

Features

- * 300W peak pulse power (8/20 μ s)
- * Low operating :5V
- * Ultra low capacitance: 1.0 pF typical
- * Ultra low leakage: nA level
- * Low clamping voltage
- * Protects one power line or data line
- * Complies with following standards:
- * – IEC 61000-4-2 (ESD) immunity test
Air discharge: ± 30 kV
Contact discharge: ± 30 kV
- * – IEC61000-4-5 (Lightning) 18A (8/20 μ s)
- *)– IEC61000-4-4 (EFT) 40A (5/50ns)
- * RoHS Compliant

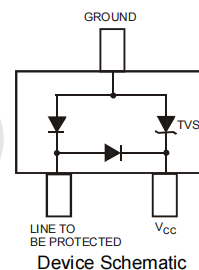
Mechanical Characteristics

- * Package: SOT23
- * Lead Finish: Matte Tin
- * Case Material: “Green” Molding Compound.
- * UL Flammability Classification Rating 94V-0
- * Moisture Sensitivity: Level 3 per J-STD-020
- * Terminal Connections: See Diagram Below
- * Shipping Qty :3000pcs/7Inch Tape & Reel

Applications

- * USB Ports
- * Smart Phones
- * Wireless Systems
- * Ethernet 10/100/1000 Base T

Dimensions and Pin Configuration



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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	300	W
Peak Pulse Current (8/20μs)	IPP	18	A
ESD per IEC 61000-4-2 (Air)	VESD	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
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	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	VRWM				5.0	V
Breakdown Voltage	VBR	IT = 1mA	6			V
Reverse Leakage Current	IR	VRWM = 5V			0.2	μA
Clamping Voltage	VC	IPP = 1A (8 x 20μs pulse)			9	V
Clamping Voltage	VC	IPP = 18A (8 x 20us pulse)		16		V
Junction Capacitance	CJ	VR = 0V, f = 1MHz			1	pF

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

Fig1. 8/20 μs Pulse Waveform

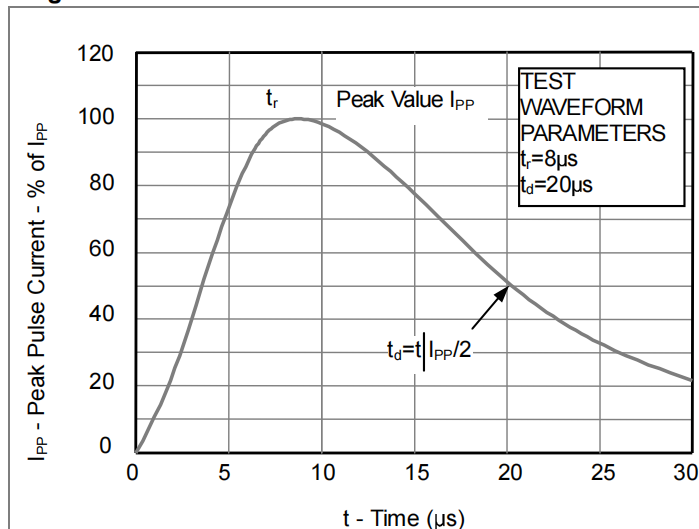


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

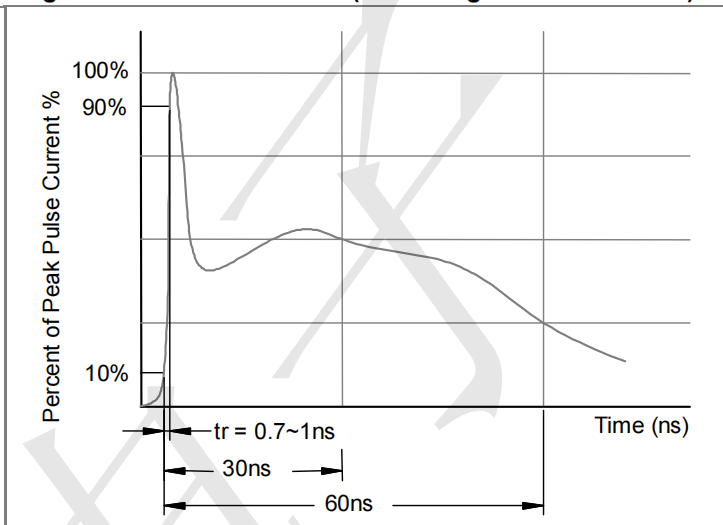
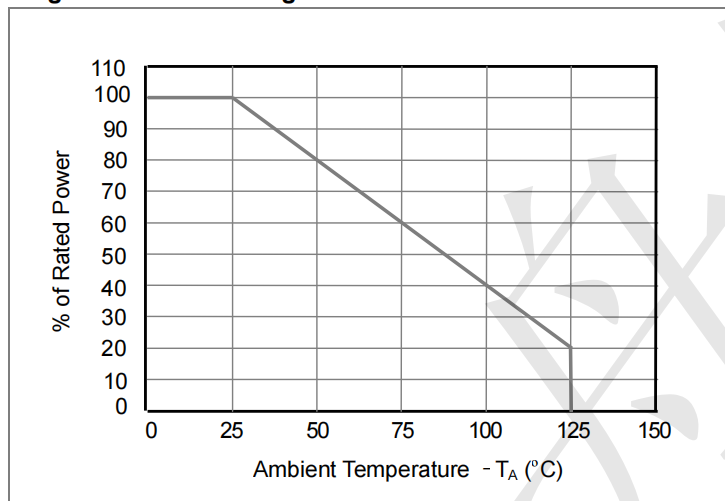
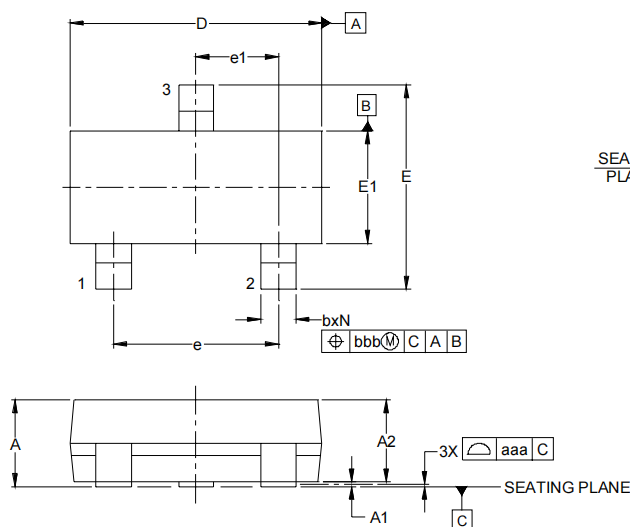


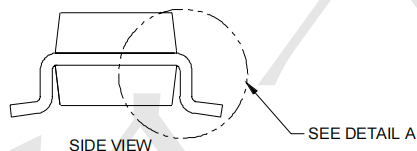
Fig3. Power Derating Curve



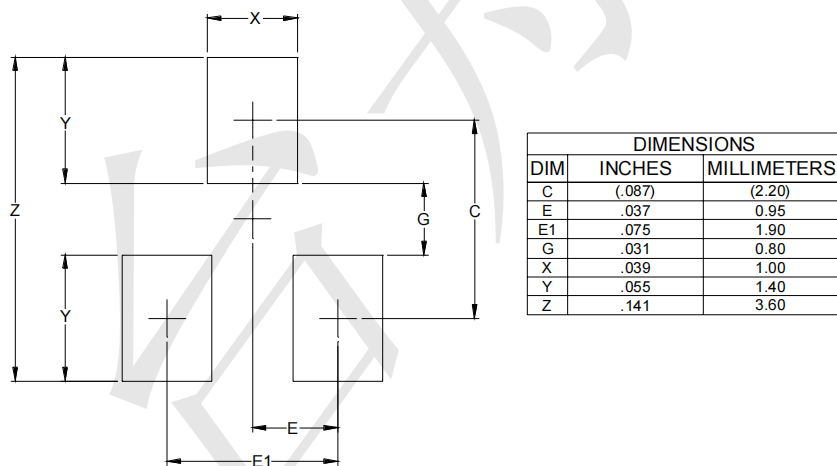
Outline Drawing - SOT23



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