

Features

- * 160W peak pulse power (8/20 μ s)
- * Low operating :15V and 24V
- * Ultra low capacitance: 13 p Typ
- * Ultra low leakage: nA leel
- * Low clamping voltage
- * Protects one power line or data line
- * Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: ± 25 kV
Contact discharge: ± 23 kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
- * RoHS Compliant

Mechanical Characteristics

- * Package: SOD.323
- * Lead Finish: Matte Tin
- * Case Material: “Green” Molding Compound.
- * UL Flammability Classification Rating 94V-0
- * Moisture Sensitivity: Level 3 per J-STD-020
- * Terminal Connections: See Diagram Below

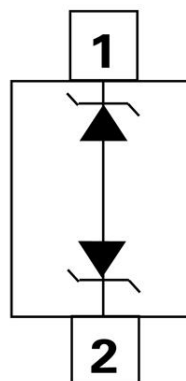
Applications

- * USB 2.0 power and data line
- * Set-top box and digital TV
- * LIN BUS
- * AEC-Q101 qualified

Ordering Information

| Part Number | Qty per Reel | Reel Size |
|-------------|--------------|-----------|
| PESD1LIN | 3000 | 7" |

Dimensions and Pin Configuration



1 cathode 1 (15 V)
2 cathode 2 (24 V)

Marking: AM

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

| Parameter | Symbol | Value | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs) | Ppk | 160 | W |
| ESD per IEC 61000-4-2 (Air) | VESD | ±25 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ±23 | |
| 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 | VRWM | | | | 15 | V |
| | | | | | 24 | |
| Breakdown Voltage | VBR | IT = 1mA | 17.1 | 18.9 | 20.3 | V |
| | | | 25.4 | 27.8 | 30.3 | |
| Reverse Leakage Current | IR | VRWM = 15V and 24V | | | 0.05 | μA |
| Clamping Voltage PESD1LIN (15 V) | VC | PP = 1A (8 x 20μs pulse) | | | 25 | V |
| | | PP = 5A (8 x 20us pulse) | | | 44 | |
| Clamping Voltage PESD1LIN (24 V) | VC | PP = 1A (8 x 20us pulse) | | | 40 | V |
| | | I _{PP} = 3A (8 x 20us pulse) | | | 70 | |
| Junction Capacitance | CJ | VR = 0V, f = 1MHz | | 13 | | pF |

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

Fig1. 8/20 μs Pulse Waveform

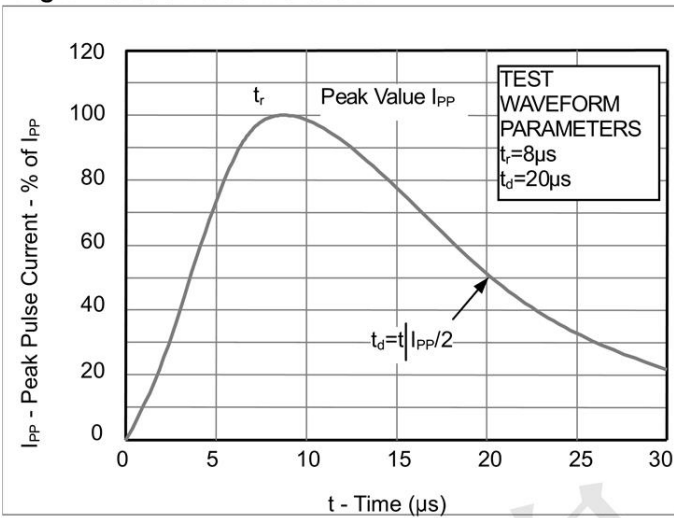


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

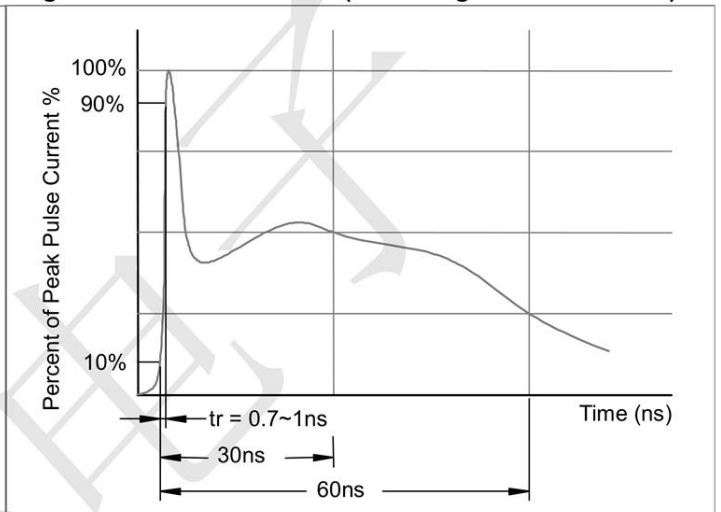
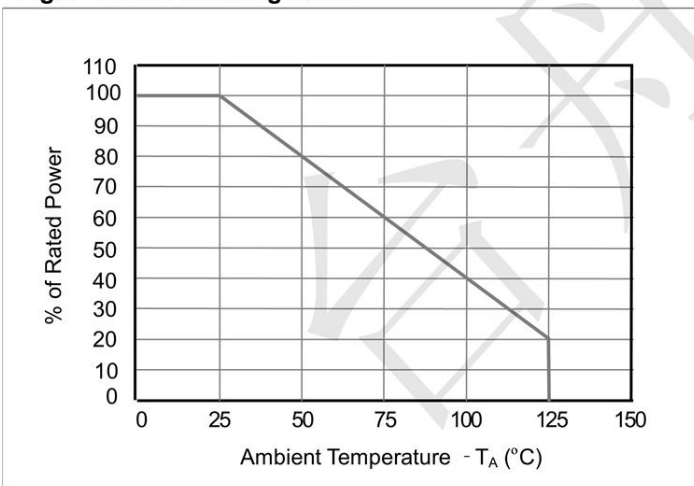
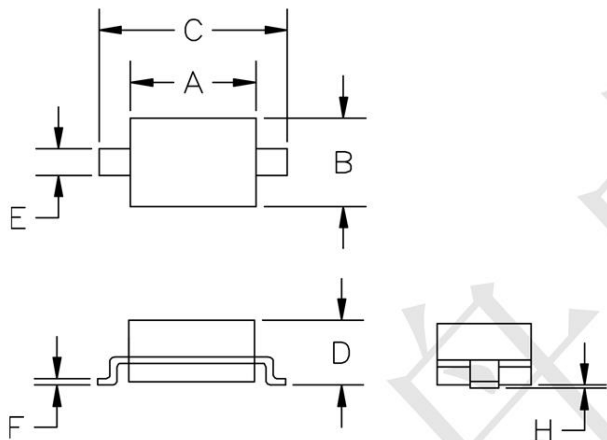


Fig3. Power Derating Curve

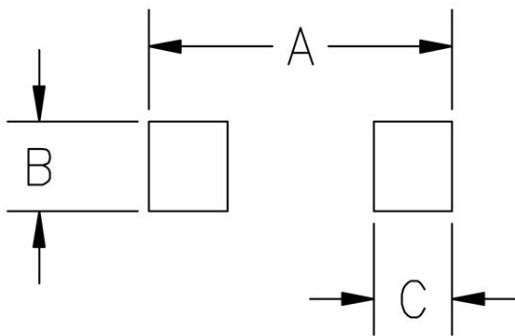


Outline Drawing - SOD-323



| SYM | DIMENSIONS | | | |
|-----|-------------|------|--------|-------|
| | MILLIMETERS | | INCHES | |
| | MIN | MAX | MIN | MAX |
| A | 1.50 | 1.80 | 0.060 | 0.071 |
| B | 1.20 | 1.40 | 0.045 | 0.054 |
| C | 2.30 | 2.70 | 0.090 | 0.107 |
| D | - | 1.10 | - | 0.043 |
| E | 0.30 | 0.40 | 0.012 | 0.016 |
| F | 0.10 | 0.25 | 0.004 | 0.010 |
| H | - | 0.10 | - | 0.004 |

Land Pattern - SOD-323



| SYM | DIMENSIONS | |
|-----|-------------|--------|
| | MILLIMETERS | INCHES |
| A | 3.15 | 0.120 |
| B | 0.80 | 0.031 |
| C | 0.80 | 0.031 |