

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



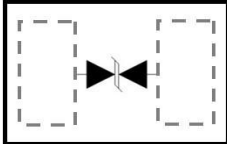
GDT



PLED

Product data sheet

PIN CONFIGURATION



DFN1006-2

FEATURES

- ◇ Transient protection for high-speed data lines
 - IEC 61000-4-2 (ESD) ±20kV (Contact)
 - ±20kV (Air)
 - IEC 61000-4-4 (EFT) 40A (5/50 ns)
 - Cable Discharge Event (CDE)
- ◇ Package optimized for high-speed lines
- ◇ Ultra-small package (1.0mm×0.6mm×0.5mm)
- ◇ Protects one data, control line
- ◇ Low capacitance: 0.5pF (Typical)
- ◇ Low leakage current
- ◇ Low clamping voltage

MACHANICAL DATA

- ◇ Flammability Rating: UL 94V-0
- ◇ Packaging: Tape and Reel
- ◇ High temperature soldering guaranteed:
 - 260°C/10s
- ◇ Reel size: 7 inch

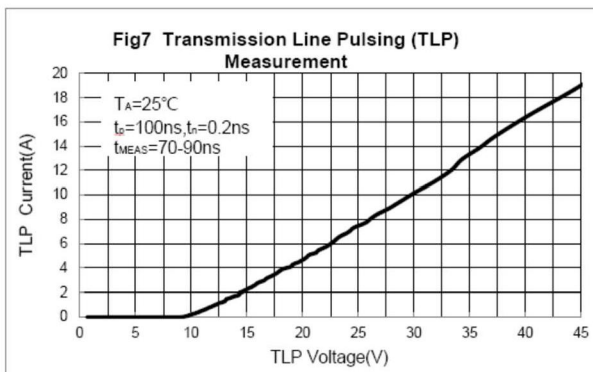
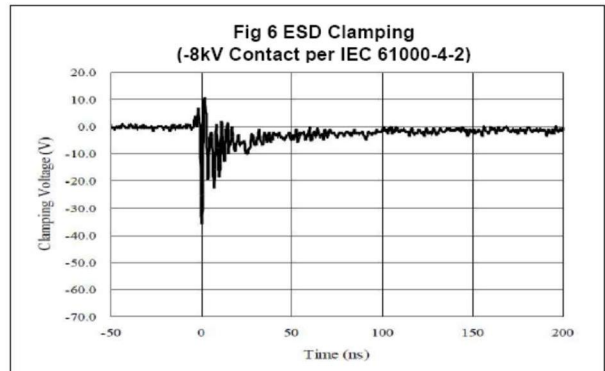
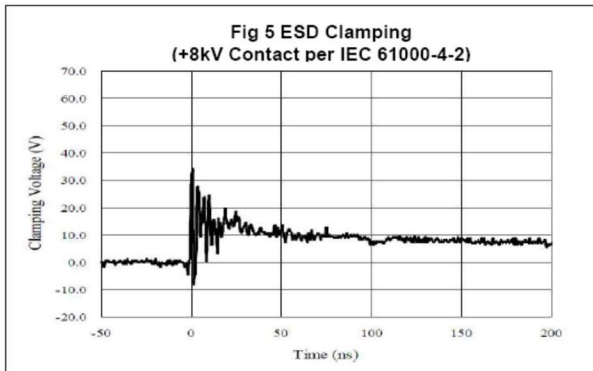
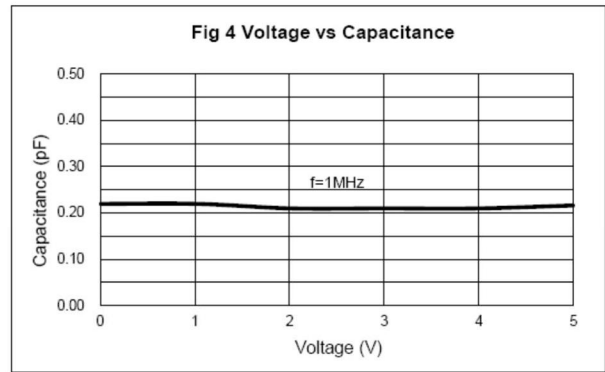
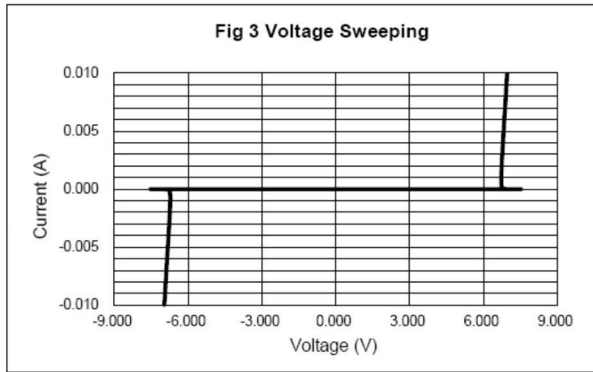
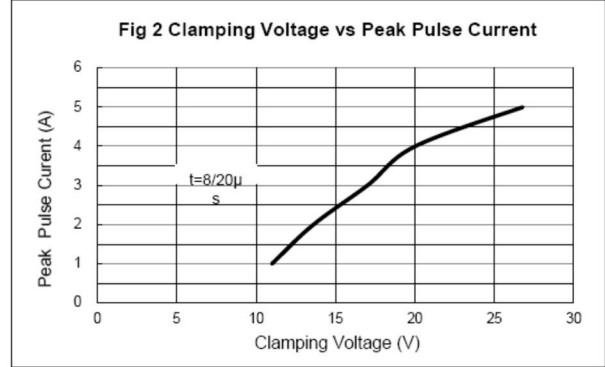
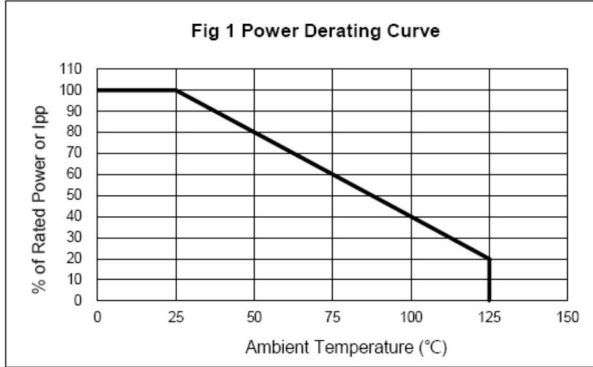
APPLICATIONS

- ◇ Serial ATA
- ◇ Desktops, Servers and Notebooks
- ◇ Cellular Phones
- ◇ MDDI Ports
- ◇ USB Data Line Protection
- ◇ Display Ports
- ◇ Digital Visual Interfaces (DVI)

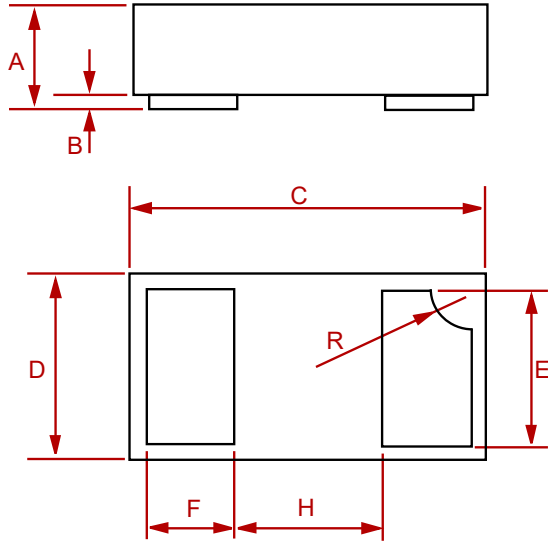
| ABSOLUTE MAXIMUM RATING | | | |
|-------------------------|--|----------------------|--------------|
| Symbol | Parameter | Value | Units |
| V_{ESD} | ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air) | ± 20 ± 20 | kV |
| P_{PP} | Peak Pulse Power (8/20 μ s) | 100 | W |
| T_{OPT} | Operating Temperature | -55~125 | $^{\circ}$ C |
| T_{STG} | Storage Temperature | -55~150 | $^{\circ}$ C |

| Symbol | Parameter | Test Condition | Min | Typ | Max | Units |
|-----------|---------------------------|---|-----|-----|-----|-------|
| V_{RWM} | Reverse Working Voltage | | | | 5.0 | V |
| V_{BR} | Reverse Breakdown Voltage | $I_T = 1\text{mA}$ | 6.0 | | | V |
| I_R | Reverse Leakage Current | $V_{RWM} = 5\text{V}$ | | | 100 | nA |
| V_C | Clamping Voltage | $I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$ | | | 13 | V |
| | | $I_{PP} = 4\text{A}, t_p = 8/20\mu\text{s}$ | | | 25 | V |
| C_J | Junction Capacitance | $V_R = 0\text{V}, f = 1\text{MHz}$ | | 0.5 | | pF |

ELECTRICAL CHARACTERISTICS CURVE

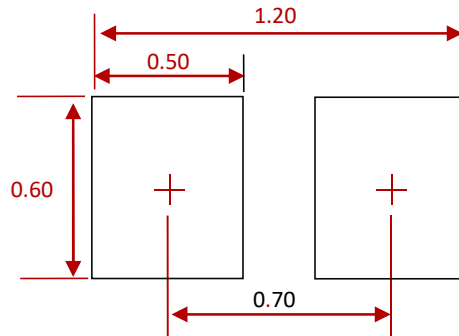


PACKAGE MECHANICAL DATA



| 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 |
|--------------|-----------|-------|
| ESD05V88D-MS | DFN1006-2 | 10000 |

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