

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



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MOV



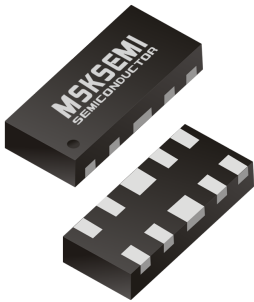
GDT



PLED

Product data sheet

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SLP2510P8

## Features

- 60Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ( $C_j = 0.2pF$  typ. I/O to I/O)
- IEC 61000-4-2  $\pm 20kV$  contact  $\pm 25kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20 $\mu s$ )

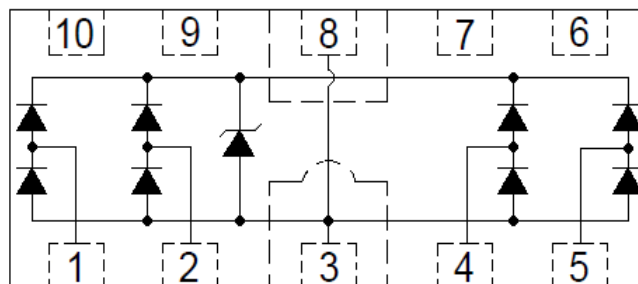
## Mechanical Data

- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

## Applications

- USB3.0, USB2.0, Ethernet
- HDMI 2.0, Displayport 1.3, eSATA
- Unified Display interface
- Digital Visual Interface
- High speed serial interface

## Schematic & PIN Configuration

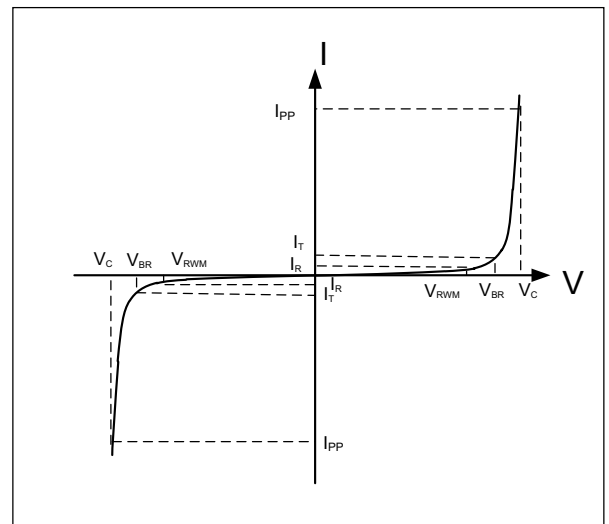


**Electrical Characteristics**

| Parameter                 | Symbol    | Conditions                         | Min | Typical | Max  | Units   |
|---------------------------|-----------|------------------------------------|-----|---------|------|---------|
| Reverse Stand-Off Voltage | $V_{RWM}$ |                                    |     |         | 5.0  | V       |
| Reverse Breakdown Voltage | $V_{BR}$  | $I_T=1mA$                          | 6.0 |         |      | V       |
| Reverse Leakage Current   | $I_R$     | $V_{RWM}=5V, T=25^{\circ}C$        |     |         | 1    | $\mu A$ |
| Peak Pulse Current        | $I_{PP}$  | $t_p = 8/20\mu s$                  |     |         | 4    | A       |
| Clamping Voltage          | $V_C$     | $I_{PP}=4A, t_p=8/20\mu s$         |     |         | 15   | V       |
| Junction Capacitance      | $C_j$     | $V_R = 0V, f = 1MHz$<br>I/O to I/O |     | 0.2     | 0.3  | pF      |
|                           |           | $V_R = 0V, f = 1MHz$<br>I/O to GND |     | 0.4     | 0.55 |         |

**Electrical Parameters (TA = 25°C unless otherwise noted)**

|           | 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 @ $V_{RWM}$ |
| $V_{BR}$  | Breakdown Voltage @ $I_T$                   |
| $I_T$     | Test Current                                |
|           |   |
|           |   |



Note: .8/20 $\mu s$  pulse waveform.

## Typical Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

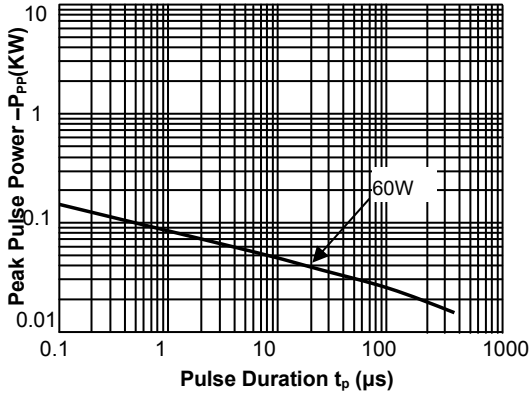


Fig.2 Pulse Derating Curve

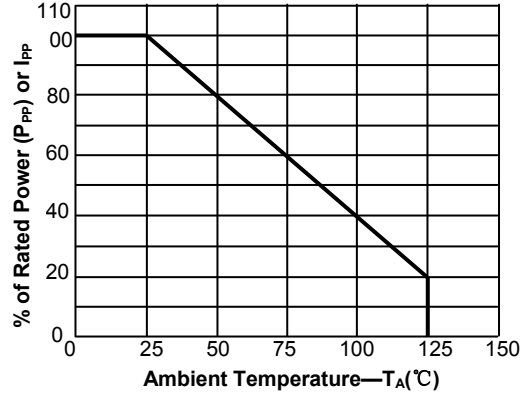


Fig.3 Pulse Waveform-8/20μs

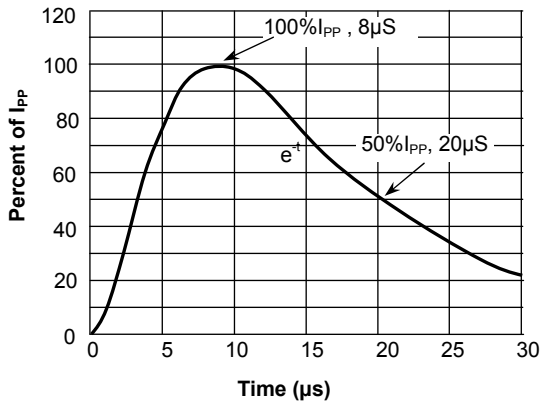
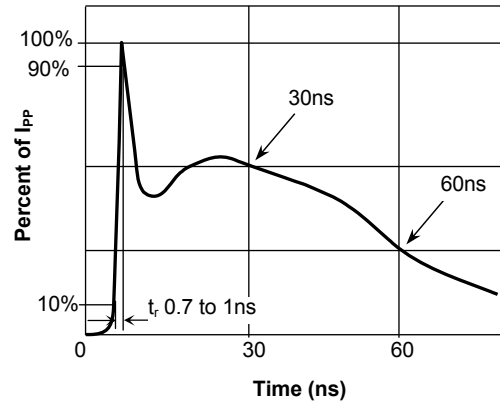
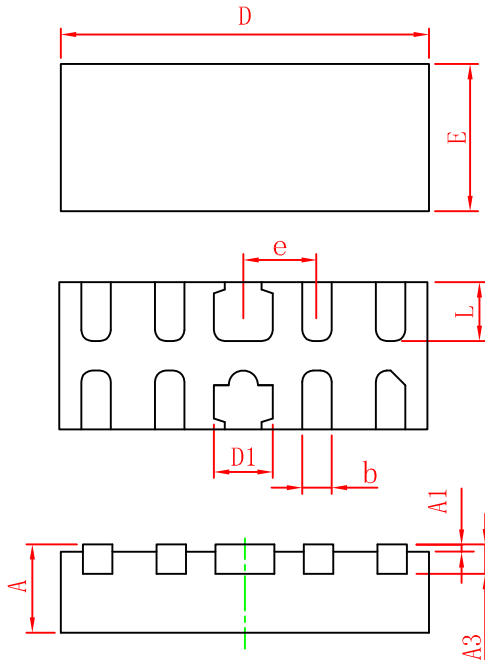


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)



**PACKAGE MECHANICAL DATA**



| Symbol | Dimensions in millimeters |      |      |
|--------|---------------------------|------|------|
|        | Min                       | Nom  | Max  |
| A      | 0.45                      | 0.50 | 0.55 |
| A1     | -                         | 0.02 | 0.05 |
| A3     | 0.10                      | 0.15 | 0.20 |
| D      | 2.45                      | 2.50 | 2.55 |
| E      | 0.95                      | 1.00 | 1.05 |
| D1     | 0.35                      | 0.40 | 0.45 |
| b      | 0.15                      | 0.20 | 0.25 |
| e      | 0.50BSC                   |      |      |
| L      | 0.35                      | 0.40 | 0.45 |

**REEL SPECIFICATION**

| P/N                | PKG       | QTY  |
|--------------------|-----------|------|
| RClamp0524P.TCT-MS | SLP2510P8 | 3000 |

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