

### Thick Film Chip Resistors 01005, 0201, 0402, 0603, 0805, 1206, 1210, 1812, 2010, 2512

Type: **ERJ XG, 1G, 2G, 3G, 6G, 8G,  
14, 12, 12Z, 1T**



#### ■ Features

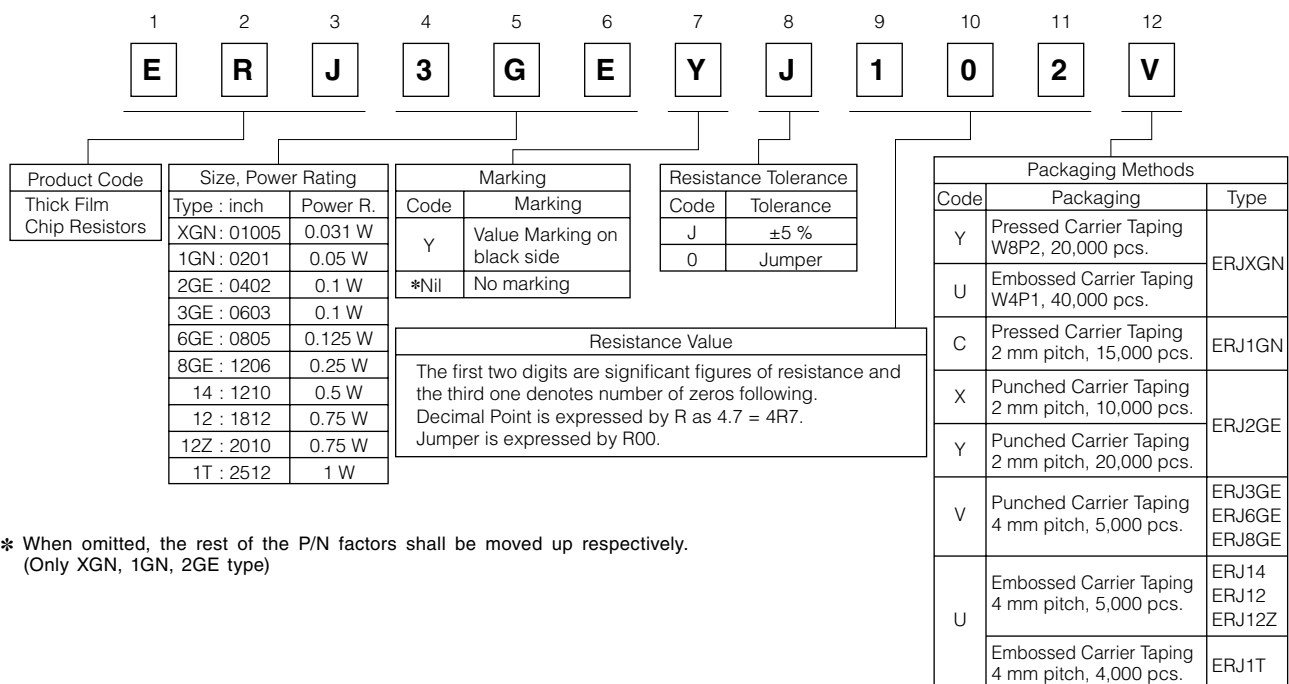
- Small size and lightweight
- High reliability  
Metal glaze thick film resistive element and three layers of electrodes
- Compatible with placement machines  
Taping packaging available
- Suitable for both reflow and flow soldering
- Reference Standards  
IEC 60115-8, JIS C 5201-8, EIAJ RC-2134B
- AEC-Q200 qualified (Exemption ERJXG)
- RoHS compliant

#### ■ Packaging Methods, Land Pattern, Soldering Conditions and Safety Precautions

Please see Data Files

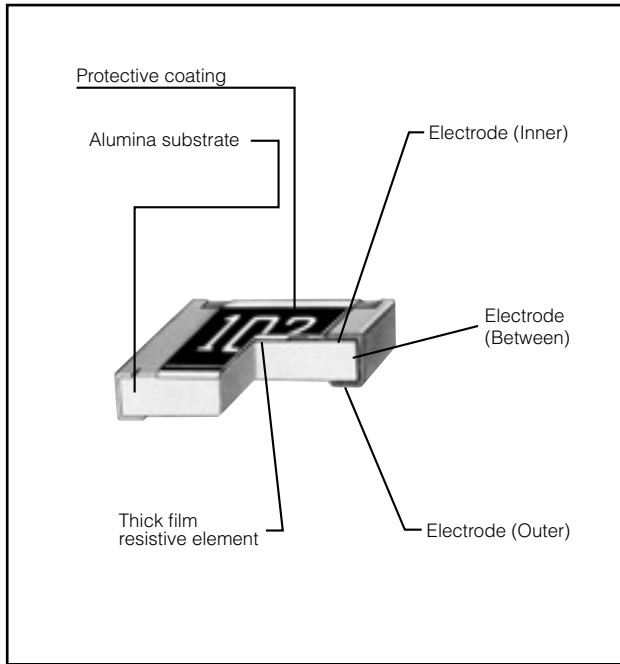
#### ■ Explanation of Part Numbers

- ERJXGN, 1GN, 2GE, 3GE, 6GE, 8GE, 14, 12, 12Z, 1T Series, ±5 % type

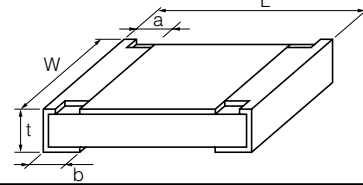


\* When omitted, the rest of the P/N factors shall be moved up respectively.  
(Only XGN, 1GN, 2GE type)

### Construction



### Dimensions in mm (not to scale)



Type (inch size)	Dimensions (mm)					Mass (Weight) (g/1000 pcs.)
	L	W	a	b	t	
ERJXG (01005)	0.40 <sup>+0.02</sup>	0.20 <sup>+0.02</sup>	0.10 <sup>+0.03</sup>	0.10 <sup>+0.03</sup>	0.13 <sup>+0.02</sup>	0.04
ERJ1G (0201)	0.60 <sup>+0.03</sup>	0.30 <sup>+0.03</sup>	0.10 <sup>+0.05</sup>	0.15 <sup>+0.05</sup>	0.23 <sup>+0.03</sup>	0.15
ERJ2G (0402)	1.00 <sup>+0.05</sup>	0.50 <sup>+0.05</sup>	0.20 <sup>+0.10</sup>	0.25 <sup>+0.05</sup>	0.35 <sup>+0.05</sup>	0.8
ERJ3G (0603)	1.60 <sup>+0.15</sup>	0.80 <sup>+0.15</sup> <sub>-0.05</sub>	0.30 <sup>+0.20</sup>	0.30 <sup>+0.15</sup>	0.45 <sup>+0.10</sup>	2
ERJ6G (0805)	2.00 <sup>+0.20</sup>	1.25 <sup>+0.10</sup>	0.40 <sup>+0.20</sup>	0.40 <sup>+0.20</sup>	0.60 <sup>+0.10</sup>	4
ERJ8G (1206)	3.20 <sup>+0.05</sup> <sub>-0.20</sub>	1.60 <sup>+0.05</sup> <sub>-0.15</sub>	0.50 <sup>+0.20</sup>	0.50 <sup>+0.20</sup>	0.60 <sup>+0.10</sup>	10
ERJ14 (1210)	3.20 <sup>+0.20</sup>	2.50 <sup>+0.20</sup>	0.50 <sup>+0.20</sup>	0.50 <sup>+0.20</sup>	0.60 <sup>+0.10</sup>	16
ERJ12 (1812)	4.50 <sup>+0.20</sup>	3.20 <sup>+0.20</sup>	0.50 <sup>+0.20</sup>	0.50 <sup>+0.20</sup>	0.60 <sup>+0.10</sup>	27
ERJ12Z (2010)	5.00 <sup>+0.20</sup>	2.50 <sup>+0.20</sup>	0.60 <sup>+0.20</sup>	0.60 <sup>+0.20</sup>	0.60 <sup>+0.10</sup>	27
ERJ1T (2512)	6.40 <sup>+0.20</sup>	3.20 <sup>+0.20</sup>	0.65 <sup>+0.20</sup>	0.60 <sup>+0.20</sup>	0.60 <sup>+0.10</sup>	45

### Ratings

<For Resistor>

Type (inch size)	Power Rating at 70 °C (W)	Limiting Element Voltage <sup>(1)</sup> (V)	Maximum Overload Voltage <sup>(2)</sup> (V)	Resistance Tolerance (%)	Resistance Range (Ω)	T.C.R. (×10 <sup>-6</sup> /°C)	Category Temperature Range (°C)	
ERJXG (01005)	0.031	15	30	±5	4.7 to 1 M (E24)	<10 Ω : -100 to +600 10 Ω to 100 Ω : ±300 100 Ω < : ±200	-55 to +125	
ERJ1G (0201)	0.05	25	50	±5	1 to 10 M (E24)	<10 Ω : -100 to +600	-55 to +125	
ERJ2G (0402)	0.1	50	100	±5	1 to 10 M (E24)		-55 to +155	
ERJ3G (0603)	0.1	75	150	±5	1 to 10 M (E24)		-55 to +155	
ERJ6G (0805)	0.125	150	200	±5	1 to 10 M (E24)		-55 to +155	
ERJ8G (1206)	0.25	200	400	±5	1 to 10 M (E24)		10 Ω to 1 M Ω: ±200	-55 to +155
ERJ14 (1210)	0.5	200	400	±5	1 to 10 M (E24)		-55 to +155	
ERJ12 (1812)	0.75	200	500	±5	1 to 10 M (E24)	1 M Ω <: -400 to +150	-55 to +155	
ERJ12Z (2010)	0.75	200	500	±5	1 to 10 M (E24)		-55 to +155	
ERJ1T (2512)	1	200	500	±5	1 to 1 M (E24)		-55 to +155	

(1) Rated Continuous Working Voltage (RCWV) shall be determined from  $RCWV = \sqrt{\text{Power Rating} \times \text{Resistance Values}}$ , or Limiting Element Voltage listed above, whichever less.

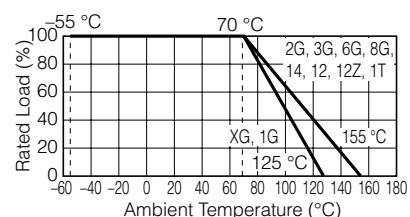
(2) Overload (Short-time Overload) Test Voltage (SOTV) shall be determined from  $SOTV = 2.5$  (Only ERJ2G=2.0) × Power Rating or max. Overload Voltage listed above whichever less.

<For Jumper>

Type (inch size)	Rated Current (A)	Maximum Overload Current (A)
ERJXG (01005)	0.5	1
ERJ1G (0201)		
ERJ2G (0402)		
ERJ3G (0603)		
ERJ6G (0805)		
ERJ8G (1206)	2	4
ERJ14 (1210)		
ERJ12 (1812)		
ERJ12Z (2010)		
ERJ1T (2512)		

### Power Derating Curve

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



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.