

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT

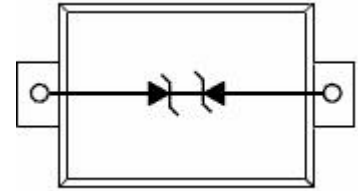


PLED

Product data sheet

Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



SOD-323

Features

- Small Body Outline Dimensions
- Low Body Height
- Peak Power up to 200 Watts @ 8 x 20 μ s Pulse
- Low Leakage current
- 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

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified. VF = 0.9V at IF = 10mA

| P/N | V _{RWM} (V) | I _R (μ A) @ V _{RWM} | V _{BR} (V)@ I _r (Note 1) | I _r | 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 |
| MSESD3Z5.0C | 5.0 | 1 | 5.6 | 1.0 | 11.6 | 18.6 | 9.4 | 174 | 25 |

Absolute Ratings (T_{amb}=25°C)

| Symbol | Parameter | Value | Units | |
|------------------|---|------------------------------------|---------------------|----|
| P _{PP} | Peak Pulse Power (t _p = 8/20 μ s) | 200 | W | |
| T _L | Maximum lead temperature for soldering during 10s | 260 | °C | |
| T _{stg} | Storage Temperature Range | -55 to +155 | °C | |
| T _{op} | Operating Temperature Range | -40 to +125 | °C | |
| T _j | Maximum junction temperature | 150 | °C | |
| | IEC61000-4-2 (ESD) | air discharge contact discharge | \pm 15 \pm 8 | KV |
| | 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 |

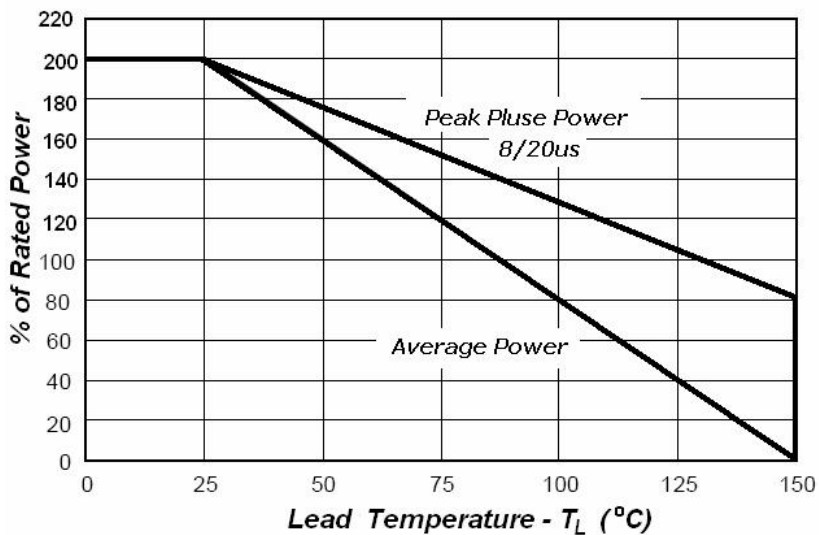
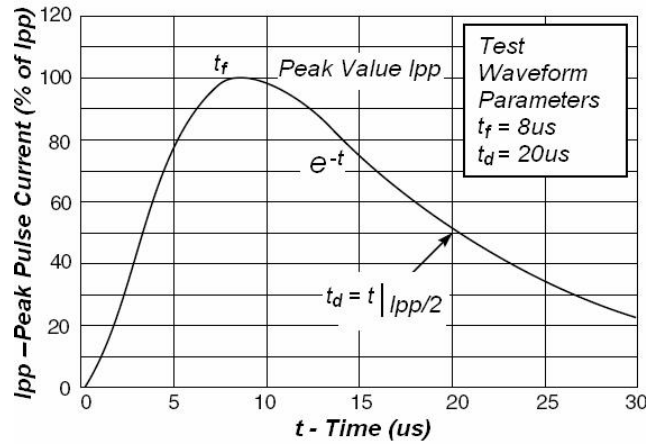
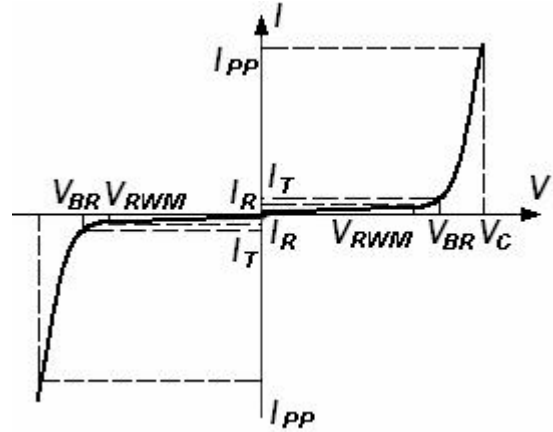
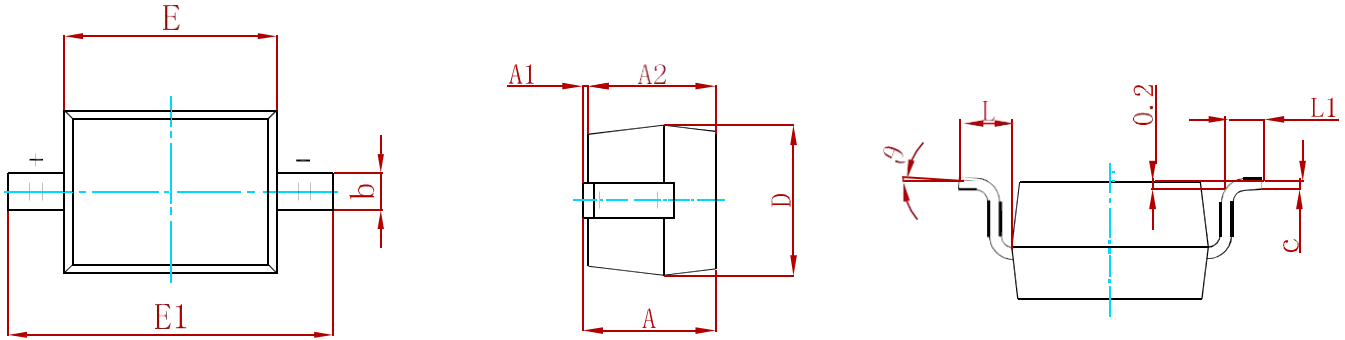


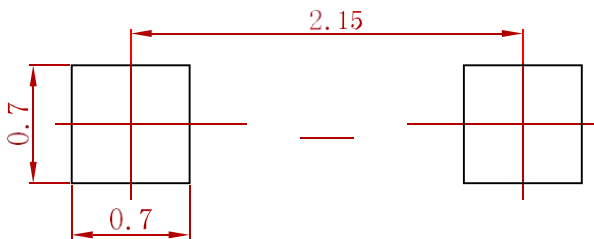
Fig2.Power Derating

PACKAGE MECHANICAL DATA



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | | 1.000 | | 0.039 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.800 | 0.900 | 0.031 | 0.035 |
| b | 0.250 | 0.350 | 0.010 | 0.014 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 1.200 | 1.400 | 0.047 | 0.055 |
| E | 1.600 | 1.800 | 0.063 | 0.071 |
| E1 | 2.550 | 2.750 | 0.100 | 0.108 |
| L | 0.475 REF. | | 0.019 REF. | |
| L1 | 0.250 | 0.400 | 0.010 | 0.016 |
| θ | 0° | 8° | 0° | 8° |

Suggested Pad Layout



- Note:**
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

| P/N | PKG | QTY |
|-------------|---------|------|
| MSESD3Z5.0C | SOD-323 | 3000 |

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