

Features

- Ultra low capacitance: 0.5pF typical
- Ultra low leakage: nA level
- Low operating voltage: 12V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
- – IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 20\text{kV}$
 - Contact discharge: $\pm 15\text{kV}$
- – IEC61000-4-5 (Lightning)2A (8/20 μs)
- RoHS Compliant
- Lead Finish: NiPdAu

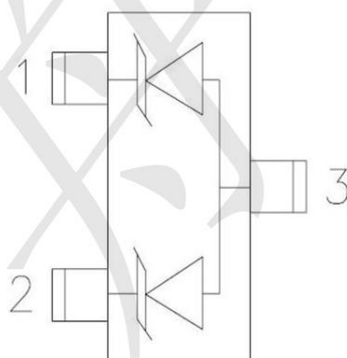
Mechanical Characteristics

- Package: SOT23
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Shipping Qty :3000pcs/7Inch Tape & Reel

Applications

- USB 2.0 and USB 3.0
- 10/100/1000 Ethernet
- High-speed data lines
- FireWire
- Local Area Network (LAN) equipmen

Dimensions and Pin Configuration



Marking: WAR

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Air)	VESD	± 15	kV
ESD per IEC 61000-4-2 (Contact)		± 8	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			12	V	
Breakdown Voltage	VBR	13.2			V	IT = 1mA
Reverse Leakage Current	IR			0.08	μA	VRWM = 12V
Forward Voltage	VF		0.8	1.2	V	IF = 10mA
Clamping Voltage	VC			22	V	I _{PP} = 1A (8 x 20μs pulse)
Clamping Voltage	VC			25	V	I _{PP} = 2A (8 x 20μs pulse)
Junction Capacitance	CJ			0.9	pF	VR=0, f=1MHz, Pin 1 to Pin 3 or Pin 2 to Pin 3
Junction Capacitance	CJ		0.5		pF	VR=0, f=1MHz, Pin 1 to Pin 2

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

Fig1. 8/20 μs Pulse Waveform

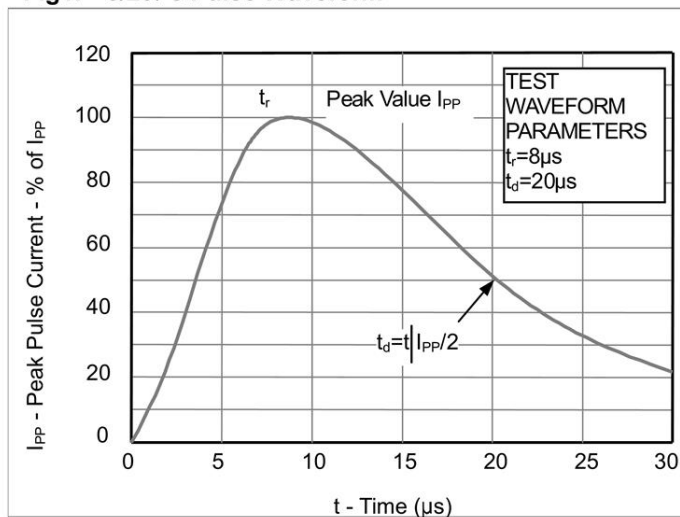


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

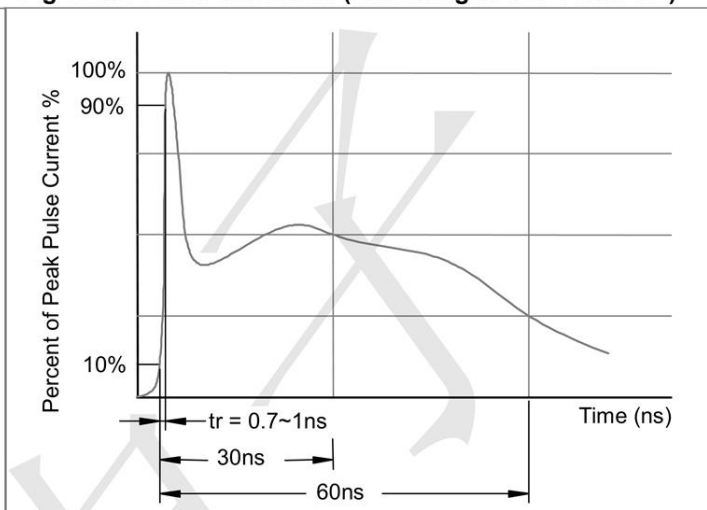
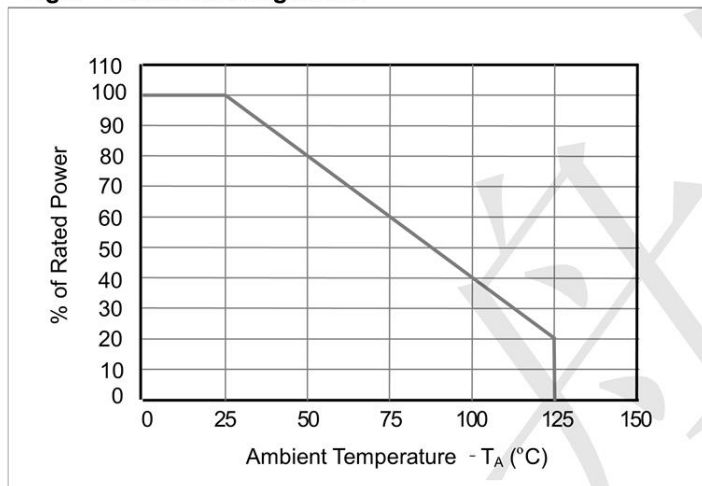
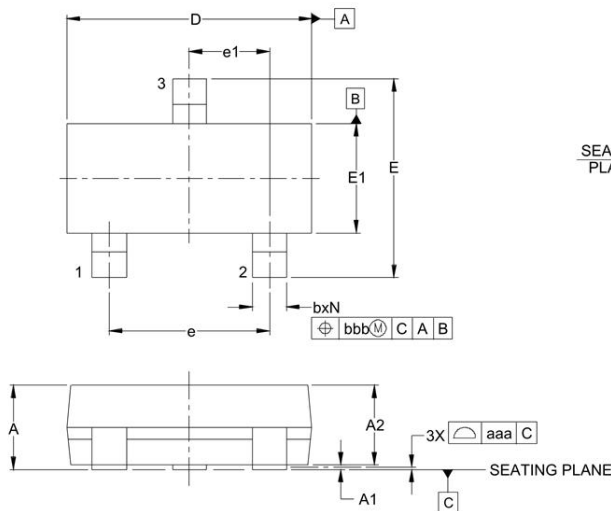


Fig3. Power Derating Curve

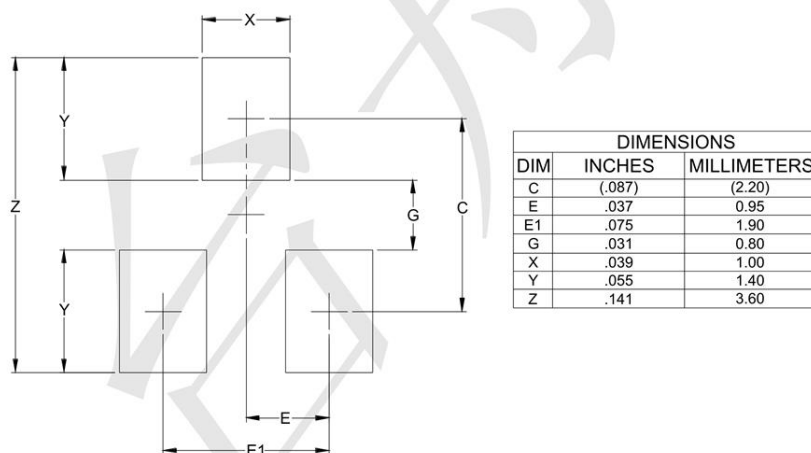


Outline Drawing - SOT23



DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.035	-	.044	0.89	-	1.12
A1	.000	-	.004	0.01	-	0.10
A2	.035	.037	.040	0.88	0.95	1.02
b	.012	-	.020	0.30	-	0.51
c	.003	-	.007	0.08	-	0.18
D	.110	.114	.120	2.80	2.90	3.04
E	.082	.093	.104	2.10	2.37	2.64
E1	.047	.051	.055	1.20	1.30	1.40
e		.075			1.90	BSC
e1		.037			0.95	BSC
L	.015	.020	.024	0.40	0.50	0.60
L1		.022			(0.55)	
N		3			3	
ϕ	0°	-	8°	0°	-	8°
aaa		.004			0.10	
bbb		.008			0.20	

Land Pattern - SOT23



DIM	DIMENSIONS	
	INCHES	MILLIMETERS
C	(.087)	(2.20)
E	.037	0.95
E1	.075	1.90
G	.031	0.80
X	.039	1.00
Y	.055	1.40
Z	.141	3.60