

Features

- Low operating voltage: 24V
- Ultra low capacitance: 30pF
- Ultra low leakage: nA level
- Low clamping voltage
- -IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 20\text{kV}$
Contact discharge: $\pm 15\text{kV}$
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5(Lightning):3A(8/20 μs)
- These are Pb-Free Devices
- Response Time is Typically < 1 ns

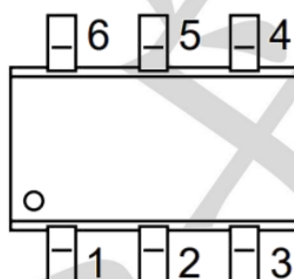
Mechanical Characteristics

- Package: SOT23-6
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Terminal Connections: See Diagram Below
- - IEC 61000-4-2 (ESD) immunity test

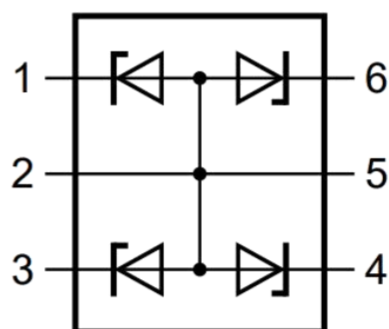
Applications

- Cellular Handsets and Accessories
- Notebooks and Handhelds
- Portable Instrumentation
- Industrial Controls

Dimensions and Pin Configuration



SOT23-6



Circuit and Pin Schematic

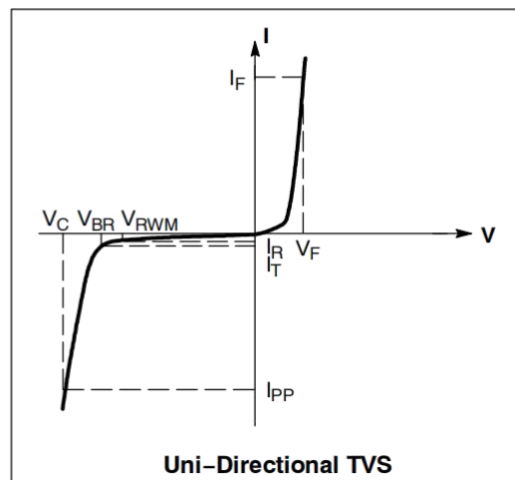
Absolute Maximum Ratings(T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pp}	150	W
Peak Pulse Current (8/20μs)	I _{pp}	3	A
ESD per IEC 61000-4-2 (Air)	VESD	±20	KV
ESD per IEC 61000-4-2 (Contact)		±15	
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}	--	--	24	V	Any I/O pin to ground
Breakdown Voltage	V _{BR}	26	27	--	V	I _T = 1mA,Any I/O pin to ground
Reverse Leakage Current	I _R	--	--	0.1	uA	V _{RWM} =24V,Any I/O pin to ground
Forward Voltage	V _F	--	0.7	1.2	V	I _F = 1mA
Clamping Voltage	V _C	--	--	24	V	I _{pp} =1A(8x 20us pulse), Any I/O pin to ground
Clamping Voltage	V _C	--	--	60	V	I _{pp} =3A(8x 20us pulse), VCC pin to ground
Junction Capacitance	C _{vo-GND}	--	20	35	pF	V _R =0V,f=1MHz,Any I/O to GND
	C _{I/O- I/O}	--	10	--	pF	V _R =0V,f=1MHz,between I/O pins

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



Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

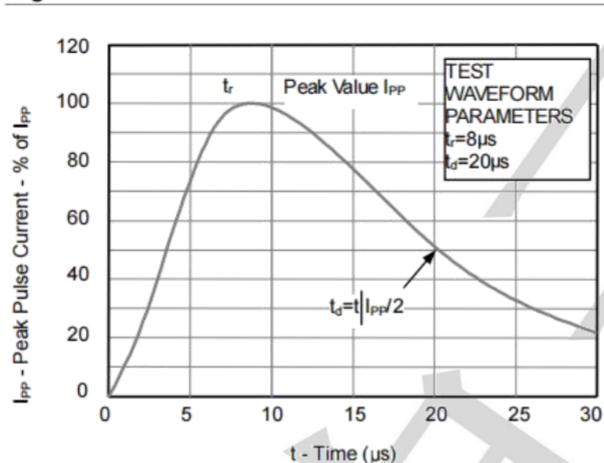


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

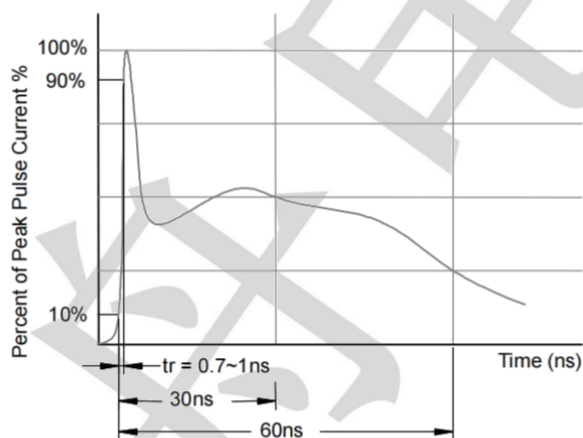
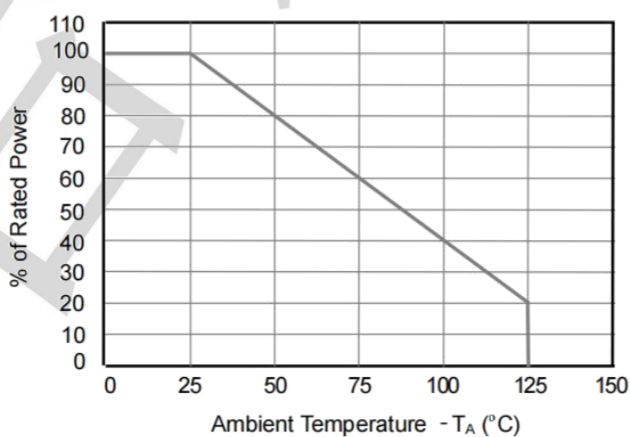
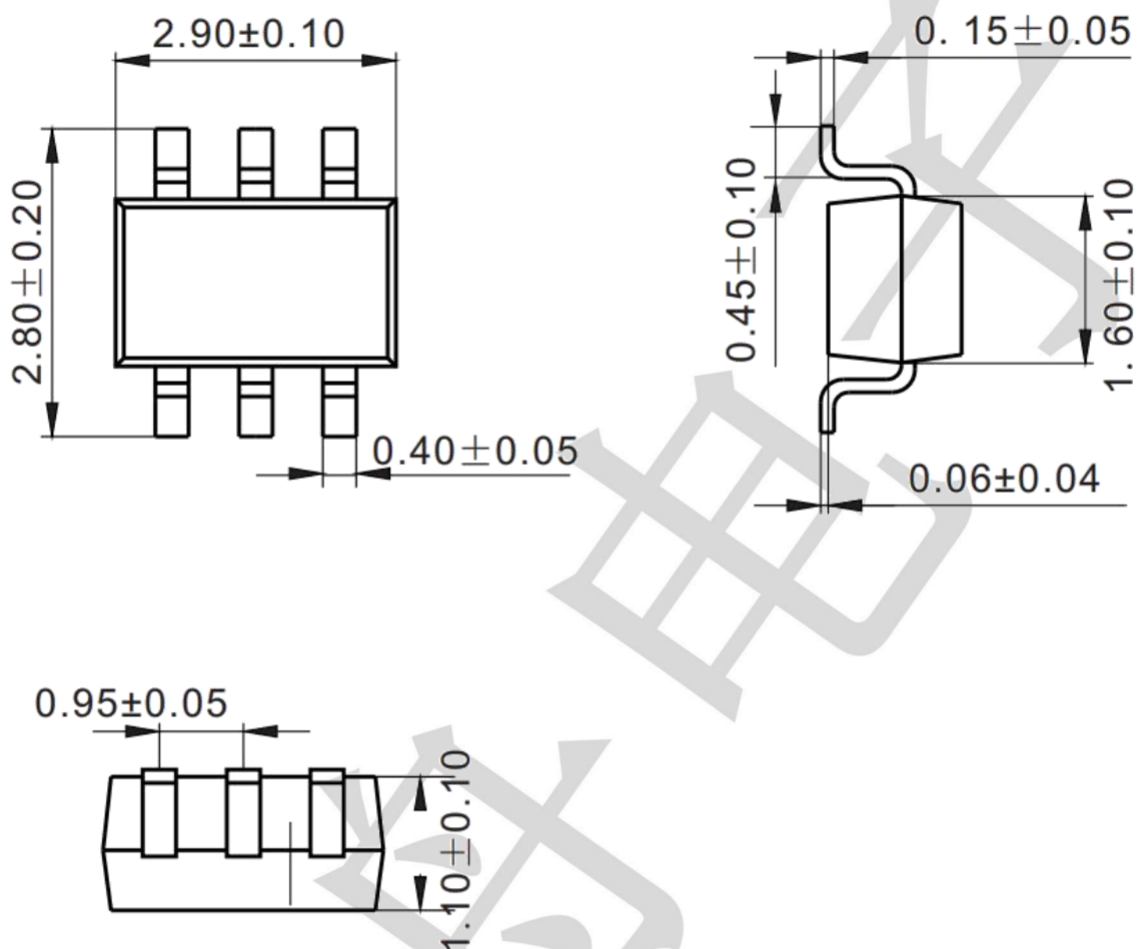


Fig3. Power Derating Curve



Package Outline Dimensions (unit: mm)

SOT23-6



Mounting Pad Layout (unit: mm)

