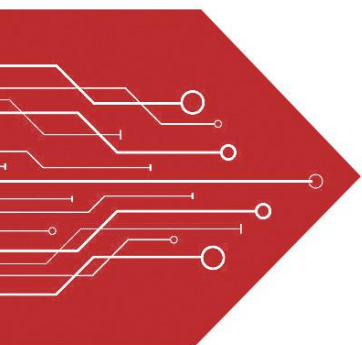


MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV

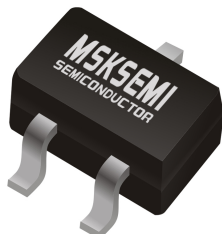


GDT

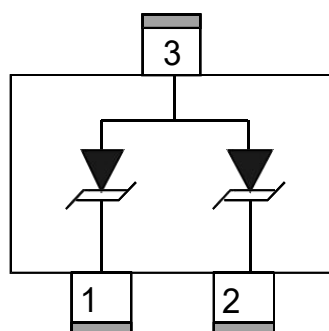
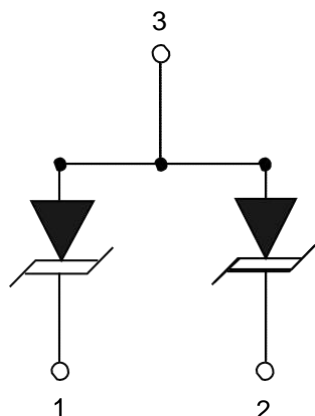


PLED

Product data sheet



SOT-23



Features

- 150 Watts peak pulse power ($t_p = 8/20\mu s$)
- Bidirectional and unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ($C_j = 100$ pF typ.)
- Protection two data lines
- IEC 61000-4-2 ± 20 kV contact ± 15 kV air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 10A(8/20 μs)

Mechanical Data

- SOT-23 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Applications

- Dataline
- Automatic Teller Machines
- Net works
- Power line

Absolute Maximum Rating

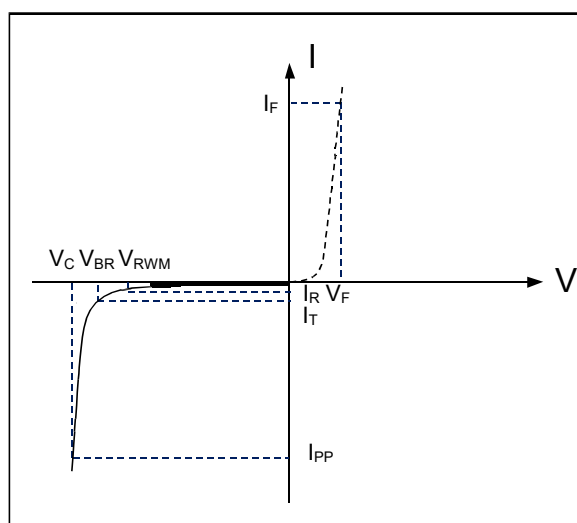
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	150	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)(note1)	I_{PP}	10	A
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	20 15	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}C$
Junction Temperature	T_J	-55 to + 125	$^{\circ}C$
Storage Temperature	T_{stg}	-55 to + 125	$^{\circ}C$

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5	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	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$			10	A
Clamping Voltage	V_C	$I_{PP} = 1A, t_p = 8/20\mu s$			10	V
		$I_{PP} = 10A, t_p = 8/20\mu s$			15	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$ (pin1、 pin2 to pin3)		100		pF

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

Symbol	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 μs pulse waveform.

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

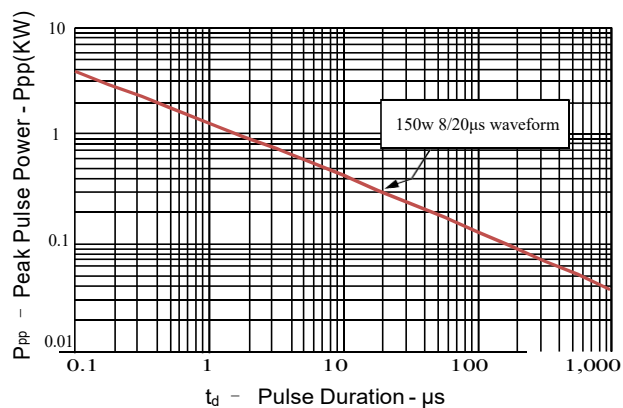


Figure 2: Power Derating Curve

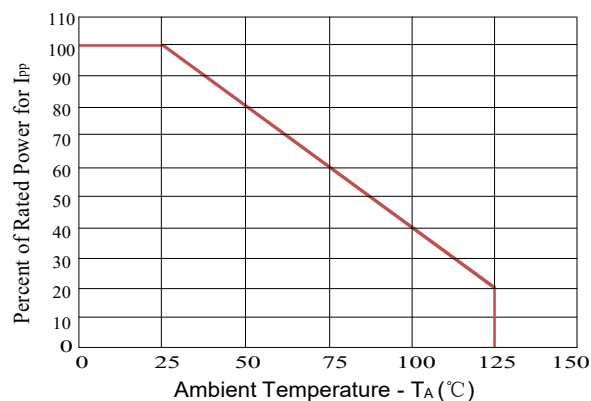


Figure3: Pulse Waveform

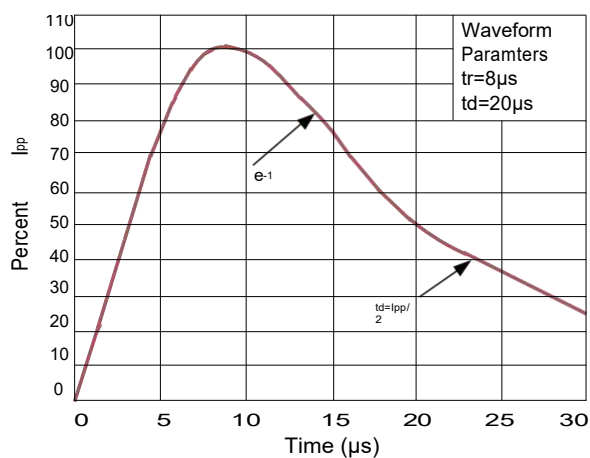
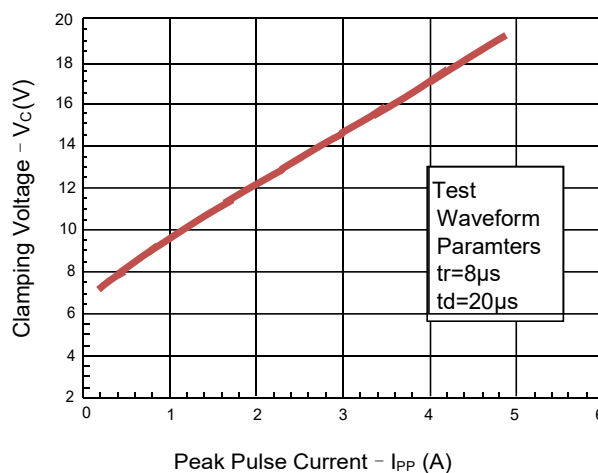
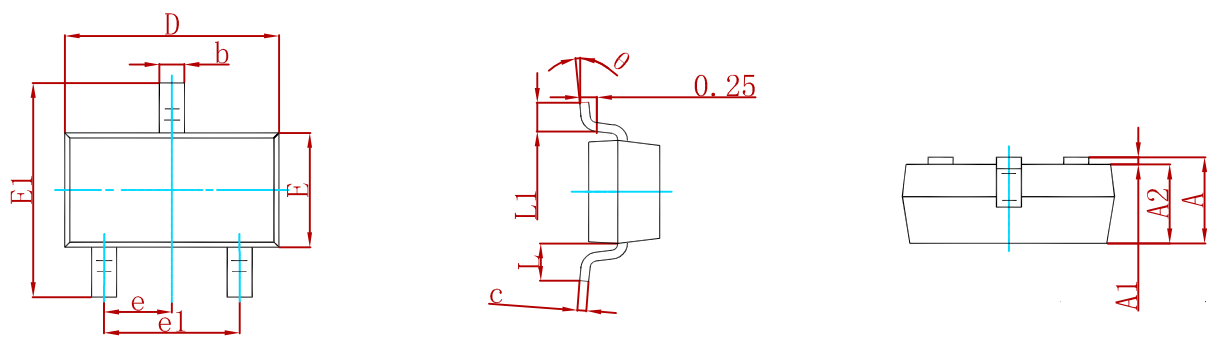


Figure 4: Clamping Voltage vs. Ipp

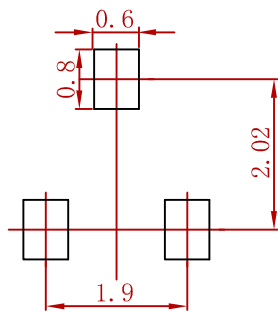


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
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
ESDA6V1L	SOT-23	3000

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