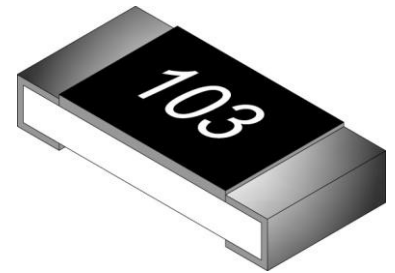


RCT series

Thick Film Low TCR Chip Resistor

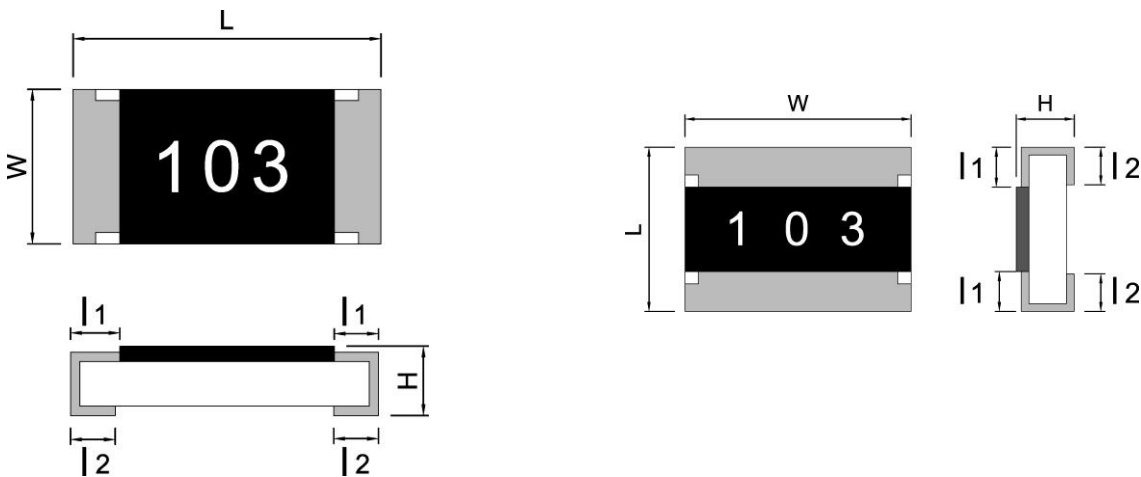
◆ Features

- » Tight tolerance from $\pm 0.1\%$, $\pm 0.25\%$, $\pm 0.5\%$, $\pm 1\%$
- » Low T.C.R. $\pm 25\text{ppm}$, $\pm 50\text{ppm}$



◆ Applications

- » Medical, Precision equipments, Electric meter
- » Converters, Communication devices, Battery
- » Measuring instrument , Printers, Smart Phone



RCT 0402/0603/0805/1206/1210/2010/2512

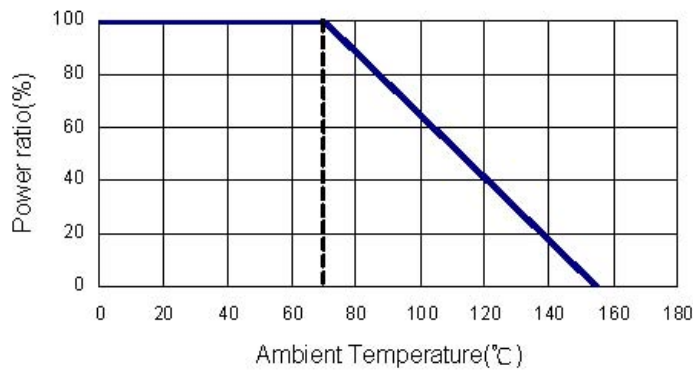
RCT1218

◆ Dimensions

Unit: mm

Type	L	W	H	l1	l2
RCT0402	1.00 \pm 0.10	0.50 \pm 0.05	0.30 \pm 0.05	0.15 \pm 0.10	0.20 \pm 0.10
RCT0603	1.60 \pm 0.20	0.80 \pm 0.15	0.40 \pm 0.10	0.30 \pm 0.20	0.30 \pm 0.10
RCT0805	2.00 \pm 0.20	1.25 \pm 0.15	0.50 \pm 0.15	0.30 \pm 0.15	0.40 \pm 0.15
RCT1206	3.05 \pm 0.10	1.60 \pm 0.20	0.55 \pm 0.15	0.40 \pm 0.20	0.50 \pm 0.20
RCT1210	3.05 \pm 0.10	2.50 \pm 0.20	0.55 \pm 0.15	0.50 \pm 0.20	0.50 \pm 0.20
RCT1218	3.10 \pm 0.10	4.60 \pm 0.10	0.55 \pm 0.05	0.40 \pm 0.20	0.50 \pm 0.20
RCT2010	5.00 \pm 0.20	2.50 \pm 0.20	0.55 \pm 0.10	0.60 \pm 0.20	0.60 \pm 0.20
RCT2512	6.30 \pm 0.20	3.20 \pm 0.20	0.55 \pm 0.10	0.60 \pm 0.20	0.60 \pm 0.20

◆ Derating Curve



Power rating or current rating is in the case based on continuous full-load at ambient temperature of 70°C. For operation at ambient temperature in excess of 70°C, the load should be derated in accordance with figure of derating Curve.

◆ Part Number

RCT	0805	B	T	D	2M
Type	size	Tolerance	Packing	TCR (ppm/°C)	R Value
RCT	0402	B: ±0.1%	T: Taping Reel	C: ±25	101KΩ = 101K
	0603	C: ±0.25%		D: ±50	2MΩ = 2M
	0805	D: ±0.5%			
	1206	F: ±1%			
	1210				
	1218				
	2010				
	2512				

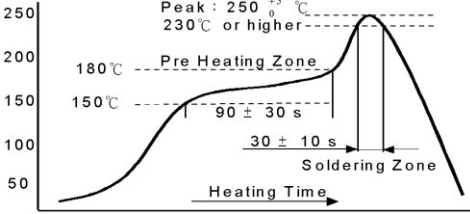
◆ Standard Electrical Specifications

Item Type	Power Rating At 70°C	Operating Temp. Range	Max. Operating Voltage	Max. Overload Voltage	Resistance Range				TCR (PPM/°C)	
					±0.1%	±0.25%	±0.5%	±1%		
RCT0402	1/16W	-55~+155°C	25V	50V	10.2KΩ-1MΩ				±50	
RCT0603	1/10W		75V	150V	101KΩ-332KΩ				±25	
					101KΩ-4M7Ω				±50	
RCT0805	1/8W		150V	300V	101KΩ-3M32Ω				±25	
					101KΩ-3M32Ω				±50	
RCT1206	1/4W		-55~+155°C	200V	400V	101KΩ-2M74Ω				±25
						101KΩ-2M74Ω				±50
RCT1210	1/2W					101KΩ-1MΩ				±25
						101KΩ-1MΩ				±50
RCT2010	3/4W					101KΩ-1MΩ				±25
						101KΩ-1MΩ				±50
RCT1218	1W					101KΩ-1MΩ				±25
						101KΩ-1MΩ				±50
RCT2512	1W					101KΩ-1MΩ				±25
		101KΩ-1MΩ				±50				

Operating Voltage = $\sqrt{P \times R}$ or Max. operating voltage listed above, whichever is lower.

Overload Voltage = $2.5 \times \sqrt{P \times R}$ or Max. overload voltage listed above whichever is lower.

◆ Reliability Test and Requirement

Test Item	Test Method	Procedure	Requirements
Temperature Coefficient of Resistance (T.C.R)	JIS C 5201-1 clause 4.8	+155°C, 25°C is the reference temperature	Refer to Ratings
Short Time Overload	JIS C 5201-1 clause 4.13	General : 2.5 times RCWV or Max. Overload voltage whichever is less for 5 seconds.	±(1.0%+0.05Ω)
IR Reflow	Sony SS-00254	 <p>The graph shows a temperature profile for IR reflow. The y-axis is temperature in °C (50 to 250) and the x-axis is Heating Time. Key points include: Pre Heating Zone at 180°C, a ramp to 150°C, a dwell of 90 ± 30 s, a ramp to a peak of 250 ± 5°C (230°C or higher), a dwell of 30 ± 10 s in the Soldering Zone, and then cooling.</p>	±(1.0%+0.05Ω)
Leaching	Sony SS-00254-9	260±5°C for 30 seconds.	>95% Coverage
Soldering Heat	JIS C 5201-1	260±5°C for 10 seconds.	±(0.5%+0.05Ω)
Temperature Cycling	JIS C 5201-1	-55°C to +155°C, 5 cycles	±(0.5%+0.05Ω)
Electric Iron	Sony SS-00254-5	Preheating temperature : 350±10°C Electric iron preheating time : 3+1/-0 sec	±(1.0%+0.05Ω)
Resistance to Solvent	JIS C 5201-1 clause 4.29	The tested resistor be immersed into isopropyl alcohol of 20~25°C for 60 secs. Then the resistor is left in the room for 48 hrs.	±(0.5%+0.05Ω)
Load Life in Humidity	JIS C 5201-1 clause 4.24	40±2°C, 90~95% R.H. RCWV or Max. working voltage whichever is less for 1000 hrs with 1.5 hrs "ON" and 0.5 hr "OFF" .	±(1.0%+0.05Ω)
Load Life (Endurance)	JIS C 5201-1 clause 4.25	70±2°C, RCWV or Max. working voltage whichever is less for 1000 hrs with 1.5 hrs "ON" and 0.5 hr "OFF" .	±(1.0%+0.05Ω)
Insulation Resistance	JIS C 5201-1 clause 4.6	100V for 1 minute.	≥ 10GΩ
Terminal Bending Strength	JIS C 5201-1 clause 4.33	Bending once for 5 seconds D : 0402、0603、0805 =5mm 1206、1210 =3mm 2010、2512、1218 =2mm	±(1.0%+0.05Ω)