

### Low Resistance Value Chip Resistors (Current Sensing Resistors) 0603, 2512

Type: **ERJM03**  
**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

■ Packaging Methods Please see Pages 40 to 43

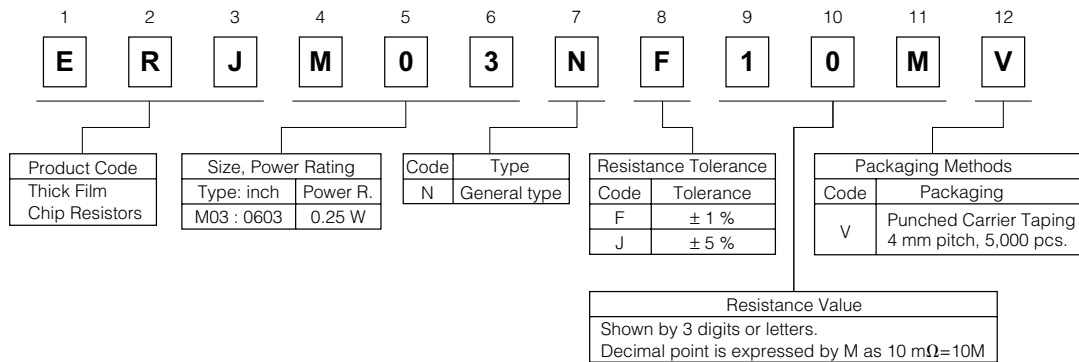
■ Recommended Land Pattern Please see Pages 44 to 45

■ Recommended Soldering Conditions Please see Page 46

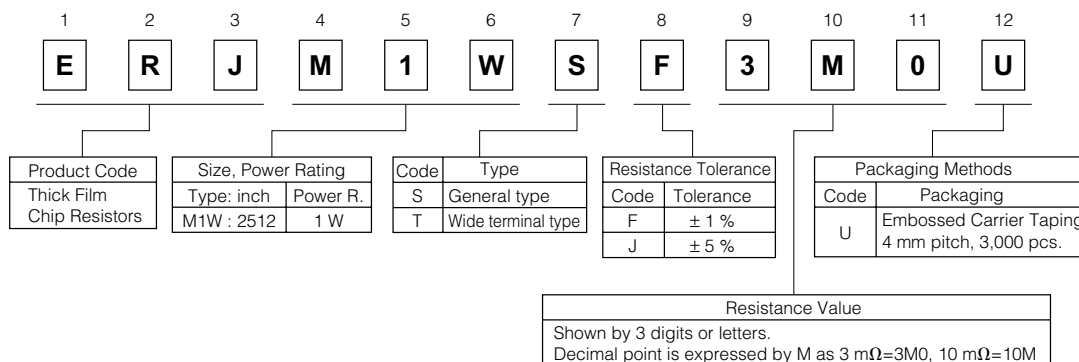
■ Safety Precautions Please see Page 47

#### ■ Explanation of Part Numbers

##### ● ERJM03

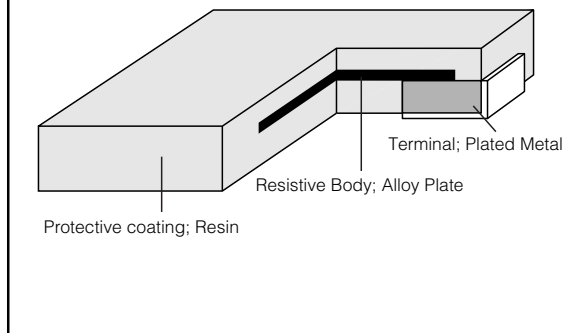


##### ● ERJM1W

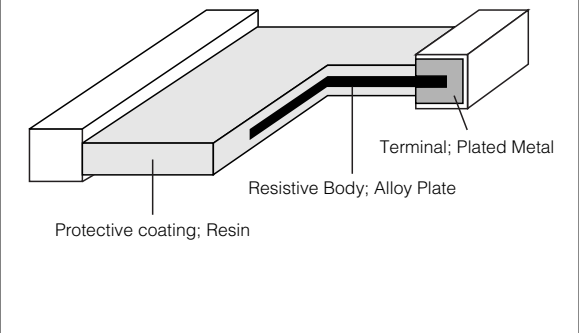


### Construction

#### ERJM03

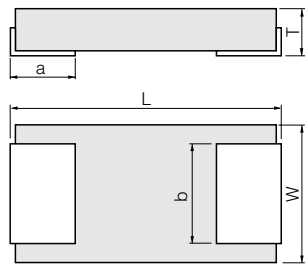


#### ERJM1W



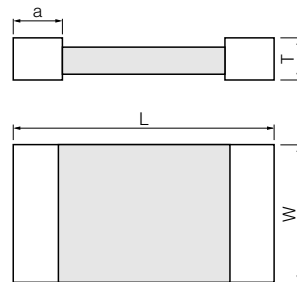
### Dimensions in mm (not to scale)

#### ERJM03



Type (inch size)	Dimensions (mm)					Mass (Weight) [g/1000 pcs.]
	L	W	T	a	b	
ERJM03N (0603)	1.60 <sup>+0.15</sup>	0.8 <sup>+0.15</sup>	0.35 <sup>+0.10</sup>	0.45 <sup>+0.15</sup>	0.65 <sup>+0.15</sup>	1.7

#### ERJM1W



Type	Type (inch size)	Dimensions (mm)				Mass (Weight) [g/1000 pcs.]
		L	W	T	a	
S Type	ERJM1WS (2512)	6.40 <sup>+0.25</sup>	3.20 <sup>+0.25</sup>	0.80 <sup>+0.30</sup>	1.00 <sup>+0.25</sup>	70
T Type	ERJM1WT (2512)	6.40 <sup>+0.40</sup>			2.10 <sup>+0.30</sup>	90

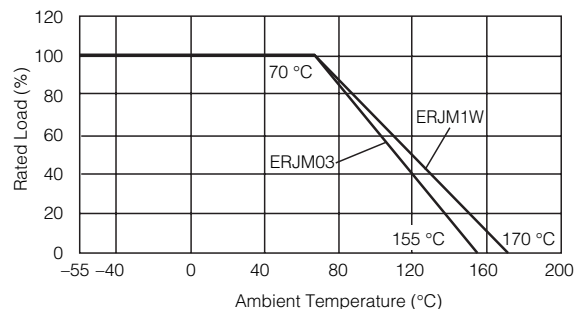
### Ratings

Type (inch size)	Power Rating at 70 °C (W)	Standard Resistance (mΩ)	Resistance Tolerance (%)	T.C.R. (×10 <sup>-6</sup> /°C)	Category Temperature Range (°C)	Circuit board of use
ERJM03N (0603)	0.25	10	F: ±1, J: ±5	±100	-55 to +155	-
ERJM1WS (2512)	1	3, 4		±350	-55 to +170	You should use the aluminum substrate when the added wattage exceeds 0.5 W.
ERJM1WT (2512)		5, 6, 10, 15, 20		±100		
		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.



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.