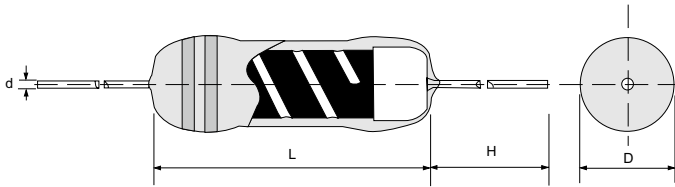


C3 - Composite Film-Type Ceramic Composition Resistor

Quality • Reliability
Cost-Down via Innovation

C3



Features

- Innovative and cost-effective C3 technology
- Conforms to ANSI/AAMI EC53:2013/ IEC 60601-2-27:2011
- Suitable replacement for ceramic composition resistors, which are required 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)	Body Diameter (D , mm)	Lead Wire Length (H , mm)	Lead Wire Diameter (d , mm)	Net Weight Per 1000 Pcs
C3100	15.5 ± 1.0	5.0 ± 0.5	30 ± 3.0	0.80 ± 0.03	1150 Grams

GENERAL SPECIFICATIONS

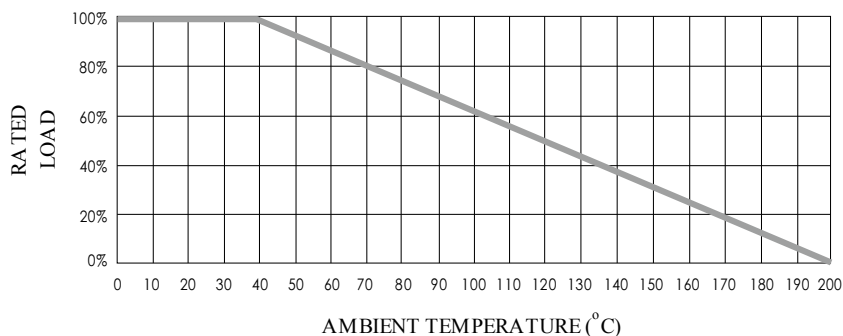
Type	Power Rating (at 40°C)	Maximum Working Voltage	Maximum Permissible Surge Voltage	Minimum Resistance	Maximum Resistance	Resistance Tolerance	Available Resistance Values
C3100	1W	300V	15KV	33Ω	22KΩ	± 10%, ± 20%	E-6 / E-12

PART NUMBER

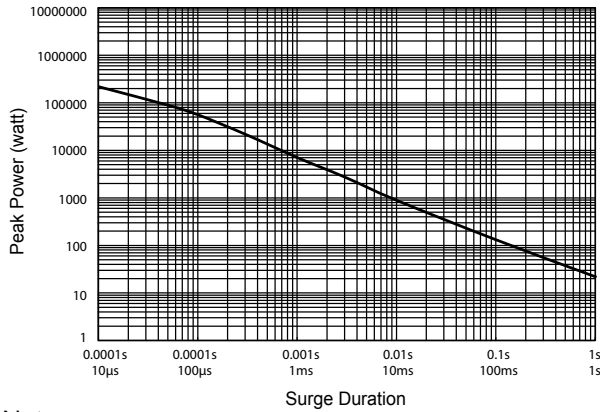
Example: C3100K1K00TKZTB500

C3100	K	1K00	TKZ	TB500
Type	Tolerance	Resistance	TCR	Packaging
	K (10%) M (20%)	1KΩ 4-character code containing - 3 significant digits 1 letter multiplier <u>OHM MULTIPLIER</u> R = 1 K = 10 ³ M = 10 ⁶ G = 10 ⁹	3-character code TKZ = Default Product Temperature Coefficient. Information of typical product temperature coefficient can be found in the Technical Summary section of the datasheet.	5-character code TB = Tape Box 500 pieces per box

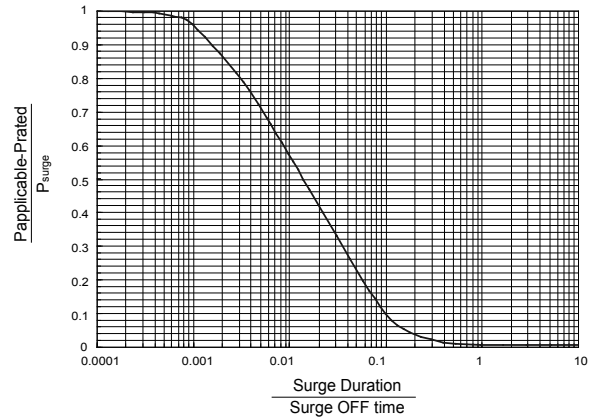
POWER DERATING CURVE



■ 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.

■ TECHNICAL SUMMARY

Characteristics	Limits
Dielectric Withstanding Voltage, VAC or DC	800
Temperature Coefficient, PPM / °C*	-3000 (Typical)
Operating Temperature Range, °C	-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).

■ PERFORMANCE SPECIFICATIONS

Characteristics	Test Conditions	Limits
Short Time Over Load	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 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 Leads immersed till 3mm from the body in (260±5)°C solder for 10±1 seconds	±2%
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.	±0.5%
Thermal Endurance	IEC 60115-1 4.25.3 1000 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	Proprietary test specification FRC-TR-010113 = $\sqrt{40,000 \times P \times R}$ 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 surges = 100	15KV ±5%