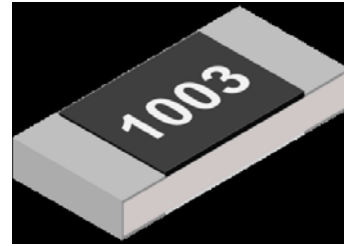


ART series

Chip Resistor Low TCR

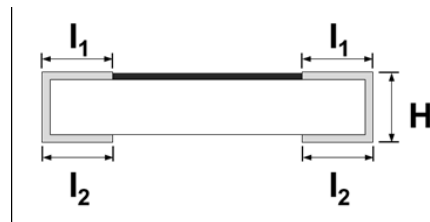
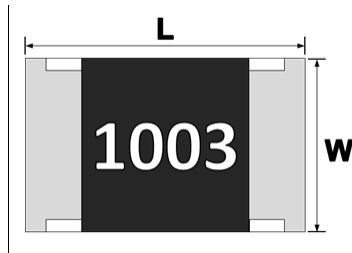
◆ Features

- » 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

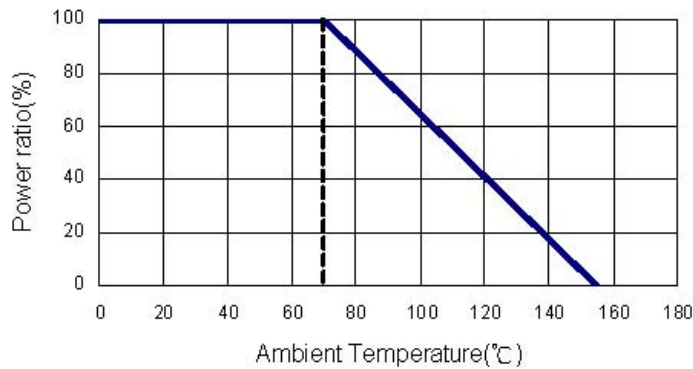


◆ Dimensions

Unit: mm

Type	L	W	H	l1	l2
ART0402	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
ART0603	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
ART0805	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
ART1206	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
ART1210	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
ART2010	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
ART2512	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

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

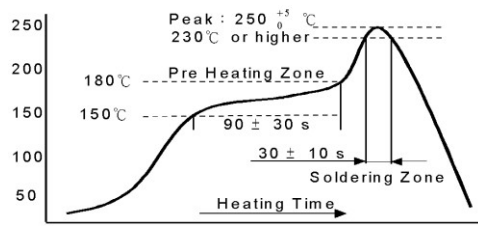
◆ **Standard Electrical Specifications**

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%	
ART0402	1/16W	-55~+155°C	25V	50V	10KΩ-1MΩ				±50
ART0603	1/10W		75V	150V	100KΩ-332KΩ				±25
					100KΩ-4M7Ω				±50
ART0805	1/8W		150V	300V	100KΩ-3M32Ω				±25
					100KΩ-3M32Ω				±50
ART1206	1/4W		200V	400V	100KΩ-2M74Ω				±25
					100KΩ-2M74Ω				±50
ART1210	1/2W		200V	400V	100KΩ-1MΩ				±25
					100KΩ-1MΩ				±50
ART2010	3/4W		200V	400V	100KΩ-1MΩ				±25
					100KΩ-1MΩ				±50
ART2512	1W		200V	400V	100KΩ-1MΩ				±25
					100KΩ-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		±(1.0%+0.05Ω)
Leaching	Sony SS-00254-9	260±5°C for 30 seconds.	>95% Coverage
Soldering Heat	JIS C 5201-1 clause 4.18	260±5°C for 10 seconds.	±(0.5%+0.05Ω)
Temperature Cycling	JIS C 5201-1 clause 4.19	-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 =2mm	±(1.0%+0.05Ω)