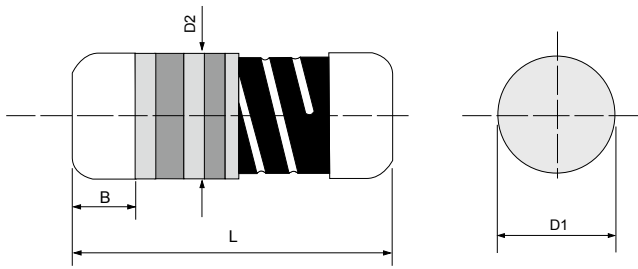


ALTERNATION HISTORY RECORDS 变更记录

Date 日期	Version 版本	Mark 标记	Page 页码	Description 描述	Drafter 制定者	Approver 审批者
2019-5-10	A	/	5	首次发行	常斯琴	彭旭

RC100 Series

Composite Film-Type Ceramic Composition MELF Resistor



1. Specifications Per

- IEC 600115-1

2. Features

- SMD-enabled structure
- Suitable replacement for ceramic composition resistors, which are requirement in most applications.
- Products meet RoHS requirements and do not contain substances of very high concern identified by European Chemicals Agency

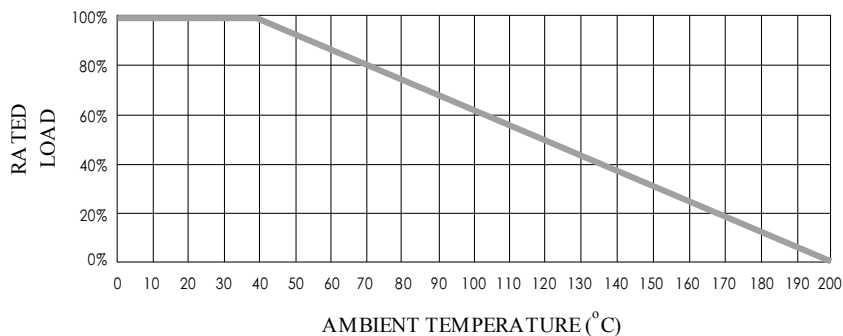
■ DIMENSIONS

Type	Body Length (L, mm)	Cap Diameter (D1, mm)	Body Diameter (D2, mm)	Soldering Spot (B, mm)	Net Weight Per 1000 pcs
RC100	14.6 ± 0.6	4.6 ± 0.5	D1+0.05/ -0.5	2.0 Min.	1000 grams

■ GENERAL SPECIFICATIONS

Type	Power Rating (at 40°C)	Maximum Working Voltage	Maximum Permissible Surge Voltage	Minimum Resistance	Maximum Resistance	Resistance Tolerance	Available Resistance Values
RC100	1W	400V	15KV	33Ω	22KΩ	±5%, ±10%, ±20%	E-6 / E-12 / E-24

■ POWER DERATING CURVE



■ TECHNICAL SUMMARY

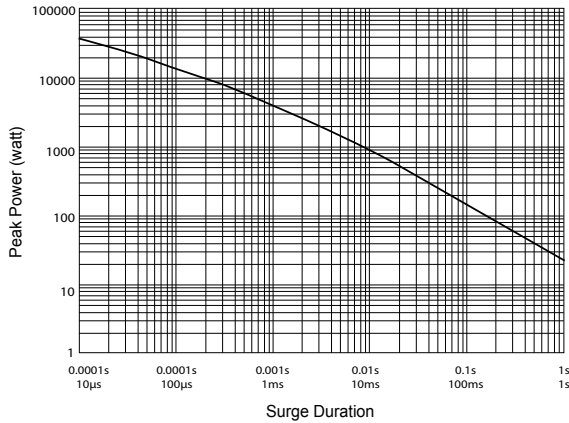
Characteristics	Limits
Dielectric Withstanding Voltage, VAC or DC	800
Temperature Coefficient, PPM/°C*	-3000 (Typical)
Operating Temperature Range,	-55 ~ +200
Insulation Resistance, MΩ	>10 ⁴

* Not applicable to all resistance values. Please check with us regarding the PPM of specific resistance value(s).

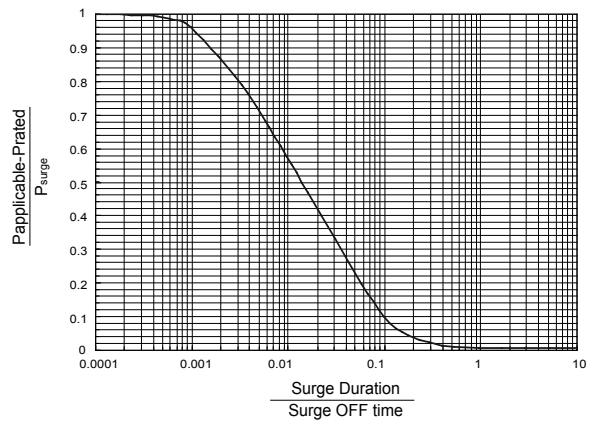
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■ SINGLE SURGE PERFORMANCE



■ SURGE POWER DERATING CURVE



Notes:

- SINGLE SURGE PERFORMANCE graph is good for NON REPETITIVE applications operating in an ambient temperature of 40°C or less. For temperatures above 40°C, the graph power must be derated further linearly down to zero at 200°C.
- To determine applicable surge power in continuous-surge applications:
 1. Identify allowable duration and peak power P_{surge} of single surge;
 2. Determine ratio of surge duration/surge OFF time in application;
 3. Calculate $P_{applicable}$ backwardly according to Y-axis of SURGE POWER DERATING CURVE.

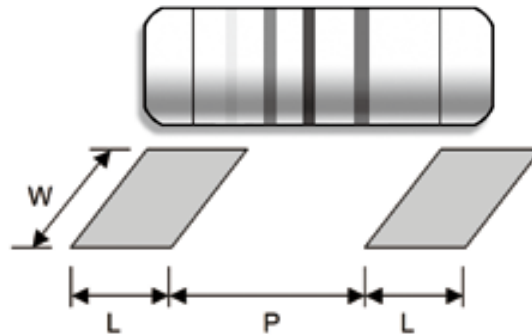
■ PERFORMANCE SPECIFICATIONS

Characteristics	Test Conditions	Limits	
Short Time Overload	IEC 60115-1 4.13 5 seconds 2.5x rated voltage (not over 2x max. working voltage)	±2%	
Load Life In Humidity	IEC 60115-1 4.24 56 days rated load (not over max. working voltage) at (40±2)°C and (93±3)% relative humidity	±5%	
Load Life	IEC 60115-1 4.25.1 Rated load (not over max. working voltage) 1,000 hours with 1.5 hours ON, 0.5 hours OFF, at (40±2)°C	±5%	
Resistance To Soldering Heat	IEC 60115-1 4.18.2 Dip the resistor into a solder bath measured (260±5)°C and hold it for a 10±1 seconds	±2.5%	
Solderability	IEC 60115-1 4.17.2 Solder area covered after (235±3)°C / (2±0.2) seconds with flux applied	95% min.coverage	
Vibration	IEC 60115-1 4.22 Six hours in each parallel and axial direction with a simple harmonic motion having an amplitude of 0.75mm and 10 to 500 Hz.	±2%	
Thermal Endurance	IEC 60115-1 4.25.3 1,000 hours at 200°C without load	±5%	
Thermal Shock	IEC 60115-1 4.19 -55°C 30minutes, +155°C 30minutes, 5 cycles	±3%	
Surge Test	Surge voltage = $\sqrt{(40,000 \times P \times R)}$ DC P is power rating, R is resistance value, surge voltage is not more than listed at right. Surge duration = 1.2/50µs Period = 60 sec Number of surge = 100	15KV	±5%

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■ SUGGESTED PAD LAYOUT



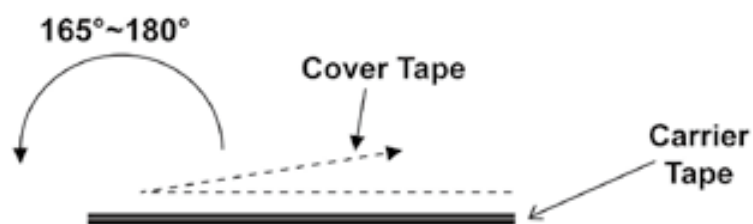
Type	Soldering Mode	Pad Length (L, mm, Min.)	Pad Spacing (P, mm)	Pad Width (W, mm, Min.)
RC100	Reflow	5.0	9.3 ± 0.4	6.5
	Wave	5.0	9.0 ± 0.4	6.0

For better heat dissipation / lower heat resistance, increase W & L.

■ COVER TAPE PEELING SPECIFICATION

Recommended peeling force:

RC100: 80±10gf



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■ PART NUMBER

Example: RC1001W22RKTYLNIL

RC100	1W	22R	K	TYL	NIL
Type	Power	Resistance	Tolerance	TCR	Packaging
	1W	22R=22Ω 22K=22KΩ 1M=1MΩ R = 1 K = 10 ³ M = 10 ⁶ G = 10 ⁹	J (5%) K (10%) M (20%)	3-7-character code TYL=Typical ± 5 ppm=5ppm ± 1000ppm=1000ppm	Nil = Bulk T/R = Tape and Reel T/B = Tape and Box