

Features

- Ultra low capacitance: 0.35pF typical
- Ultra low leakage: nA level
- Low operating voltage: $\pm 5V$
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 20kV$
 - Contact discharge: $\pm 15kV$
 - IEC61000-4-5 (Lightning)4A (8/20 μs)
- RoHS Compliant
- Lead Finish: NiPdAu

Mechanical Characteristics

- Package: SOT-23
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

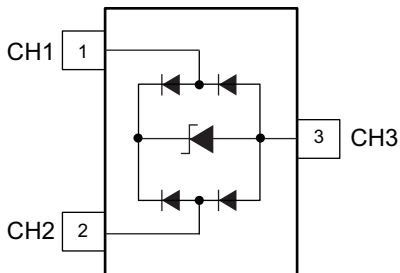
Applications

- Laptop Computers
- Cellular Phones
- Digital Cameras
- Personal Digital Assistants (PDAs)

Ordering Information

Part Number	Qty per Reel	Reel Size
TPD2E009DBZR-TP	3000	7"

Dimensions and Pin Configuration



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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	75	W
Peak Pulse Current (8/20μs)	Ipp	4	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	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Breakdown Voltage	VBR	6.5		9	V	IT = 1mA
Reverse Leakage Current	IR			0.08	uA	VRWM = 5V
Clamping Voltage	VC			9	V	Ipp=1A(8x 20us pulse)
Clamping Voltage	VC			14	V	Ipp=4A(8x 20us pulse)
Junction Capacitance	CJ		0.5	0.6	pF	VR = 0V, f = 1MHz (IO to GND)
Junction Capacitance	CJ		0.35		pF	VR = 0V, f = 1MHz (IO to IO)

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

Fig1. 8/20 μs Pulse Waveform

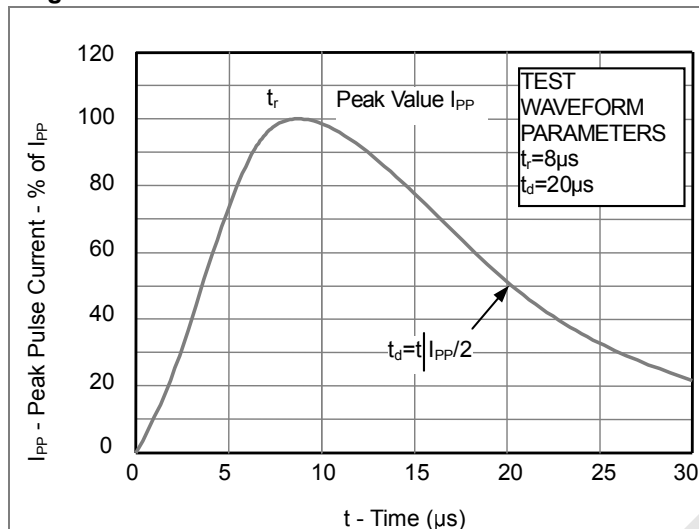


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

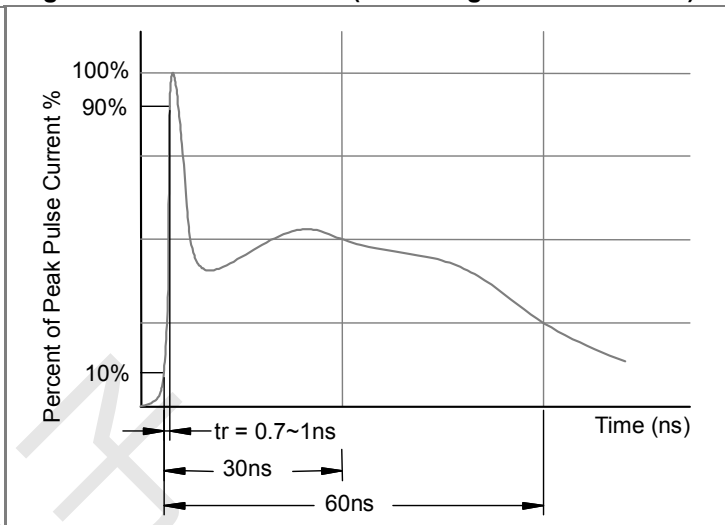
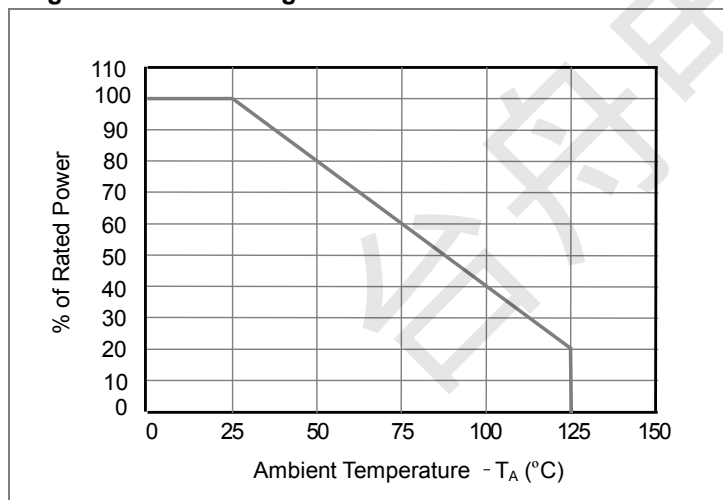
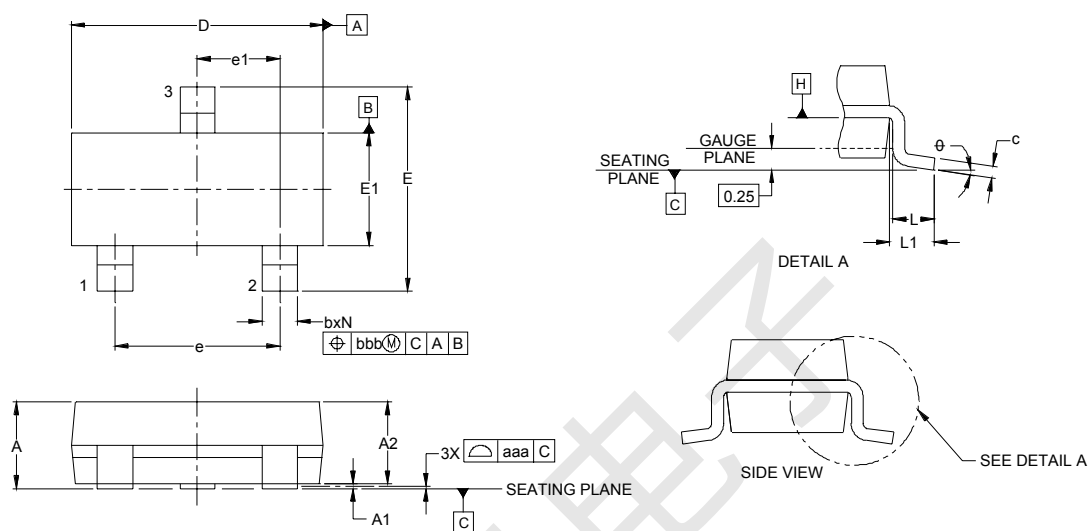


Fig3. Power Derating Curve

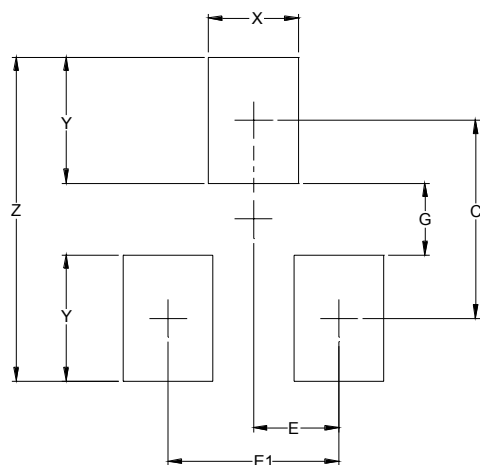


Outline Drawing - SOT23



		DIMENSIONS					
		INCHES			MILLIMETERS		
DIM		MIN	NOM	MAX	MIN	NOM	MAX
A		.035	-	.044	0.89	-	1.12
A1		.005	-	.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					1.90 BSC		
e1			.075		0.95 BSC		
L	.015	.022	.024	0.40	0.50	0.60	
L1		.020			(0.55)		
N		3			3		
φ	0°	-	8°	0°	-	8°	
aaa		.004			0.10		
bbb		.008			0.20		

Land Pattern - SOT23



DIMENSIONS		
DIM	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