

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



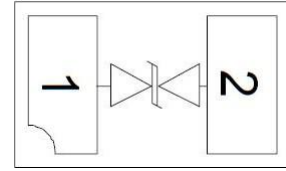
PLED

Product data sheet

www.msksemi.com

Features

- 30W (8/20 μ s) Peak Pulse Power
- Low Capacitance ESD Protection
- SOD-882 Package
- RoHS Compliant
- Matte Tin Lead finish (Pb-Free)
- Protect One High Speed Data Line
- Meet IEC61000-4-2 Level 4:
- Contact Discharge > 8kV Air
- Discharge > 15kV



Applications

- Communication System
- Portable Instrumentation
- Audio and Video Equipment
- Computers and Peripherals
- USB 1.1, USB 2.0 Ports

DFN1006

Maximum Ratings (Ta = 25°C)

| Symbol | Parameter | Value | Unit |
|----------------|--------------------------------------|-------------|------|
| PPK | Peak Pulse Power | 30 | W |
| IPP | Peak Pulse Current | 2 | A |
| VESD (Contact) | Contact ESD Voltage per IEC61000-4-2 | 8 | kV |
| VESD (Air) | Air ESD Voltage per IEC61000-4-2 | 15 | kV |
| TJ | Junction Temperature | -55 to +150 | °C |
| TSTG | Storage Temperature | -55 to +150 | °C |

Electrical Characteristics (Ta = 25°C)

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|--------|------------------------------|-------------------------|-----|-----|-----|---------|
| VRWM | Reverse Working Peak Voltage | | | | 5 | V |
| VBR | Reverse Breakdown Voltage | IT = 1mA | 5.5 | | 9.5 | V |
| IR | Reverse Leakage Current | VRWM = 5V | | | 0.1 | μ A |
| VC | Clamping Voltage | IPP = 1A (8/20 μ s) | | | 12 | V |
| VC | Clamping Voltage | IPP = 2A (8/20 μ s) | | | 15 | V |
| CJ | Capacitance | VR = 0V, f = 1MHz | | 3.0 | 3.5 | pF |

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 |

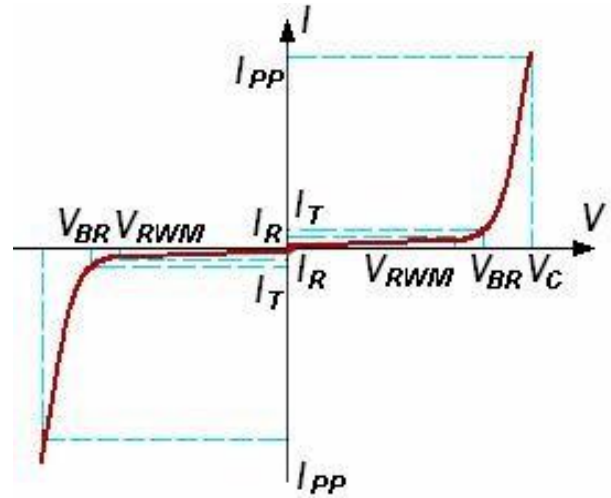


FIG1: Pulse Waveform

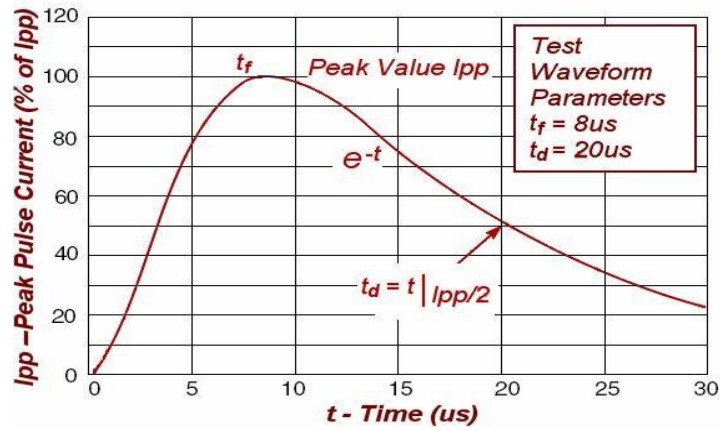
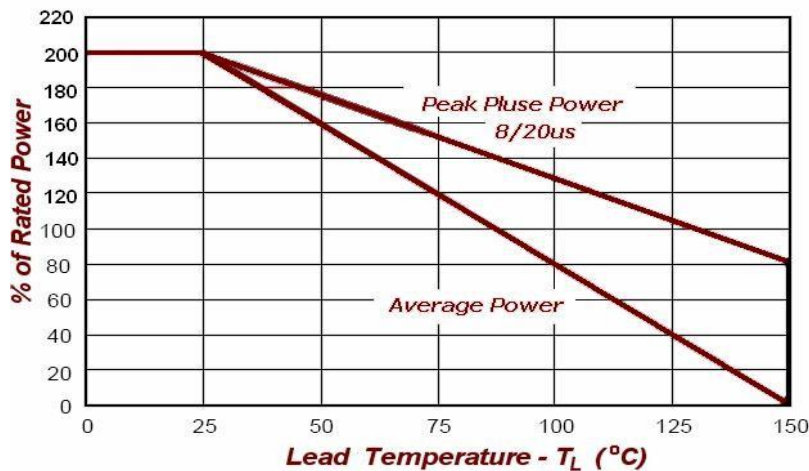
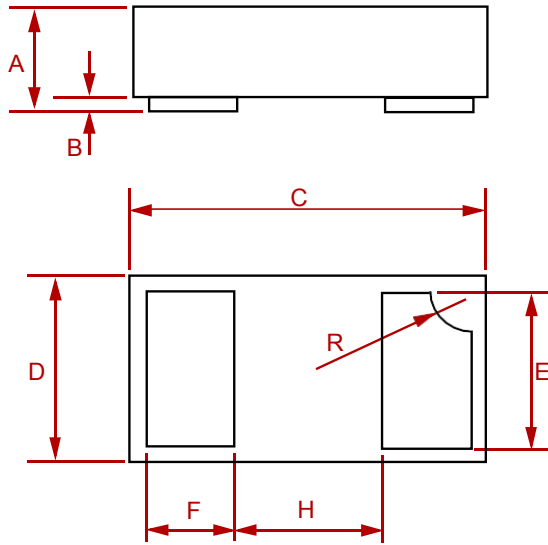


FIG2: Power Derating

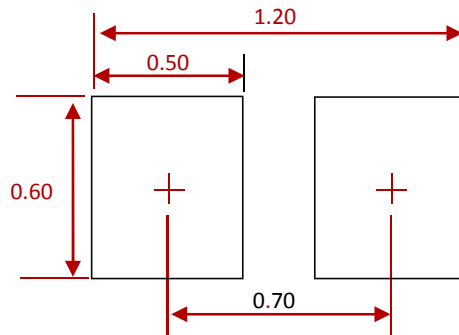


PACKAGE MECHANICAL DATA



| Dim | Inches | | Millimeters | |
|-----|-----------|-------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.0125 | 0.02 | 0.32 | 0.52 |
| B | 0.000 | 0.002 | 0.00 | 0.05 |
| C | 0.037 | 0.043 | 0.95 | 1.080 |
| D | 0.022 | 0.027 | 0.55 | 0.680 |
| E | 0.016 | 0.024 | 0.40 | 0.60 |
| F | 0.008 | 0.012 | 0.20 | 0.30 |
| H | 0.015Typ. | | 0.40Typ. | |
| R | 0.001 | 0.005 | 0.05 | 0.15 |

Suggested Pad Layout



NOTES:

1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.

REEL SPECIFICATION

| P/N | PKG | QTY |
|---------------|---------|-------|
| ESD5V0U1BL-MS | DFN1006 | 10000 |

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