

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 μs)

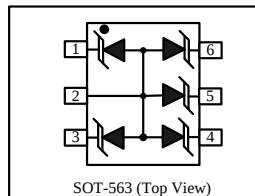
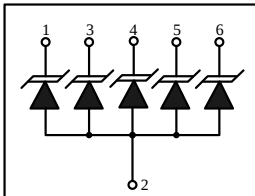
Applications

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

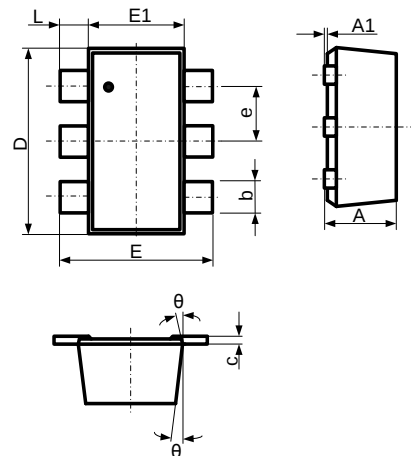
Mechanical Data

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
θ	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

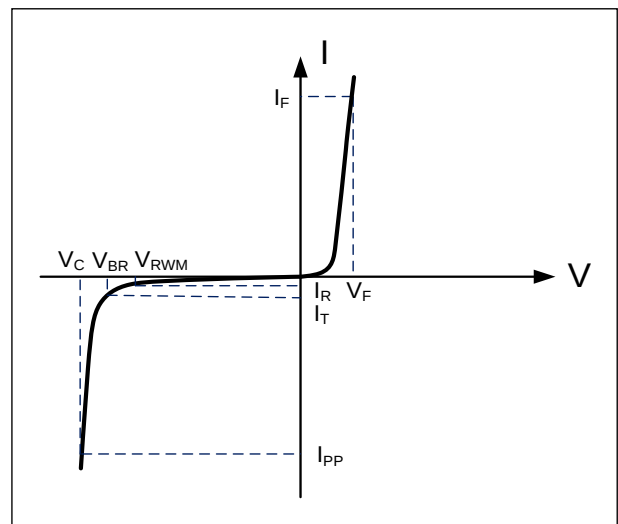
ESDA6V8AV6

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

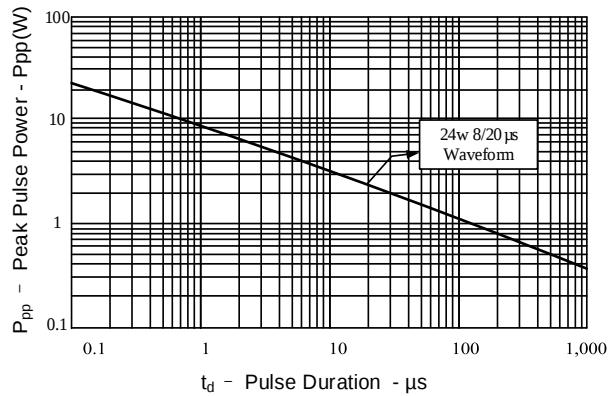


Figure 2: Power Derating Curve

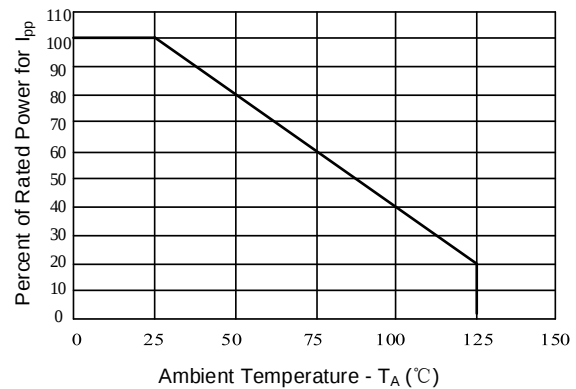


Figure 3: Clamping Voltage vs. Peak Pulse Current

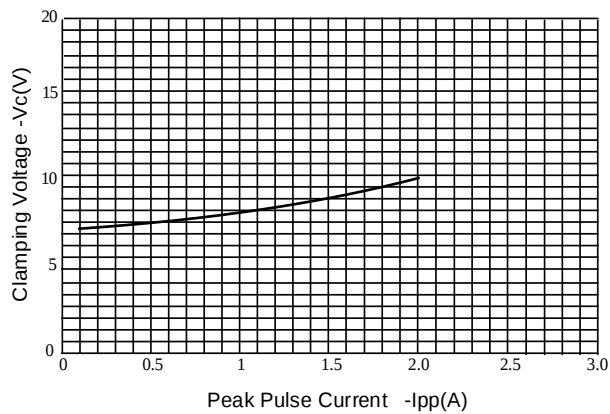


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

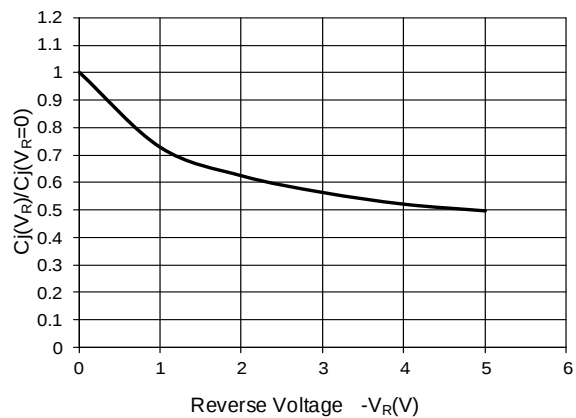


Figure 5: 8/20 μs Pulse Waveform

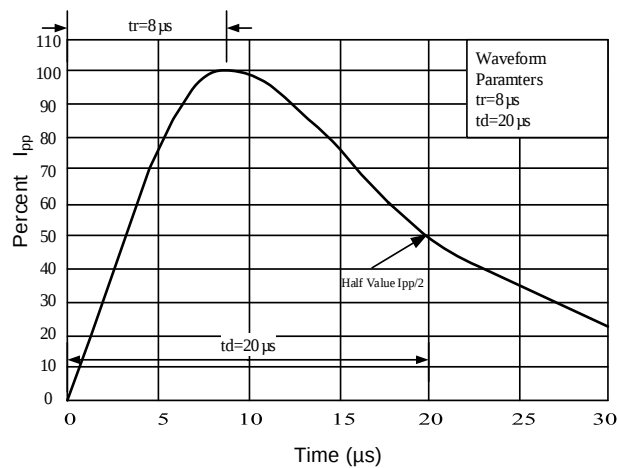
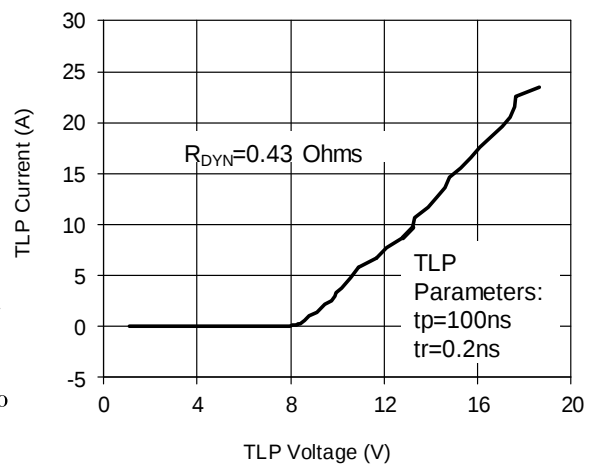


Figure 6: TLP I-V Curve



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