TECH PUBLIC
台舟电子

TPESD15VS2UAT

2-Line Unl-directional TVS Diode

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Features

- Operating voltage：15V
- Ultra low leakage：nA level
- 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) 5A (8/20μs)
- RoHS Compliant

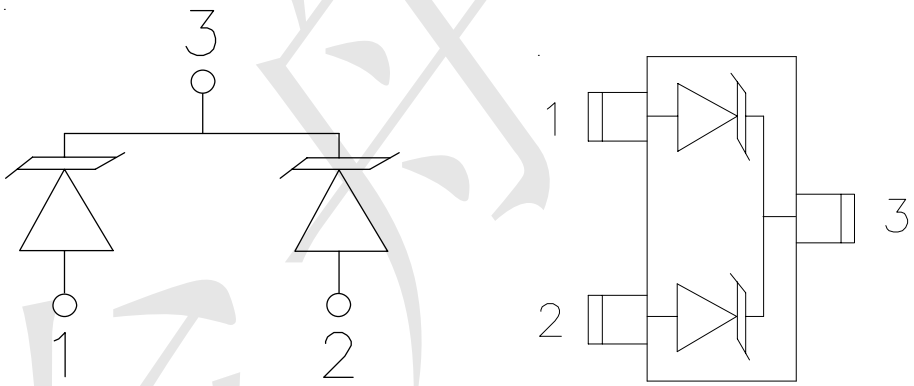
Mechanical Characteristics

- Package: SOT23
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0
- Pb-Free, Halogen Free, RoHS/WEEE Compliant
- Shipping Qty :3000pcs/7Inch Tape & Reel

Applications

- USB Power & Data Line Protection
- Monitors and Flat Panel Displays
- I²C Bus Protection
- Portable Instrumentation
- Set Top Box

Dimensions and Pin Configuration



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

Parameter	Symbol	Value	Unit
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±30 ±30	kV
Operating Temperature Range	T_J	−55 to +125	°C
Storage Temperature Range	Tstg	−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}			15	V	
Breakdown Voltage	V_{BR}	16.5	18	20	V	I_T = 1mA
Reverse Leakage Current	I_R		0.01	0.1	μA	V_{RWM} = 15V
Clamping Voltage	V_C			18	V	I_{PP} = 1A (8 x 20μs pulse)
Clamping Voltage	V_C		27	40	V	I_{PP} = 5A (8 x 20μs pulse)
Peak Pulse Current	I_{PP}			5	A	t_P=8/20μs
Junction Capacitance	C_J			55	pF	VR=0, f=1MHz, Pin 1 to Pin 3 or Pin 2 to Pin 3

Fig1. 8/20μs Pulse Waveform

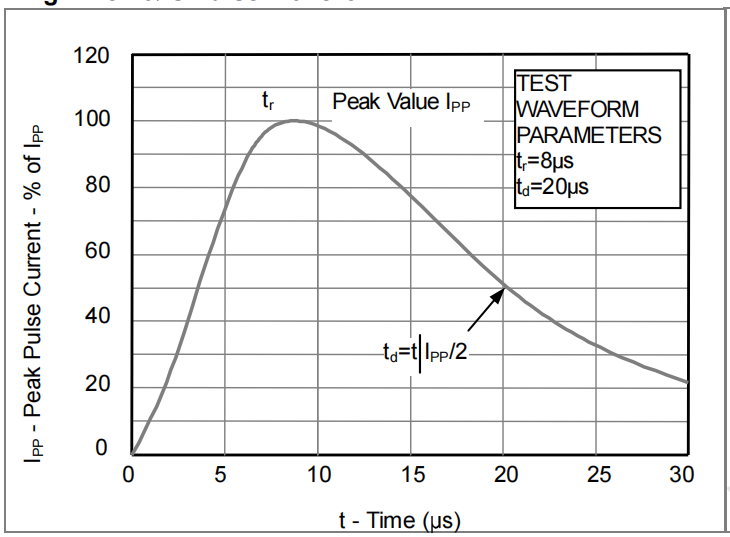


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

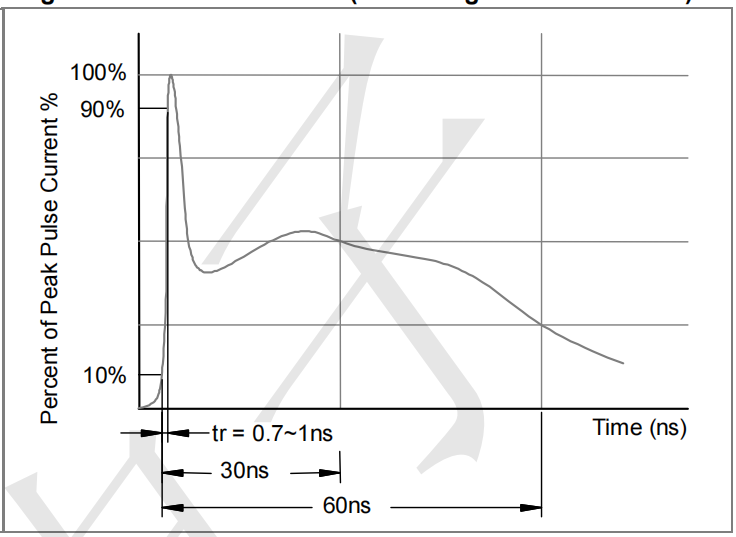
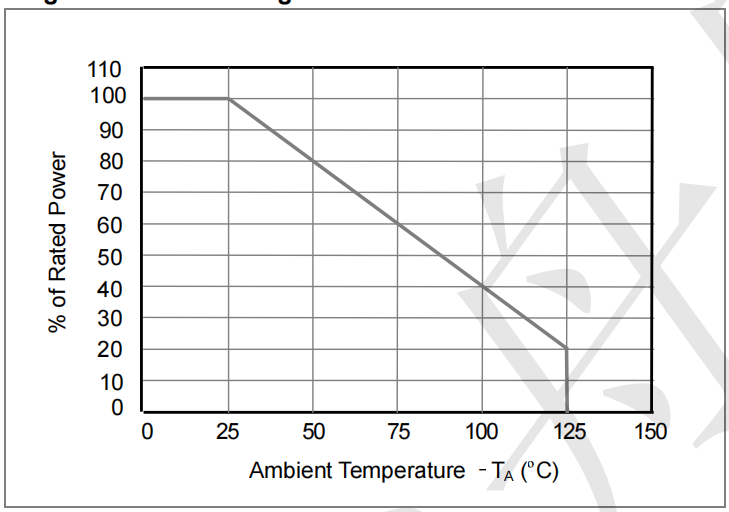
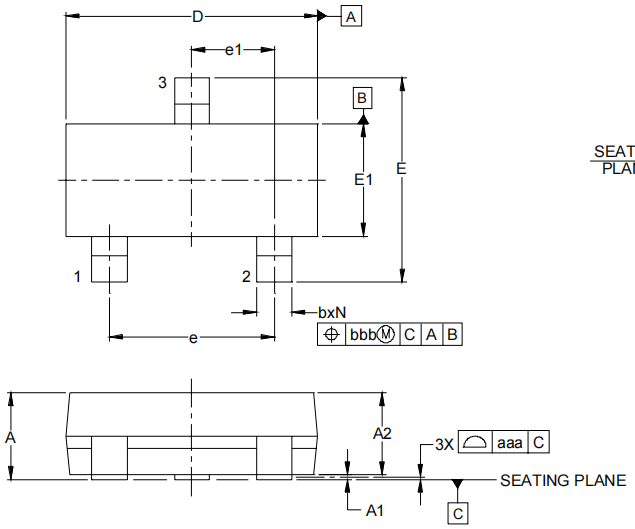
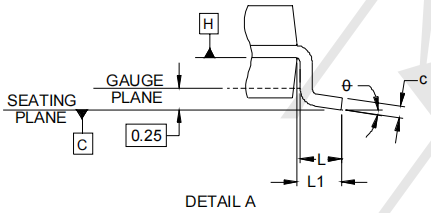


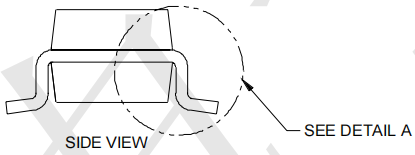
Fig3. Power Derating Curve



Outline Drawing - SOT23

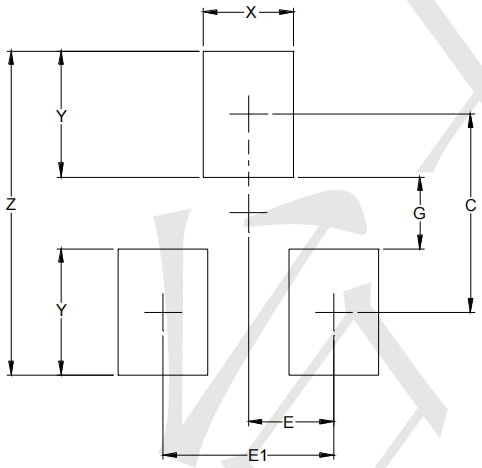






DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.035	-	.044	0.89	-	1.12
A1	.000	-	.004	0.01	-	0.10
A2	.035	.037	.040	0.88	0.95	1.02
b	.012	-	.020	0.30	-	0.51
c	.003	-	.007	0.08	-	0.18
D	.110	.114	.120	2.80	2.90	3.04
E	.082	.093	.104	2.10	2.37	2.64
E1	.047	.051	.055	1.20	1.30	1.40
e	.075			1.90 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



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

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TECH PUBLIC:

BZT52C6V2S SS510F TP3722S8 TPAX809SS3 TPESD05R4UD XC6219B332MR BZX84C16 FDN335N PNTK3139PT5G TPESDA17P100-1U2M DDTA143ZCA SS56C TPD2E2U06DRLR-TP IRF5802TRPBF-TP LM337BD2TR4G-TP TPAX811MS4 TPMCP112T-290E/TT TPNTD20P06LT4G BV03CWT PESD5V0F1BSF-TP TPESD0504S6-A QM3003J-TP SMAJ13CA TPDMG6602SVT TPESD0402G08V TPESD0512S4-A TPSTM1001SWX6F SIL2324A-TP 0402ESDA-18N-TP XP202A0003PR-TP