



# SLMESD5V0D9 TVS Diodes for ESD Protection

## SLMESD5V0D9 TVS Protection Diodes SOLA ESD Protection Diodes

### General description

The SLMESD5V0D9 series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

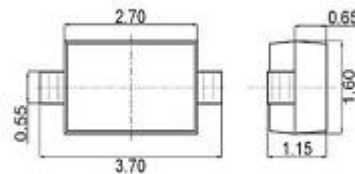
### Features

- Stand-off Voltage: 5V-7.0V
- Peak power up to 1200 Watts@8x20us Pulse
- Low leakage
- Response time is typically <1ns
- ESD rating of Class 3(>16KV)per Human Body Model
- IEC61000-4-2 Level 4 ESD Protection
- IEC61000-4-4 Level 4 EFT Protection

### Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

### Package Information



### Marking





# SLMESD5V0D9

## TVS Diodes for ESD Protection

### Absolute Ratings( $T_{amb}=25^{\circ}C$ )

| Symbol    | Parameter   | Value                | Units       |    |
|-----------|---|----------------------|-------------|----|
| $P_{PP}$  | Peak pulse power( $TP=8/20\mu s$ )                | 1200                 | W           |    |
| $T_L$     | Maximum lead temperature for soldering during 10S | 260                  | $^{\circ}C$ |    |
| $T_{stg}$ | Storage temperature range                         | -55 to +155          | $^{\circ}C$ |    |
| $T_{OP}$  | Operating temperature range                       | -40 to +125          | $^{\circ}C$ |    |
| $T_j$     | Maximum junction temperature                      | 150                  | $^{\circ}C$ |    |
|           | IEC61000-4-2(ESD) air discharge                   | $\pm 30$             | KV          |    |
|           | Contact discharge                                 | $\pm 30$             |             |    |
|           | IEC61000-4-4(EFT)                                 | 65                   | A           |    |
|           | ESD voltage                                       | Per Human Body Model | 16          | KV |
|           |   | Per Machine Model    | 400         | V  |

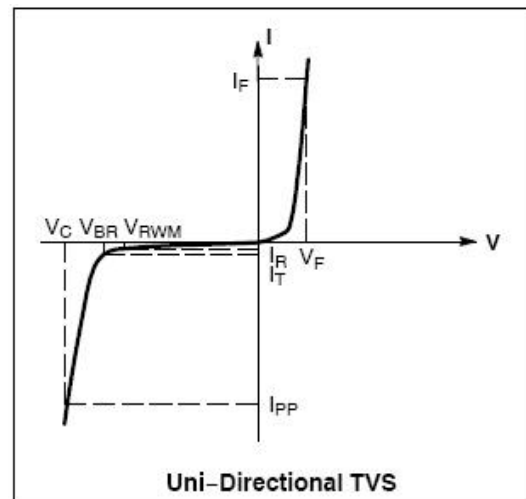
### ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}C$ unless noted, $V_F=0.9V$ Max @ $I_F=10mA$ for all types)

|             | $V_{RWM}$ | $I_R(\mu A)$ | $V_{BR}(V)$ | $I_T$ | $V_C(V)@$   | $V_C(V)@$    | $I_{PP}$ | $P_{PK}$ | C    |
|-------------|-----------|--------------|-------------|-------|-------------|--------------|----------|----------|------|
|             | (V)       | @ $V_{RWM}$  | @ $I_T$     |       | $I_{PP}=5A$ | Max $I_{PP}$ | (A)      | (W)      | (pF) |
|             | Max       | Max          | Min         | mA    | Typ         | Max          | Max      | Max      | Typ  |
| SLMESD5V0D9 | 5.0       | 2            | 6.2         | 1.0   | 9.0         | 23           | 70       | 1200     | 700  |

### ELECTRICAL CHARACTERISTICS

( $T_A=25^{\circ}C$  unless otherwise noted)

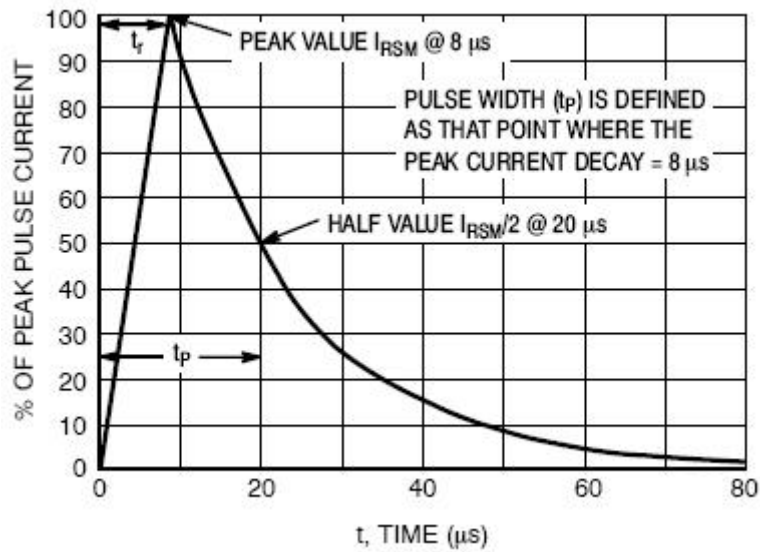
| Symbol    | Parameter                                   |
|-----------|---|
| $I_{PP}$  | Maximum Reverse Peak Pulse Current          |
| $V_C$     | Clamping Voltage @ $I_{PP}$                 |
| $V_{RWM}$ | Working Peak Reverse Voltage                |
| $I_R$     | Maximum Reverse Leakage Current @ $V_{RWM}$ |
| $V_{BR}$  | Breakdown Voltage @ $I_T$                   |
| $I_T$     | Test Current                                |
| $I_F$     | Forward Current                             |
| $V_F$     | Forward Voltage @ $I_F$                     |
| $P_{PK}$  | Peak Power Dissipation                      |
| C         | Max Capacitance @ $V_R=0$ and $f=1MHz$      |



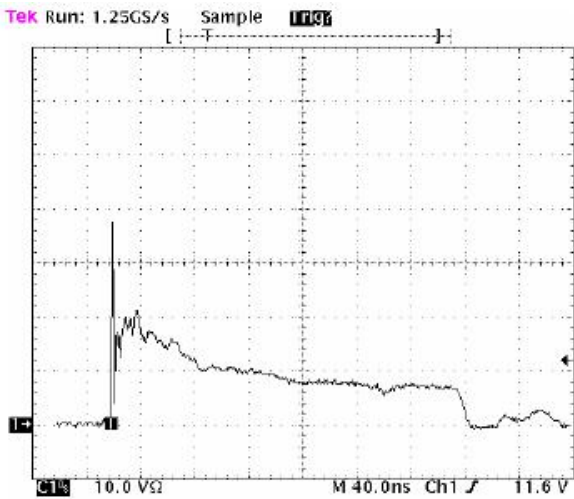
\*The “G” suffix indicates Pb-Free package available.

\*\*Other voltages available upon request

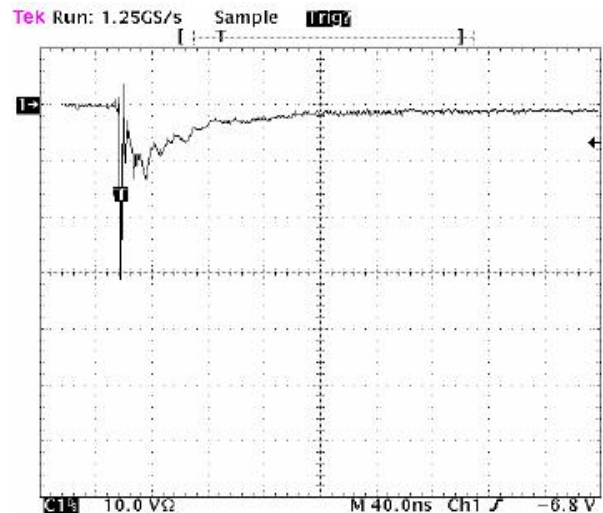
1. Surge current waveform per Figure 1.
2.  $V_{BR}$  is measured with a pulse test current  $I_T$  at an ambient temperature of 25°C



**Figure 1 8x20us Pulse Waveform**



**Figure 2 Positive 8KVcontact per  
IEC 61000-4-2-ESD**



**Figure 3 Negative 8KVcontact per  
IEC 61000-4-2-ESD**

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