

2-Line Bi-directional TVS Diode

www.sot23.com.tw

Features

- ♦ 80W peak pulse power(8/20µs)
- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test

Air discharge: ±30kV Contact discharge: ±30kV

- IEC61000-4-4 (EFT) 40A (5/50ns)

-IEC61000-4-5 (Lightning) 8A (8/20µs)

♦ RoHS Compliant

Ordering Information

Part Number	Qty per Reel	Reel Size	
TPD5V0L2B3SO-7-F	3000	7"	

Mechanical Characteristics

◆ Package: SOT-23

◆ Lead Finish: Matte Tin

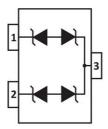
Case Material: "Green" Molding Compound.
 UL Flammability Classification Rating 94V-0

♦ Moisture Sensitivity: Level 3 per J STD 020

Applications

- Cellular Handsets and Accessories
- Notebooks and Handhelds
- Portable Instrumentation
- Set Top Box
- Industrial Controls

Dimensions and Pin Configuration



Marking:TB2 Or V4t



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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	Ppk	80	W
Peak Pulse Current (8/20µs)	Ipp	8	А
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±30 ±30	kV
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	Тур	Max	Unit	Test Condition	
Reverse Working Voltage	VRWM			5	V		
Breakdown Voltage	VBR	6		8.4	V	IT = 1mA	
Reverse Leakage Current	I _R			0.06	uA	VRWM = 5V	
Clamping Voltage	Vc		6		V	Ipp=1A(8x 20us pulse)	
Clamping Voltage	Vc			14	V	Ipp=8A (8x 20us pulse)	
Junction Capacitance	Cı		15	20	pF	VR=0, f=1MHz, Pin 1 to Pin 3 or Pin 2 to Pin 3	
Junction Capacitance	Cì		7		pF	VR=0, f=1MHz, Pin1 to Pin 2 or Pin 2 to Pin1	



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Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

Fig1. 8/20µs Pulse Waveform

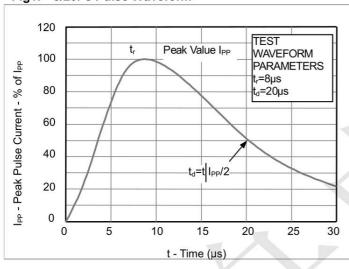
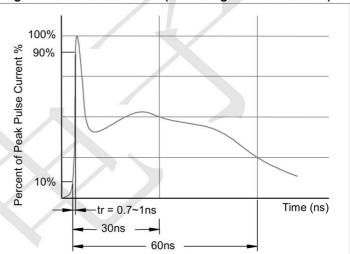
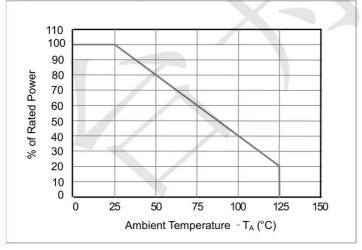


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)





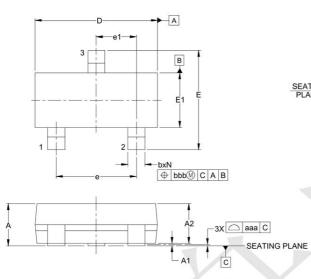


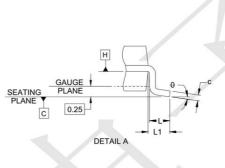


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Outline Drawing - SOT23

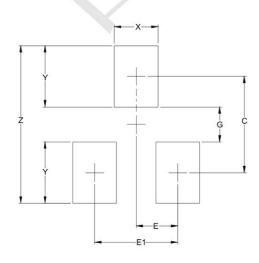




		DIN	IENSI	ONS			
DIM		INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX	
Α	.035	-	.044	0.89	-	1.12	
A1	.000	-	.004	0.01		0.10	
A2	.035	.037	.040	0.88	0.95	1.02	
b	.012	-	.020	0.30	-	0.51	
С	.003	8.5	.007	0.08		0.18	
D	.110	.114	.120	2.80	2.90	3.04	
Е	.082	.093	.104	2.10	2.37	2.64	
E1	.047	.051	.055	1.20	1.30	1.40	
е	.075			1.90 BSC			
e1	100	.037			0.95 BSC		
L	.015	.020	.024	0.40	0.50	0.60	
L1	.022				(0.55)		
N	3				3		
-0	0°		8°	0°		8°	
aaa	.004				0.10		
bbb	.008			1	0.20		



Land Pattern - SOT23



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