

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT

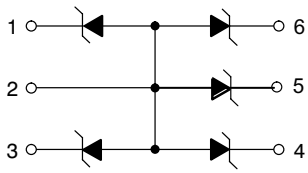


PLED

Product data sheet



SOT-563



Specification Features:

- Working Peak Reverse Voltage: 5 V
- Low Leakage current: <1uA@3V
- High ESD protection Level: >20kV per HBM
- IEC61000- 4- 2 Level 4 ESD Protection
- IEC61000- 4- 4 Level 4 EFT Protection
- Five separate unidirectional configurations

Mechanical Characteristics

- Void Free, Transfer-Molded, Thermosetting Plastic Case
- Corrosion Resistant Finish, Easily Solderable
- Small Packaging

Applications

- Cell Phone Handsets and Accessories
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Digital Cameras
- Peripherals
- MP3 Players

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power(tp=8/20us)	Ppp	20	W
Maximum Peak Pulse Current(tp=8/20us)	Ipp	1.6	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	Vpp	±20 ±16	KV
Maximum lead temperature for soldering during 10s	TL	260	°C
Storage Temperature Range	Tstg	-55~+150	°C
Operating Temperature Range	Top	-55~+125	°C

Electrical Characteristics

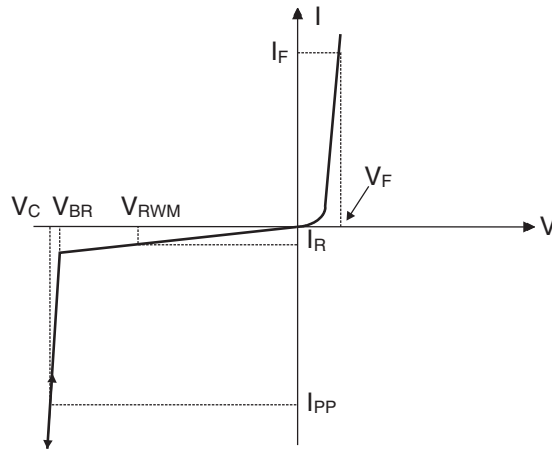
(T=25°C, Device for 5.0V Working Peak Reverse Voltage)

	Conditions	Minimum	Typical	Maximum	Unit
I_R	$V_{RWM}=5V$			0.5	uA
V_F	$I_F= -10mA$	-0.4	-0.8	-1.25	V
V_{BR}	$I_T=1mA$	6.2	6.8	7.2	V
V_C	$I_{PP}=1A, t_p = 8/20\mu s, \text{note 1}$			12	V
	$I_{PP}=1.6A, t_p = 8/20\mu s, \text{note 1}$			14.4	V
C	Pin1 to 2 $V_R = 0V, f = 1MHz$		9		pF

Note1: Surge current waveform per Figure 1.

Electrical Parameter

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}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T
I_F	Forward Current
V_F	Forward Voltage @ I_F



Typical Characteristics

Figure 1. Pulse Waveform

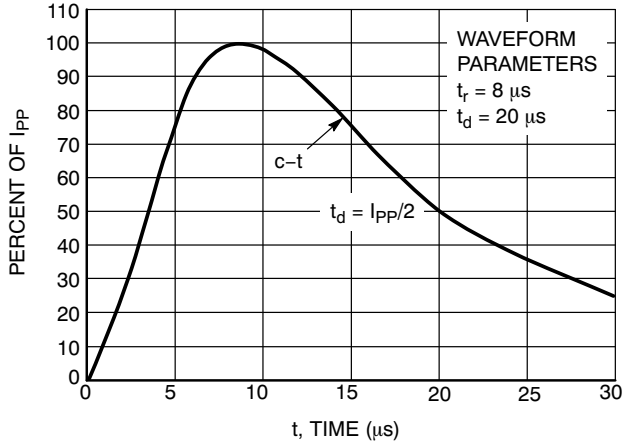


Figure 2. Power Derating Curve

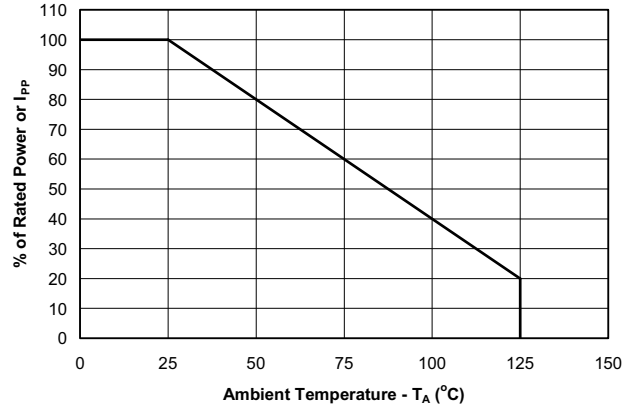


Figure 3. Non-Repetitive Peak Pulse Power vs. Pulse Time

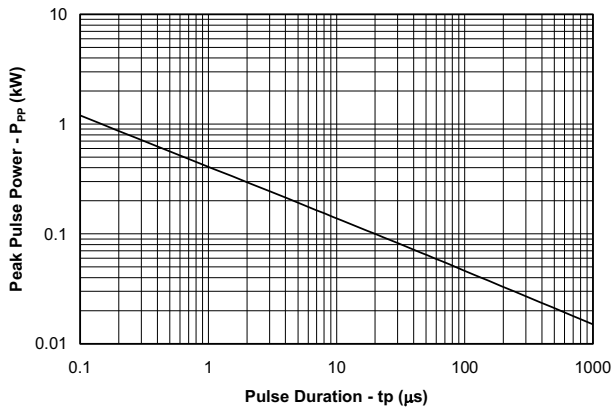
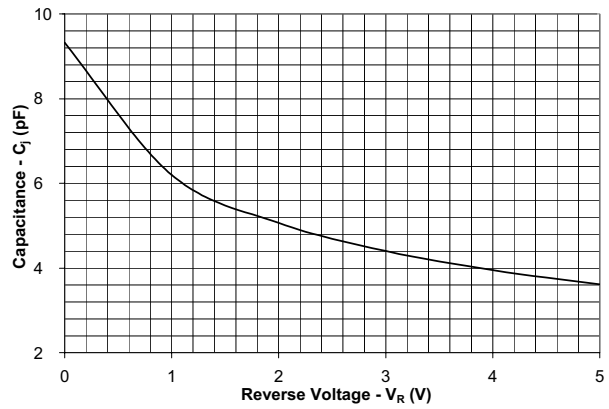
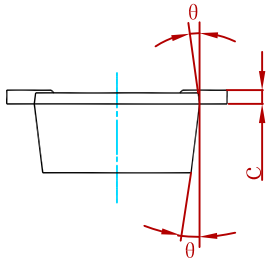
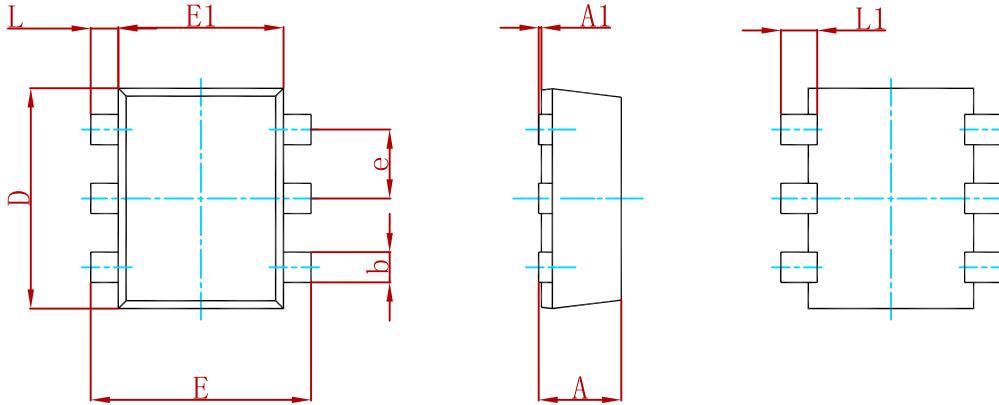


Figure 4. Junction Capacitance vs. Reverse Voltage

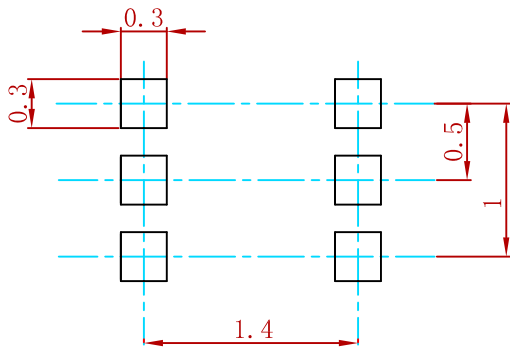


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
L1	0.200	0.400	0.008	0.016
θ	7° REF.		7° REF.	

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
ESDA6V8AV6-MS	SOT-563	3000

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