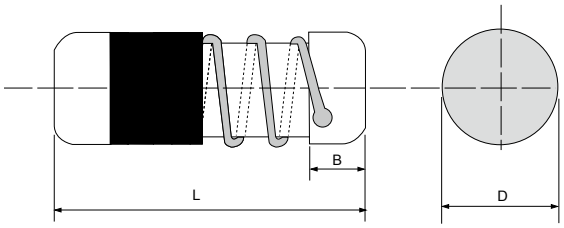
ISW - Ignition Noise Suppression Resistor(Wirewound Type)

Quality • Reliability
Cost-Down via Innovation.



Specifications Per

• IEC 60115-1

Features

• Dedicatedly designed for high-voltage spark ignition systems
• Enhanced weld spot is reliable against surge with long-term stability
• RoHS and REACH compliant

DIMENSIONS

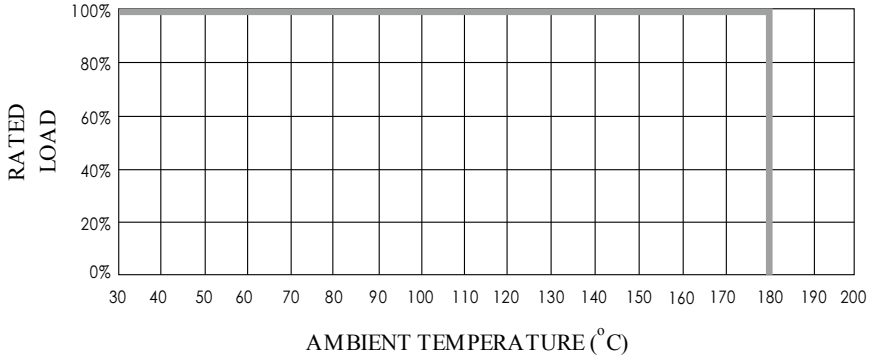
Type	Body Length (L, mm)	Body Diameter (D, mm)	Cap Length (B, mm)
ISW35K	16.0 ± 1.0	4.5 ± 0.7	2.2 ± 0.3
ISW50K	18.5 ± 1.0	4.5 ± 0.7	2.2 ± 0.3
ISW50K1	22.5 ± 1.5	4.5 ± 0.7	2.2 ± 0.3

GENERAL SPECIFICATIONS

Type	Nominal Power Rating (at 70°C)	Maximum Working Voltage	Maximum Surge Load	Minimum Resistance	Maximum Resistance	Resistance Tolerance	Available Resistance Value
ISW35K	2W	350V	35KV / 20nS	1KΩ	3K3Ω	±5% ~ ± 20%	E-6/E-24
ISW50K	2W	400V	50KV / 20nS	1KΩ	4KΩ	±5% ~ ± 20%	E-6/E-24
ISW50K1	3W	450V	50KV / 30nS	1KΩ	5KΩ	±5% ~ ± 20%	E-6/E-24

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

POWER DERATING CURVE



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PART NUMBER

Example: ISW50KM1K00TKZBK500

ISW50K	M	1K00	TKZ	BK500
Type	Tolerance	Resistance	TCR	Packaging
	J (5%) K (10%) M (20%)	1KΩ **4-character code** containing - 3 significant digits 1 letter multiplier OHM MULTIPLIER 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.	Bulk 500 pieces **5-character code** BK = Bulk BK + Quantity

TECHNICAL SPECIFICATIONS

Characteristics	Limits	
Dielectric Withstanding Voltage, VAC or DC	ISW35K ISW50K ISW50K1	500
Temperature Coefficient, PPM / °C*	±300	
Operating Temperature Range, °C	-40 ~ +180	
Insulation Resistance, MΩ	10^4	
Inductance Range, 2 MHz, μH	5 to 50	

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

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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 working voltage) at (40±2)°C and (93±3)% relative humidity	±5%
Load Life 1,000 hours	**IEC 60115-1 4.25.1** Rated load (not over working voltage) with 1.5 hours ON, 0.5 hours OFF, at (70±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** 1,000 hours at 180°C without load	±5%
Thermal Shock	**IEC 60115-1 4.19** -55°C 30minutes, +155°C 30minutes, 5 cycles	±3%
Surge Test	200,000 impacts at period 20ms (3000rpmX1.11hours) according to the following chart.	±5%

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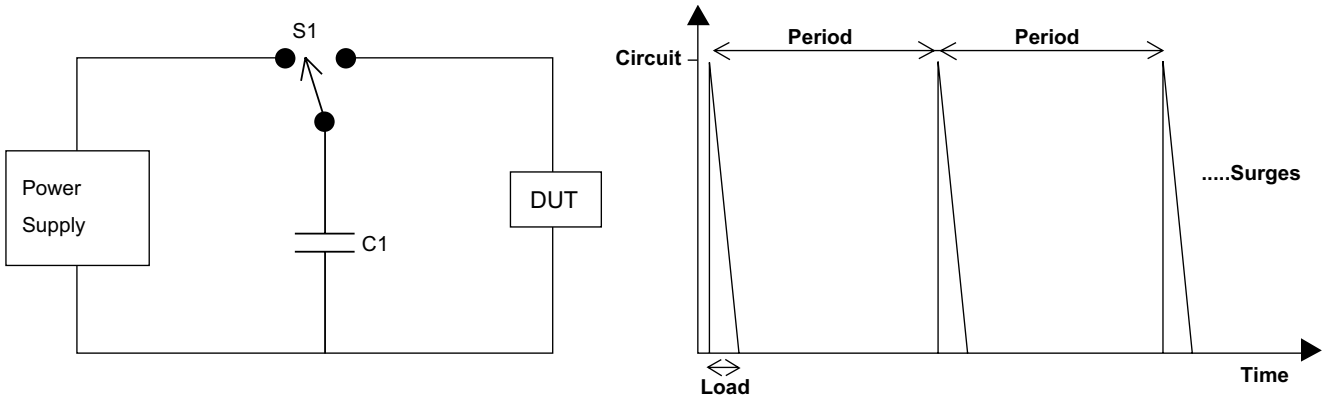
SURGE TEST

Type	Circuit	Load	Period	Surges
ISW35K	35KV	30nS	20mS	200,000
ISW50K	50KV	30nS	20mS	200,000
ISW50K1	50KV	45nS	20mS	200,000

SURGE DIAGRAM



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