TECH PUBLIC
台舟电子

TPESDB5V0AT3

1-Line Bl-directional TVS Diode

www.sot23.com.tw

Features

- 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) 6A (8/20μs)
- RoHS Compliant

Mechanical Characteristics

- Package: SOT323
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0

Applications

- Notebooks and Handhelds
- Automotive Appllcatrons

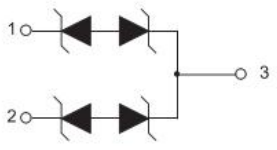
Ordering Information

Part Number	Qty per Reel	Reel Size
TPESDB5V0AT3	3000	7″

Dimensions and Pin Configuration

SOT323





Marking:B5A Or TB7

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	60	W
Peak Pulse Current (8/20μs)	Ipp	6	A
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	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Breakdown Voltage	VBR	6			V	IT = 1mA
Reverse Leakage Current	I_R			0.08	uA	VRWM= 5V
Clamping Voltage	VC			8	V	IPP = 1A (8 x 20us pulse)
Clamping Voltage	VC			10	V	IPP = 6A (8 x 20us pulse)
Junction Capacitance	CJ		13	20	pF	VR = 0V, f = 1MHz

Fig1. 8/20μs Pulse Waveform

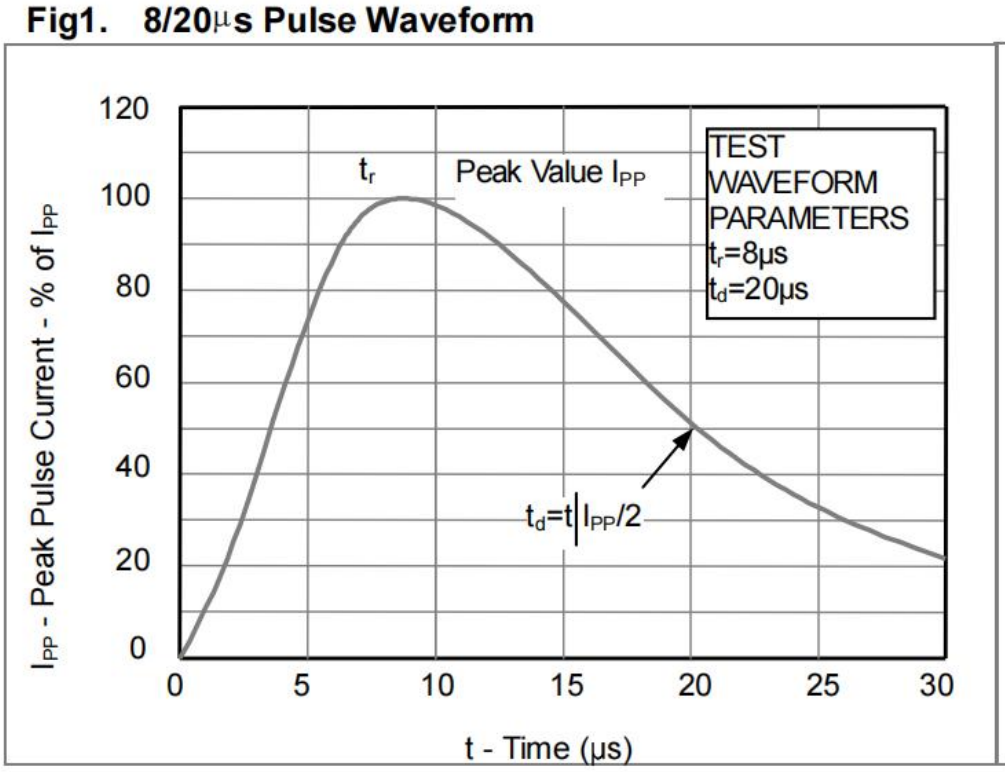


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

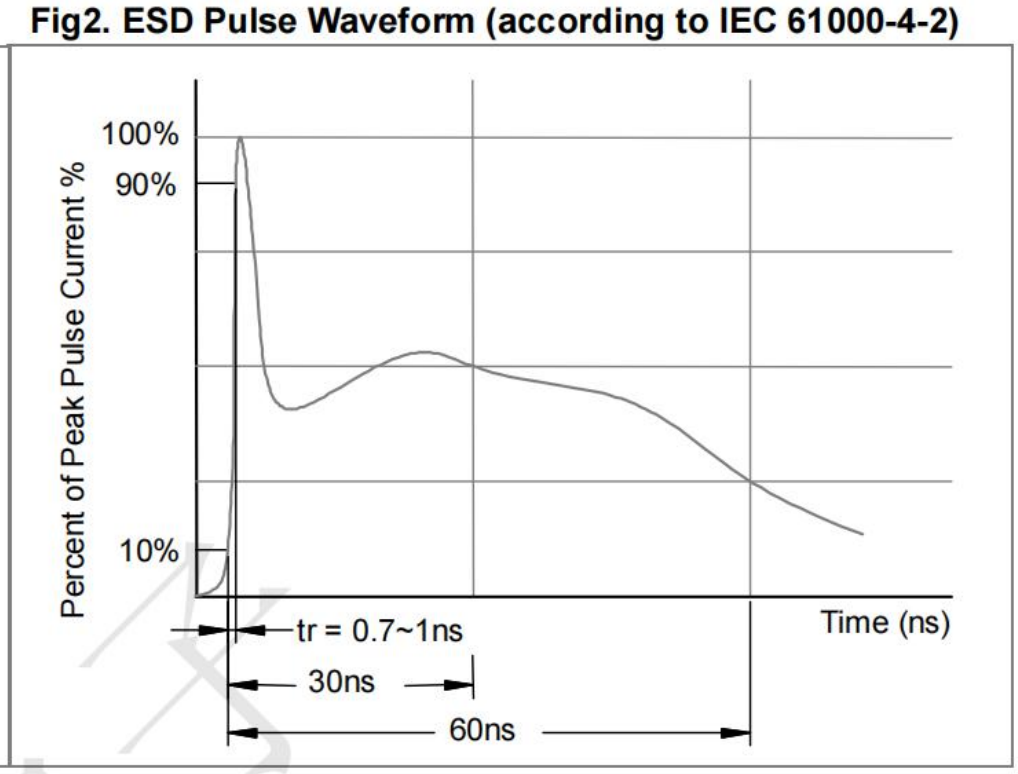
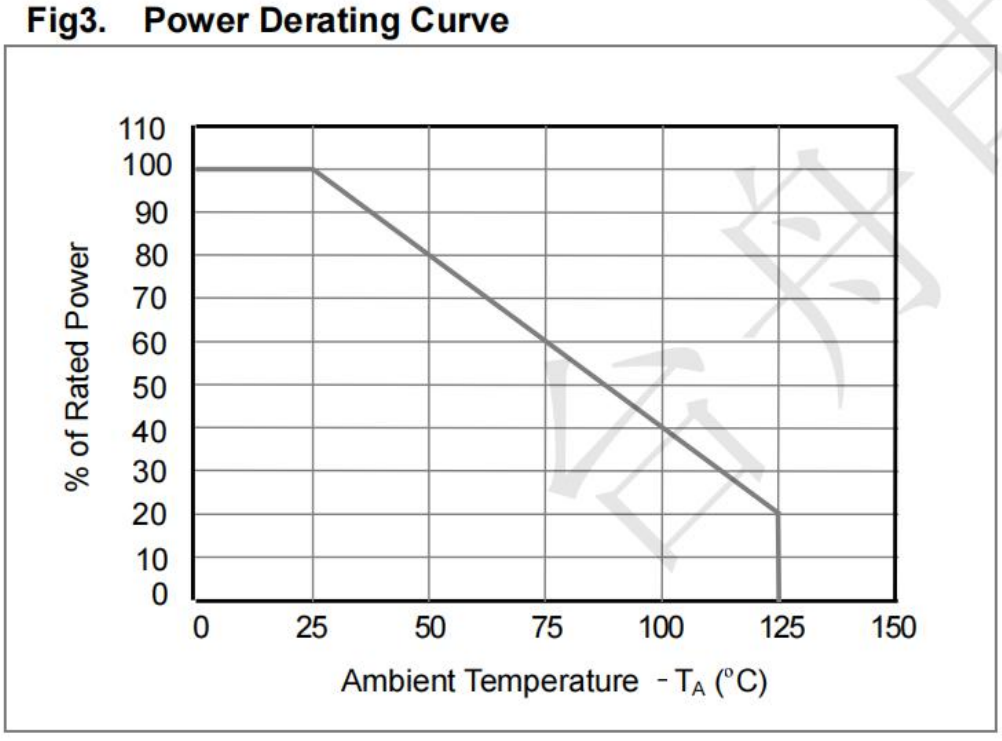
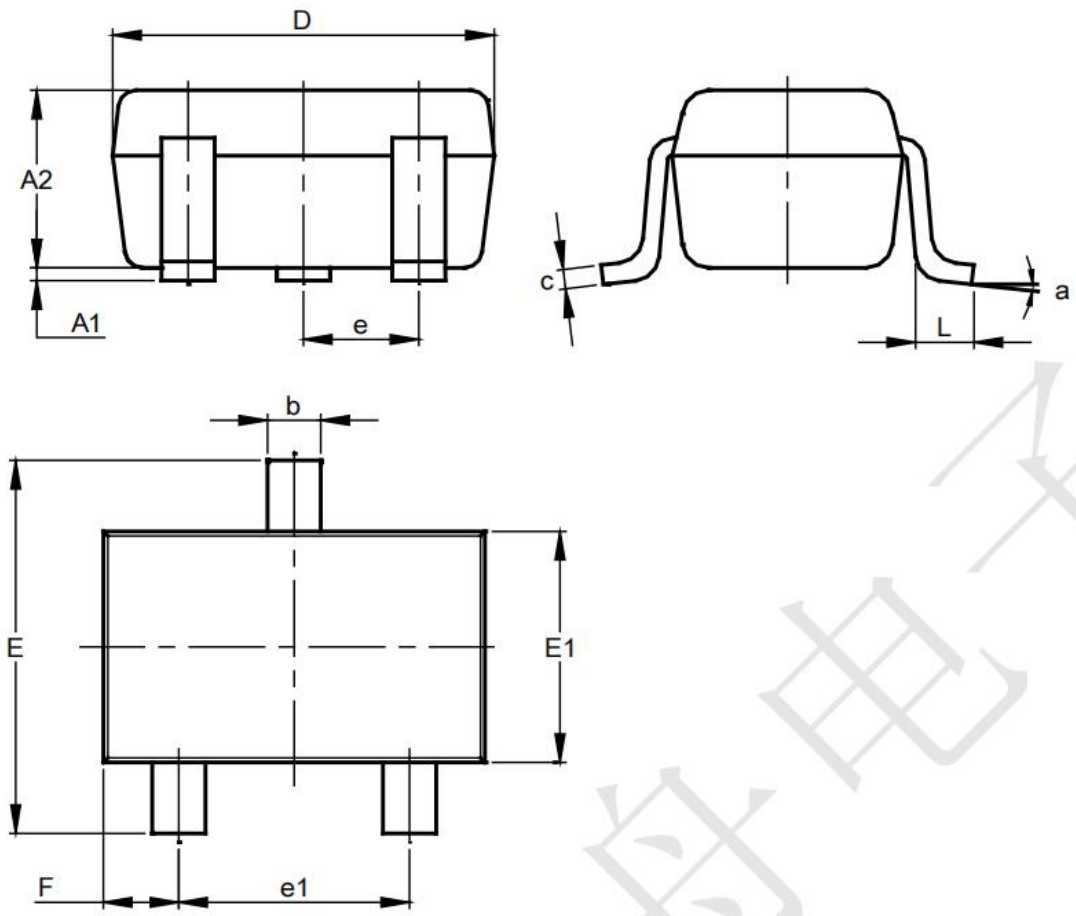


Fig3. Power Derating Curve

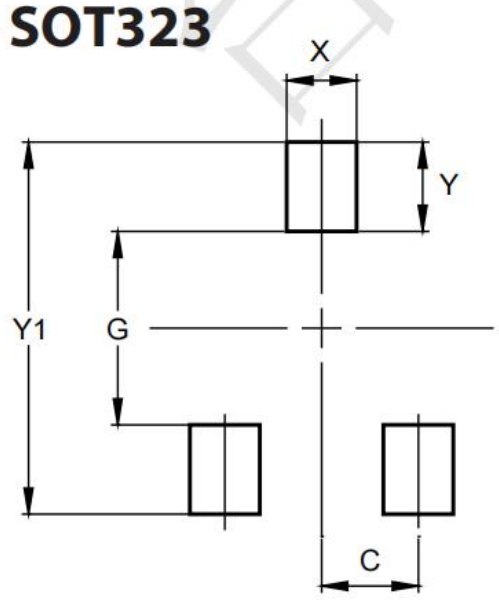


Outline Drawing - SOT323(SC70-3)



SOT323			
Dim	Min	Max	Typ
A1	0.00	0.10	0.05
A2	0.90	1.00	0.95
b	0.25	0.40	0.30
c	0.10	0.18	0.11
D	1.80	2.20	2.15
E	2.00	2.20	2.10
E1	1.15	1.35	1.30
e	0.650 BSC		
e1	1.20	1.40	1.30
F	0.375	0.475	0.425
L	0.25	0.40	0.30
a	0°	8°	--
All Dimensions in mm			

Land Pattern - SOT323



Dimensions	Value (in mm)
C	0.650
G	1.300
X	0.470
Y	0.600
Y1	2.500

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

TECH PUBLIC:

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