TPTVS0571WS
1-Line Uni-directional ESD DIODE

Features

- Low operating voltage: 5V
- Low leakage current
- Ultra low leakage: nA level
- Low clamping voltage
- –IEC 61000-4-2 (ESD) immunity test
  Air discharge: ±30kV
  Contact discharge: ±30kV
  –IEC61000-4-4 (EFT) 40A (5/50ns)
- 2-pin leadless package
- These are Pb−Free Devices
- Response Time is Typically < 1 ns

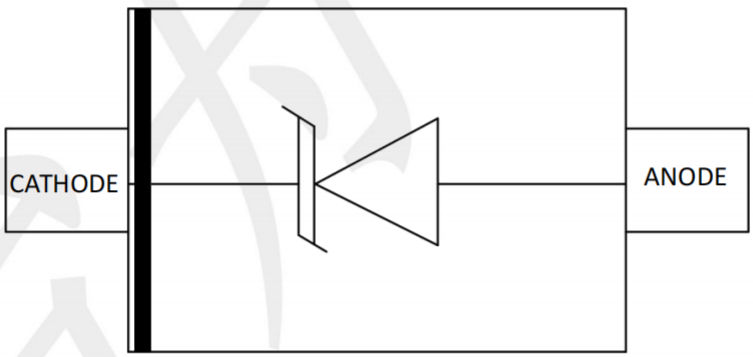
Mechanical Characteristics

- Package: SOD323(0805)
- 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
- Peripherals

Dimensions and Pin Configuration



SOD323

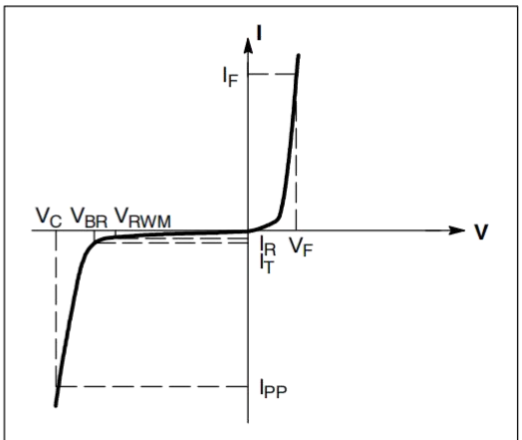
Absolute Maximum Ratings(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	2080	W
IEC 61000−4−2 Spec Current at 60 ns (A)	Ipp	130	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	--	9	V	IT= 1mA
Reverse Leakage Current	IR	--	--	1	uA	VRWM=5V
Forward voltage	VF	--	0.8	1.2	V	IF=10mA
Clamping Voltage	VC	--	--	9.5	V	Ipp=20A(8x 20us pulse)
Clamping Voltage	VC	--	--	16	V	Ipp=130A(8x 20us pulse)
Junction Capacitance	CJ	--	850	1100	pF	VR = 0V, f = 1MHz

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

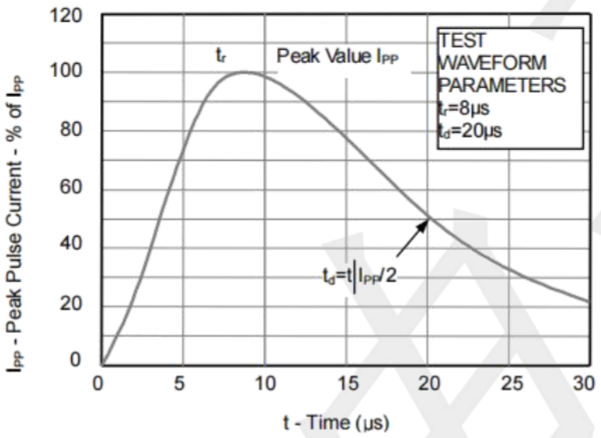


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

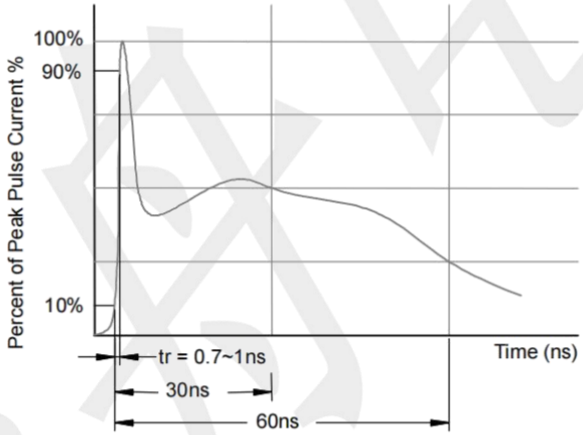
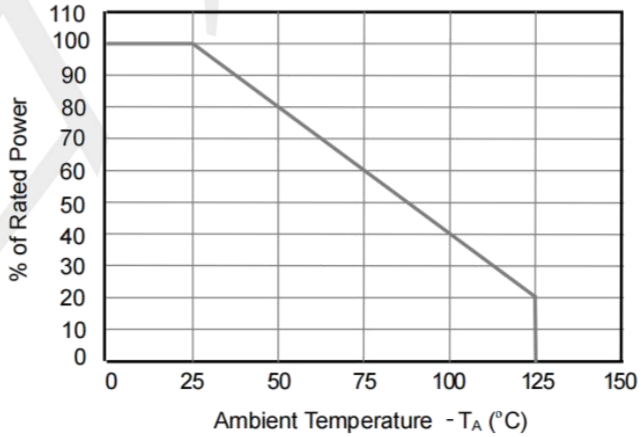
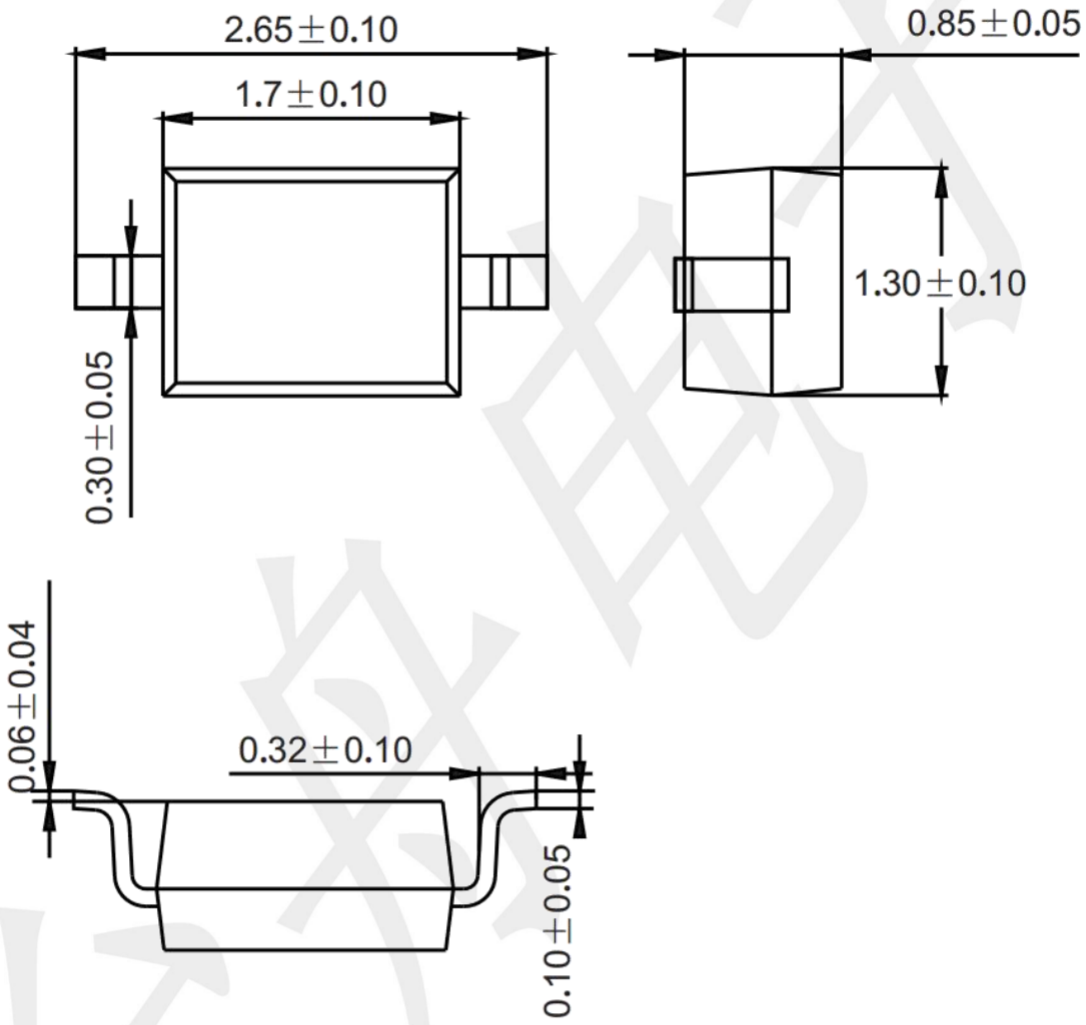
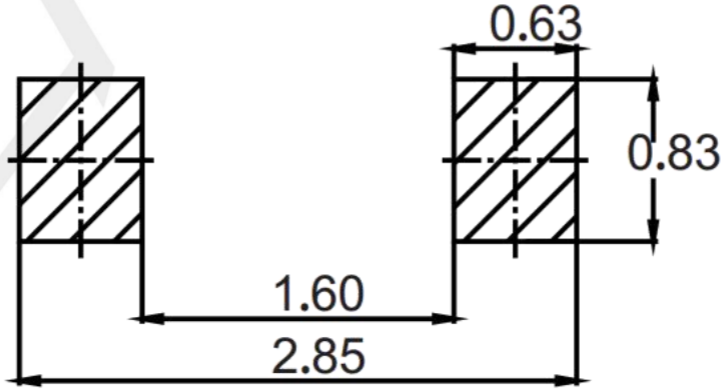


Fig3. Power Derating Curve



Package Outline Dimensions (unit: mm)

SOD323 (0805)



Mounting Pad Layout (unit: mm)