### Features

- 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



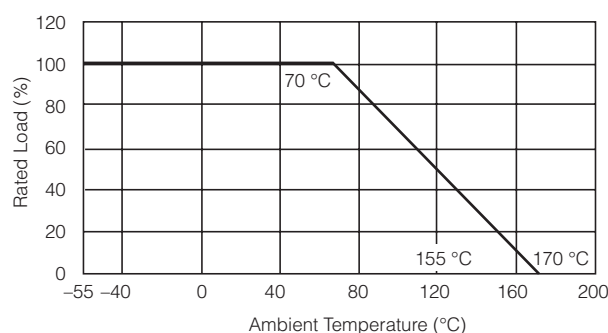
### Ratings

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

\* Please contact the factory for other values and the range

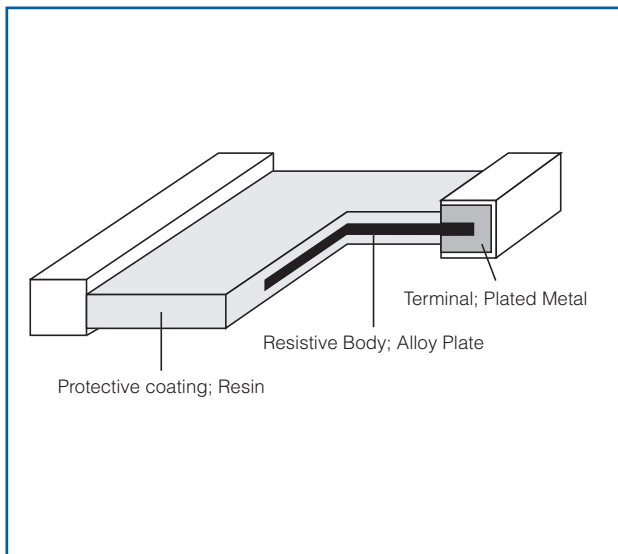
### Power Derating Curve

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

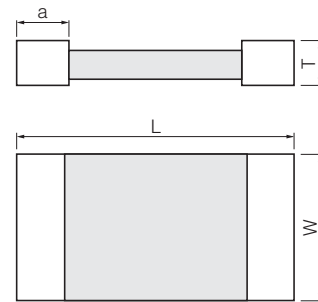


# Panasonic Current Sensing Resistors, Metal Plate Type

## Construction



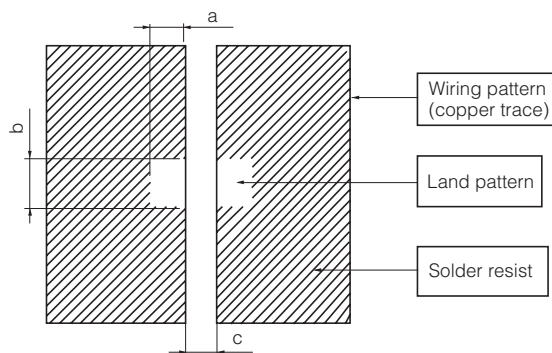
## Dimensions in mm (not to scale)



| Type   | Part No.<br>(inch size) | Dimensions (mm) |                 |                 |                 | Mass (Weight)<br>[g/1000 pcs.] |
|--------|-------------------------|-----------------|-----------------|-----------------|-----------------|--------------------------------|
|        |                         | L               | W               | T               | a               |                                |
| S Type | ERJM1WS<br>(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<br>(2512)       | 6.40 $\pm$ 0.40 |                 |                 | 2.10 $\pm$ 0.30 | 90                             |

## 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 |

# Mouser Electronics

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