

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet

[www.msksemi.com](http://www.msksemi.com)

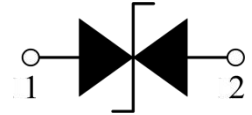
**Feature**

- 80W peak pulse power per line ( $t_p = 8/20\mu s$ )
- Bidirectional configurations
- Response time is typically  $< 1ns$
- Low clamping voltage
- RoHS compliant
- Transient protection for data lines to IEC61000-4-2(ESD)  $\pm 25KV$ (air),  $\pm 25KV$ (contact); IEC61000-4-4 (EFT) 40A (5/50ns)

**Pin Description**



**Schematic Diagram**



**Applications**

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

SOD-882

**Mechanical Characteristics**

- Mounting position: Any
- Qualified max reflow temperature:  $260^{\circ}C$
- Device meets MSL 1 requirements

**Electrical characteristics per line@ $25^{\circ}C$  (unless otherwise specified)**

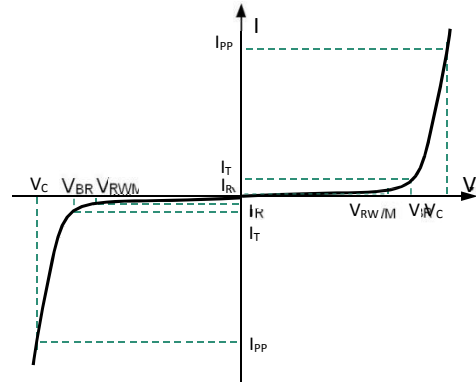
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	$V_{RWM}$				5	V
Breakdown Voltage	$V_{BR}$	$I_t = 1mA$	5.6		9.0	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V T=25^{\circ}C$			1.0	$\mu A$
Clamping Voltage	$V_{CL}$	$I_{PP}=16A t_p=100ns$		24		V
Clamping Voltage	$V_C$	$I_{PP}=1.0A$		10	13	V
Clamping Voltage	$V_C$	$I_{PP}=4.5A$		18	22	V
Junction Capacitance	$C_j$	$V_R=0V f = 1MHz$		3	5	pF

**Absolute maximum rating@ $25^{\circ}C$**

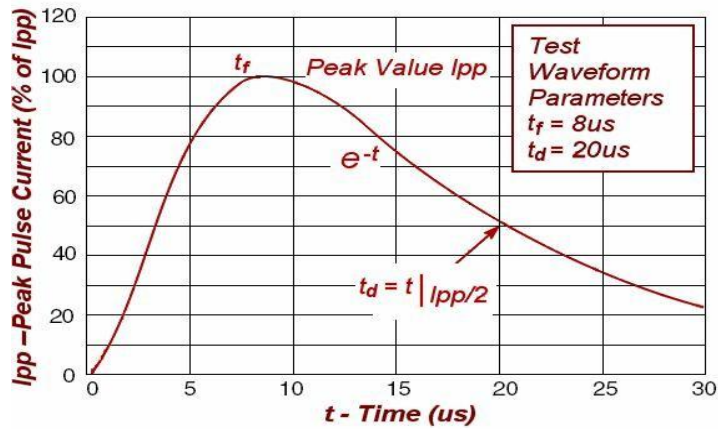
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{pp}$	80	W
Operating Temperature	$T_J$	-55 to 150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to 150	$^{\circ}C$

**Electronics Parameter**

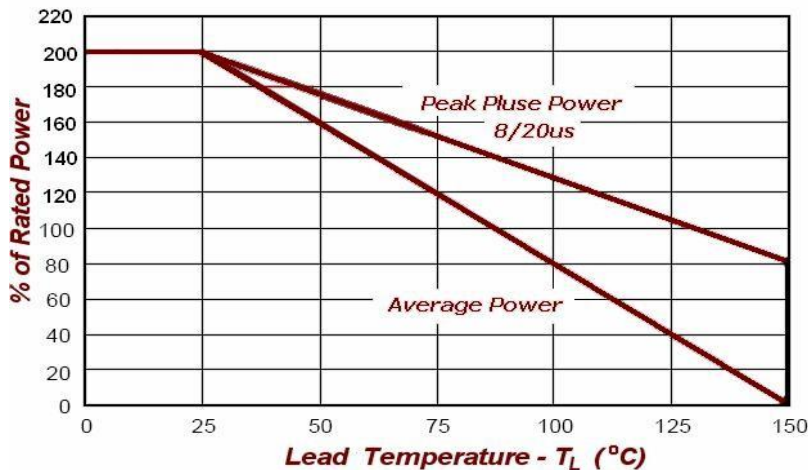
Symbol	Parameter
$V_{RWM}$	Peak Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$P_{PP}$	Peak Pulse Power
$C_J$	Junction Capacitance
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



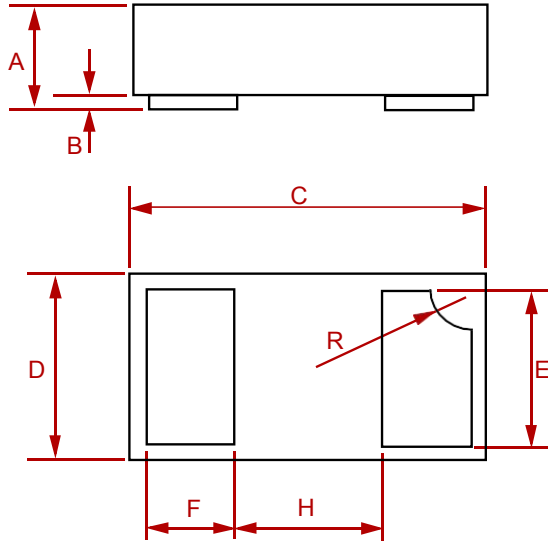
**FIG1: Pulse Waveform**



**FIG2: Power Derating**

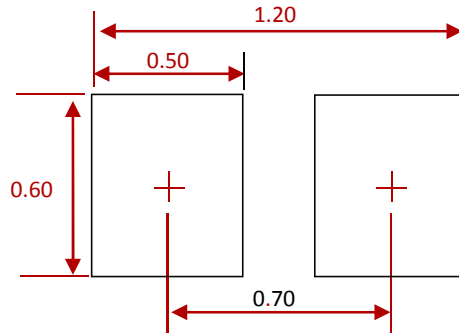


**PACKAGE MECHANICAL DATA**



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
ESD5V0F1BL-MS	SOD-882	10000

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