

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
2019-5-20	A	/	4	首次发行	常斯琴	彭旭

RISC Series

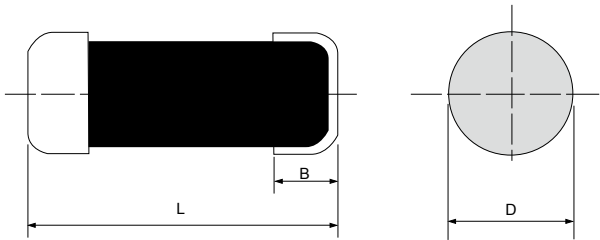
Ignition Noise Suppression Resistor (Ceramic Film Composite Type)

Specifications Per

• IEC 60115-1

Features

- Dedicatedly designed for high-voltage spark ignition systems.
- Proprietary ceramic composite withstands high-voltage surge impacts with long-term stability. One of few sources in the world capable of manufacturing such type of resistor.
- RoHS and REACH compliant



DIMENSIONS

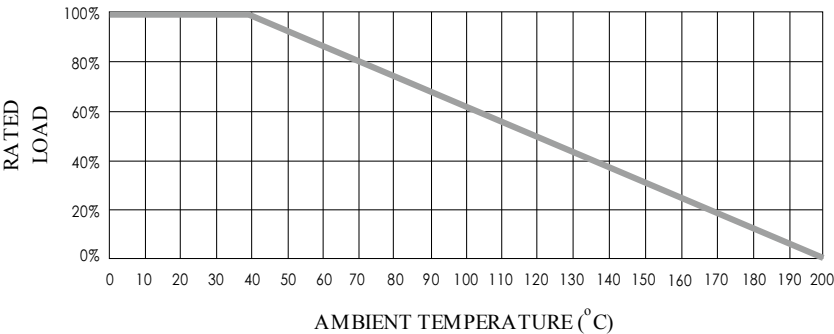
Type	Body Length (L, mm)	Body Diameter (D, mm)	Cap Length (B, mm)	Net Weight Per 1000 pcs
RISC20K	10.5± 1.0	4.0 ± 0.5	2.2 ± 0.3	390 grams
RISC25K	11.0 ± 1.0	3.5 ± 0.5	2.2 ± 0.3	400 grams
RISC50K	18.5 ± 1.0	4.5 ± 0.7	2.2 ± 0.3	700 grams
RISC50K1	22.5 ± 1.5	4.5 ± 0.7	2.2 ± 0.3	1300 grams

GENERAL SPECIFICATIONS

Type	Power Rating (at 40°C)	Maximum Working Voltage	Maximum Surge Load	Minimum Resistance	Maximum Resistance	Resistance Tolerance	Available Resistance Values
RISC20K	0.5W	350V	25KV / 10nS	1KΩ	10KΩ	±5% ~ ±20%	E-6/E-24
RISC25K	0.5W	350V	25KV / 10nS	1KΩ	10KΩ	±5% ~ ±20%	E-6/E-24
RISC50K	2W	400V	50KV / 20nS	1KΩ	10KΩ	±5% ~ ±20%	E-6/E-24
RISC50K1	3W	450V	50KV / 30nS	1KΩ	10KΩ	±5% ~ ±20%	E-6/E-24

Special sizes, values, and specifications not listed available on special order.

POWER DERATING CURVE



RISC Series

Ignition Noise Suppression Resistor

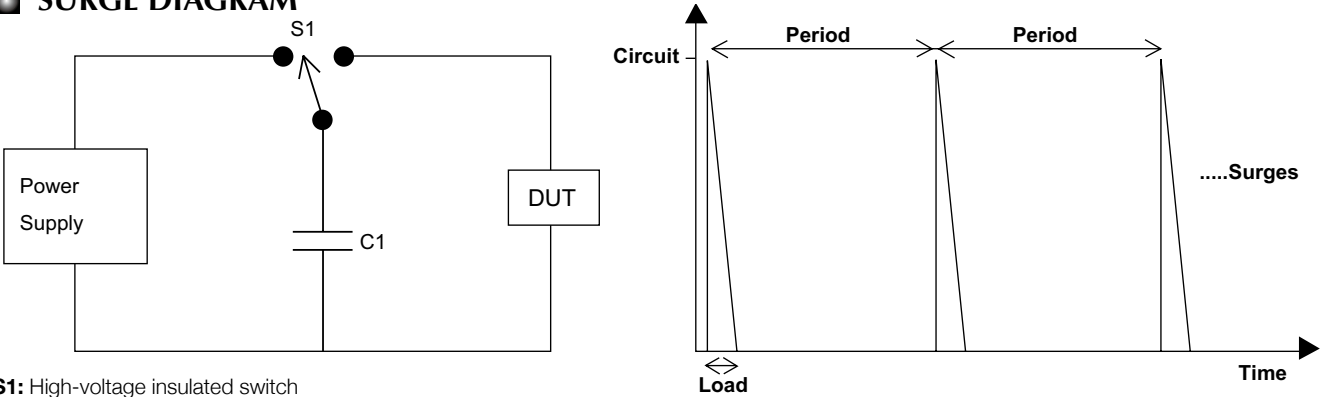
(Ceramic Film CompositeType)

TECHNICAL SUMMARY

Characteristics	Limits	
Dielectric Withstanding Voltage, VAC or DC	RISC20K RISC25K RISC50K RISC50K1	500
Temperature Coefficient, PPM / °C*	±3300 (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).

SURGE DIAGRAM



S1: High-voltage insulated switch
C1: High-voltage variable capacitor
Power supply: Variable 0 ~ 50KV DC
DUT: Device Under Test.

SURGE TEST

Type	Circuit	Load	Period	Surges
RISC20K	25KV	20nS	20mS	200,000
RISC25K	25KV	20nS	20mS	200,000
RISC50K	50KV	30nS	20mS	200,000
RISC50K1	50KV	45nS	20mS	200,000

RISC Series

Ignition Noise Suppression Resistor

(Ceramic Film CompositeType)

■ 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%
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.	±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, 500 cycles	±5%
Surge Test	200,000 impacts at period 20ms (3000rpm/1hour) according to the following chart.	±5%

■ PART NUMBER

Example: **RISC20K1/2W22RJ3300ppmNIL**

RISC20K	1/2W	22R	J	3300ppm	NIL
Type	Power	Resistance	Tolerance	TCR	Packaging
	1/2W	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 TCR=±300ppm=300ppm	Nil = Bulk T/R = Tape and Reel T/B = Tape and Box