TPDT2636-04S

4-CHANNEL ULTRA LOW CAPACITANCE ESD DIODE

Features

- Low operating voltage: 5.5V
- Ultra low capacitance: 0.4pF (Typ)
- Ultra low leakage: nA level
- Low clamping voltage
- –IEC 61000-4-2 (ESD) immunity test
  - Air discharge: ±20kV
  - Contact discharge: ±18kV
  - –IEC61000-4-4 (EFT) 40A (5/50ns)
  - –IEC61000-4-5 (Lightning) 5A (8/20μs)
- 6-pin leadless package
- These are Pb−Free Devices
- Response Time is Typically < 1 ns

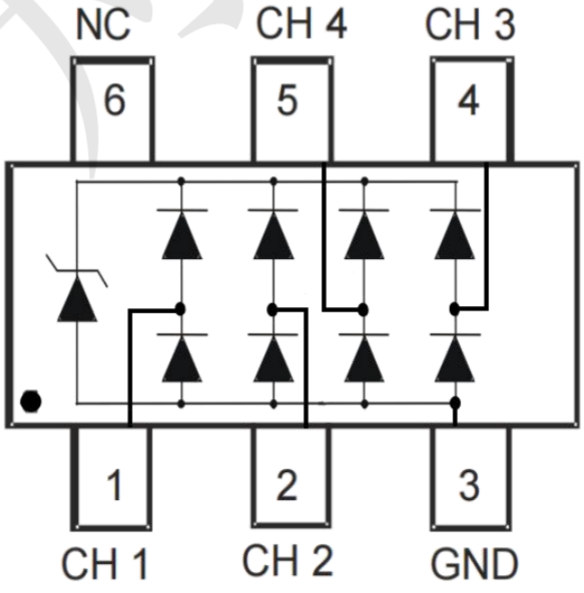
Mechanical Characteristics

- Package: SOT-363
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound
- Terminal Connections: See Diagram Below
- -IEC 61000-4-2 (ESD) immunity test

Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- USB 2.0 power and data line

Dimensions and Pin Configuration



Device Pinout

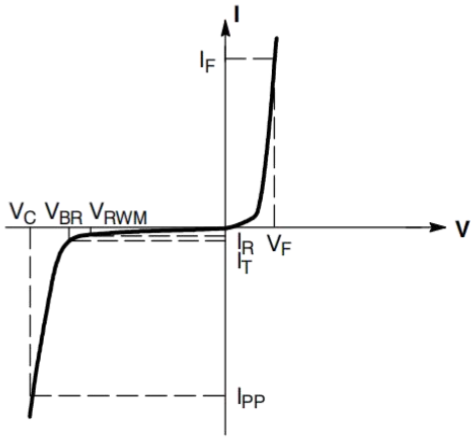
Absolute Maximum Ratings(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	50	W
Peak Pulse Current (8/20μs)	Ipp	5	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	VESD	±20 ±18	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	--	3.3	5.5	V	
Breakdown Voltage	VBR	6.0	--	--	V	IT= 1mA
Reverse Leakage Current	IR	--	--	100	nA	VRWM=3.3V
Forward Voltage	VF	0.5	--	1.2	V	IT=10mA
Clamping Voltage	VC	--	7.0		V	Ipp=1A(8x 20us pulse)
Clamping Voltage	VC	--	7.5	10	V	Ipp=5A(8x 20us pulse)
Junction Capacitance	CJ	--	0.4	0.65	pF	VR =0V, f =1MHz,CH to GND
Junction Capacitance	CJ	--	0.35	--	pF	VR =0V, f =1MHz,Between each CH

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F
P_{pk}	Peak Power Dissipation
C	Capacitance @ V_R = 0 and f = 1.0 MHz



Uni−Directional TVS

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

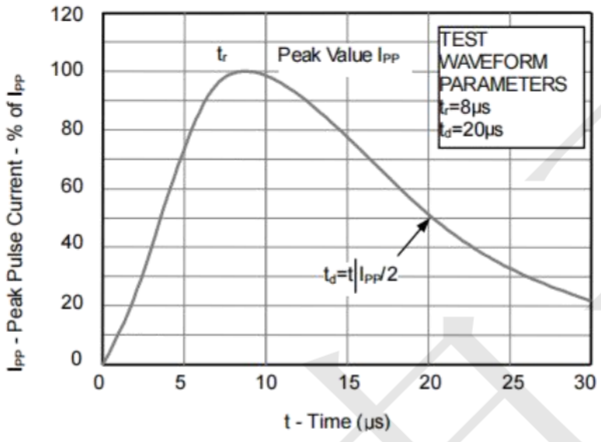


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

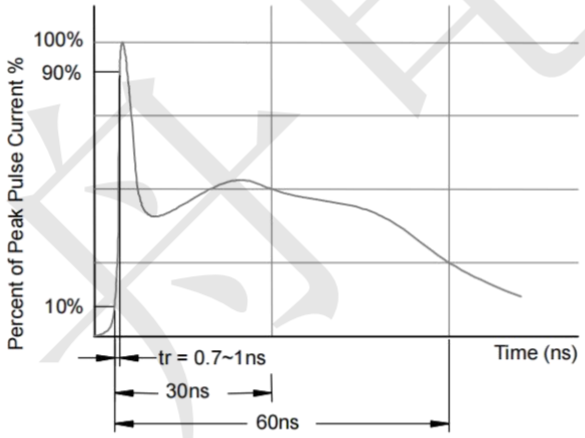
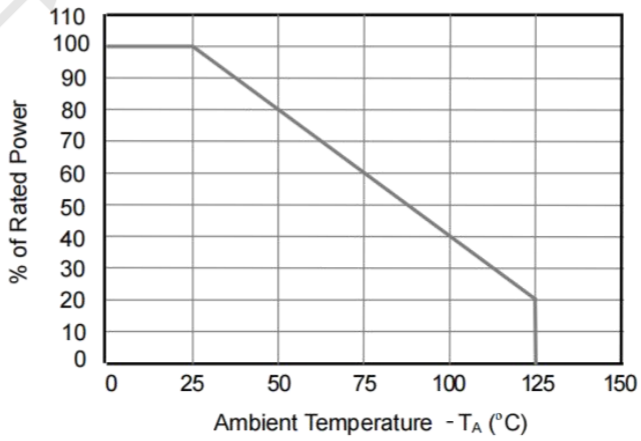
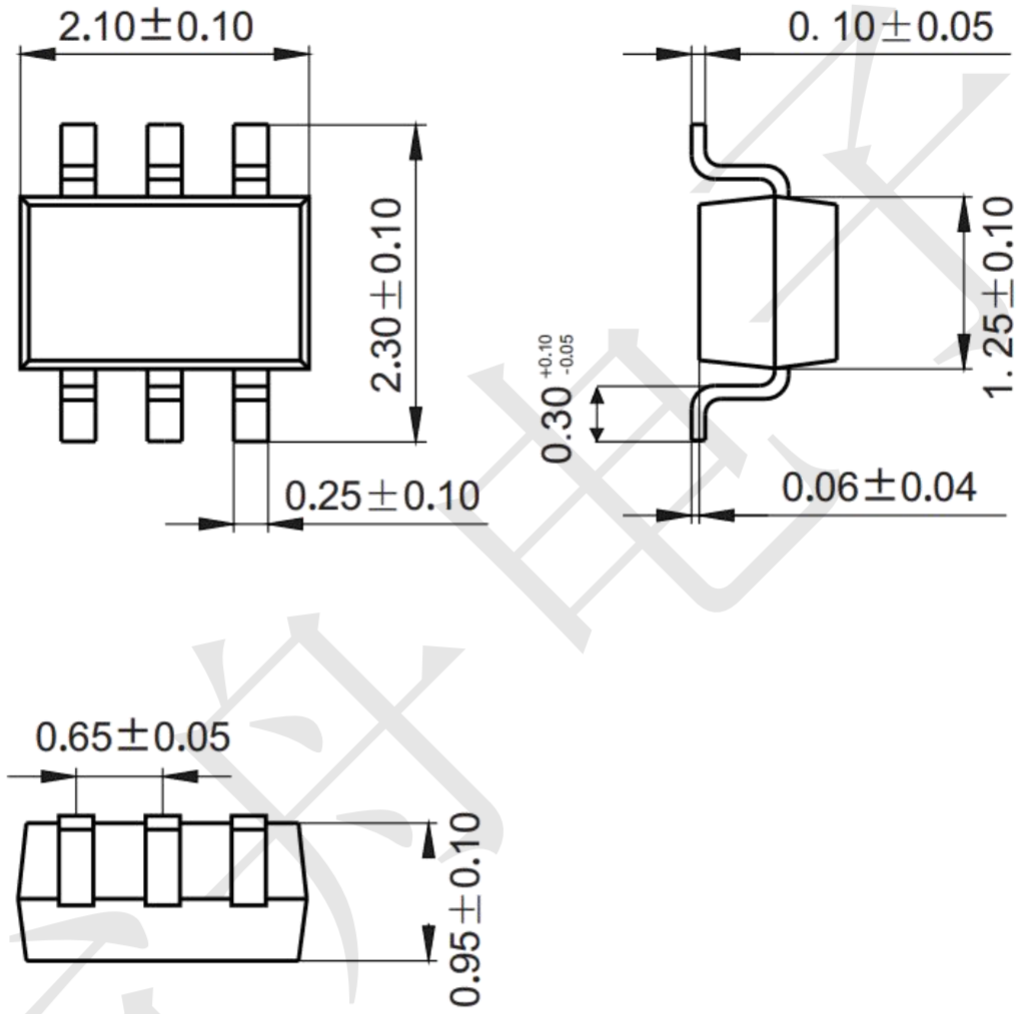


Fig3. Power Derating Curve

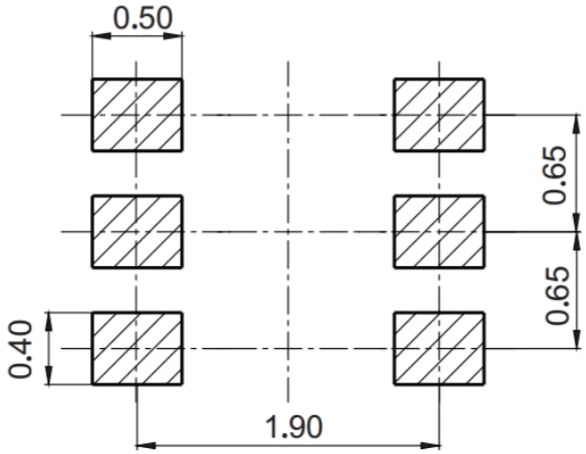


Package information (Unit: mm)

SOT-363



Mounting Pad Layout (unit: mm)



Unikeyic Electronics

Global Electronic Components Distributor

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

TECH PUBLIC:

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