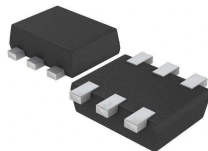


### Features

25Watts peak pulse power ( $t_p = 8/20\mu s$ )  
 Tiny SOT563 package  
 Solid-state silicon-avalanche technology  
 Low clamping voltage  
 Low leakage current  
 Protection five data/power line to:  
 IEC 61000-4-2  $\pm 8kV$  contact  $\pm 15kV$  air  
 IEC 61000-4-4 (EFT) 40A (5/50ns)  
 IEC 61000-4-5 (Lightning) 2.5A (8/20 $\mu s$ )

### Applications

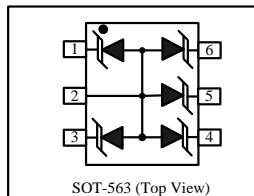
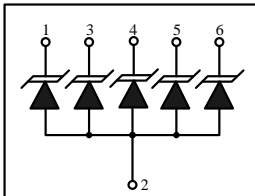
Cellular Handsets & Accessories  
 Personal Digital Assistants (PDAs)  
 Notebooks & Handhelds  
 Portable Instrumentation  
 Digital Cameras



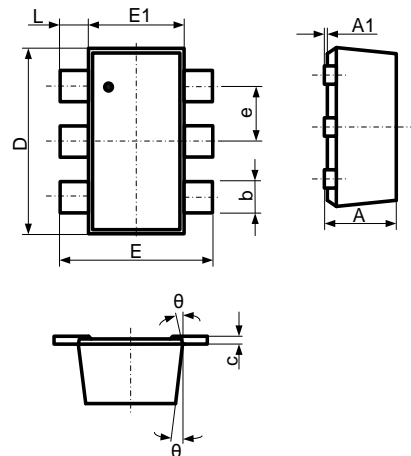
### Mechanical Data

SOT563 package  
 Molding compound flammability rating: UL 94V-0  
 Packaging: Tape and Reel  
 RoHS/WEEE Compliant

Schematic & PIN Configuration



### SOT-563



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETER	
	MIN	MAX	MIN	MAX
A	0.021	0.024	0.525	0.600
A1	0.000	0.002	0.000	0.050
e	0.018	0.022	0.450	0.550
c	0.004	0.006	0.090	0.160
D	0.059	0.067	1.500	1.700
b	0.007	0.011	0.170	0.270
E1	0.043	0.051	1.100	1.300
E	0.059	0.067	1.500	1.700
L	0.004	0.012	0.100	0.300
$\theta$	7°REF		7°REF	

Dimensions in inches and (millimeters)

### Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	25	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	$I_{pp}$	2.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	20 16	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	°C
Junction Temperature	$T_J$	-55 to + 125	°C
Storage Temperature	$T_{stg}$	-55 to + 125	°C

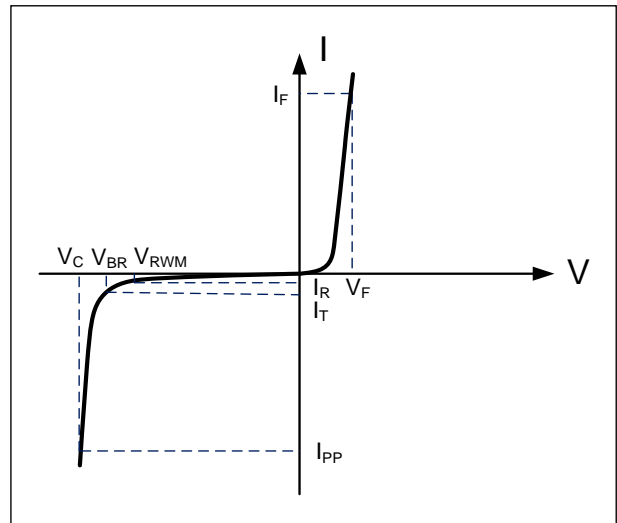
# ESDA6V8AV6

## Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	6.0			V
Reverse Leakage Current	$I_R$	$V_{RWM}=5V, T=25^\circ C$		50	100	nA
Clamping Voltage	$V_C$	$I_{PP}=2.5A, t_p=8/20\mu s$		11		V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$ IO to IO		8.5		pF
		$V_R = 0V, f = 1MHz$ IO to GND		16		

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

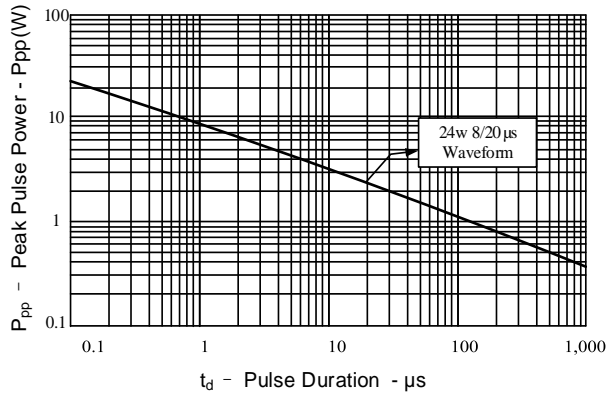
Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current



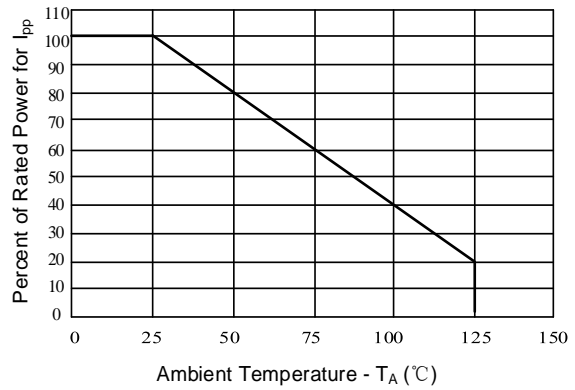
Note: 8/20μs pulse waveform.

## RATING AND CHARACTERISTIC CURVES (ESDA6V8AV6)

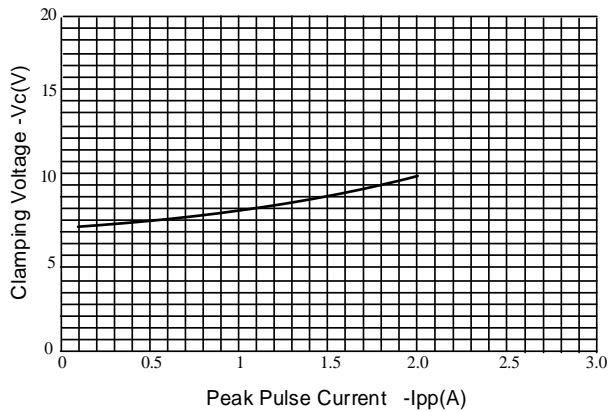
**Figure 1: Peak Pulse Power vs. Pulse Time**



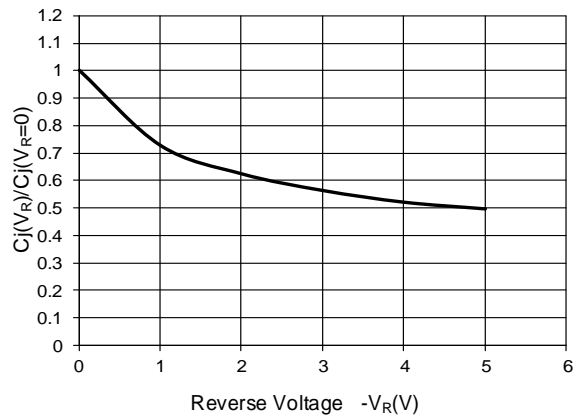
**Figure 2: Power Derating Curve**



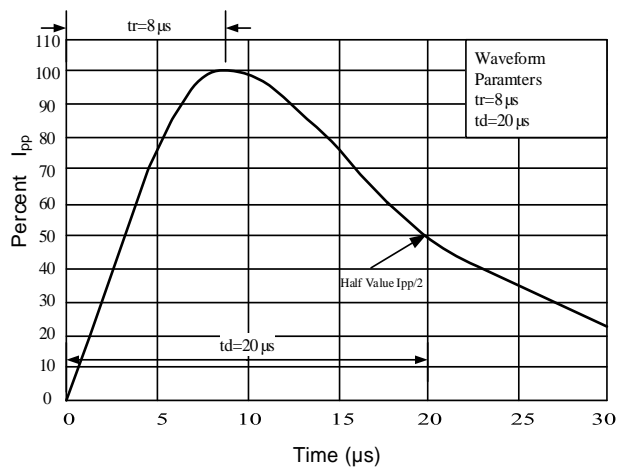
**Figure 3: Clamping Voltage vs. Peak Pulse Current**



**Figure 4: Normalized Junction Capacitance vs. Reverse Voltage**



**Figure 5: 8/20μs Pulse Waveform**



**Figure 6: TLP I-V Curve**

