

## Features

- Ultra low leakage: nA level
- Low operating voltage: 5V
- Complies with following standards:
- IEC 61000-4-2 (ESD) immunity test
  - Air discharge:  $\pm 20\text{kV}$
  - Contact discharge:  $\pm 18\text{kV}$
- IEC61000-4-5 (Lightning)4A (8/20  $\mu\text{s}$ )
- RoHS Compliant
- Lead Finish: NiPdAu

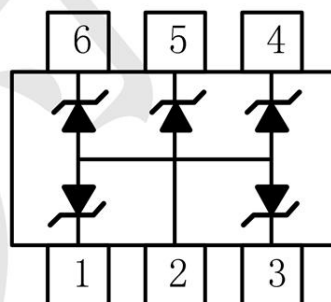
## Mechanical Characteristics

- Package: SOT563 (1.6mmx1.6mmx0.6mm)
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0
- Pb-Free, Halogen Free, RoHS/WEEE Compliant
- Shipping Qty : 4000pcs/7Inch Tape & Reel

## Applications

- USB 2.0 interface
- 10/100 Ethernet
- Personal digital assistants (PDA's)
- Notebooks, Desktops and Servers
- Portable instrumentation
- Digital cameras

## Dimensions and Pin Configuration



Pin Configuration

**Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)**

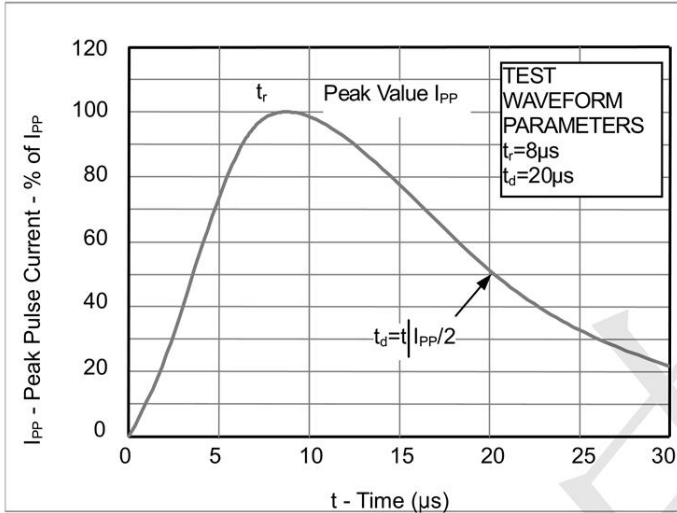
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	40	W
ESD per IEC 61000-4-2 (Air)	VESD	±20	kV
ESD per IEC 61000-4-2 (Contact)		±18	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

**Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)**

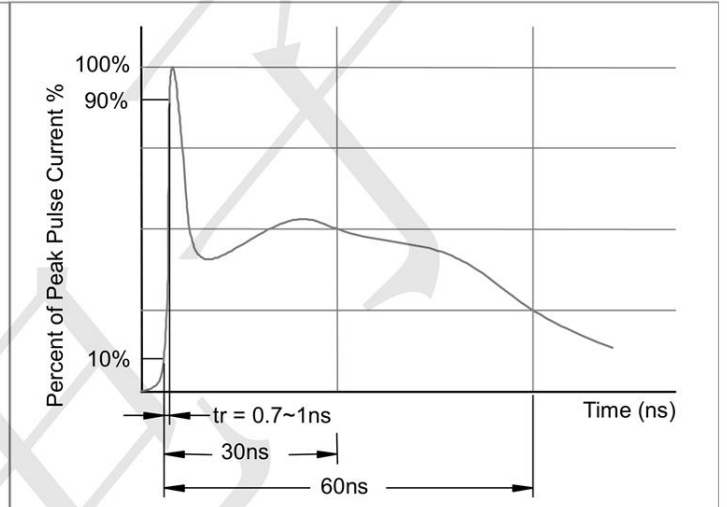
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			5	V	
Breakdown Voltage	V <sub>BR</sub>	6			V	I <sub>T</sub> = 1mA
Reverse Leakage Current	I <sub>R</sub>			0.1	μA	V <sub>RWM</sub> = 5V
Forward Voltage	V <sub>F</sub>			1.2	V	I <sub>F</sub> = 10mA
Clamping Voltage	V <sub>C</sub>			14	V	I <sub>PP</sub> =4A (8 x 20us pulse)
Junction Capacitance	C <sub>J</sub>			10	pF	V <sub>R</sub> = 0V, f = 1MHz IO to Gnd

**Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)**

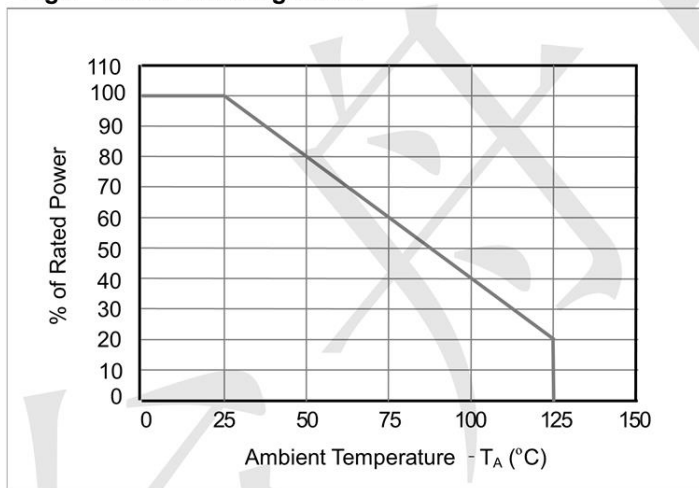
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



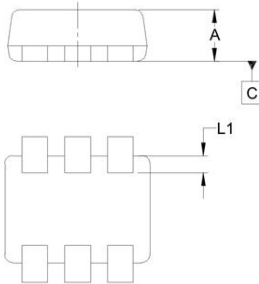
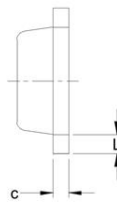
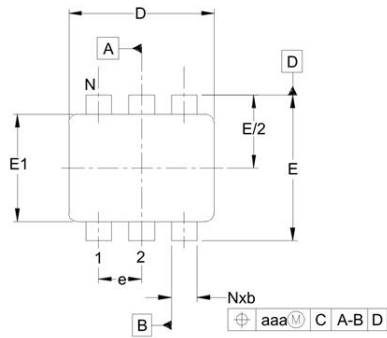
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig3. Power Derating Curve**

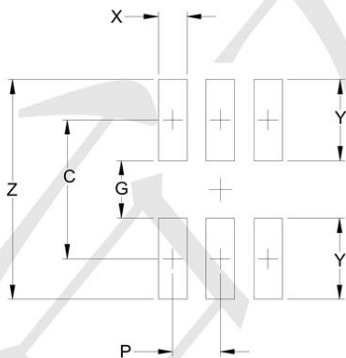


## Outline Drawing - SOT-563



DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.019	-.024	0.50	-	-	0.60
b	.005	-.012	0.15	-	-	0.30
c	.003	-.007	0.10	-	-	0.18
D	.059	.063	.067	1.50	1.60	1.70
E	.061	.063	.067	1.55	1.60	1.70
E1	.043	.047	.049	1.10	1.20	1.25
e	.020 BSC			0.50 BSC		
L	.003	.008	.012	0.10	0.20	0.30
L1	.003	.006	.008	0.10	0.15	0.20
N	6			6		
aaa	.004			0.10		

## Land Pattern - SOT-563



DIM	DIMENSIONS	
	INCHES	MILLIMETERS
C	(.057)	(1.45)
P	.020	0.50
G	.024	0.60
X	.012	0.30
Y	.033	0.85
Z	.090	2.30