

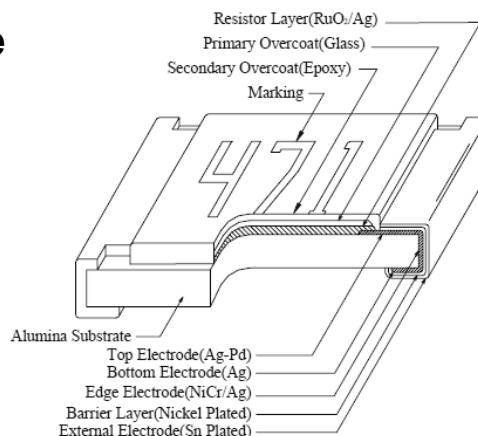
Thick Film Chip Resistor – General Purpose

Features

- Small and light weight
- Excellent heat resistance and moisture resistance
- Suitable size and packaging for surface mount assembly
- RoHS Compliant

Applications

- For general purpose applications
- For laptop and notebook computer, memory module, digital camera and telecommunication equipment



Absolute Maximum Ratings & Characteristics

Product Number	mm	Tolerance	Power Rating @70°C	MAX Working Voltage	MAX Overload Voltage	TCR ppm/°C	Resistance Range	Rated Working Temperature	
RC2512	6432	J: ±5% F: ±1%	1W	250V	500V	±200	1Ω ~ 9.76Ω	-55°C~+155°C	
							±100		10Ω ~ 1MΩ
							±200		1.02MΩ ~ 10MΩ

***Jumper**

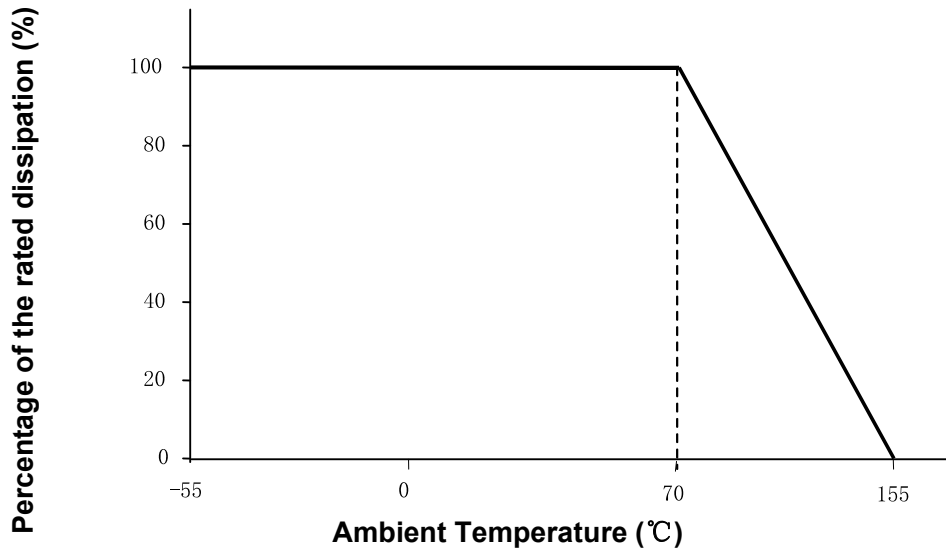
Product Number	Jumper Rated Current	Resistance	Rated Working Temperature
RC2512	4A	50mΩ (Max.)	-55°C~+155°C

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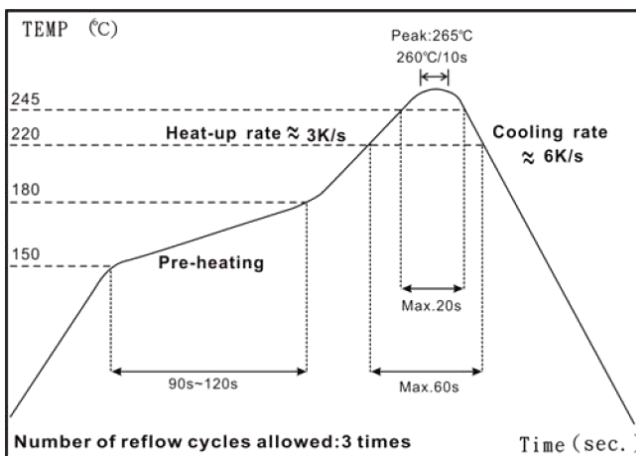
Power Derating Curve

For resistors operate in the ambient temperature over 70°C, loading power ratio will de-rate in accordance with following curve.

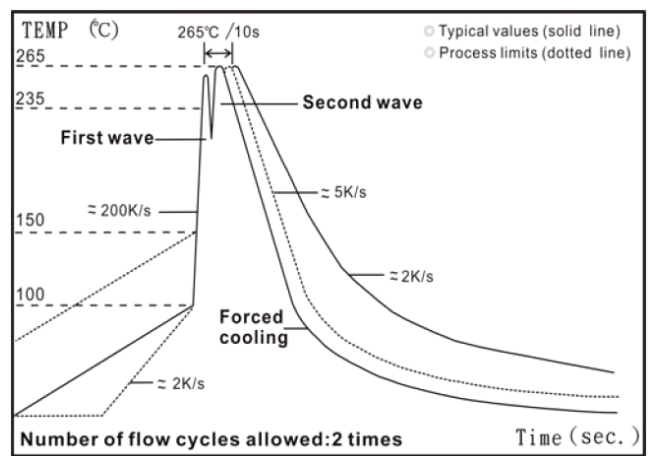


Max. Dissipation of rated power as a function of the ambient temperature

Soldering Condition



IR Reflow soldering

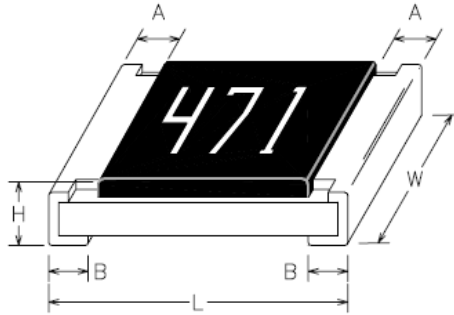


Wave soldering (flow soldering)

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Dimensions (in mm)



Product Number	mm	L	W	H	A	B	Average Weight
RC2512	6432	6.35 ± 0.20	3.20 ± 0.15	0.55 ± 0.10	0.60 ± 0.25	0.50 ± 0.20	40.01 mg

Marking

(1) ±5% Tolerance (J): 3 digits, the first two digits are significant figures; the third digit is number of zeros to follow. Letter "R" is as decimal point; Letter "0" for jumper.

(2) ±1% Tolerance (F): 4 digits, the first three digits are significant figures; the fourth digit is number of zeros. Letter "R" is as decimal point; Letter "0" for jumper.

Examples:

3 digits marking (±5%)



$$683 = 68 \times 10^3 \Omega$$

$$= 68000 \Omega = 68K\Omega$$

$$7R5 = 7.5 \Omega$$



Jumper

4 digits marking (±1%)



$$6812 = 681 \times 10^2 \Omega$$

$$= 68100 \Omega = 68.1K\Omega$$

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Test and Requirements

Test Item	Test Method	Test Condition	Requirement		
			±1%	±5%	Jumper
Temperature Coefficient of Resistance(T.C.R.)	JIS C 5201 4.8 IEC 60115-1 4.8	-55°C~+155,20°C is the reference temperature	Within the specification		
Short Time Overload	JIS C 5201 4.13 IEC 60115-1 4.13	2.5 times RCWV or max. overload voltage for 5 seconds	±(1.0%+0.05Ω)	±(2.0%+0.05Ω)	<50mΩ
Insulation Resistance	JIS C 5201 4.6 IEC 60115-1 4.6	Max. overload voltage for 1 minute	≥10G		
Voltage Proof	JIS C 5201 4.7 IEC 60115-1 4.7	1.42 times RCWV (RMS) for 1 minute	no breakdown or flashover		
Substrate Bending Test	JIS C 5201 4.33 IEC 60115-1 4.33	Bending once with 5 seconds for 3 mm	±(1.0%+0.05Ω)	±(1.0%+0.05Ω)	<50mΩ
Resistance to soldering heat	JIS C 5201 4.18 IEC 60115 4.18	260±5°C for 10 seconds	±(0.5%+0.05Ω)	±(1.0%+0.05Ω)	<50mΩ
Leaching	JIS C 5201 4.18 IEC 60115 4.18	260±5°C for 60 seconds	no leaching		
Solderability	JIS C 5201 4.17 IEC 60115-1 4.17	245±5°C for 3 seconds.	>95% coverage		
Endurance at upper category temperature	JIS C 5201 4.23 IEC 60115-1 2.23.2	at +155°C for 1000 hrs	±(1.0%+0.05Ω)	±(1.5%+0.10Ω)	<50mΩ
Rapid change of temperature	JIS C 5201 4.19 IEC 60115-1 4.19	-55°C to +155°C, 5 cycles	±(0.5%+0.05Ω)	±(1.0%+0.05Ω)	<50mΩ
Damp heat with load	JIS 5201 4.24	40±2°C, 90~95% R.H. or max. working voltage for 1000 hrs with 1.5hrs "ON" and 0.5 hrs "OFF"	±(2.0%+0.10Ω)	±(3.0%+0.10Ω)	<100mΩ
Endurance	JIS C 5201 4.25 IEC 60115-1 4.25.1	70±2°C, RCWV or Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"	±(2.0%+0.10Ω)	±(3.0%+0.10Ω)	<100mΩ

Note: RCWV: Rated Continuous Working Voltage.

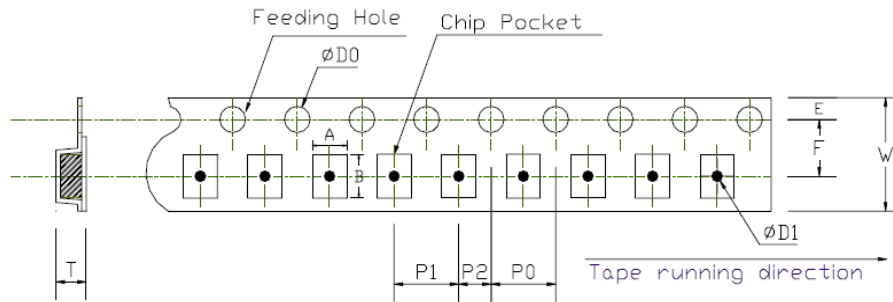
$$RCWV = \sqrt{\text{Rated power (W)} \times \text{Resistance value (R)}}$$

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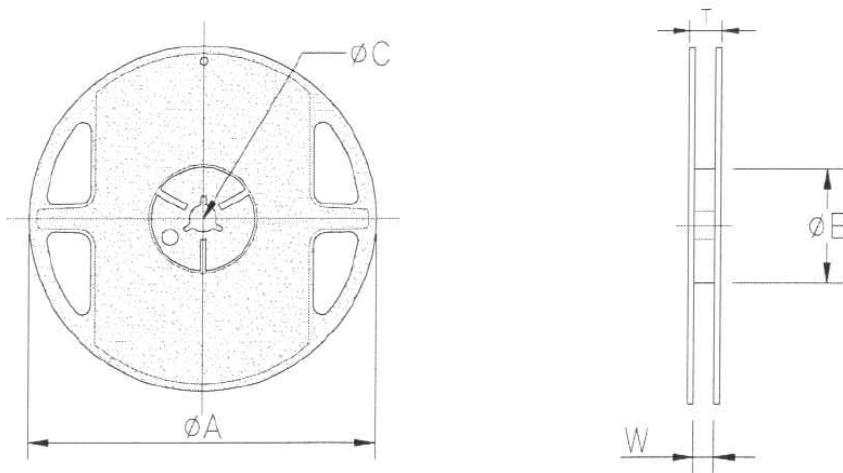
Packing Information:

Carrier Tape Dimensions (in mm)



Type	A	B	W	E	F	P0	P1	P2	$\psi D0$	$\psi D0$	T
RC2512	3.50±0.2	6.70±0.2	12.0±0.3	1.75±0.1	5.5±0.05	4.0±0.1	4.0±0.1	2.0±0.05	1.5+0.1/-0	1.5+0.25/-0	Max1.2

Reel Dimensions (in mm)



Reel Diameter	PCS per Embossed Tape	A	B	C	W	T
7"	4,000	180+0/-3	60+1/-0	13.0±0.2	13.0±0.5	15.4±1

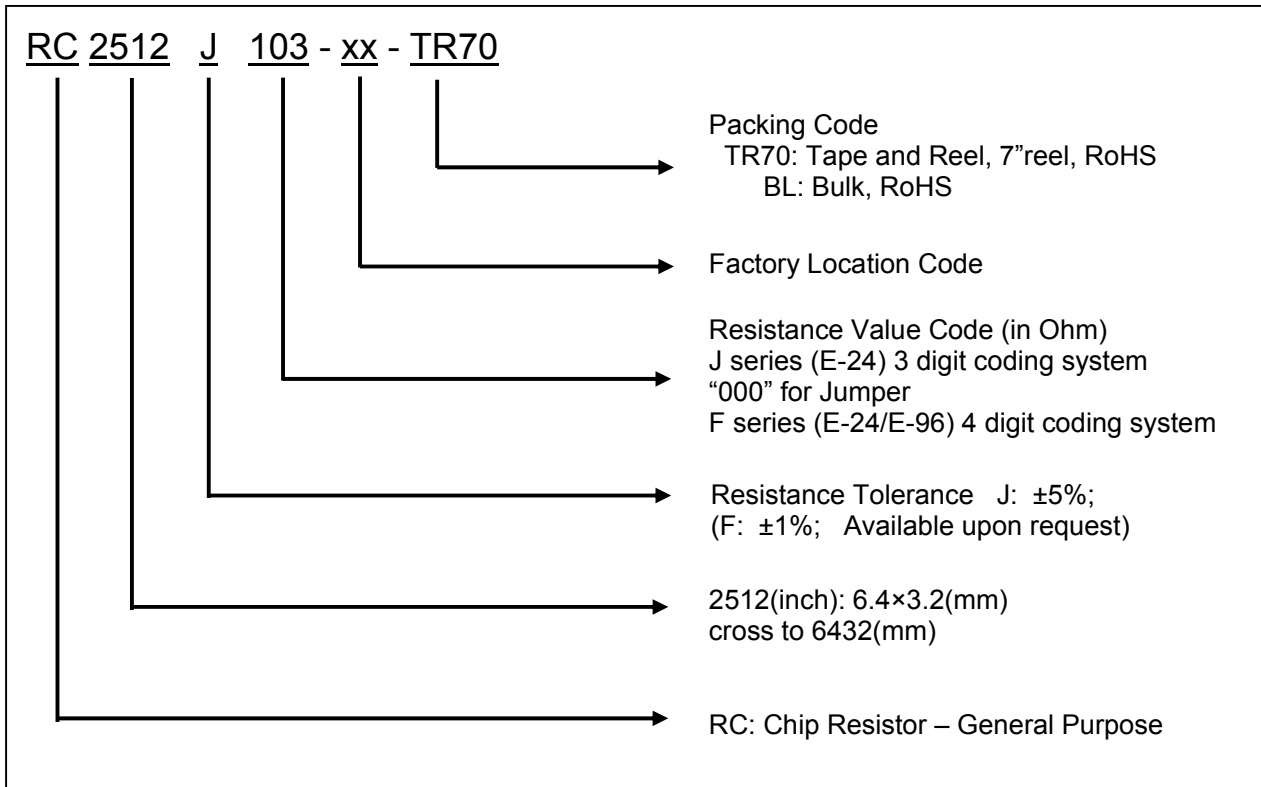
Carton Information

PCS per Carton	Carton Size
192,000	400X400X200 (in mm)

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How to Order



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How to contact us:

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