TECH PUBLIC
台舟电子

TPESD2431Z

1-Line Bi-directional TVS Diode

www.sot23.com.tw

Features

- Low operating voltage: ±24V
- Ultra low capacitance:0.3pF typical
- Ultra low leakage: nA level
- Low operating voltage:
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
- – IEC 61000-4-2 (ESD) immunity test
  Air discharge: ±20kV
  Contact discharge: ±15kV
- – IEC61000-4-5 (Lightning) 2A (8/20μs)
- RoHS Compliant
- Lead Finish: NiPdAu

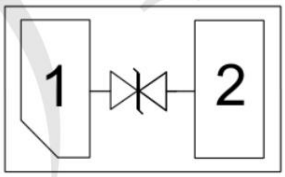
Mechanical Characteristics

- Package: DFN0603-2 (0201)
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Shipping Qty :15000pcs Or 10000/7Inch Tape & Reel

Applications

- VGA,DVI.SDI,USB1.0,USB2.0,USB3.0,USB3.1
- High Definition Multi-Media Interface(HDMI1.3/1.4/2.0
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Peripherals

Dimensions and Pin Configuration



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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	90	W
Peak Pulse Current (8/20μs)	Ipp	2	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	V_{ESD}	±20 ±15	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}	26.4			V	I_T = 1mA
Reverse Leakage Current	I_R			0.1	uA	V_{RWM} = 24V
Clamping Voltage	V_C			40	V	Ipp=1A(8x 20us pulse)
Clamping Voltage	V_C			55	V	Ipp=2A(8x 20us pulse)
Junction Capacitance	C_J		0.3		pF	VR = 0V, f = 1MHz

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

Fig1. 8/20μs Pulse Waveform

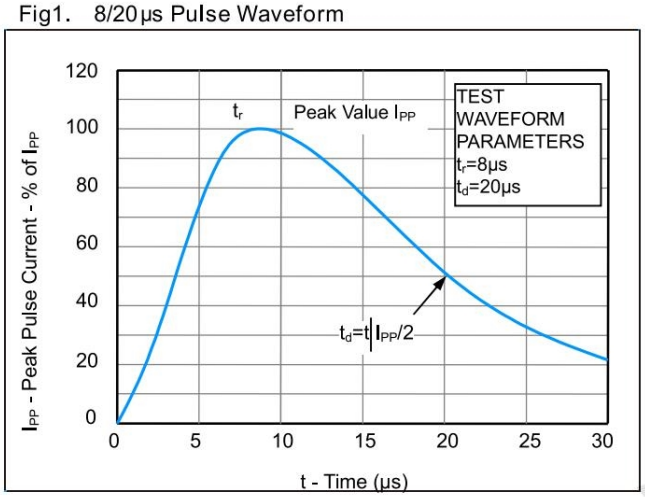


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

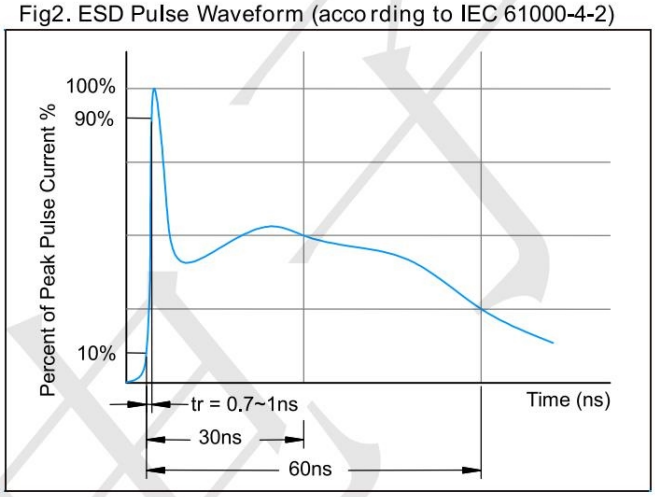
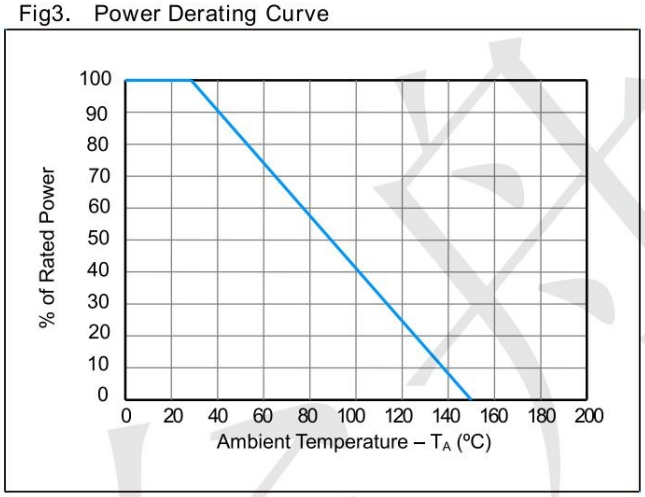
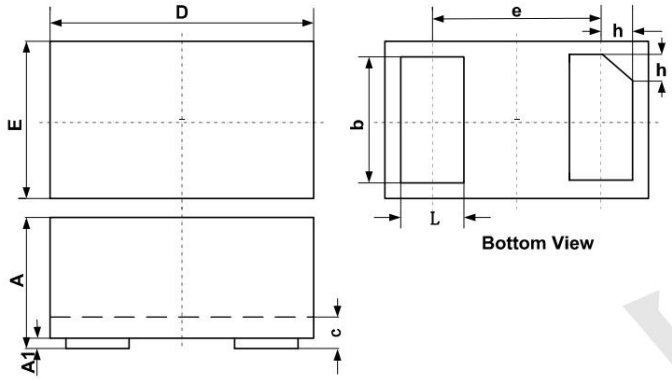


Fig3. Power Derating Curve

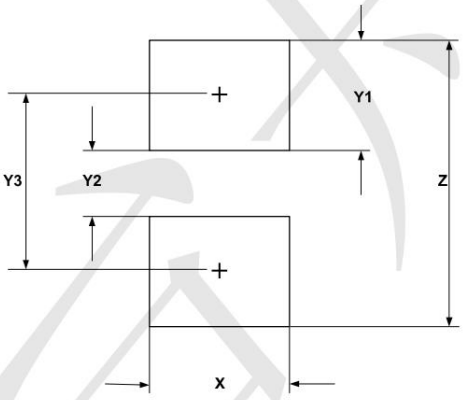


DFN0603-2 Package Outline Drawing (0201)



SYM	DIMENSIONS		
	MILLIMETERS		
	MIN	NOM	MAX
A	0.230	0.300	0.330
A1	0.000	0.020	0.050
b	0.215	0.245	0.275
c	0.120	0.150	0.180
D	0.550	0.600	0.650
e	0.355 BSC		
E	0.250	0.300	0.350
L	0.160	0.190	0.220
h	0.079 BSC		

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	0.30	0.012
Y1	0.25	0.010
Y2	0.15	0.006
Y3	0.40	0.016
Z	0.65	0.026

Unikeyic Electronics

Global Electronic Components Distributor

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

TECH PUBLIC:

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