TECH PUBLIC
台舟电子

PESD2IVN24-TR-P

2-Line bi -directional TVS Diode

www.sot23.com.tw

Features

- 300W peak pulse power(8/20μs)
- Ultra low leakage：nA level
- Operating voltage：24V
- 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) 7A (8/20μs)
- RoHS Compliant

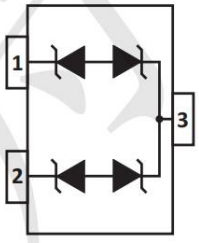
Mechanical Characteristics

- 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
- Shipping Qty :3000pcs/7Inch Tape & Reel

Applications

- Cellular Handsets and Accessories
- Notebooks and Handhelds
- Portable Instrumentation
- Set Top Box
- Industrial Controls
- CAN Bus Protection
- Automotive Appllcatrons

Dimensions and Pin Configuration



Marking: 24KC

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)	I_{PP}	7	A
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 (TA=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			24	V	
Breakdown Voltage	V_{BR}	26.7			V	I_T = 1mA
Reverse Leakage Current	I_R			0.08	μA	V_{RWM} = 24V
Forward Voltage	V_F		0.8	1.2	V	I_F = 10mA
Clamping Voltage	V_C		33		V	I_{PP} = 1A (8 x 20μs pulse)
Clamping Voltage	V_C			43	V	I_{PP} = 7A (8 x 20μs pulse)
Junction Capacitance	C_J		25		pF	VR=0, f=1MHz, Pin 1 to Pin 2

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

Fig1. 8/20μs Pulse Waveform

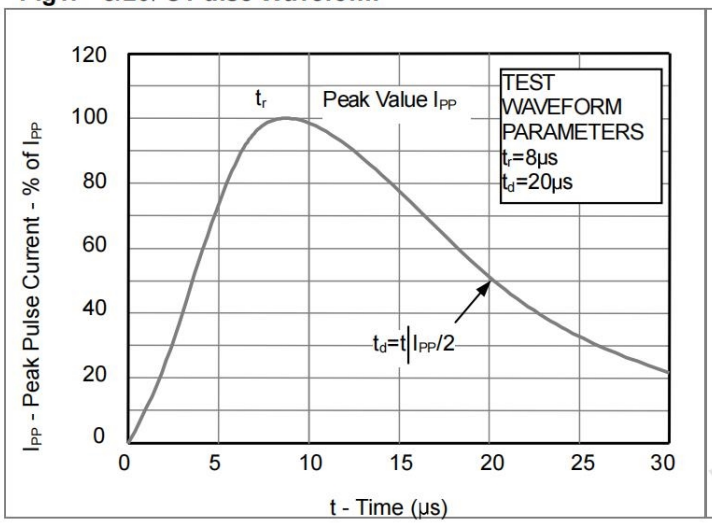


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

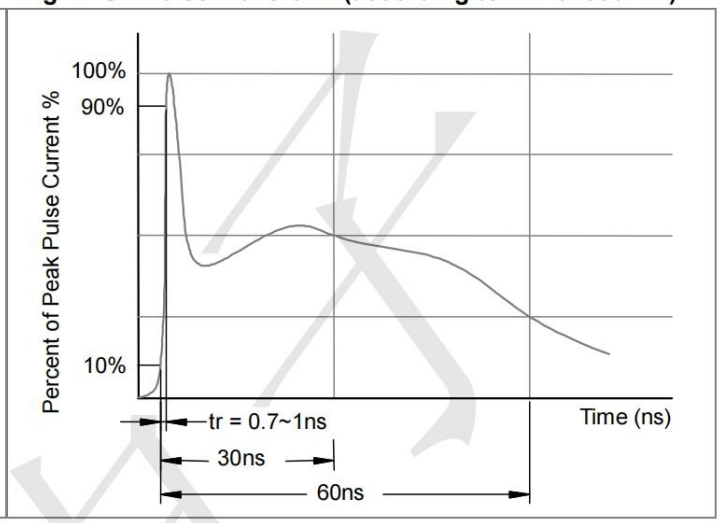
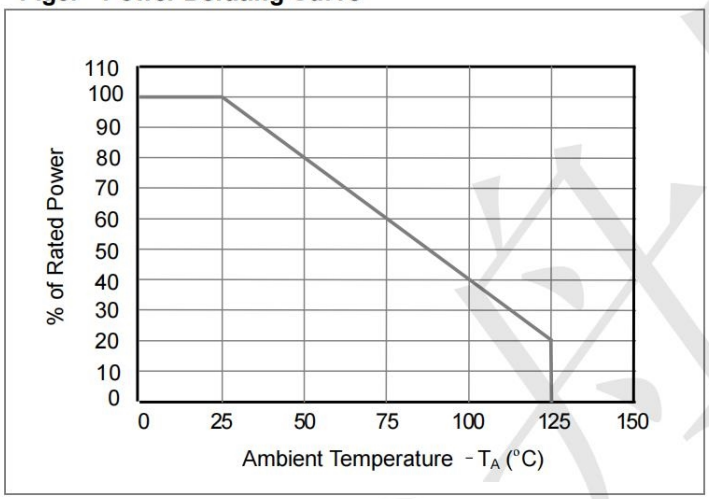
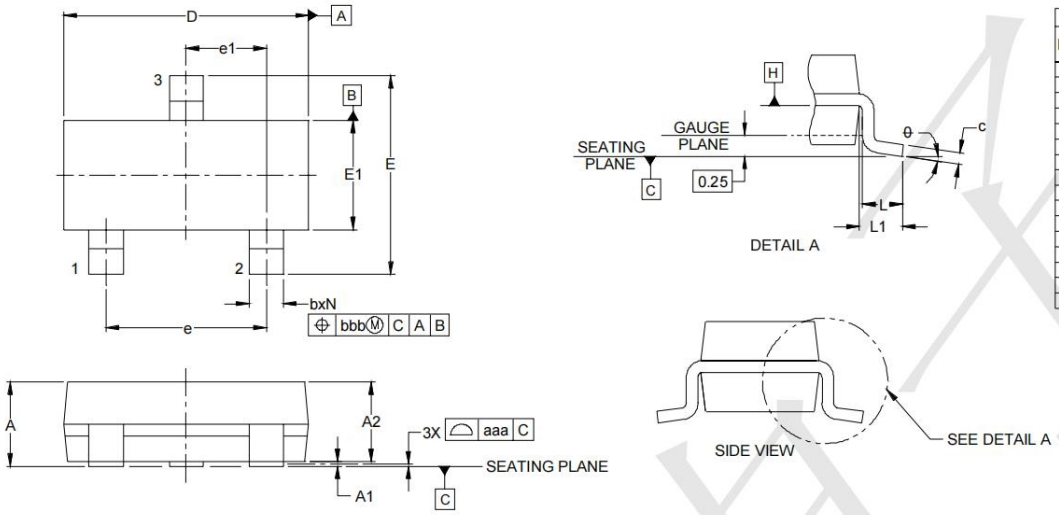


Fig3. Power Derating Curve

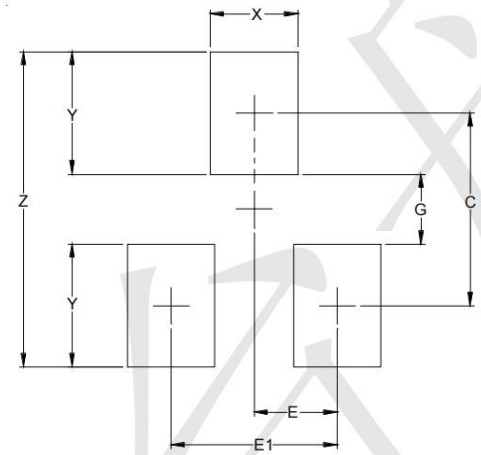


Outline Drawing - SOT23



DIM	DIMENSIONS					
	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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ESD5B5.0ST1G-P FDMS7670AS-TP TPADM809LAKSZ TPESD0402G08V TPGC12C-1 DDTA143ZCA TPAPX809S-31SA TPSPX3819M5-L-3-3 TPADM809SAKSZ LTH7 QM3003J-TP TPS3809L30DBVR-TP IRFR2405TRPBF-TP TPESD0504S6-A TPESD5311N TPZVN3320FTA BSN20W TPS7B6950DBVR-TP TPWSB5557Z TPB05A40-323 SI3932DV SN7002W TPD1213A-02SM TPFMMT493 BV15C DMP6350S FDC6301N-TP TPB1A30-123 TPDMG6602SVT TPZXMP3A13FTA