

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV

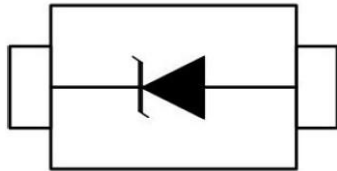


GDT



PLED

Product data sheet



SOD-323

- ◆ 350 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- ◆ Transient protection for high speed data lines to IEC 61000-4-2 (ESD)  $\pm 15kV$  (air),  $\pm 8kV$  (contact) IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ Working voltages : 3.3V-36V
- ◆ Protects one bidirectional line
- ◆ Low operating and clamping voltages
- ◆ Solid-state silicon avalanche technology

### Applications

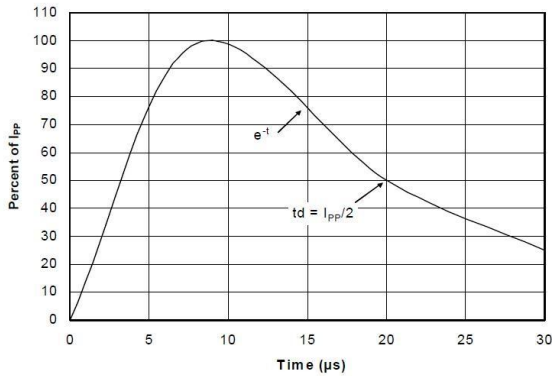
- ◆ Notebooks, Desktops, Servers and Video Graphics Cards
- ◆ USB Power & Data Line Protection
- ◆ Monitors and Flat Panel Displays
- ◆ I<sup>2</sup>C Bus Protection
- ◆ Portable Instrumentation
- ◆ Set Top Box

Symbol	Parameter	Value	Units
$V_{ESD}$	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$\pm 15$ $\pm 8$	kV
$P_{PP}$	Peak Pulse Power (8/20 $\mu s$ )	350	W
$T_{OPT}$	Operating Temperature	-55/+150	°C
$T_{STG}$	Storage Temperature	-55/+150	°C
$T_L$	Lead Soldering Temperature	260 (10 sec.)	°C

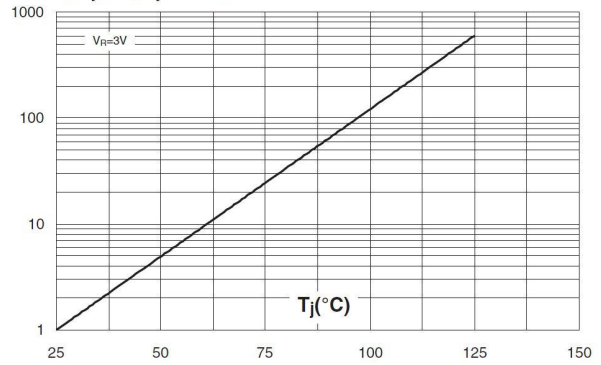
P/N	$V_{RWM}$	$V_B$	$I_T$	$V_{C@1A}$	$V_C$		$I_R$	$C_T$
	(V) (max.)	(V) (min.)	(mA)	(V) (max.)	(V) (max.)	(@A)	( $\mu$ A) (max.)	(pF) (max.)
SD03-MS	3.3	4	1	6.5	14	20	40	450
SD05-MS	5	6	1	9.8	18	17	10	300
SD08-MS	8	8.5	1	10.5	24	15	1	240
SD12-MS	12	13.3	1	19	32	11	1	130
SD15-MS	15	16.7	1	24	38	10	1	120
SD18-MS	18	20.0	1	29	45	9	1	100
SD20-MS	20	22.3	1	35	50	8	1	90
SD24-MS	24	26.7	1	43	52	7	1	80
SD36-MS	36	40	1	60	75	5	1	60

Typical Characteristics@ Ta=25°C unless otherwise specified

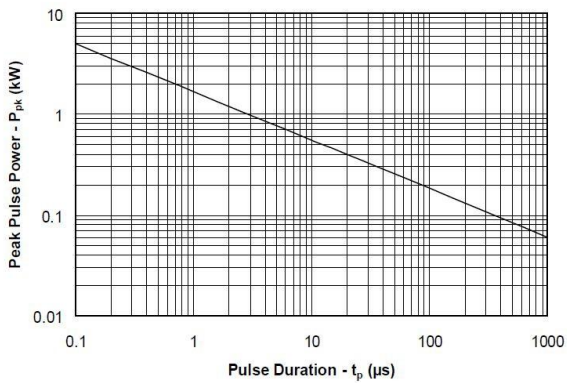
**Pulse Waveform**



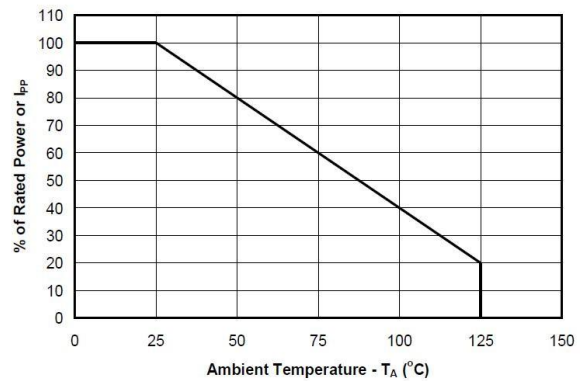
$I_R(T_j) / I_R(T_j=25^\circ C)$



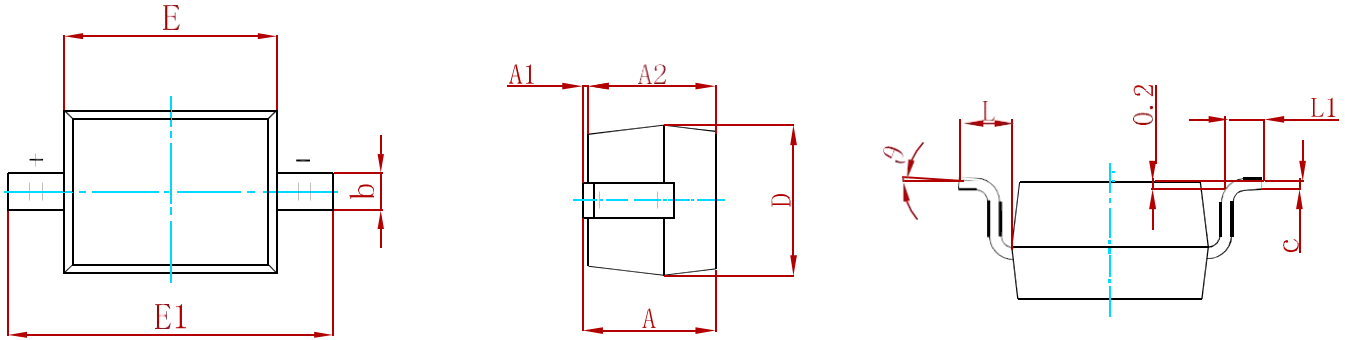
**Non-Repetitive Peak Pulse Power vs. Pulse Time**



**Power Derating Curve**

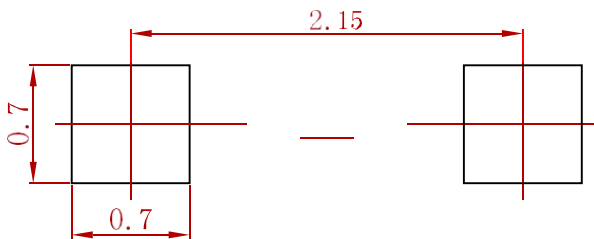


**PACKAGE MECHANICAL DATA**



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: ± 0.05mm.
  3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

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

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