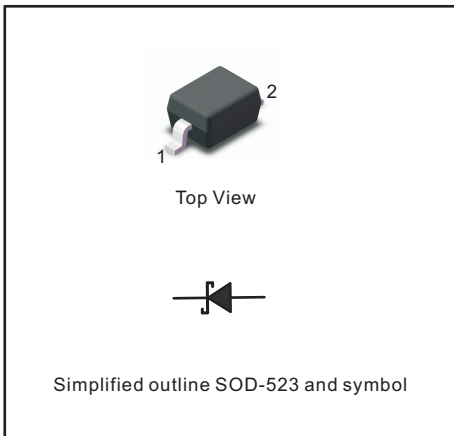


Transient Voltage Suppressors for ESD Protection
PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |


Applications

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

Features

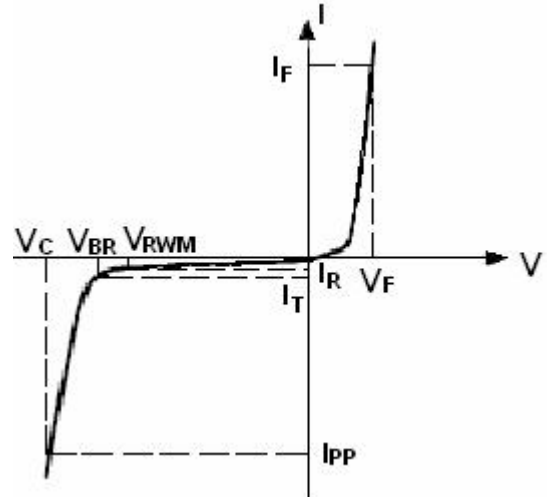
- Small Body Outline Dimensions
- Low Body Height
- Stand-off Voltage: 7V
- Peak Power up to 200 Watts @ 8 x 20 μ s Pulse
- Low Leakage
- Response Time is Typically < 1 ns
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- IEC61000-4-2 Level 4 ESD Protection
- IEC61000-4-4 Level 4 EFT Protection
- We declare that the material of product compliance with RoHS requirements.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

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

| Symbol | Parameter | Value | Units |
|-----------|---|-------------|-------------|
| P_{PP} | Peak Pulse Power ($t_p = 8/20\mu s$) | 200 | W |
| T_L | Maximum lead temperature for soldering during 10s | 260 | $^{\circ}C$ |
| T_{stg} | Storage Temperature Range | -55 to +150 | $^{\circ}C$ |
| T_{op} | Operating Temperature Range | -40 to +125 | $^{\circ}C$ |
| T_j | Maximum junction temperature | 150 | $^{\circ}C$ |
| | IEC61000-4-2 (ESD) air discharge | ± 15 | KV |
| | contact discharge | ± 8 | |
| | IEC61000-4-4 (EFT) | 40 | A |
| | ESD Voltage Per Human Body Model | 16 | KV |

Electrical Parameter

| 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} |
| I_T | Test Current |
| V_{BR} | Breakdown Voltage @ I_T |
| I_F | Forward Current |
| V_F | Forward Voltage @ I_F |

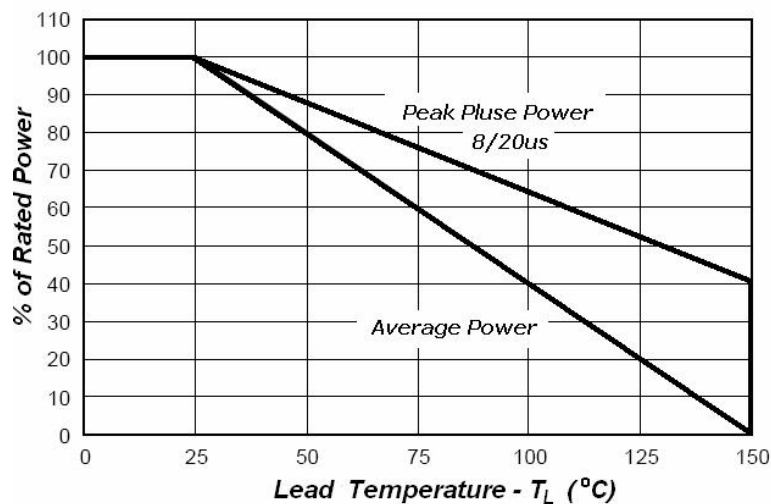


Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified. $V_F = 0.9V$ at $I_F = 10mA$

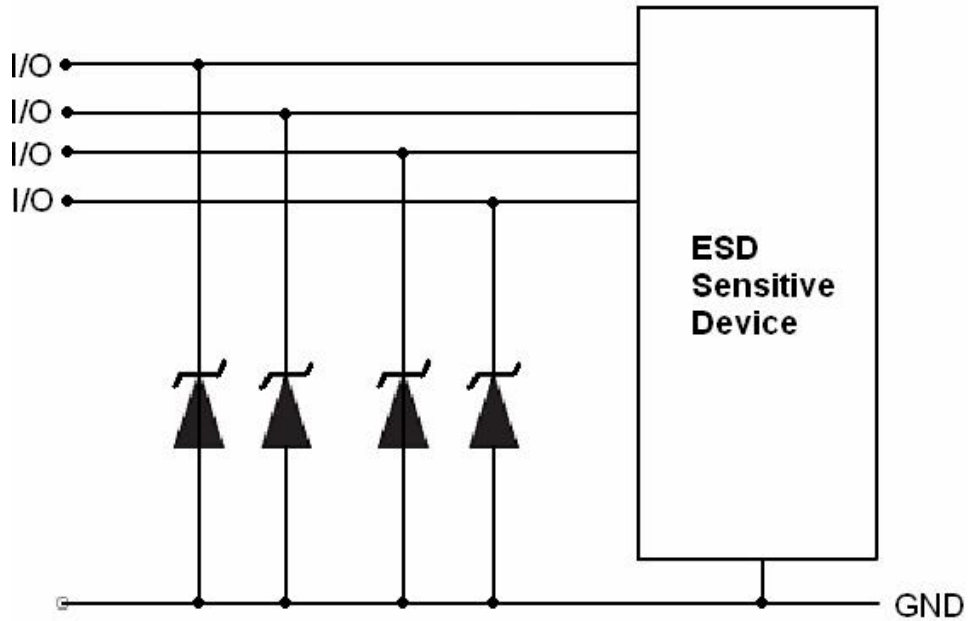
| Device | Device Marking | V_{RWM} (V) | I_R (uA) @ V_{RWM} | V_{BR} (V) @ I_T (Note 1) | I_T | V_C (V) @ $I_{PP}=5 A^*$ | V_C (V) @ Max I_{PP}^* | I_{PP} (A)* | P_{PK} (W)* | C (pF) |
|----------|----------------|---------------|------------------------|-------------------------------|-------|----------------------------|----------------------------|---------------|---------------|--------|
| | | Max | Max | Min | mA | Typ | Max | Max | Max | Typ |
| ESD5Z7V0 | ZH | 7.0 | 1.0 | 7.5 | 1.0 | 13.5 | 22.7 | 8.8 | 200 | 65 |

*Surge current waveform per Figure 1.

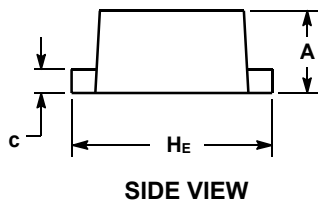
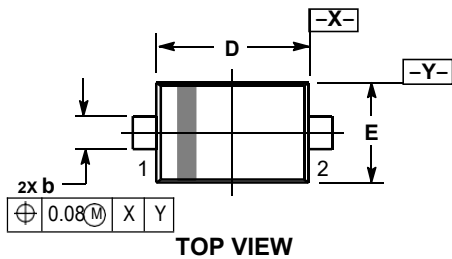
1. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.



Transient Voltage Suppressors for ESD Protection



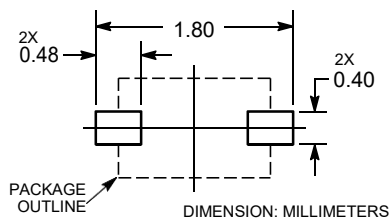
SOD-523



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
 2. CONTROLLING DIMENSION: MILLIMETERS.
 3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
 4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

| DIM | MILLIMETERS | | |
|-----|-------------|------|------|
| | MIN | NOM | MAX |
| A | 0.50 | 0.60 | 0.70 |
| b | 0.25 | 0.30 | 0.35 |
| c | 0.07 | 0.14 | 0.20 |
| D | 1.10 | 1.20 | 1.30 |
| E | 0.70 | 0.80 | 0.90 |
| H E | 1.50 | 1.60 | 1.70 |
| L | 0.30 REF | | |
| L2 | 0.15 | 0.20 | 0.25 |

RECOMMENDED SOLDERING FOOTPRINT*



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