



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



## Thick Film Chip Resistors

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



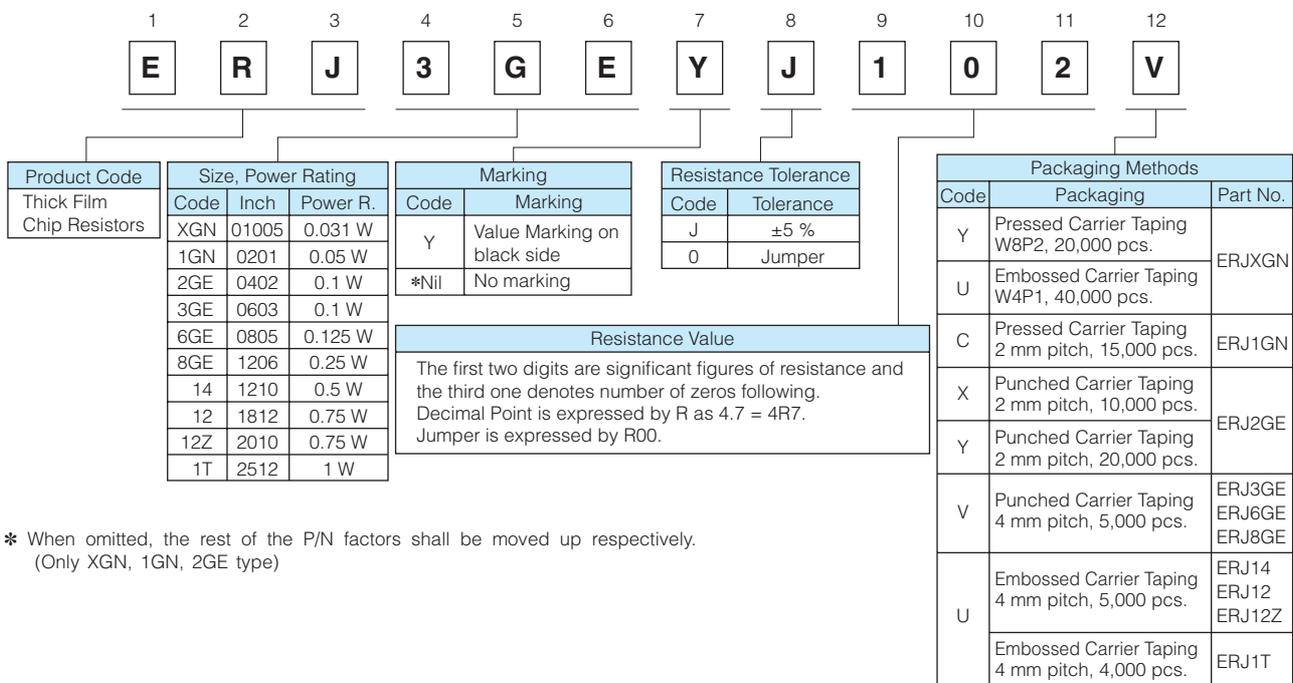
### Features

- 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

**As for Packaging Methods, Land Pattern, Soldering Conditions and Safety Precautions,**  
Please see Data Files

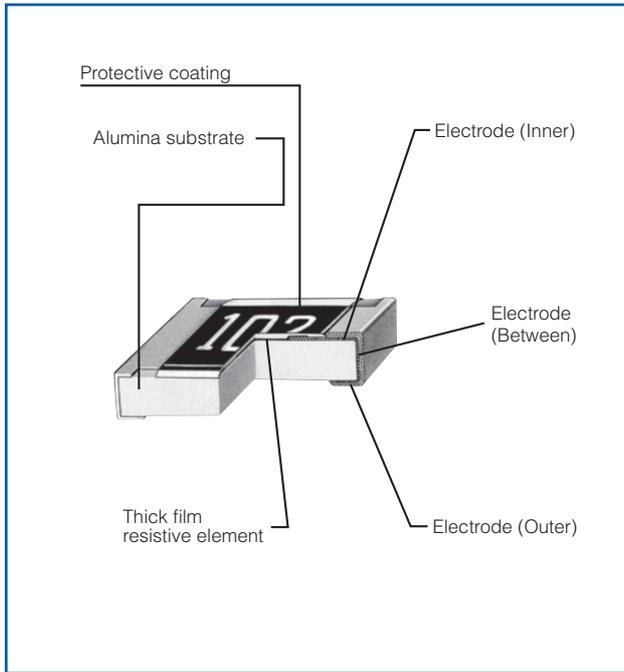
### Explanation of Part Numbers

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

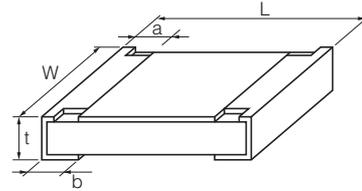


\* When omitted, the rest of the P/N factors shall be moved up respectively.  
(Only XGN, 1GN, 2GE type)

## Construction



## Dimensions in mm (not to scale)



Part No. (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/-0.05</sup>	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/-0.20</sup>	1.60 <sup>+0.05/-0.15</sup>	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]

Part No. (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)	10 Ω to 1 M Ω: ±200	-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)		-55 to +155
ERJ14 (1210)	0.5	200	400	±5	1 to 10 M (E24)	1 M Ω <: -400 to +150	-55 to +155
ERJ12 (1812)	0.75	200	500	±5	1 to 10 M (E24)		-55 to +155
ERJ12Z (2010)	0.75	200	500	±5	1 to 10 M (E24)	-400 to +150	-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) × RCWV or max. Overload Voltage listed above whichever less.

### [For Jumper]

Part No. (inch size)	Rated Current (A)	Maximum Overload Current (A)
ERJXG (01005)	0.5	1
ERJ1G (0201)		
ERJ2G (0402)		
ERJ3G (0603)	1	2
ERJ6G (0805)		
ERJ8G (1206)		
ERJ14 (1210)		
ERJ12 (1812)		
ERJ12Z (2010)		
ERJ1T (2512)	2	4

### Power Derating Curve

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

