



## 20KA SMD Gas Discharge Tube SC2E8-600HSMD Surface Mount 2-Electrode GDT

Our Product Introduction

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### Basic Information

- Place of Origin: Shenzhen, Guangdong, China
- Brand Name: SOCAY
- Certification: UL, REACH, RoHS, ISO
- Model Number: SC2E8-600HSMD
- Minimum Order Quantity: 500PCS
- Price: Negotiable
- Delivery Time: 5-8 work days



### Product Specification

- Product Name: Gas Discharge Tube
- Size:  $\phi 8 \times 6\text{mm}$
- DC Spark-over Voltage @100V/ $\mu\text{s}$ :  $600\text{V} \pm 20\%$
- Max. Spark-over Impulse Voltage @100V/ $\mu\text{s}$ : 1100V
- Max. Spark-over Impulse Voltage @1KV/ $\mu\text{s}$ : 1200V
- Max. Capacitance: 1.5pF
- Nom. Impulse Discharge Current: 20KA
- Storage Temperature:  $-40^{\circ}\text{C} \sim +90^{\circ}\text{C}$
- Arc Voltage: 20V
- Highlight: Gas Discharge Tube Surface Mount, 20KA Gas Discharge Tube



### Product Description

20KA SMD Ceramic Gas Discharge Tube SC2E8-600HSMD, Surface Mount 2-Electrode GDT



#### Description

Gas discharge Tubes (GDT) are classical components for protecting the installations of the telecommunications. It is essential that IT and telecommunications systems -with their high-grade but sensitive electronic circuits - be protected by arresters. They are thus fitted at the input of the power supply system together with varistors and at the connection points to telecommunication lines. They have become equally indispensable for protecting base stations in mobile telephone systems as well as extensive cable television (CATV) networks with their repeaters and distribution systems.

These protective components are also indispensable in other sectors. In AC power transmission systems, they are often used with current-limiting varistors. In customer premises equipment such as DSL modems, WLAN routers, TV sets and cable modems. In air-conditioning equipment, the integral black-box concept offers graduated protection by combining arresters with varistors, PTC, diodes and inductor.

| Part Number                                | Marking    | 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 Impulse Discharge Current | Impulse           |
|                                            |            | @100V/S               | @100V/ $\mu$ s                     | @1KV/ $\mu$ s |                               | @1MHz               | @1A         | @8/20 $\mu$ s $\pm$ 5 times       | @8/20 $\mu$ s 1 time          | @50Hz 1 Sec 10 times              | @10/100 300 times |
| SC2E8-75H<br>SC2E8-75HL<br>SC2E8-75HSMD    | SOCAY 75H  | 75V $\pm$ 20%         | 500V                               | 600V          | 1 G $\Omega$ (at 25V)         | 1.5pF               | ~15V        | 20KA                              | 25KA                          | 20A                               | 200A              |
| SC2E8-90H<br>SC2E8-90HL<br>SC2E8-90HSMD    | SOCAY 90H  | 90V $\pm$ 20%         | 500V                               | 600V          | 1 G $\Omega$ (at 50V)         | 1.5pF               | ~15V        | 20KA                              | 25KA                          | 20A                               | 200A              |
| SC2E8-150H<br>SC2E8-150HL<br>SC2E8-150HSMD | SOCAY 150H | 150V $\pm$ 20%        | 500V                               | 600V          | 1 G $\Omega$ (at 50V)         | 1.5pF               | ~20V        | 20KA                              | 25KA                          | 20A                               | 200A              |
| SC2E8-230H<br>SC2E8-230HL<br>SC2E8-230HSMD | SOCAY 230H | 230V $\pm$ 20%        | 600V                               | 700V          | 1 G $\Omega$ (at 100V)        | 1.5pF               | ~20V        | 20KA                              | 25KA                          | 20A                               | 200A              |

|                                            |               |          |       |       |                   |       |      |      |      |     |      |
|--------------------------------------------|---------------|----------|-------|-------|-------------------|-------|------|------|------|-----|------|
| SC2E8-250H<br>SC2E8-250HL<br>SC2E8-250HSMD | SOCAY<br>250H | 250V±20% | 700V  | 800V  | 1 GΩ (at<br>100V) | 1.5pF | ~20V | 20KA | 25KA | 20A | 200A |
| SC2E8-300H<br>SC2E8-300HL<br>SC2E8-300HSMD | SOCAY<br>300H | 300V±20% | 800V  | 900V  | 1 GΩ (at<br>100V) | 1.5pF | ~20V | 20KA | 25KA | 20A | 200A |
| SC2E8-350H<br>SC2E8-350HL<br>SC2E8-350HSMD | SOCAY<br>350H | 350V±20% | 800V  | 900V  | 1 GΩ (at<br>100V) | 1.5pF | ~20V | 20KA | 25KA | 20A | 200A |
| SC2E8-420H<br>SC2E8-420HL<br>SC2E8-420HSMD | SOCAY<br>420H | 420V±20% | 900V  | 1000V | 1 GΩ (at<br>100V) | 1.5pF | ~20V | 20KA | 25KA | 20A | 200A |
| SC2E8-470H<br>SC2E8-470HL<br>SC2E8-470HSMD | SOCAY<br>470H | 470V±20% | 900V  | 1000V | 1 GΩ (at<br>100V) | 1.5pF | ~20V | 20KA | 25KA | 20A | 200A |
| SC2E8-600H<br>SC2E8-600HL<br>SC2E8-600HSMD | SOCAY<br>600H | 600V±20% | 1100V | 1200V | 1 GΩ (at<br>100V) | 1.5pF | ~20V | 20KA | 25KA | 20A | 200A |
| SC2E8-800H<br>SC2E8-800HL<br>SC2E8-800HSMD | SOCAY<br>800H | 800V±20% | 1200V | 1400V | 1 GΩ (at<br>100V) | 1.5pF | ~20V | 20KA | 25KA | 20A | 200A |

#### Notes:

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

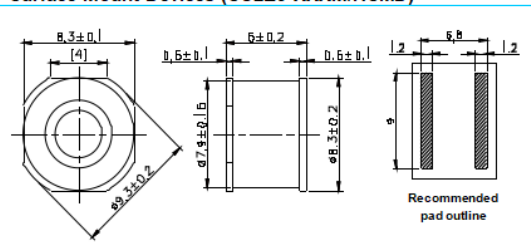
### Features

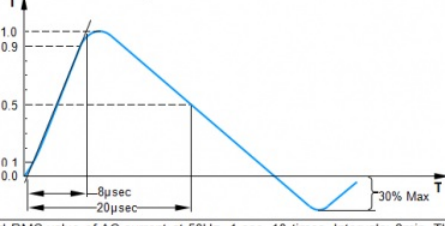
- ◆ Non-Radioactive
- ◆ RoHS compliant
- ◆ High insulation resistance
- ◆ Excellent response to fast rising transients
- ◆ Ultra low capacitance
- ◆ 10~20KA surge capability tested with 8/20μs pulse as defined by IEC 61000-4-5

### Applications

- ◆ Communication lines and equipment
- ◆ CATV equipment
- ◆ Test equipment
- ◆ Data lines
- ◆ Power supplies
- ◆ Instrumentation circuits
- ◆ Medical electronics
- ◆ ADSL equipment
- ◆ Telecom SLIC protection

### Surface Mount Devices (SC2E8-XXXM/HSMD)



| Electrical Rating                     |                                                                                                                                                                                                                                                                                                                                                                                                                        |                             |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Item                                  | Test Condition / Description                                                                                                                                                                                                                                                                                                                                                                                           | Requirement                 |
| DC Spark-over Voltage                 | The voltage is measured with a slowly rate of rise $dv/dt=100V/s$                                                                                                                                                                                                                                                                                                                                                      | To meet the specified value |
| Impulse Spark-over Voltage            | The maximum impulse spark-over voltage is measured with a rise time of $dv/dt=100V/\mu s$ or $1KV/\mu s$                                                                                                                                                                                                                                                                                                               |                             |
| Insulation Resistance                 | The resistance of gas tube shall be measured each terminal each other terminal, please see above spec.                                                                                                                                                                                                                                                                                                                 |                             |
| Capacitance                           | The capacitance of gas tube shall be measured each terminal to each other terminal.<br>Test frequency :1MHz                                                                                                                                                                                                                                                                                                            |                             |
| Nominal Impulse Discharge Current     | <p>The maximum current applying a waveform of <math>8/20\mu s</math> that can be applied across the terminals of the gas tube. One hour after the test is completed, re-testing of the DC spark-over voltage does not exceed <math>\pm 30\%</math> of the nominal DC spark-over voltage. Dwell time between pulses is 3 minutes.</p>  |                             |
| Nominal Alternating Discharge Current | Rated RMS value of AC current at 50Hz, 1 sec. 10 times. Intervals: 3min. The DC spark-over voltage does not exceed $\pm 30\%$ of the nominal DC spark-over voltage. $IR > 10^6 ohms$                                                                                                                                                                                                                                   |                             |

#### Cautions and Warnings:

Gas discharge tubes (GDT) must not be operated directly in power supply networks.

Gas discharge tubes (GDT) may become hot in case of longer periods of current stress (danger of burning).

Gas discharge tubes (GDT) may be used only within their specified values. In the event of overload, the head contacts may fail or the component may be destroyed.

Damaged Gas discharge tubes (GDT) must not be re-used.



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