

THICK FILM SURGE CHIP RESISTORS

(RSC SERIES)

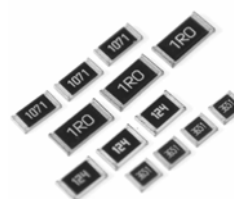
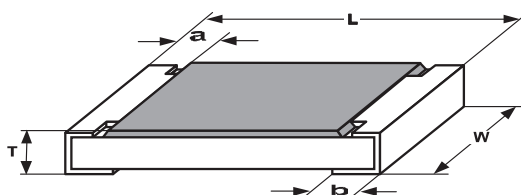
Features

Small size and lightweight with size range per int'l standard
Highly stable in auto-placement surface mounting application
Suitable for withstanding circuit for surge voltage

Applications

Photo disc drive
Charger
LCD video monitor
Medical or Military equipment
Inverter
Measurement instrument

Dimensions

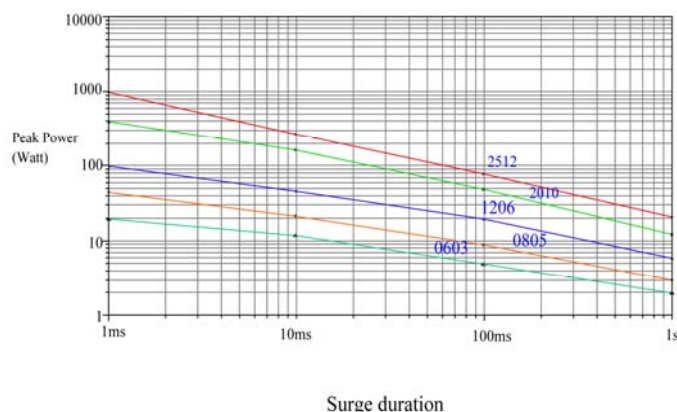


Style	Dimensions : mm				
	L	w	a	b	T
RSC-06 0603	1.60 ±0.10	0.80 ±0.10	0.30 ±0.20	0.30 ±0.20	0.45 ±0.10
RSC-10 0805	2.00 ±0.15	1.20 ±0.15	0.40 ±0.20	0.40 ±0.20	0.50 ±0.10
RSC-18 1206	3.10 ±0.15	1.60 ±0.15	0.50 ±0.25	0.50 ±0.25	0.55 ±0.15
RSC-22 2010	5.00 ±0.20	2.50 ±0.20	0.60 ±0.25	0.60 ±0.25	0.60 ±0.15
RSC-24 2512	6.35 ±0.20	3.10 ±0.20	0.60 ±0.25	0.50 ±0.25	0.60 ±0.15

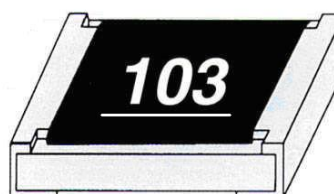
General Specification

TYPE	Size	Power Rating at 70°C	Max. RCWV	Max. Overload Voltage	Resistance Tolerance (%)	Temperature Coefficient (TCR; ppm/°C)	Resistance Range		Standard Resistance Values
							Min.	Max.	
RSC-06	0603	1/10W	50V	100V	±5%(J) ±10%(K) ±15%(L) ±20%(M)	±100	1Ω	1MΩ	E-24
RSC-10	0805	1/8W	150V	300V					
RSC-18	1206	1/4W	200V	400V					
RSC-22	2010	1/2W	200V	400V					
RSC-24	2512	1W	200V	400V					

Surge Performance RSC Series



Marking: a white line under the resistance marking on resistor body



Characteristic and Test Methods

ITEM	SPECIFICATION	TEST METHOD
DC Resistance	J : $\pm 5\%$, K : $\pm 10\%$, L : $\pm 15\%$, M : $\pm 20\%$	IEC 60115-1 / JIS C 5201-1, Clause 4.5 Measure the resistance value.
Short time Overload	$\Delta R \leq \pm (2\% + 0.1\Omega)$	IEC 60115-1 / JIS C 5201-1, Clause 4.13 2.5×Rated voltage or Max. Overload Voltage for 5 sec. measure resistance after 30 minutes
Solderability	Over 95% of termination must be covered with solder	IEC 60115-1 / JIS C 5201-1, Clause 4.17 After immersing flux, dip in the $235 \pm 2^\circ\text{C}$ molten solder bath for 2 ± 0.5 sec.
Resistance to Solder Heat	$\Delta R \leq \pm (1\% + 0.1\Omega)$ No mechanical	IEC 60115-1 / JIS C 5201-1, Clause 4.18 With $260 \pm 5^\circ\text{C}$ for 10 ± 1 sec.
Temperature Coefficient of Resistance (TCR)	$\pm 100 \text{ ppm}/^\circ\text{C}$	IEC 60115-1 / JIS C 5201-1, Clause 4.8 Test temperature : $25^\circ\text{C} (T_1) \rightarrow -55^\circ\text{C} (T_2)$ $25^\circ\text{C} (T_1) \rightarrow +155^\circ\text{C} (T_2)$ $\text{TCR (ppm}/^\circ\text{C}) = \frac{R_2 - R_1}{R_1} \times \frac{1}{T_2 - T_1} \times 10^6$ T1: 25°C T2: Test temperature R1: Resistance at reference temperature (T1) R2: Resistance at test temperature (T2)
Load Life Humidity	$\Delta R \leq \pm (3\% + 0.1\Omega)$	IEC 60115-1 / JIS C 5201-1, Clause 4.24 Maintain the temperature of the resistor at $40 \pm 2^\circ\text{C}$ and 90~95% R.H. with the rated voltage applied. Cycle ON for 1.5 hours and OFF for 0.5 hour for 1000+48/-0 hours. After 1~4 hour, measure the resistance value.
Load Life	$\Delta R \leq \pm (3\% + 0.1\Omega)$	IEC 60115-1 / JIS C 5201-1, Clause 4.25 Permanent resistance change after 1000+48/-0 hours (1.5 hours ON , 0.5 hour OFF) at RCWV or Max. Keep the resistor at $70 \pm 2^\circ\text{C}$ ambient
Intermittent Overload	$\Delta R \leq \pm (5\% + 0.1\Omega)$ No mechanical damage	JIS C 5202 5.8 4.0×Rated voltage (Max. Overload Voltage) 1 sec ON, 25 sec OFF, test 10,000 cycles
Temperature Cycle	$\Delta R \leq \pm (1\% + 0.1\Omega)$ No mechanical damage	IEC 60115-1 / JIS C 5201-1, Clause 4.19 Repeat 5 cycles as follows -55°C (30 min.) + 25°C (2~3 min.) $+155^\circ\text{C}$ (30 min.) + 25°C (2~3 min.)
Insulation Resistance	Between termination and coating must be over 1000M Ω	IEC 60115-1 / JIS C 5201-1, Clause 4.6 Test voltage: 100±15V
Bending Strength	$\Delta R \leq \pm (1\% + 0.1\Omega)$ No mechanical damage	IEC 60115-1 / JIS C 5201-1 Clause 4.33 Resistance change after bended on the 90mm PCB. Bend: 3mm for 0603 、0805 , 2mm for 1206 , 2010, 2512

Parts Number System

RSC—10	103	J	R
Type	Resistance	Tolerance	Standard Packing
RSC-06 0603	3 Digits	J = $\pm 5\%$	R=Paper tape reel
RSC-10 0805	First 2 digits are significant figure	K = $\pm 10\%$	K=Embossed plastic tape reel
RSC-18 1206		L = $\pm 15\%$	B= Bulk Bag
RSC-22 2010	Third Digits is number of zeros	M = $\pm 20\%$	Please refer to packaging explanation
RSC-24 2512			

