



SEMICONDUCTOR

ESD9D5C

Bi-Directional TVS

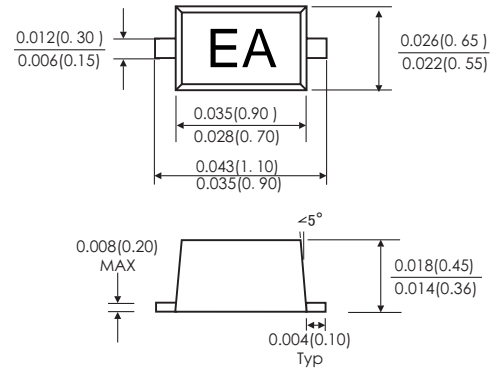
FEATURES

- Bi-Directional Transient Voltage Suppressor
- Low capacitance and Low Leakage
- ESD Protection, IEC61000-4-2 level4
- Low clamping voltage
- RoHS Compliant

MECHANICAL DATA

- Case: SOD-923 molded plastic body
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0

SOD-923



Dimensions in inches and (millimeters)



Absolute Maximum Ratings ($T_A=25^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|--|--------|-------------|------------------|
| Peak Pulse Power ($t_p=8/20\mu\text{s}$) | PPP | 40 | W |
| Maximum Reverse Peak Pulse Current ($t_p=8/20\mu\text{s}$) | IPP | 5.0 | A |
| ESD VOLTAGE IEC61000-4-2 Air | VESD | 15 | KV |
| ESD VOLTAGE IEC61000-4-2 Contact | | 8 | |
| Operating temperature range | TJ | -55 to +125 | $^\circ\text{C}$ |
| Storage temperature range | TSTG | -55 to +150 | $^\circ\text{C}$ |

Electrical Characteristics ($T_A=25^\circ\text{C}$)

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|------------------------------|-----------|--|-----|------|-----|---------------|
| Reverse Working Peak Voltage | V_{RWM} | $I_R=1\mu\text{A}$ | | | 5.0 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T=1\text{mA}$ | 6.0 | | | V |
| Reverse Current | I_R | $V_{RWM}=5\text{V}$ | | | 1.0 | μA |
| Clamping Voltage | V_C | $I_{PP}=5\text{A}$, $t_p=8/20\mu\text{s}$ | | | 9.0 | V |
| Diode Capacitance | C_D | $V_R=0\text{V}$, $f=1\text{MHZ}$ | | 13.5 | | pF |

CHARACTERISTIC CURVES ESD9D5C

Fig1. 8/20 μ s Pulse Waveform

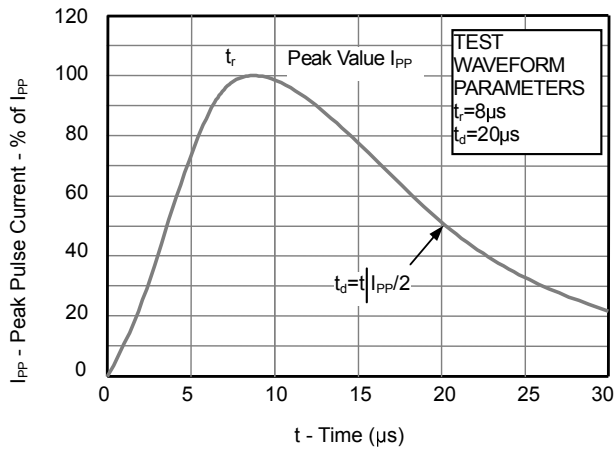


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

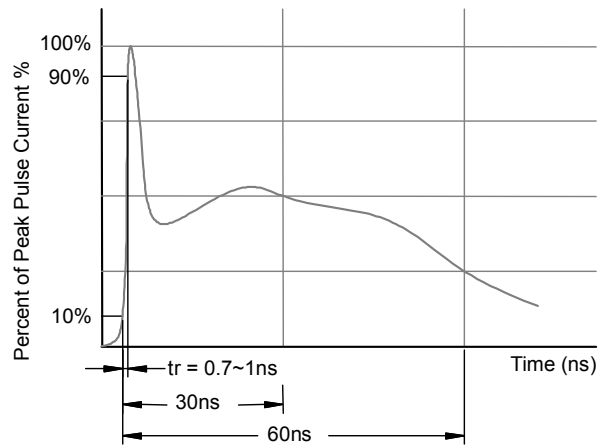


Fig3. Power Derating Curve

