



## RoHS Compliant Circuit Protection Components SM8S20CAG Surface Mount TVS SMD Diode

Our Product Introduction

### Basic Information

- Place of Origin: Shenzhen, Guangdong, China
- Brand Name: SOCAY
- Certification: UL, REACH, RoHS, ISO
- Model Number: SM8S20CAG
- Minimum Order Quantity: 500PCS
- Price: Negotiable
- Delivery Time: 5-8 work days



### Product Specification

- Product Name: TVS Diodes
- Package Size: DO-218AB
- Vr: 20V
- Ir@Vr @25 : 5μA
- Ir@Vr @175 : 150μA
- Vbr@It (Min.): 22.2V
- Vbr@It (Max.): 24.5V
- It: 5mA
- Vc@Ipp: 32.4V
- Ipp: 204A
- Storage Temperature: -55°C To +175°C
- Highlight: RoHS Circuit Protection Components, SMD Circuit Protection Components, Surface Mount TVS SMD Diode



### More Images



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## Product Description

### RoHS Compliant Circuit Protection Components SM8S20CAG Surface Mount TVS SMD Diode

**DATASHEET:** [SM8SXXG Series\\_v2309.1.pdf](#)

#### Description:

The SM8S series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

| Part Number   |           | Working Peak Reverse Voltage $V_{RWM}$ (V) | Breakdown Voltage $V_{BR}$ (V) |      | Test Current $I_T$ (mA) | Maximum Reverse Leakage $I_R$ @ $V_{RWM}$ ( $\mu A$ ) | Maximum $I_R$ @ $V_{RWM}$ $T_J=175$ ( $\mu A$ ) | Maximum Reverse Surge Current $I_{PP}$ (A) | Maximum Clamping Voltage $V_C$ @ $I_{PP}$ (V) |
|---|-----------|--|--------------------------------|------|-------------------------|---|---|--|---|
| Uni   | Bi        |  | Min.                           | Max. |                         |   |   |  |   |
| SM8S20AG  | SM8S20CAG | 20.0                                       | 22.2                           | 24.5 | 5.0                     | 10  | 150   | 204  | 32.4  |
| <b>Notes:</b><br>1. Surge current waveform is defined at 10/1000 $\mu$ S waveform.<br>2. For all types maximum $V_F = 1.8$ V at $I_F = 100$ A measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum. |           |  |                                |      |                         |   |   |  |   |

#### Features:

Product electrical parameters:

1. Power: 6600W
2. Working voltage: 10.0-43.0V
3. Current: 388-95.1A
4. Provide one-way/two-way polarity
5. Low forward voltage drop and low leakage current
6. High surge capability
7. Junction passivation optimization design passivation anisotropic rectification technology
8.  $T_J = 175$ , suitable for high reliability and automotive requirements
9. Comply with ISO7637-2 surge specifications (test conditions change)
10. Comply with MSL level 1, according to J-STD-020, the maximum LF peak value is 245
11. Comply with AEC-Q101 requirements

#### Application:

Automotive Protection.

#### Typical applications of SM8S series automotive grade TVS diodes:

1. Adding TVS diodes to signal and power lines can prevent microprocessors or microcontrollers from malfunctioning due to instantaneous surges, such as electrostatic discharge effects, AC power surges and switching power supply noise.
2. The electrostatic discharge effect can release pulses of more than 10,000V and 60A, and can last for 10ms; while ordinary TTL devices will be damaged when encountering 10V pulses of more than 30ms. TVS diodes can effectively absorb pulses that can cause device damage and eliminate interference caused by switching between buses.
3. Placing the TVS tube between the signal line and the ground can prevent the data and control bus from being affected by unnecessary noise.

#### Packaging

| Part Number    | Component Package | Quantity | Packaging Option  |
|----------------|-------------------|----------|---|
| SM8SXXG Series | DO-218AB          | 500 PCS  | 13" diameter plastic tape and reel, anode towards the sprocket hole |



**SOCAY's main products** include a full range of Ceramic Gas Discharge Tubes (GDT), Transient Suppression Diodes (TVS Diodes), ESD Suppressor, Thyristor Surge Suppressors (TSS), Spark Gap Protectors (SPG), Varistors (MOV), Chip Varistors (MLV), PTC Resettable Fuse, Negative Temperature Coefficient thermistors (NTC Thermistors), Chip Bead, Schottky Diodes, Zener Diode, etc. From circuit design to product testing (and provide test reports), we will provide you with one-stop services in the field of circuit protection. With excellent quality and service, SOCAY has won extensive praise from customers and respect from the industry.

