

Features

- Low operating voltage: 35V
- Ultra low capacitance: 4pF
- Ultra low leakage: nA level
- Low clamping voltage
- -IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 22\text{kV}$
Contact discharge: $\pm 22\text{kV}$
- -IEC61000-4-4 (EFT) 40A (5/50ns)
- 3-pin leadless package
- These are Pb-Free Devices
- Response Time is Typically $< 1\text{ ns}$

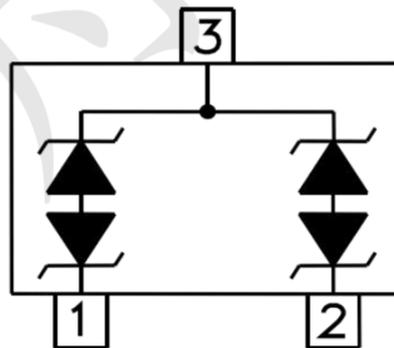
Mechanical Characteristics

- Package: SOT-23
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Terminal Connections: See Diagram Below
- -IEC 61000-4-2 (ESD) immunity test

Applications

- Industrial Controls
- Personal Digital Assistants
- Notebooks and Handhelds
- CAN Bus Protection
- Automotive Applications

Dimensions and Pin Configuration



SOT-23

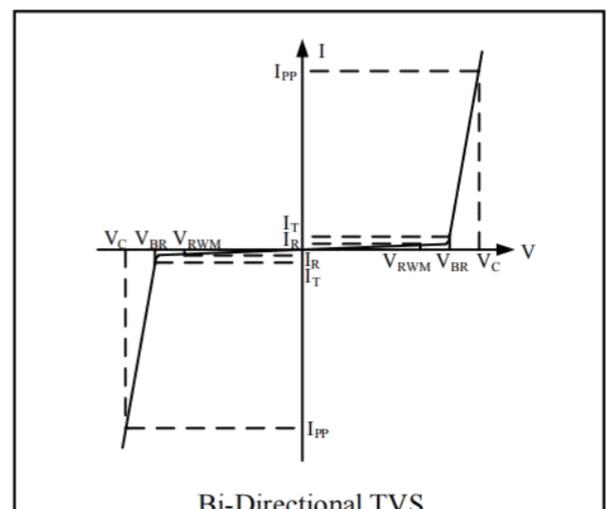
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pk}	180	W
IEC 61000-4-2 Spec Current at 60 ns (A)	I _{pp}	3	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±22 ±22	KV
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}	--	--	35	V	
Breakdown Voltage	V _{BR}	37	--	44	V	I _T = 1mA
Reverse Leakage Current	I _R	--	--	0.1	μA	V _{RWM} =35V
Clamping Voltage	V _C	--	45	51	V	I _{pp} =1A(8x 20us pulse)
Clamping Voltage	V _C	--	64	72	V	I _{pp} =3A(8x 20us pulse)
Junction Capacitance	C _J	--	10	--	pF	V _R =0V, f =1MHz, Pin1,2 to Pin3
Junction Capacitance	C _J	--	3	6	pF	V _R =0V, f =1MHz, Pin1, to Pin2

Symbol	Parameter
V _{RWM}	Nominal Reverse Working Voltage
I _R	Reverse Leakage Current @ V _{RWM}
V _{BR}	Reverse Breakdown Voltage @ I _T
I _T	Test Current for Reverse Breakdown
V _C	Clamping Voltage @ I _{pp}
I _{pp}	Maximum Peak Pulse Current
C _{ESD}	Parasitic Capacitance
V _R	Reverse Voltage
f	Small Signal Frequency



Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

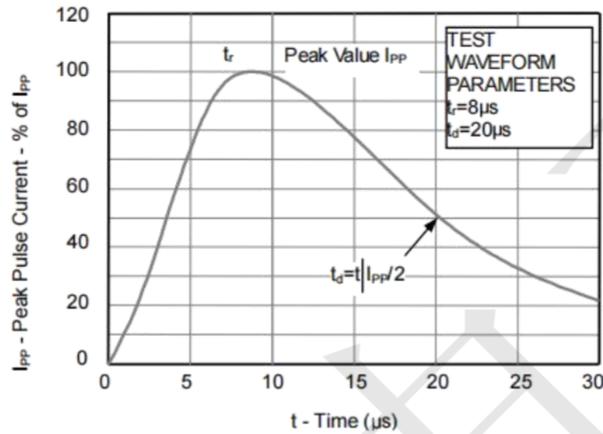


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

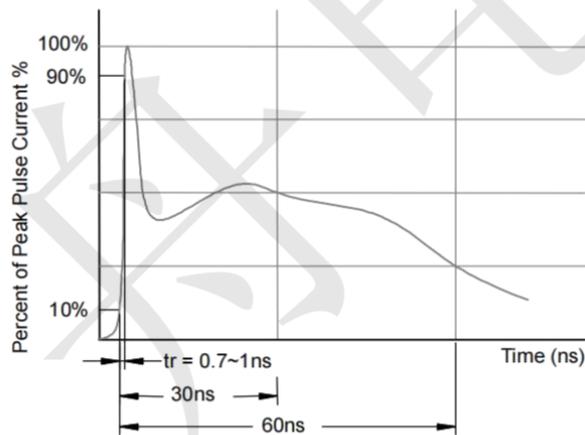
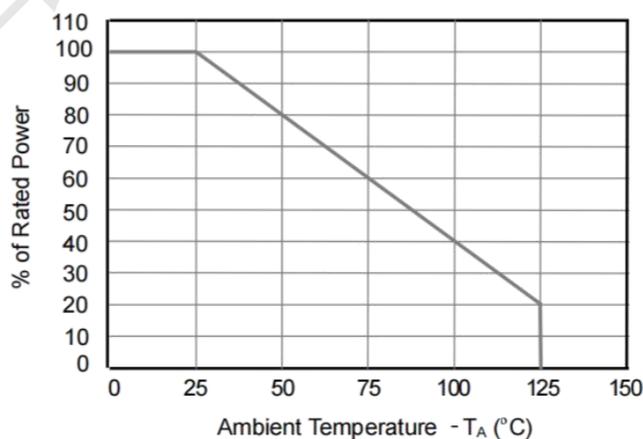
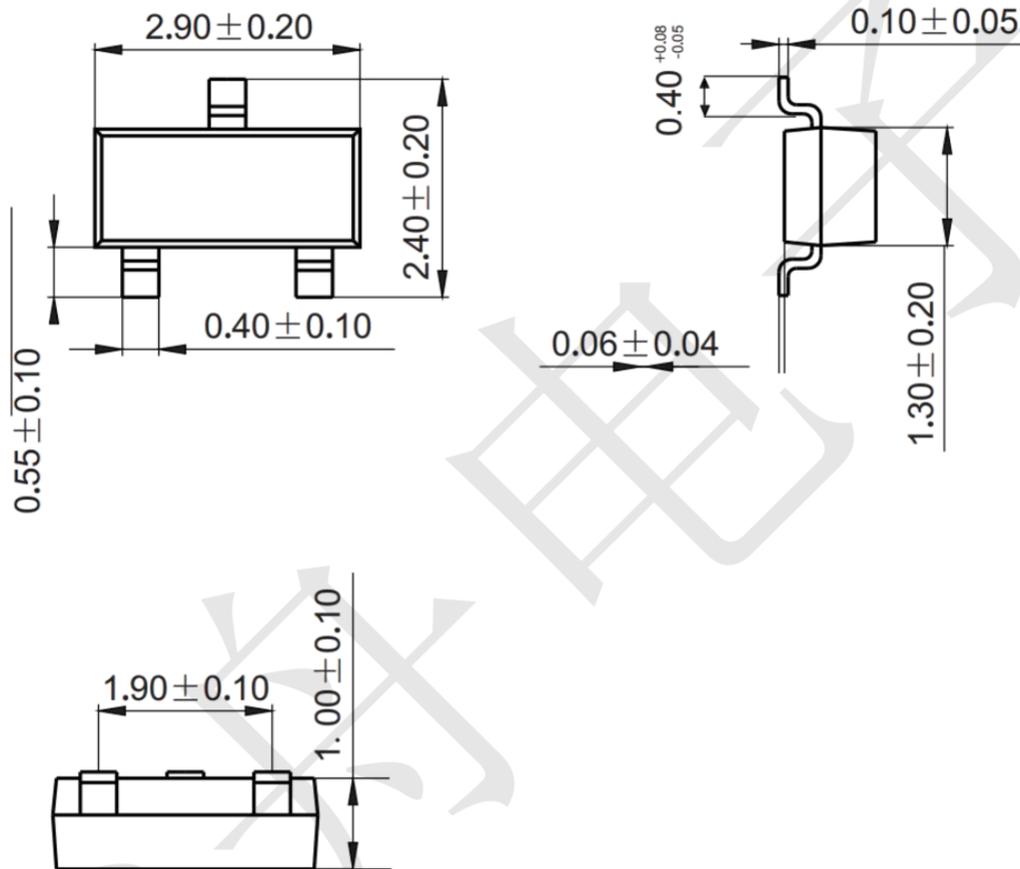


Fig3. Power Derating Curve



Package Outline Dimensions (unit: mm)

SOT-23



Mounting Pad Layout (unit: mm)

