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

<table>
<thead>
<tr>
<th>Code</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Thick Film Chip Resistors</td>
</tr>
<tr>
<td>R</td>
<td>Size, Power Rating Code</td>
</tr>
<tr>
<td>J</td>
<td>Type Code</td>
</tr>
<tr>
<td>M</td>
<td>Code Type</td>
</tr>
<tr>
<td>1</td>
<td>Resistance Tolerance Code</td>
</tr>
<tr>
<td>W</td>
<td>Tolerance</td>
</tr>
<tr>
<td>S</td>
<td>Code Type</td>
</tr>
<tr>
<td>F</td>
<td>Resistance Tolerance Code</td>
</tr>
<tr>
<td>3</td>
<td>Tolerance</td>
</tr>
<tr>
<td>M</td>
<td>Code Type</td>
</tr>
<tr>
<td>0</td>
<td>Resistance Tolerance Code</td>
</tr>
<tr>
<td>U</td>
<td>Packaging Methods</td>
</tr>
</tbody>
</table>

**Product Code**: ERJM1W

**Type**: ERJM1W

**Power Rating at 70 °C (W)**

<table>
<thead>
<tr>
<th>Part No. (inch size)</th>
<th>Power Rating at 70 °C (W)</th>
<th>Standard Resistance (mΩ)</th>
<th>Resistance Tolerance (%)</th>
<th>T.C.R. (× 10⁻⁶/°C)</th>
<th>Category Temperature Range (°C)</th>
<th>Circuit board of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERJM1WS (2512)</td>
<td>1</td>
<td>3, 4</td>
<td>F: ±1, J: ±5</td>
<td>±350</td>
<td>-55 to +170</td>
<td>You should use the aluminum substrate when the added wattage exceeds 0.5 W.</td>
</tr>
<tr>
<td>ERJM1WT (2512)</td>
<td>1.5</td>
<td>5, 6, 10, 15, 20</td>
<td>F: ±1, J: ±5</td>
<td>±100</td>
<td>155 °C</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1, 1.5</td>
<td></td>
<td>±50</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2, 3, 4</td>
<td></td>
<td>±150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*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.
Current Sensing Resistors, Metal Plate Type

Construction

- Terminal: Plated Metal
- Resistive Body: Alloy Plate
- Protective coating: Resin

Dimensions in mm (not to scale)

- An example of a land pattern

Recommended Land Pattern

- Part No. Dimensions (mm)
  - ERJM1WS
    - L: 6.40 ± 0.25
    - W: 3.20 ± 0.25
    - T: 0.80 ± 0.30
    - a: 1.00 ± 0.25
    - Mass (Weight) [g/1000 pcs.]: 70
  - ERJM1WT
    - L: 6.40 ± 0.40
    - W: 2.10 ± 0.30
    - T: 90

Part No. Dimensions (mm)

- ERJM1WS
  - a: 2.1
  - b: 3.4
  - c: 4.2
- ERJM1WT
  - a: 3.1
  - b: 3.4
  - c: 2.2

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use. Should a safety concern arise regarding this product, please be sure to contact us immediately.

Oct. 2014