

# THUNDER®

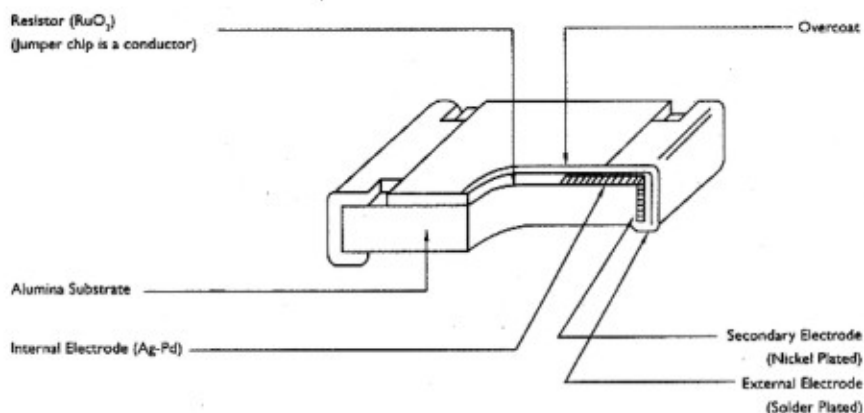
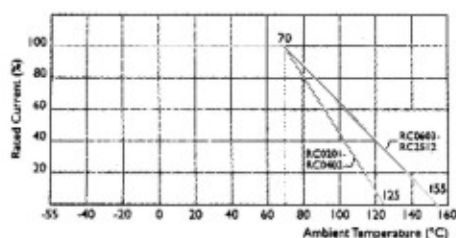
## Thick Film Chip Resistors/RC Series



### FEATURES

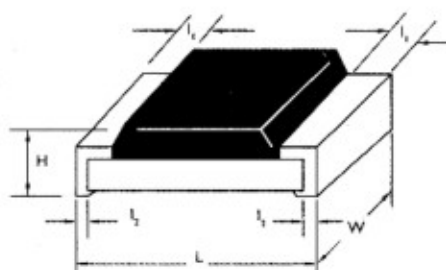
- Extremely Thin and Light
- Highly Reliable Multilayer Electrode Construction
- Compatible with all Soldering Process
- Highly Stable in Auto-Placement Surface Mounting Applications
- Barrier Layer End Termination
- Zero Ohm Jumper is Available
- Available in 8mm Tape & Reel per EIA R5481

### DERATING CURVE



### DIMENSIONS

Unit : mm



STYLE	L	W	H	l <sub>1</sub>	l <sub>2</sub>
RC0201	0.60±0.10	0.30±0.05	0.25±0.05	0.15±0.10	0.15±0.10
RC0402	1.00±0.05	0.50±0.05	0.35±0.05	0.20±0.10	0.25±0.10
RC0603	1.60±0.10	0.80±0.10	0.45±0.10	0.25±0.15	0.25±0.15
RC0805	2.00±0.10	1.25±0.10	0.50±0.10	0.35±0.20	0.35±0.20
RC1206	3.10±0.10	1.60±0.10	0.55±0.10	0.45±0.20	0.40±0.20
RC1210	3.10±0.10	2.60±0.15	0.50±0.10	0.45±0.15	0.50±0.20
RC2010	5.00±0.10	2.50±0.15	0.55±0.10	0.45±0.15	0.50±0.20
RC2512	6.35±0.10	3.10±0.15	0.55±0.10	0.60±0.20	0.50±0.20

## ELECTRICAL CHARACTERISTICS

STYLE	RC0201	RC0402	RC0603	RC0805	RC1206	RC1210	RC2010	RC2512
Power Rating @ 70°C	1/20W	1/16W	1/10W	1/8W	1/4W	1/3W	3/4W	1W
Operating Temp. Range	-55°C ~ +155°C	-25°C ~ +125°C	-55°C ~ +155°C				-25°C ~ +125°C	-55°C ~ +155°C
Maximum Working Voltage	15V	50V	50V	150V	200V	200V	200V	200V
Maximum Overload Voltage	50V	100V	100V	300V	400V	400V	400V	400V
Dielectric Withstand Voltage	50V	100V	100V	300V	500V	500V	500V	500V
Resistance Range								
E24 Tol. ±2%, ±5%	10Ω ~ 1MΩ	1Ω ~ 10MΩ	1Ω ~ 22MΩ					
E96 Tol. ±0.5%, ±1%		2.2Ω ~ 4.7MΩ	1Ω ~ 4.7MΩ					
Zero Ohm Jumper	< 0.05Ω							
TCR ±200ppm/°C	10Ω ≤ R ≤ 1M	10Ω ≤ R < 10MΩ	10Ω ≤ R < 100M; 10MΩ < R ≤ 22MΩ					
±250ppm/°C	10Ω ≤ R ≤ 1M							
±300ppm/°C		1Ω ≤ R < 10Ω						
0/+500ppm/°C	10Ω ≤ R < 100Ω							
Jumper Criteria								
Rated Current (A)	0.5	1.0	1.0	2.0	2.0	2.0	2.0	2.0
Maximum Current (A)	1.0	2.0	2.0	5.0	10.0	10.0	10.0	10.0

## ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD		1% TOL.	5% TOL.
Temperature Coefficient	MIL-STD-202F, Method 304	LCT to UCT	by Type	
Thermal Shock	MIL-STD-202F, Method 107G	25 Cycles, -65°C to +125°C (Step by Step 2 min.)	±(0.5%+0.05Ω)	±(1%+0.05Ω)
Low Temperature Operation	MIL-R-55342D, Para.4.7.4	One Hour at -65°C Followed by 45 Minutes RCWV	±(0.5%+0.05Ω)	±(1%+0.05Ω)
Short Time Overload	MIL-R-55342D, Para.4.7.5	2.5 Times RCWV for 5 Seconds	±(1%+0.05Ω)	±(2%+0.05Ω)
Insulation Resistance	JIS-C-5202, 5.6	RCOV for 1 Minute	>10GΩ	
Dielectric Withstand Voltage	JIS-C-5202, 5.7	R.M.S. for 1 Minute	by Type	
Resistance to Soldering Heat	MIL-STD-202F, Method 210C	Soldered to Test Board at 260°C for 10 Seconds	±(0.5%+0.05Ω)	±(1%+0.05Ω)
Moisture Resistance	MIL-STD-202F, Method 106F	42 Cycles, Total 1000 Hours	±(0.5%+0.05Ω)	±(2%+0.05Ω)
Life	MIL-STD-202F, Method 108A	1000 Hours at 70°C RCWV Intermittent	±(1%+0.05Ω)	±(3%+0.05Ω)
Solderability	JIS-C-5202, 6.11	230°C for 5 Seconds	>95% Coverage	
Bending Strength	JIS-C-5202, 6.14	Unit Mounted in Center of 90mm Board Length, Deflected 5mm (power chip 2mm) in Either Direction for 5 Seconds	±(1%+0.05Ω)	±(1%+0.05Ω)