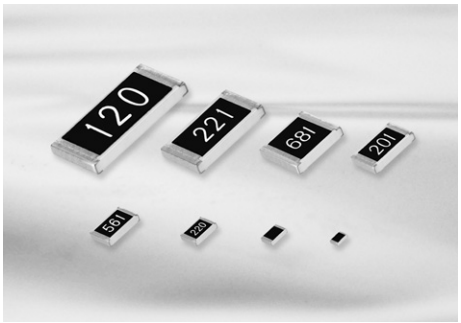
General Purpose



Feature

- Very small, thin, and light weight.
- Both flow and reflow soldering are applicable.
- Owing to the reduced lead inductance, the high frequency characteristic is excellent.
- Suitable size and packaging for surface mount assembly.

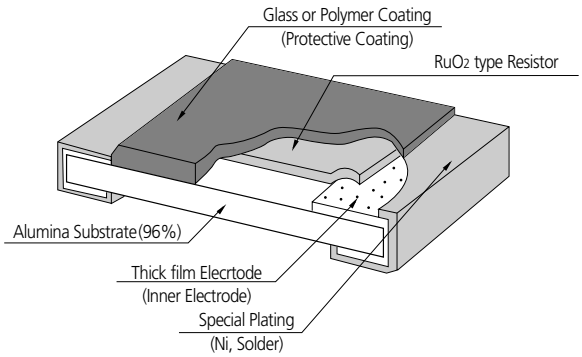
The product of lead-free terminal is RoHS compliant.
PhO(lead oxide) is included in the glass of our product which is prescribed on RoHS appendix as an exception.

Application

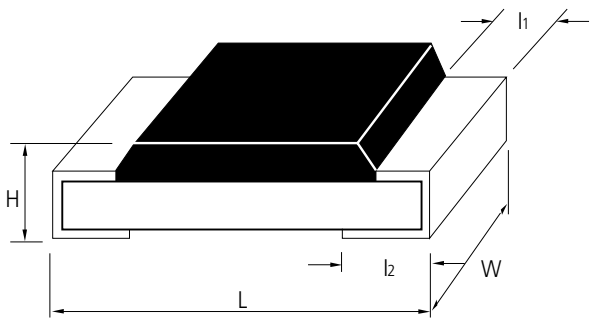
- General purpose
- Home Appliances
  (DVD, Digital TV,CAMCODER, VTR, Digital Camera, Audio,Tunner)
- For Computers & Communications
  (Notebook, Memory Module, Mobile, Network Equipment, etc)

Structure and Dimensions

• Structure



• Dimensions



(UNIT: mm)

Type	Inch	Power(W)	L	W	H	I_1	I_2	Average Weight
RC0603	0201	1/20	0.60±0.03	0.30±0.03	0.23±0.03	0.1±0.05	0.15±0.05	0.15㎎
RC1005	0402	1/16	1.00±0.05	0.50±0.05	0.35±0.05	0.20±0.10	0.25±0.10	0.6㎎
RC1608	0603	1/10	1.60±0.10	0.80±0.15	0.45±0.10	0.30±0.20	0.35±0.10	2.1㎎
RC2012	0805	1/8	2.00±0.20	1.25±0.15	0.50±0.10	0.40±0.20	0.35±0.20	4.9㎎
RC3216	1206	1/4	3.20±0.20	1.60±0.15	0.55±0.10	0.45±0.20	0.40±0.20	9.5㎎
RC3225	1210	1/3	3.20±0.20	2.55±0.20	0.55±0.10	0.45±0.20	0.40±0.20	16㎎
RC5025	2010	2/3	5.00±0.20	2.50±0.20	0.55±0.10	0.60±0.20	0.60±0.20	26㎎
RC6432	2512	1	6.30±0.20	3.20±0.20	0.55±0.10	0.60±0.20	0.60±0.20	41㎎

Parts Numbering System

• The part number system shall be in the following format

RC Code Designation	2012 Dimension & Size Code	J Tolerance	100 Resistance Value	CS Packaging Code
RC: Chip Resistor	0603: 0.6×0.3(㎜) - 0201(inch) 1005: 1.0×0.5(㎜) - 0402(inch) 1608: 1.6×0.8(㎜) - 0603(inch) 2012: 2.0×1.2(㎜) - 0805(inch) 3216: 3.2×1.6(㎜) - 1206(inch) 3225: 3.2×2.5(㎜) - 1210(inch) 5025: 5.0×2.5(㎜) - 2010(inch) 6432: 6.4×3.2(㎜) - 2512(inch)	G : ±2% J : ±5% K : ±10% ※Jumper:' J'	3 or 4 digits coding system (IEC coding system) 3digits (E-24 series) 4digits (E-96 series)	GS: Bulk Packaging CS: Tape Packaging 7" ES: Tape Packaging 10" FS: Tape Packaging 13" AS: Tape Packaging 13"

Specification

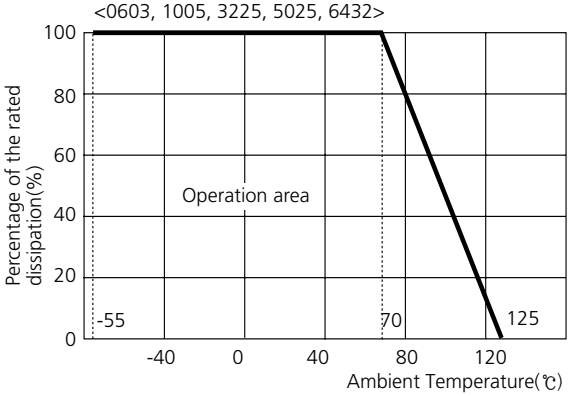
Type	Power Rating (W)	Working Voltage (MAX)	Overload Voltage (MAX)	TCR (ppm/℃)	Resistance Range (Ω) G(±2%) E-48	Resistance Range (Ω) J(±5%) E-24	Resistance Range (Ω) K(±10%) E-12	Rated Ambient Temperature	Rated Working Temperature
RC 0603	1/20	25(V)	50(V)	1Ω≤R<10Ω +300/-200ppm	1Ω~1MΩ	1Ω~10MΩ	1Ω~10MΩ	70℃	-55℃~+125℃
RC 1005	1/16	50(V)	100(V)						
RC 1608	1/10			10Ω≤R≤1MΩ ±100ppm (0603:±250ppm)					-55℃~+155℃
RC 2012	1/8	150(V)	300(V)						
RC 3216	1/4	200(V)	400(V)						
RC 3225	1/3								
RC 5025	2/3			1MΩ<R≤10MΩ ±300ppm					-55℃~+125℃
RC 6432	1								

• Rated voltage (V) = $\sqrt{\text{Rated power(W)} \times \text{Normal resistance value (R)}}$
Rated voltage should be lower than (MAX) working voltage.

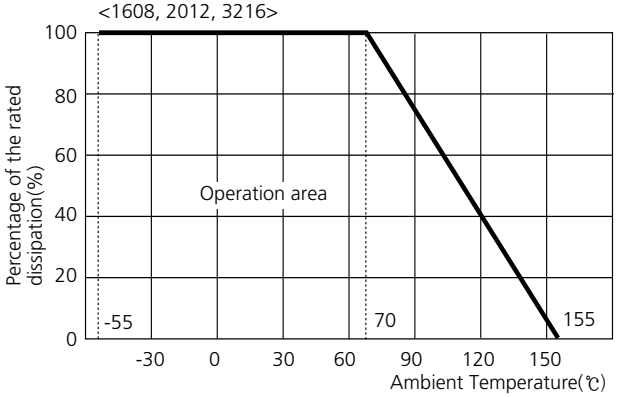
Power Derating Curve

The rated power is the maximum continuous loading power at 70℃ ambient temperature.
For ambient temperature above 70℃, the loading power follows the below power derating curve.
(The load current shall be derated according to derating curve in case of the 'Jumper')

<0603, 1005, 3225, 5025, 6432>



<1608, 2012, 3216>



Jumper Resistors

Type	Resistance	Current Rating	Rated Ambient Temperature	Rated Working Temperature
RC 0603	50mΩ Max.	0.5(A)	70℃	-55℃~+125℃
RC 1005		1.0(A)		
RC 1608				
RC 2012		2.0(A)		
RC 3216				
RC 3225				
RC 5025				
RC 6432				

Marking

3 digits indication (E-24 series)

- Left 2 digits represent significant figures.
- Last 1 digit represent exponential number of 10.
- Example: 103
  Left 2 digits: 10
  Last 1 digit: 3
  $103 = 10 \times 10^3 \Omega$
  $= 10000\Omega = 10k\Omega$

- Jumper chip is printed as 000
- Resistance below 10 Ω is expressed using "R"
  ex) 7R5=7.5 Ω
- 0603, 1005 type: No marking.