

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT

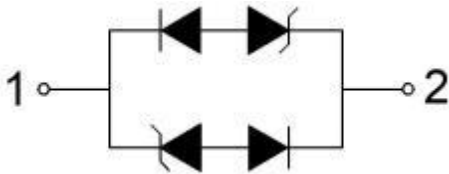


PLED

Product data sheet



SOD-323



### Features

- 2-pin lead-less package
- Low Junction capacitance (Max value: 1.5pF)
- Peak Pulse current (8/20  $\mu$ s) MAX : 20A
- IEC61000-4-2 (ESD)  $\pm$ 30kV (air),  $\pm$ 30kV (contact)
- Low leakage current
- Working voltages:3.3V
- RoHS Compliant

### Mechanical Characteristics

- Package: SOD-323
- Lead Finish:Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Tape Reel :3000pcs

### Applications

- LED Lighting Modules
- RS232/RS485
- CAN and LIN Bus
- Portable Instrumentation
- General Purpose I/O
- Automotive application

**Absolute Maximum Ratings** ( T= 2 5 ° C, RH= 4 5 % - 7 5 % , unless otherwise noted)

Parameters	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P <sub>PP</sub>	380	W
Peak Pulse Current (8/20μs)	I <sub>PP</sub>	20	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V <sub>ESD</sub>	±30 ±30	KV
Operating Temperature Range	T <sub>J</sub>	-55 to + 125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to + 150	°C

**Electrical Characteristics** (T=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V <sub>RWM</sub>				3.3	V
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	I <sub>R</sub> = 1mA	5		8	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 3.3V			0.5	μA
Clamping voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A, T <sub>p</sub> =8/20us			9.5	V
Clamping voltage	V <sub>C</sub>	I <sub>PP</sub> = 20A, T <sub>p</sub> =8/20us			19	V
Junction capacitance	C <sub>j</sub>	V <sub>R</sub> =0V, f =1MHz	0.8	1	1.5	PF

Typical Characteristics

FIG1: Power rating derating curve

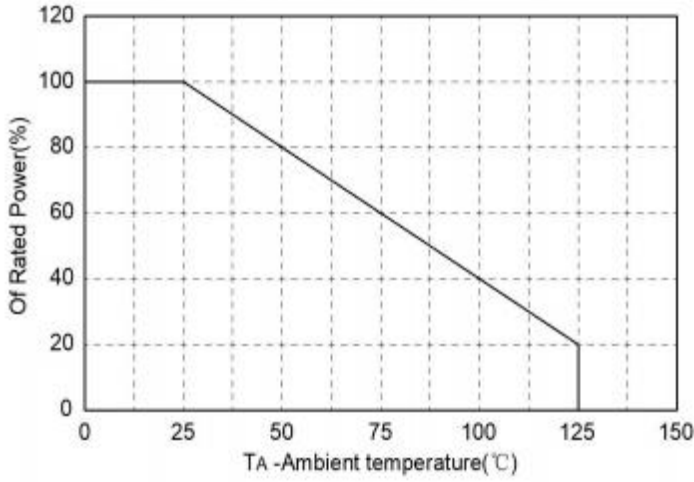


FIG2: pulse Waveform

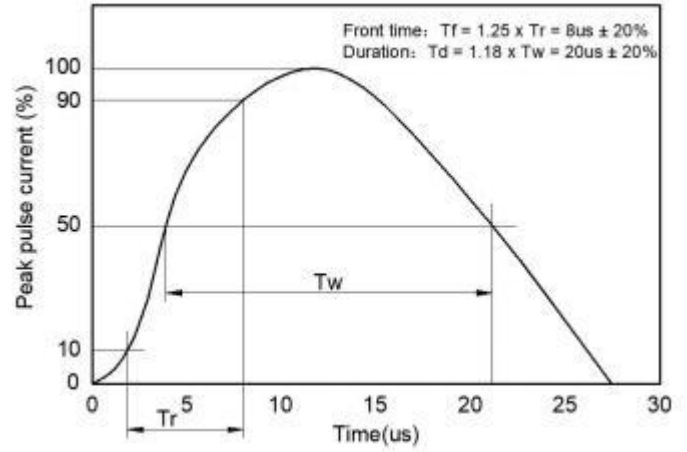


FIG3: Capacitance between terminals characteristics

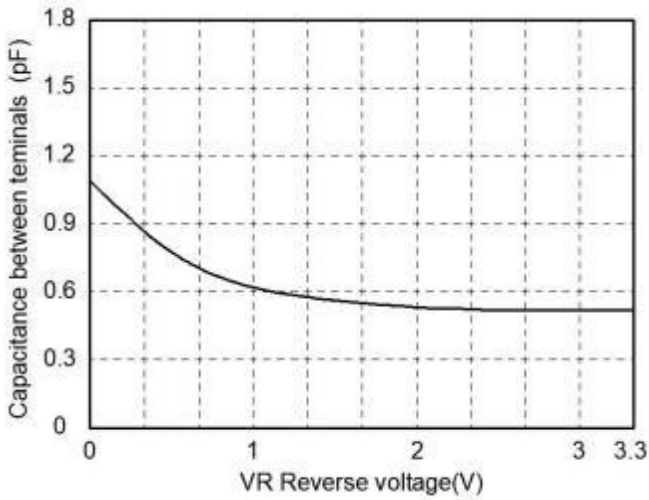
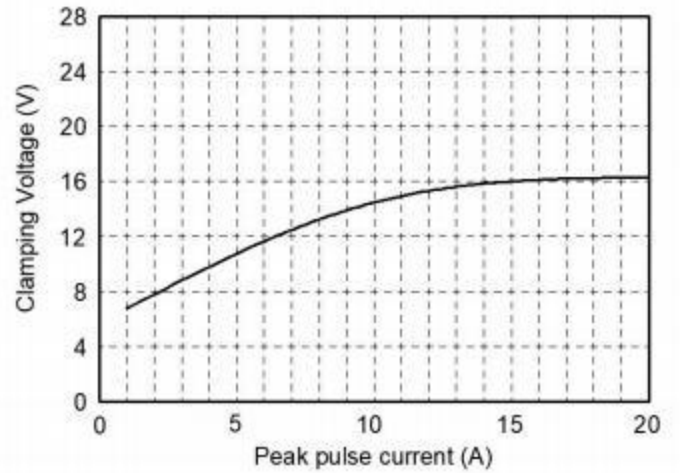
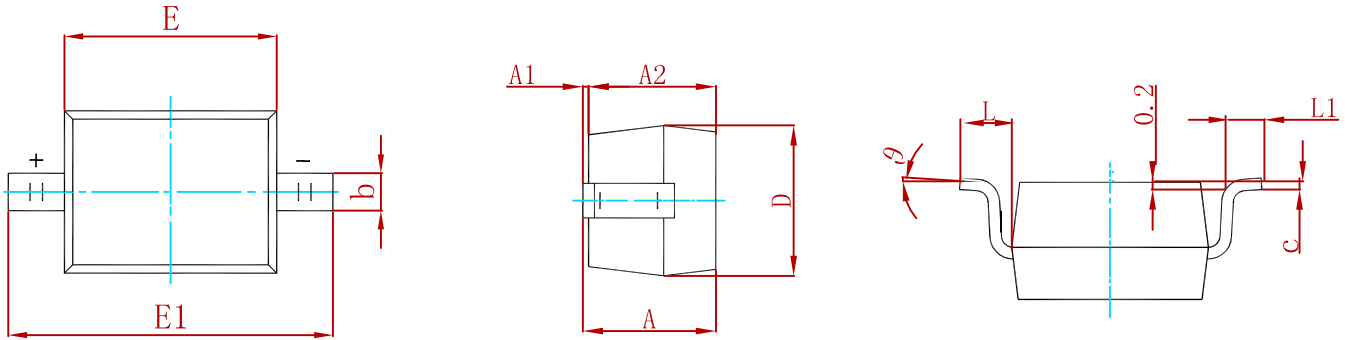


FIG4: Clamping Voltage vs. Peak Pulse Current

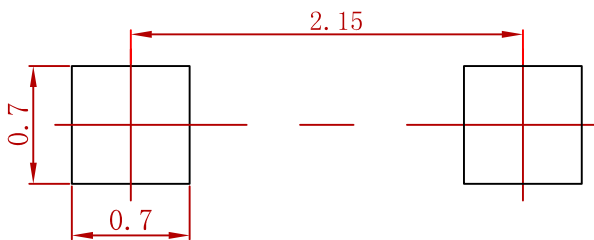


**PACKAGE MECHANICAL DATA**



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:  $\pm 0.05\text{mm}$ .
  3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

P/N	PKG	QTY
BSD3C031L2-MS	SOD-323	3000

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