

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

TPD1E10B06DPYR-MS

Product specification

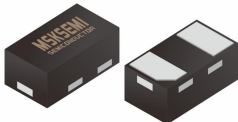
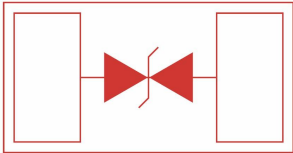

Features

- 80Watts peak pulse power (tp = 8/20µs)
- Transient protection for high speed data lines to IEC 61000-4-2 (ESD) ± (air), ± (contact) IEC 61000-4-4 (EFT) 40A (5/50ns)
- Working voltages : 5V
- Protects One Power or I/O Port
- Low operating and clamping voltages
- Solid-state silicon avalanche technology

Applications

- Notebooks, Desktops, Servers and Video Graphics Cards
- USB Power & Data Line Protection
- Monitors and Flat Panel Displays
- I²C Bus Protection
- Portable Instrumentation
- Set Top Box

Reference News

| PACKAGE OUTLINE | Pin Configuration | Marking |
|---|---|---|
|  |  |  |
| <p>X1SON-2</p> | | |

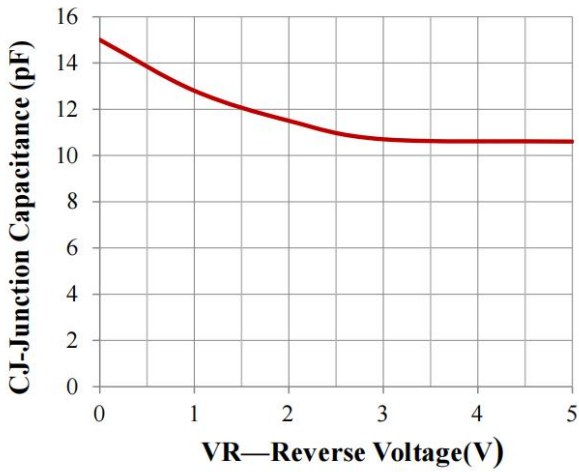
Maximum Rating @ Ta=25C unless otherwise specified

| Symbol | Parameter | Ratings | Units |
|------------------|--------------------------------|--------------|-------|
| P _{PK} | Peak Pulse Power (tp = 8/20μs) | 80 | Watts |
| T _L | Lead Soldering Temperature | 260(10sec.) | °C |
| T _J | Operating Temperature | -55 to + 125 | °C |
| T _{STG} | Storage Temperature | -55 to + 150 | °C |

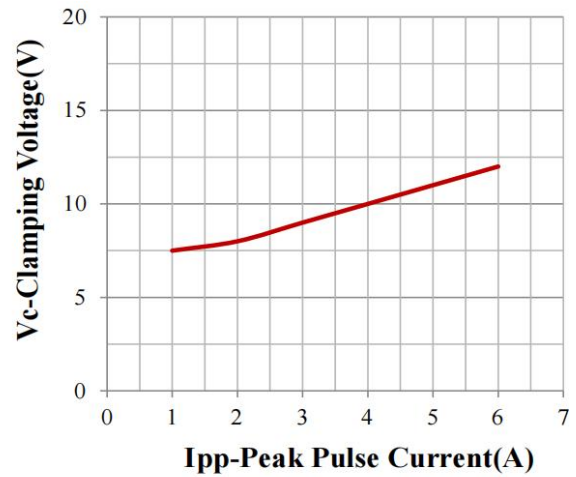
Electrical Characteristics @ Ta=25C unless otherwise

| Parameter | VRWM @ IR | | VBR@ ImA | Vc@ 1 | Vc@ IPP | | CJ |
|-------------------|-----------|-----|----------|-------|---------|---|-----|
| | V | A | V | V | V | A | F |
| | | MAX | MIN | MAX | MAX | | TYP |
| TPD1E10B06DPYR-MS | 5 | 1 | 5.8 | 11.8 | 15 | 5 | 12 |

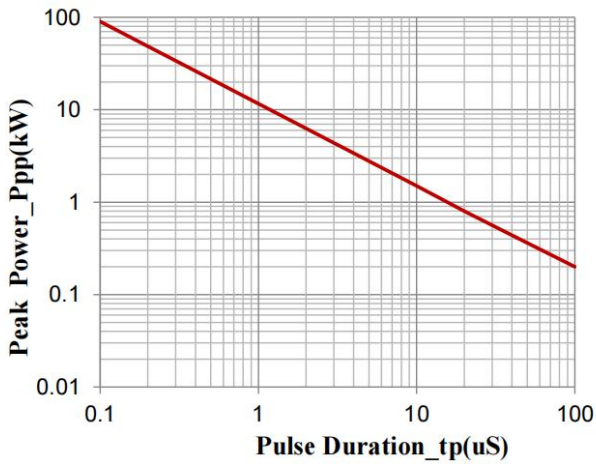
Typical Characteristics @ $T_a=25^{\circ}\text{C}$ unless otherwise specified



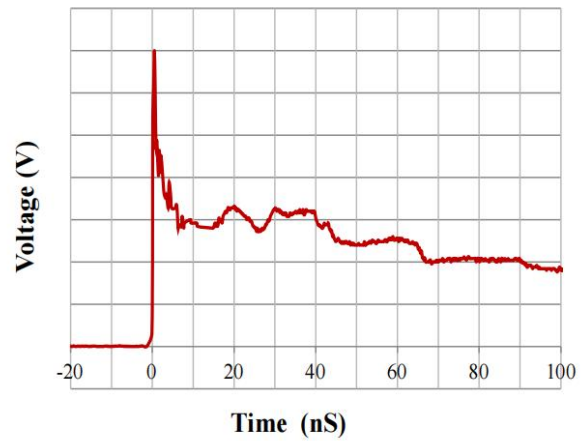
Junction Capacitance vs. Reverse Voltage



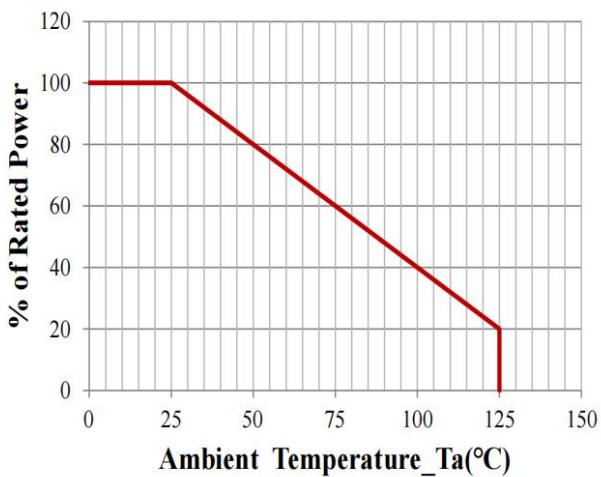
Clamping Voltage vs. Peak Pulse Current



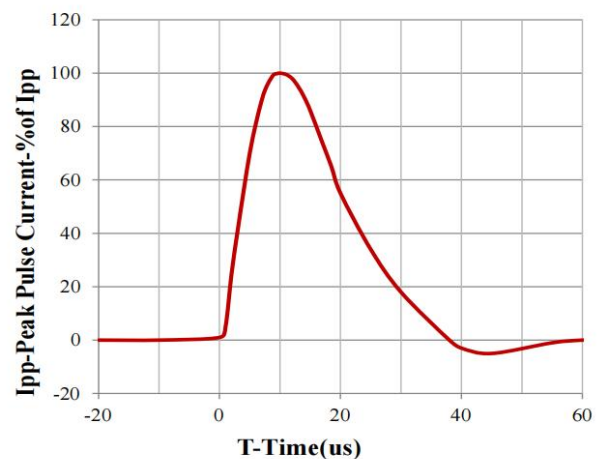
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform

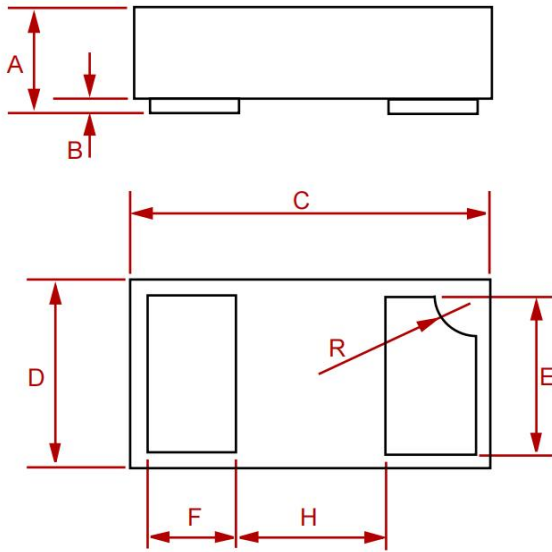


Power Derating Curve



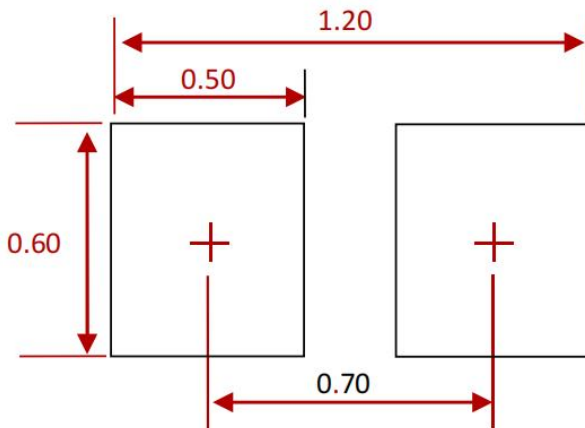
8 X 20us Pulse Waveform

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



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 |
|-------------------|---------|-------|
| TPD1E10B06DPYR-MS | X1SON-2 | 10000 |

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