

Features

- Ultra low capacitance: 0.35pF typical
- Ultra low leakage: nA level
- Low operating voltage: 3.3V
- 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)4A (8/20 μs)
- RoHS Compliant
- Lead Finish: NiPdAu

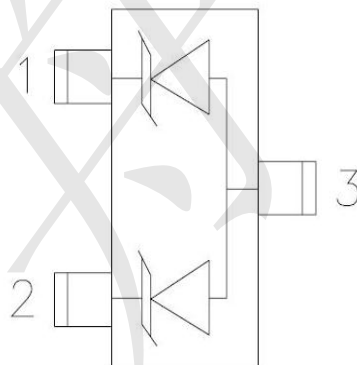
Mechanical Characteristics

- 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
- SATA and eSATA
- DVI
- Set Top Box
- Portable Electronics

Dimensions and Pin Configuration



Marking: Q3W

Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	100	W
Peak Pulse Current (8/20μs)	I _{PP}	4	A
ESD per IEC 61000-4-2 (Air)	VESD	± 20	kV
ESD per IEC 61000-4-2 (Contact)		± 15	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			3.3	V	
Breakdown Voltage	V _{BR}	4.3			V	I _T = 1mA
Reverse Leakage Current	I _R			0.08	μA	V _{RWM} = 3.3V
Forward Voltage	V _F		0.8	1.2	V	I _F = 10mA
Clamping Voltage	V _C			10	V	I _{PP} = 1A (8 x 20μs pulse)
Clamping Voltage	V _C			18	V	I _{PP} = 20A (8 x 20μs pulse)
Junction Capacitance	C _J			0.75	pF	V _R =0, f=1MHz, Pin 1 to Pin 3 or Pin 2 to Pin 3
Junction Capacitance	C _J		0.4		pF	V _R =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

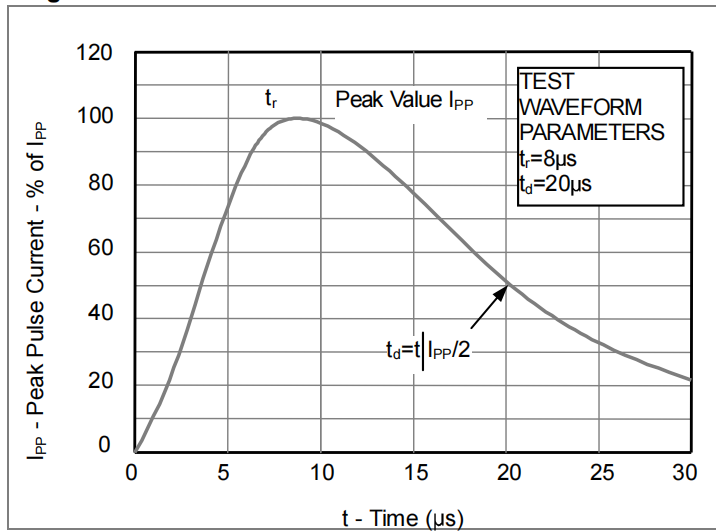


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

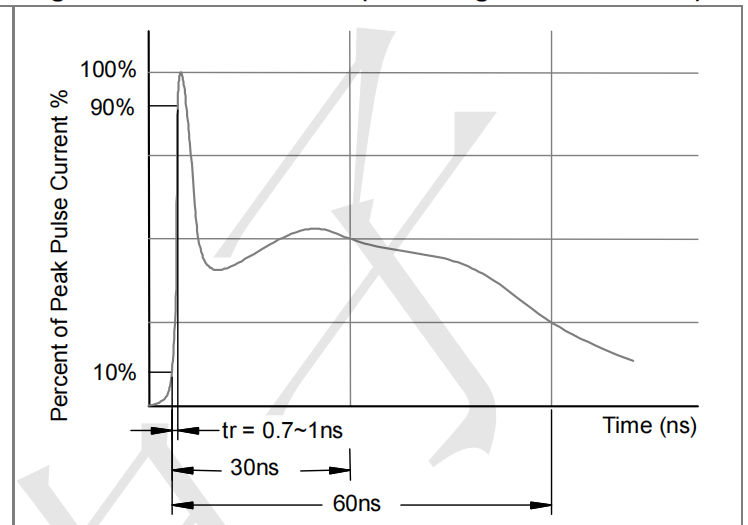
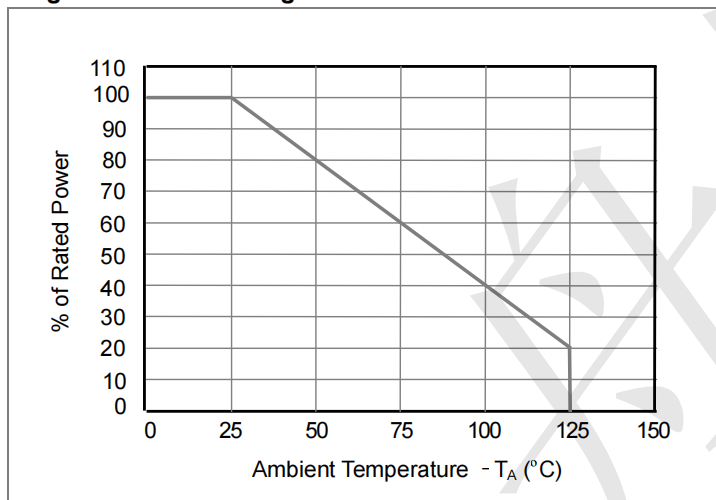
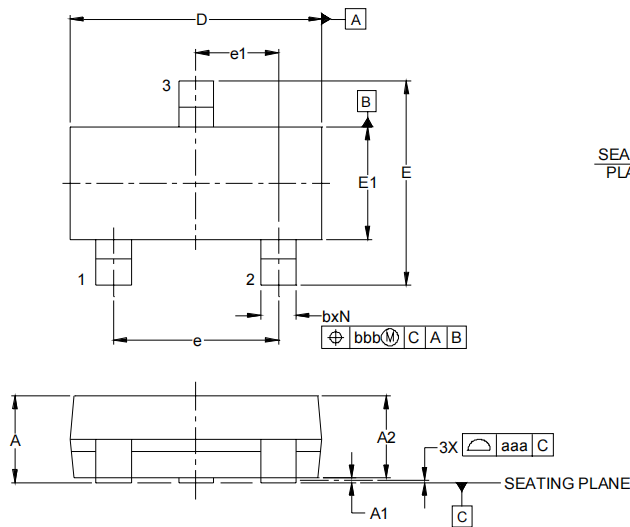


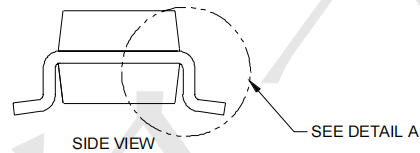
Fig3. Power Derating Curve



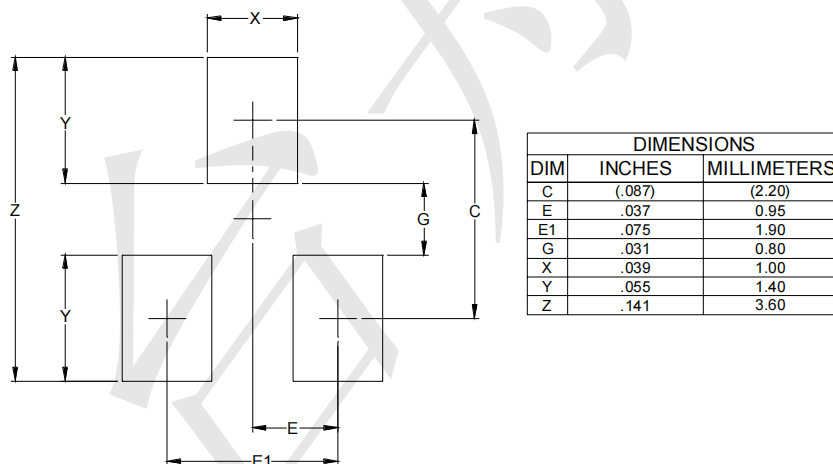
Outline Drawing - SOT23



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	-	-
θ	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