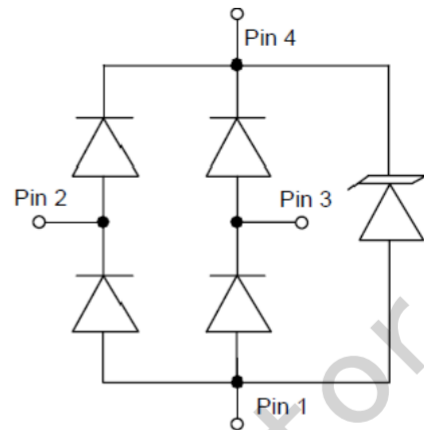


## Features

- ◆ 45W (8/20 $\mu$ s) Peak Pulse Power
- ◆ Low Capacitance ESD Protection
- ◆ SOT-143 Package
- ◆ RoHS Compliant
- ◆ Matte Tin Lead finish (Pb-Free)
- ◆ Protect Two High Speed Data Lines and Vcc
- ◆ Meet IEC61000-4-2 Level 4:

Contact Discharge > 15kV

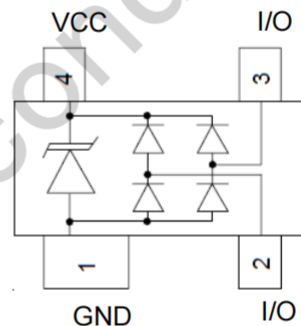
Air Discharge > 20kV



Circuit Diagram

## Applications

- ◆ I<sup>2</sup>C Bus Protection
- ◆ ISDN S/T Interface
- ◆ Ethernet 10/100 BaseT
- ◆ Portable Electronics
- ◆ Video Line Protection
- ◆ WAN/LAN Equipment
- ◆ Microcontroller Input Protection
- ◆ USB Power and Data Line Protection
- ◆ T1/E1 Secondary IC Side Protection



PIN Diagram

## Ordering information

| Device | Package | Reel Size | Qty / Reel |
|--------|---------|-----------|------------|
| SR05   | SOT-143 | 7 inch    | 3000       |

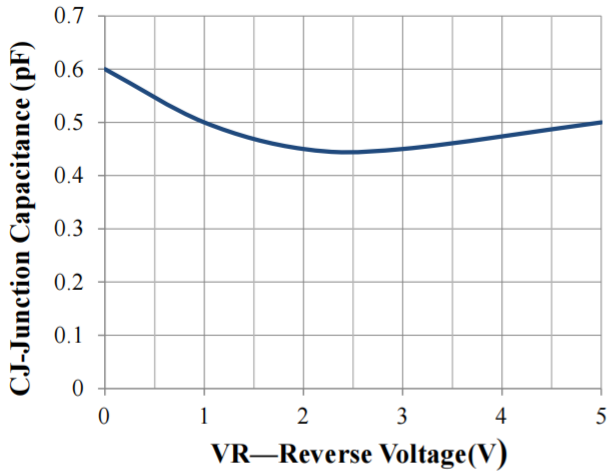
## Absolute Maximum Ratings (TA =25°C unless otherwise specified)

| Parameter                                  | Symbol               | Value       | Unit |
|--|----------------------|-------------|------|
| Peak Pulse Power (8/20 $\mu$ s, I/O-GND)   | Ppk                  | 45          | W    |
| Peak Pulse Power (8/20 $\mu$ s, Vcc-GND)   | Ppk                  | 60          | W    |
| Peak Pulse Current (8/20 $\mu$ s, I/O-GND) | IPP                  | 3           | A    |
| Peak Pulse Current (8/20 $\mu$ s, Vcc-GND) | IPP                  | 4           | A    |
| ESD per IEC 61000-4-2 (Air)                | V <sub>ESD,VDD</sub> | $\pm 20$    | kV   |
| ESD per IEC 61000-4-2 (Contact)            | V <sub>ESD,I/O</sub> | $\pm 15$    | kV   |
| Operating Temperature Range                | TJ                   | -55 to +125 | °C   |
| Storage Temperature Range                  | Tstg                 | -55 to +150 | °C   |

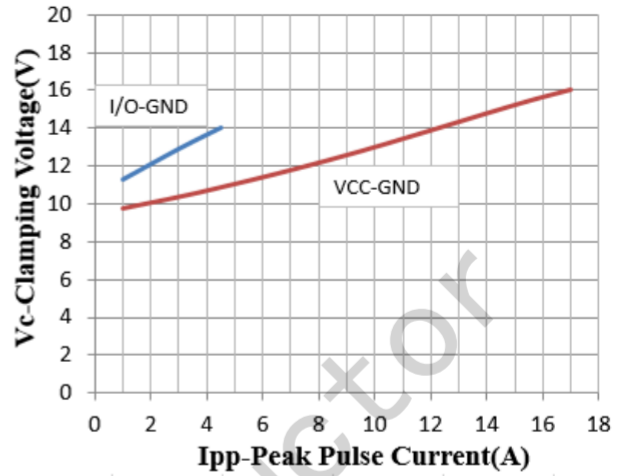
## Electrical Characteristics (TA =25°C unless otherwise specified)

| Parameter                 | Symbol    | Test Condition   | Min | Typ  | Max  | Unit          |
|---------------------------|-----------|--|-----|------|------|---------------|
| Reverse Working Voltage   | $V_{RWM}$ | Pin 5 to GND, I/O-GND  |     |      | 5.0  | V             |
| Breakdown Voltage         | $V_{BR}$  | $I_T = 1\text{mA}$ (Pin 5 to GND, I/O-GND)                           | 6.0 | 7.5  | 8.5  | V             |
| Reverse Leakage Current   | $I_R$     | $V_{RWM} = 5.0\text{V}$  |     |      | 0.5  | $\mu\text{A}$ |
| Forward Breakdown Voltage | $V_F$     | $I_F = 15\text{mA}$ , GND to Pin 5/I/O                               |     | 0.8  | 1.0  | V             |
| Clamping Voltage          | $V_C$     | $I_{PP} = 3\text{A}$ (8 x 20 $\mu\text{s}$ pulse, I/O to GND)        |     | 14.0 | 15.0 | V             |
| Clamping Voltage          | $V_C$     | $I_{PP} = 4\text{A}$ (8 x 20 $\mu\text{s}$ pulse, Pin 5 to GND)      |     | 16.0 | 18.0 | V             |
| Junction Capacitance      | $C_J$     | $V_{pin5} = 5\text{V}$ , I/O=0V,<br>$f = 1\text{MHz}$ , I/O-GND      |     | 0.6  | 0.7  | pF            |
| Junction Capacitance      | $C_J$     | $V_{pin5} = 5\text{V}$ , I/O=0V,<br>$f = 1\text{MHz}$ , I/O-I/O pins |     | 0.3  | 0.4  | pF            |

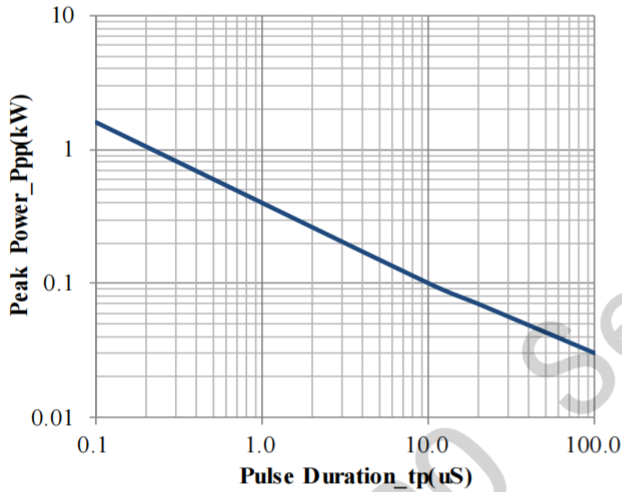
Typical Performance Characteristics (TA =25°C unless otherwise Specified)



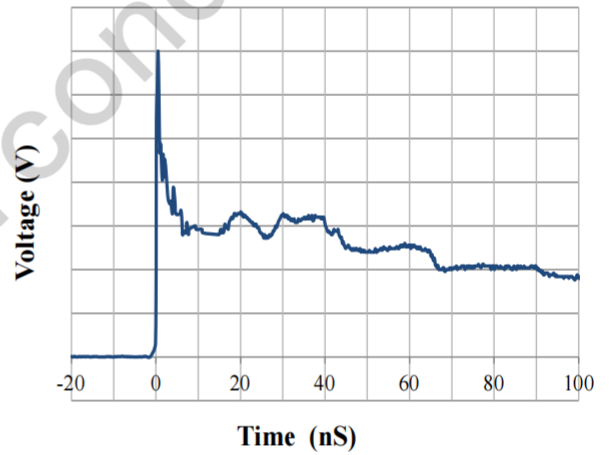
Junction Capacitance vs. Reverse Voltage



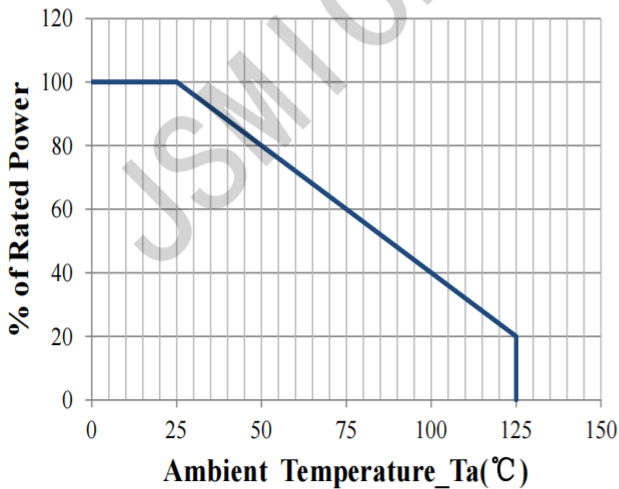
Clamping Voltage vs. Peak Pulse Current



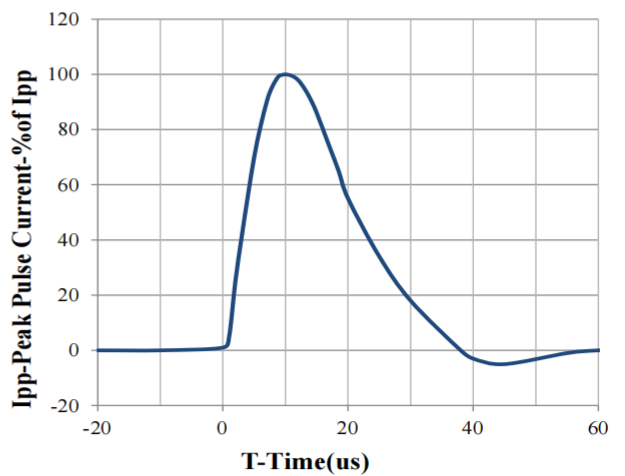
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



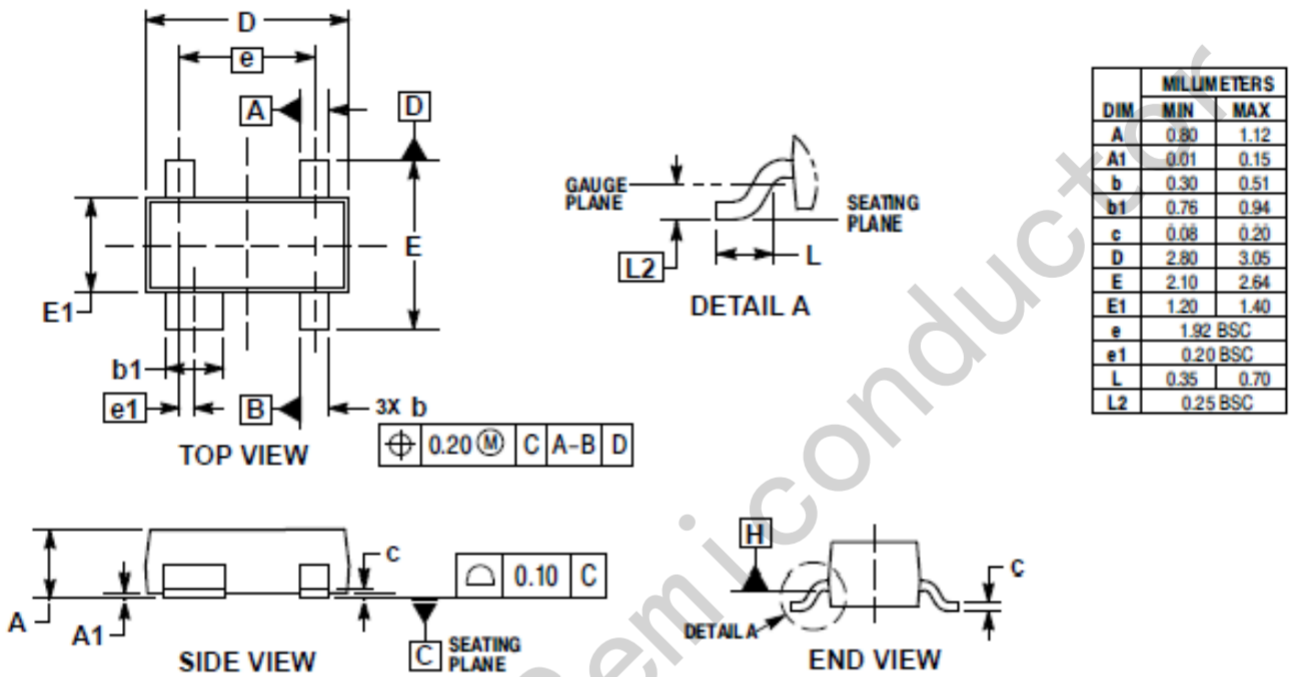
Power Derating Curve



8 X 20us Pulse Waveform

Package Information

SOT-143



单击下面可查看定价，库存，交付和生命周期等信息

[>>JSMSEMI\(杰盛微\)](#)