



SOCAY Gas Discharge Tube Surge Protector SC2E5-90LSMD Surface Mount GDT

Our Product Introduction

Basic Information

- Place of Origin: Shenzhen, Guangdong, China
- Brand Name: SOCAY
- Certification: UL, REACH, RoHS, ISO
- Model Number: SC2E5-90LSMD
- Minimum Order Quantity: 2000PCS
- Price: Negotiable
- Delivery Time: 1-2weeks



Product Specification

- Description: Gas Discharge Tube
- Package: 5*5*4.2mm
- DC Spark-over Voltage @100V/ μ s: 90V \pm 20%
- Max. Spark-over Impulse Voltage @100V/ μ s: 500V
- Max. Spark-over Impulse Voltage @1KV/ μ s: 650V
- Min. Insulation Resistance: 1G Ω (@50V DC)
- Max. Capacitance: 1.0pF
- Arc Voltage @1A: 15V
- Nom. Max. Impulse Discharge Current Impulse Discharge Current: 5KA
- Operating Temperature: -40 $^{\circ}$ C~+90 $^{\circ}$ C
- Storage Temperature: -40 $^{\circ}$ C~+90 $^{\circ}$ C
- Max. Impulse Discharge Current: 10KA



More Images



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Product Description

SOCAY Gas Discharge Tube Surge Protector SC2E5-90LSMD, Surface Mount GDT

DATASHEET: [SC2E5-SMD_v2110.1.pdf](#)

Part Number	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage		Minimum Insulation Resistance	Maximum Capacitance	Arc Voltage	Service Life			
							Nominal Impulse Discharge Current	Max Impulse Discharge Current	Nominal Alternating Discharge Current	Impulse Life
	@100V/S	@100V/μs	@1KV/μs		@1MHz	@1A	@8/20μs ±5 times	@8/20μs 1 time	@50Hz 1 Sec 10 times	@10/100μs 300 times
SC2E5-75LSMD	75V±20%	500V	650V	1 GΩ (at 50V DC)	1.0pF	~15V	5KA	10KA	5A	100A
SC2E5-90LSMD	90V±20%	500V	650V	1 GΩ (at 50V DC)	1.0pF	~15V	5KA	10KA	5A	100A
SC2E5-150LSMD	150V±20%	500V	650V	1 GΩ (at 50V DC)	1.0pF	~20V	5KA	10KA	5A	100A
SC2E5-200LSMD	200V±20%	500V	650V	1 GΩ (at 100V DC)	1.0pF	~20V	5KA	10KA	5A	100A
SC2E5-230LSMD	230V±20%	600V	700V	1 GΩ (at 100V DC)	1.0pF	~20V	5KA	10KA	5A	100A
SC2E5-300LSMD	300V±20%	700V	800V	1 GΩ (at 100V DC)	1.0pF	~20V	5KA	10KA	5A	100A
SC2E5-350LSMD	350V±20%	700V	800V	1 GΩ (at 100V DC)	1.0pF	~20V	5KA	10KA	5A	100A
SC2E5-420LSMD	420V±20%	800V	950V	1 GΩ (at 100V DC)	1.0pF	~20V	5KA	10KA	5A	100A
SC2E5-470LSMD	470V±20%	900V	1000V	1 GΩ (at 100V DC)	1.0pF	~20V	5KA	10KA	5A	100A
SC2E5-600LSMD	600V±20%	1100V	1200V	1 GΩ (at 100V DC)	1.0pF	~20V	5KA	10KA	5A	100A
SC2E5-800LSMD	800V±20%	1200V	1400V	1 GΩ (at 100V DC)	1.0pF	~20V	5KA	10KA	5A	100A

Notes:
 Terms in accordance with ITU-T K.12 and GB/T 9043-2008
 At delivery AQL 0.65 level , DIN ISO 2859

I:About Gas discharge tube

Gas discharge tube, the full name of ceramic gas discharge tube, English Gas Discharge tube, often replaced by the abbreviation GDT, is a gap-type surge protection device, which has been widely used in lightning protection of communication systems. Discharge tubes are often used in the first or first two stages of multi-level protection circuits to discharge lightning instantaneous overcurrent and limit overvoltage. Since the inter-electrode insulation resistance of the discharge tube is very large and the parasitic capacitance is very small, it is not suitable for high frequencies. Lightning protection of signal lines has clear advantages. The main shortcomings of the discharge tube protection characteristics are that its discharge time delay is large, the action sensitivity is not ideal, and it is difficult to effectively suppress lightning waves with a large rising steepness. There is a continuous flow problem in the lightning protection of the power supply system.



II: Main Ingredients

Porcelain tube powder, electrode, electron inert gas, etc.

Features:

Non-Radioactive
RoHS compliant
Low insertion loss
Excellent response to fast rising transients
Ultra low capacitance
5KA surge capability tested with 8/20 μ s pulse as defined by IEC 61000-4-5

Classification of ceramic gas discharge tubes

1. According to the number of electrodes, commonly used gas discharge tubes are divided into diode discharge tubes and triode discharge tubes. Most of their packaging materials are ceramics, so they are called ceramic discharge tubes.
2. According to the appearance size, commonly used gas discharge tubes are divided into chip discharge tubes and plug-in discharge tubes.
3. According to the product pulse voltage, commonly used gas discharge tubes are divided into conventional pulse discharge tubes and low pulse discharge tubes.

Working principle of ceramic gas discharge tube

Ceramic gas discharge tubes are sealed with ceramics, and are composed of two or more metal electrodes with gaps inside, filled with inert gases argon and neon. Generally, they are connected in parallel on the circuit. When the device does not operate, the resistance is very high and the equivalent capacitance is low. It can be regarded as an open circuit and has almost no impact on the circuit. When there is an abnormal pulse, the internal resistance drops instantly after reaching the operating voltage value, and the current is released. When the abnormal high voltage disappears, it will automatically return to the high resistance state and the circuit will operate normally.

Advantages of ceramic gas discharge tubes

1. Before breakdown (conduction), it is equivalent to an open circuit, with a large resistance and no or very small leakage current;
2. After breakdown (conduction), it is equivalent to a short circuit, which can pass a large current with a very small voltage drop;
3. The pulse current capacity (peak current) is very large; 2.5kA~100kA;
4. It has two-way symmetry characteristics.
5. The capacitance value is very small, less than 3pF.

About SOCAY

we are manufacturer and supplier of GDT, NTC, DIODES ect passive components more than 20 years from China .if you have any request please contact us freely .

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