

Features

- Low operating voltage: 2.8V
- Ultra low capacitance: 0.6pF(Typ)
- Ultra low leakage: nA level
- Low clamping voltage
- -IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 30\text{kV}$
Contact discharge: $\pm 30\text{kV}$
- -IEC61000-4-4 (EFT) 40A (5/50ns)
- 3-pin leadless package
- These are Pb-Free Devices
- Response Time is Typically $< 1\text{ ns}$

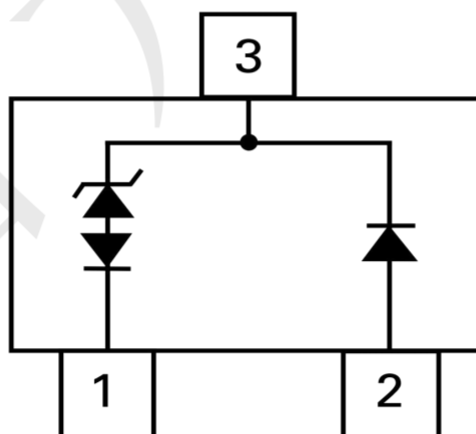
Mechanical Characteristics

- 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

- 10/100/1000 Ethernet
- WAN/LAN Equipment
- Switching Systems
- Desktops, Servers, and Notebooks

Dimensions and Pin Configuration



SOT-23

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

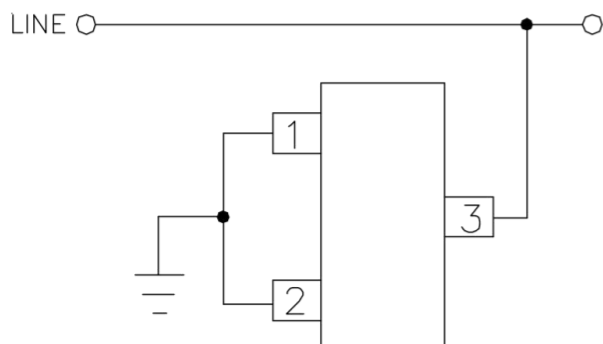
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	1800	W
Peak Pulse Current (8/20μs)	Ipp	30	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±30 ±30	KV
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

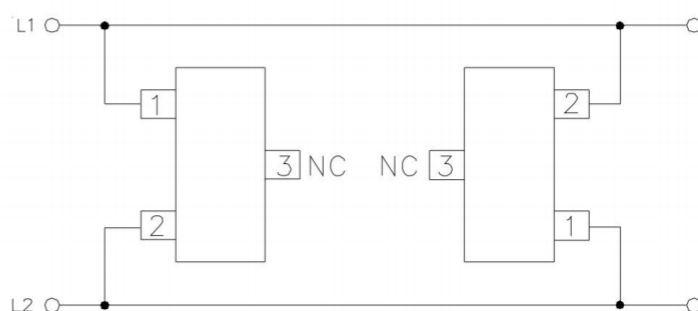
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM	--	--	2.8	V	
Breakdown Voltage	VBR	3.0	--	--	V	IT= 1mA
Reverse Leakage Current	IR	--	--	0.5	uA	VRWM=2.8V
Forward Voltage	VF	--	0.7	1.2	V	IF = 1mA
Clamping Voltage	VC	--	5	--	V	Ipp=1A(8x 20us pulse)
Clamping Voltage	VC	--	--	12	V	Ipp=38A(8x 20us pulse)
Junction Capacitance	CJ	--	0.6	1.0	pF	VR = 0V, f = 1MHz, Pin2 to Pin1

Applications Information

Protection of one unidirectional line



Low capacitance protection of one high-speed line pair



Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

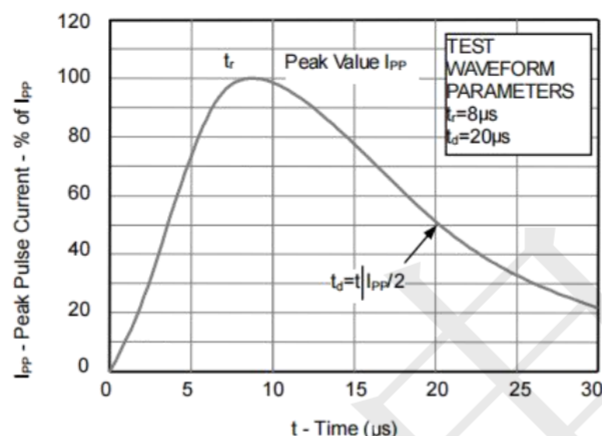


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

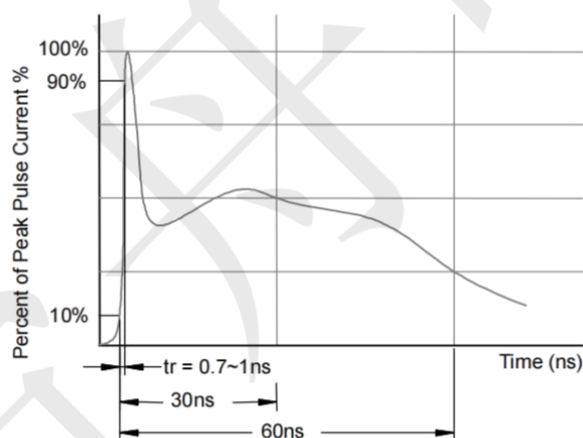
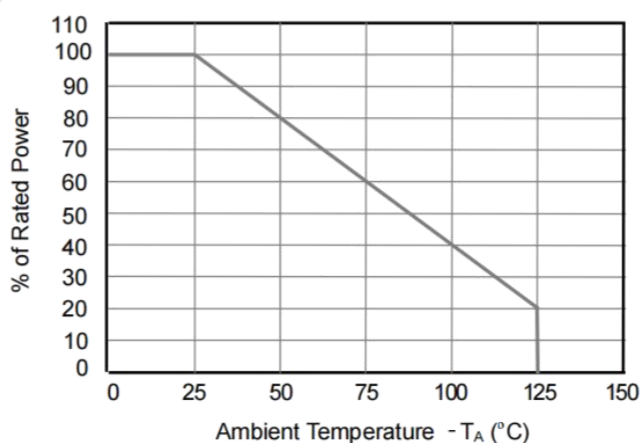
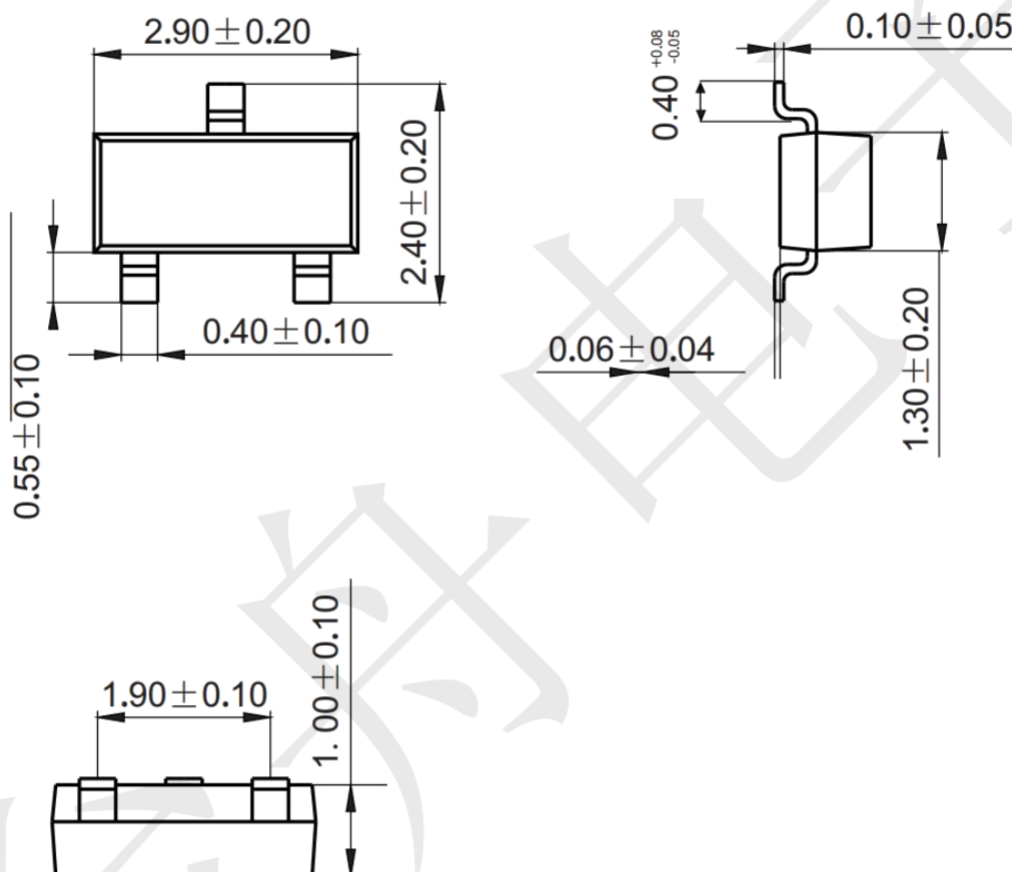


Fig3. Power Derating Curve



Package Outline Dimensions (unit: mm)

SOT-23



Mounting Pad Layout (unit: mm)

