

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

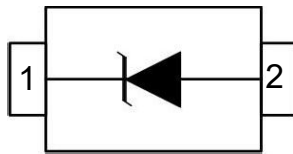
Product data sheet

PACKAGE OUTLINE



SOD-323

PIN CONFIGURATION



Feature

- 1400W Peak pulse power per line ($t_P = 8/20\mu s$)
- SOD-323 package
- Response time is typically $< 1\text{ ns}$
- Protect one I/O or power line
- Low clamping Voltage
- RoHS compliant
- Transient protection for data lines to IEC61000-4-2(ESD) $\pm 30\text{KV(air)}$, $\pm 30\text{KV(contact)}$;
IEC 61000-4-4 (EFT) 40A (5/50ns)
61000-4-5 (Lightning) 70A (8/20us)

Applications

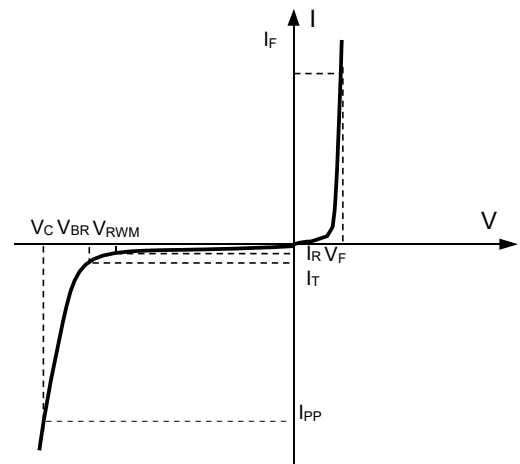
- Cell phone handsets and accessories
- Personal digital assistants (PDA's)
- Notebooks, desktops, and servers
- Portable instrumentation
- Cordless phones
- Digital cameras
- Peripherals

Mechanical Characteristics

- Lead finish: 100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature: 260°C
- Device meets MSL 3 requirements
- Pure tin plating: 7 ~ 17 μm
- Pin flatness: $\leq 3\text{mil}$

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



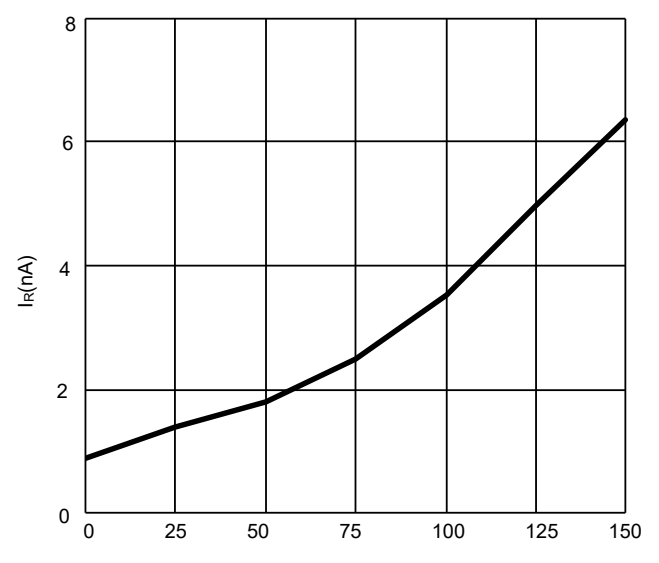
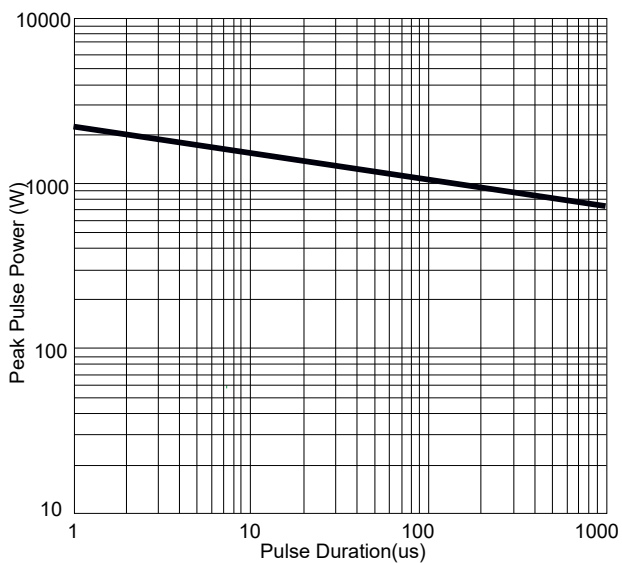
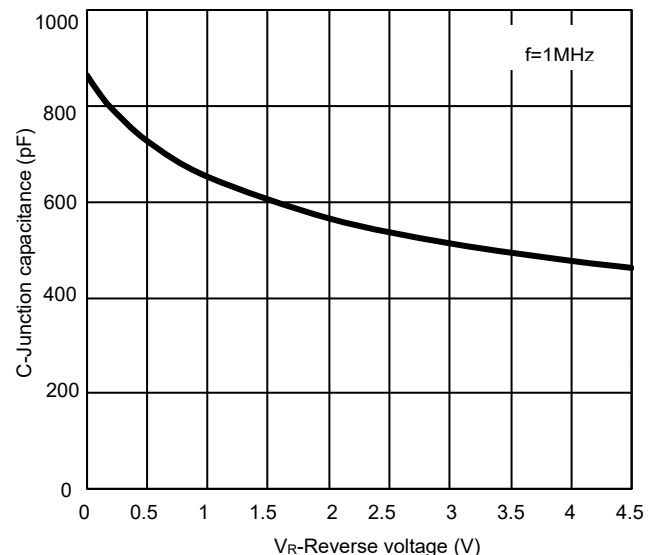
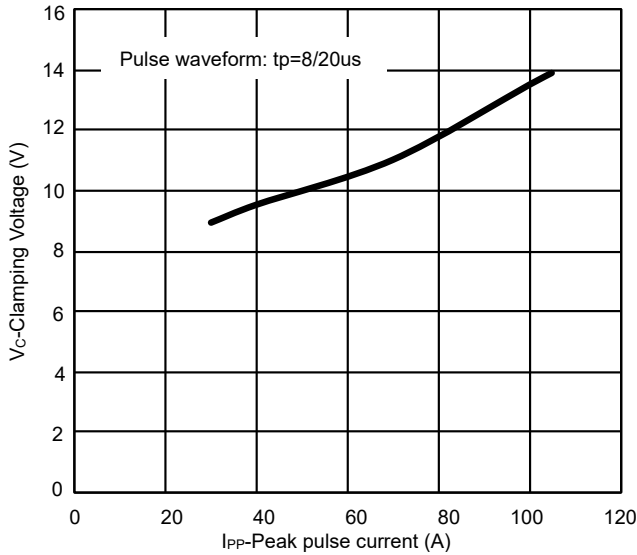
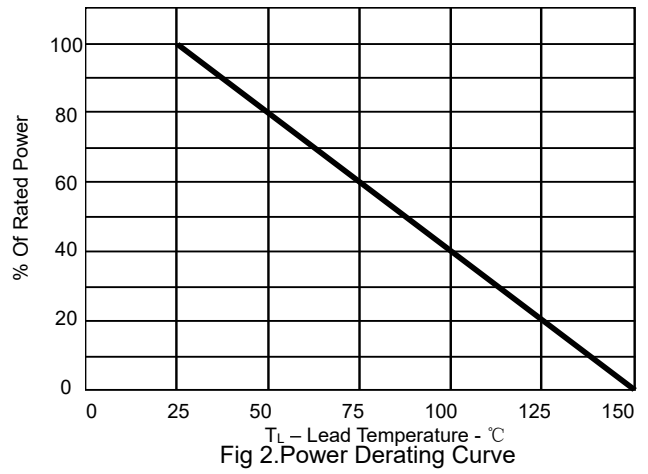
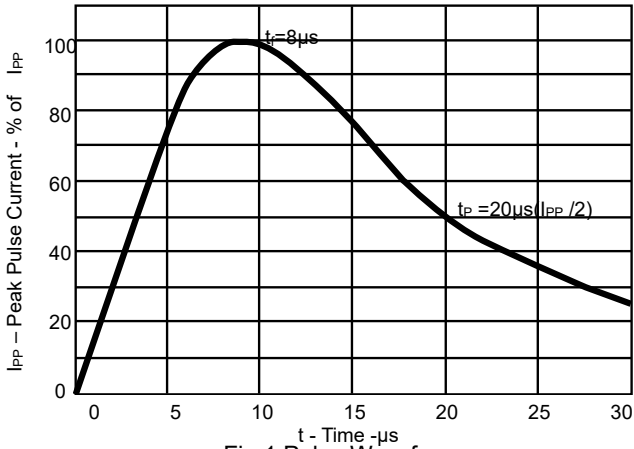
Absolute maximum rating@25 °C

Rating	Symbol	Value	Units
Peak Pulse Power ($t_P = 8/20\mu S$)	P_{pp}	1400	W
Lead Soldering Temperature	T_L	260 (10 sec)	°C
Operating Temperature	T_J	-55 to 125	°C
Storage Temperature	T_{STG}	-55 to 150	°C

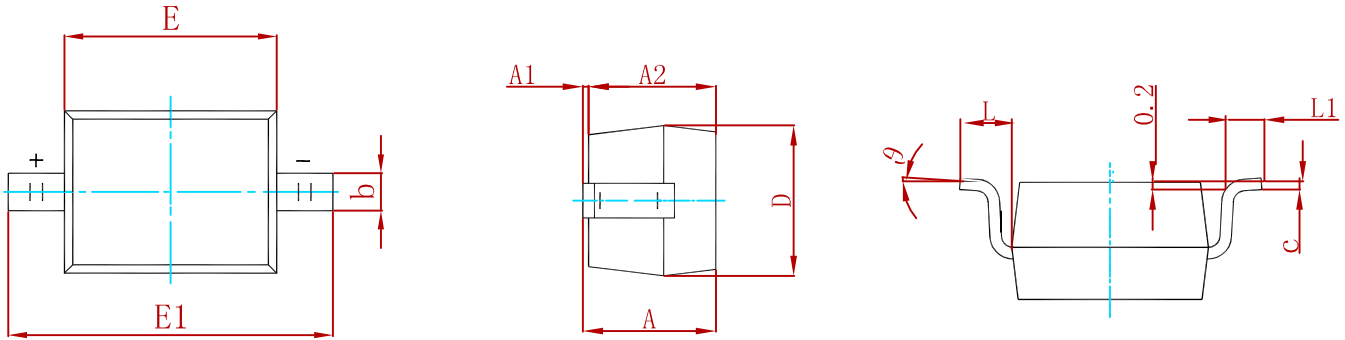
Electrical characteristics per line@25 °C (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	V_{RWM}				4.5	V
Breakdown Voltage	V_{BR}	$I_t = 1mA$	5		7	V
Reverse Leakage Current	I_R	$V_{RWM} = 4.5V$			5	μA
Clamping Voltage	V_C	$I_{PP} = 40A$ $t_P = 8/20\mu s$		9.5	11	V
Clamping Voltage	V_C	$I_{PP} = 70A$ $t_P = 8/20\mu s$		11	12	V
Clamping Voltage	V_C	$I_{PP} = 100A$ $t_P = 8/20\mu s$		13.5	15	V
Junction Capacitance	C_j	$V_R = 0V$ $f = 1MHz$	750	850	950	pF

Typical Characteristics

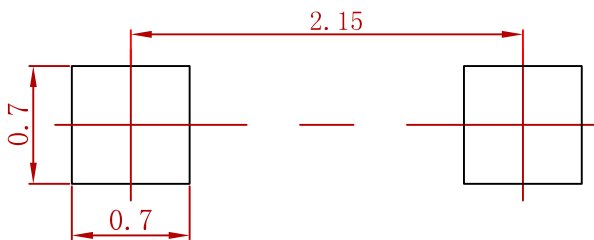


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

Suggested Pad Layout



- Note:**
1. Controlling dimension: in millimeters.
 2. General tolerance: ± 0.05 mm.
 3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
PTVSHC3D4V5U-MS	SOD-323	3000

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