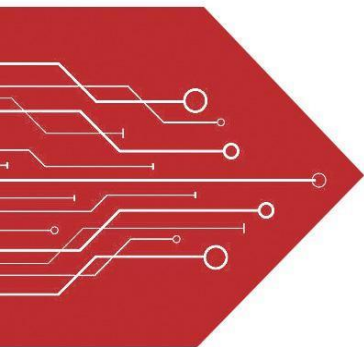
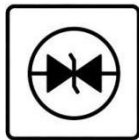


MSKSEMI

SEMICONDUCTOR



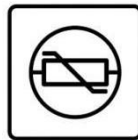
ESD



TVS



TSS



MOV



GDT

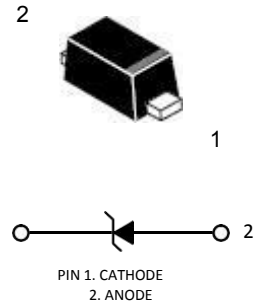


PLED

Product data sheet

Specification Features:

- Ultra Low Capacitance 0.5 pF
- Low Clamping Voltage
- Small Body Outline Dimensions:
0.039" x 0.024" (1.00 mm x 0.60 mm)
- Low Body Height: 0.016" (0.4 mm)
- Stand-off Voltage: 5 V
- Low Leakage
- Response Time is Typically < 1.0 ns
- IEC61000-4-2 Level 4 ESD Protection
- This is a Pb-Free Device
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



SOD-923

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted, V_F = 1.0 V Max. @ I_F = 10 mA for all types)

| P/N | V _{RWM} (V) | I _R (μA) @ V _{RWM} | V _{BR} (V) @ I _T (Note 2) | I _T | C (pF) | | V _C (V) @ I _{PP} = 1 A (Note 3) | V _C Per IEC61000-4-2 (Note 4) |
|-----------------|----------------------|--|---|----------------|--------|-----|---|---|
| | Max | Max | Min | mA | Typ | Max | Max | |
| ESD9X5.0ST5G-MS | 5.0 | 1.0 | 5.4 | 1.0 | 15 | 15 | 9.8 | Figures 1 and 2 See Below |

2. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.
3. Surge current waveform per Figure 5.
4. For test procedure see Figures 3 and 4.

ELECTRICAL CHARACTERISTICS

(T_A = 25°C unless otherwise noted)

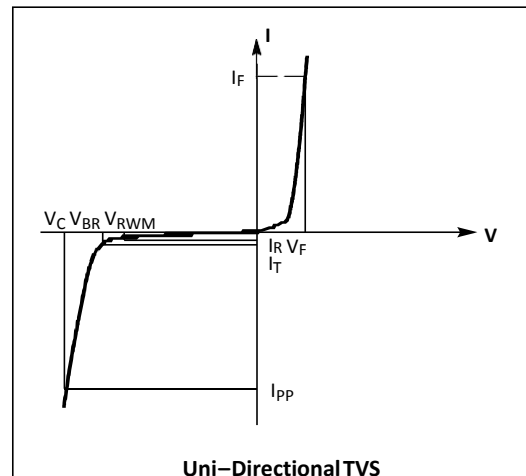
| Symbol | Parameter |
|------------------|--|
| I _{PP} | Maximum Reverse Peak Pulse Current |
| V _C | Clamping Voltage @ I _{PP} |
| V _{RWM} | Working Peak Reverse Voltage |
| I _R | Maximum Reverse Leakage Current @ V _{RWM} |
| V _{BR} | Breakdown Voltage @ I _T |
| I _T | Test Current |
| I _F | Forward Current |
| V _F | Forward Voltage @ I _F |
| P _{pk} | Peak Power Dissipation |
| C | Capacitance @ V _R = 0 and f = 1.0 MHz |

MAXIMUM RATINGS

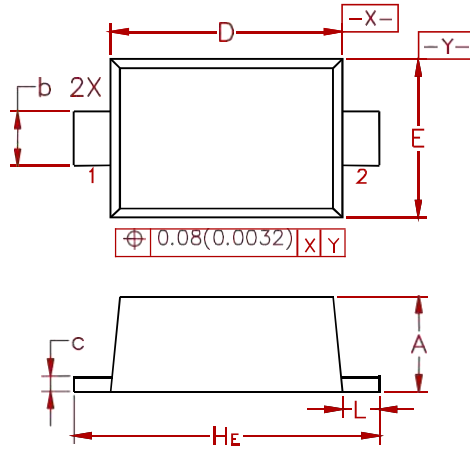
| Rating | Symbol | Value | Unit |
|--|------------------|-------------|------|
| IEC 61000-4-2 (ESD) Contact Air | | ±10 ±15 | kV |
| Total Power Dissipation on FR-5 Board (Note 1) @ T _A = 25°C | P _D | 150 | mW |
| Storage Temperature Range | T _{stg} | -55 to +150 | °C |
| Junction Temperature Range | T _J | -55 to +125 | °C |
| Lead Solder Temperature - Maximum (10 Second Duration) | T _L | 260 | °C |

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. FR-5 = 1.0 x 0.75 x 0.62 in.

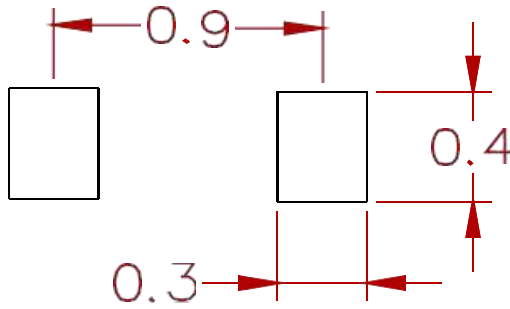


PACKAGE MECHANICAL DATA



| Dim | Millimeters | | | Inches | | |
|-----|-------------|------|------|--------|-------|-------|
| | Min | Nom | Max | Min | Nom | Max |
| A | 0.36 | 0.40 | 0.43 | 0.014 | 0.016 | 0.017 |
| b | 0.15 | 0.20 | 0.25 | 0.006 | 0.008 | 0.010 |
| c | 0.07 | 0.12 | 0.17 | 0.003 | 0.005 | 0.007 |
| D | 0.75 | 0.80 | 0.85 | 0.030 | 0.031 | 0.033 |
| E | 0.55 | 0.60 | 0.65 | 0.022 | 0.024 | 0.026 |
| HE | 0.95 | 1.00 | 1.05 | 0.037 | 0.039 | 0.041 |
| L | 0.05 | 0.10 | 0.15 | 0.002 | 0.004 | 0.006 |

Suggested Pad Layout



Dimensions: Millimeters

REEL SPECIFICATION

| P/N | PKG | QTY |
|-----------------|---------|------|
| ESD9X5.0ST5G-MS | SOD-923 | 8000 |

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