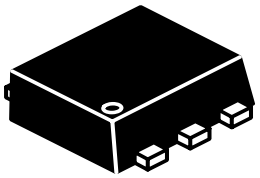
ESDA6V8AV6

Transient Voltage Suppressors for ESD Protection

Features

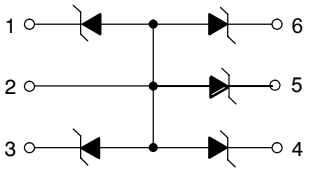
- Working Peak Reverse Voltage: 5 V
- Low Leakage current: <1uA@3V
- High ESD protection Level: >20kV per HBM
- IEC61000- 4- 2 Level 4 ESD Protection
- IEC61000- 4- 4 Level 4 EFT Protection
- Five separate unidirectional configurations



SOT−563

Mechanical Characteristics

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



Applications

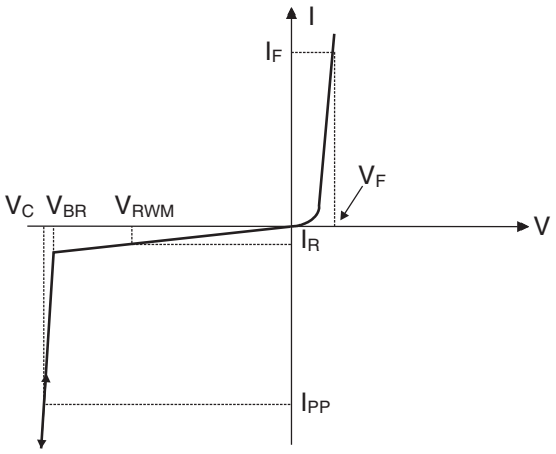
- Cell Phone Handsets and Accessories
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Digital Cameras
- Peripherals
- MP3 Players

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 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



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, tp = 8/20us, note1			12	V
	I_{PP}=1.6A, tp = 8/20us, note1			14.4	V
C	Pin1 to 2 V_R = 0V, f = 1MHz		9		pF

Note1: Surge current waveform per Figure 1.

Typical Characteristics

Figure 1. Pulse Waveform

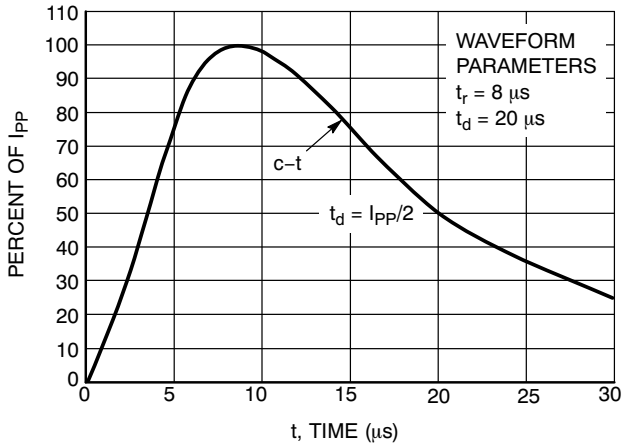


Figure 2. Power Derating Curve

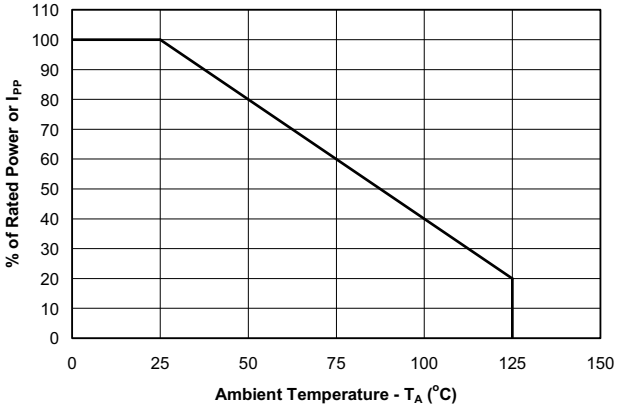


Figure 3. Non-Repetitive Peak Pulse Power vs. Pulse Time

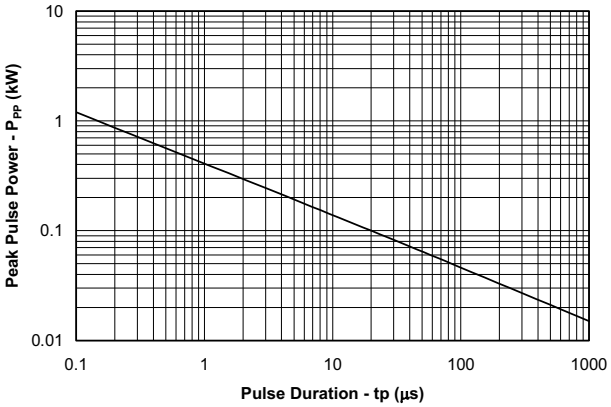
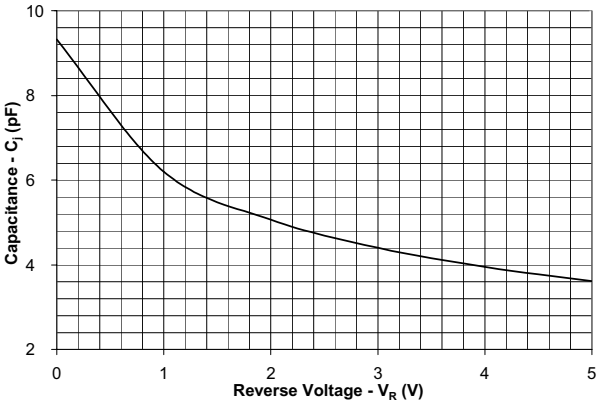
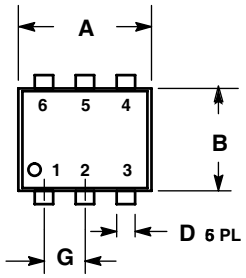
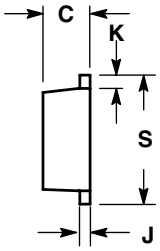


Figure 4. Junction Capacitance vs. Reverse Voltage



Package Outline SOT-563

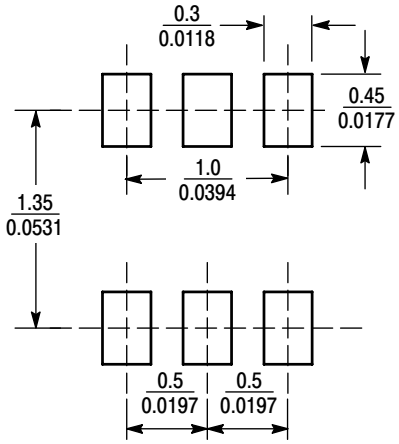




DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.50	1.70	0.059	0.067
B	1.10	1.30	0.043	0.051
C	0.50	0.60	0.020	0.024
D	0.17	0.27	0.007	0.011
G	0.50 BSC		0.020 BSC	
J	0.08	0.18	0.003	0.007
K	0.10	0.30	0.004	0.012
S	1.50	1.70	0.059	0.067

STYLE 6:
PIN 1. CATHODE
2. ANODE
3. CATHODE
4. CATHODE
5. CATHODE
6. CATHODE

SOLDERING FOOTPRINT



SCALE 20:1 $\left(\frac{\text{mm}}{\text{inches}}\right)$