

Features

- Low operating voltage: 3.3V
- Ultra low capacitance: 0.8pF
- Ultra low leakage: nA level
- Low clamping voltage
- -IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 25\text{kV}$
Contact discharge: $\pm 25\text{kV}$
- -IEC61000-4-4 (EFT) 40A (5/50ns)
- -IEC61000-4-5(Lightning):4.5A(8/20 μs)
- These are Pb-Free Devices
- Response Time is Typically < 1 ns

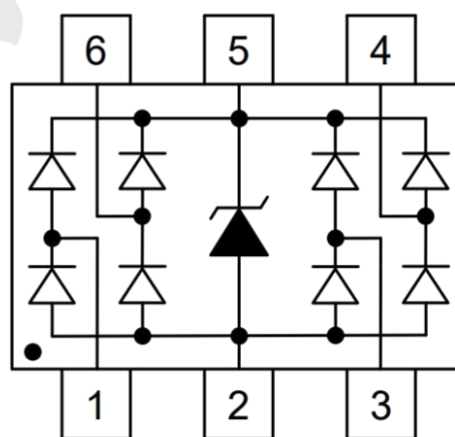
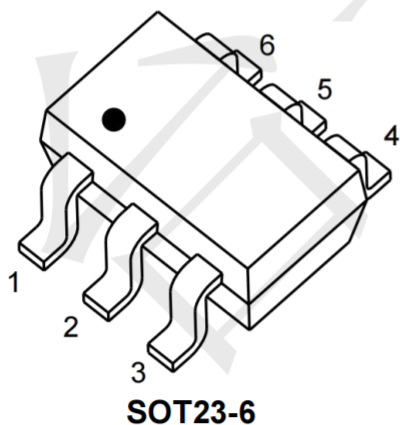
Mechanical Characteristics

- 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



Circuit and Pin Schematic

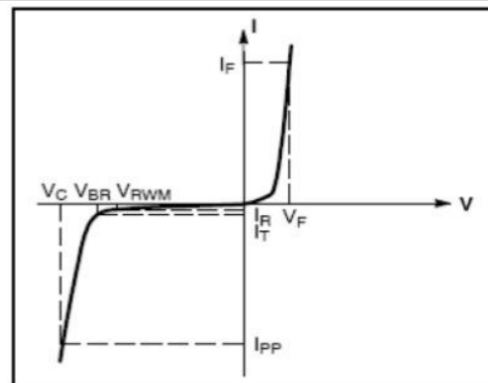
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pp}	60	W
Peak Pulse Current (8/20μs)	I _{pp}	4.5	A
ESD per IEC 61000-4-2 (Air)	VESD	±25	KV
ESD per IEC 61000-4-2 (Contact)		±25	
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}	--	--	3.3	V	Any I/O pin to ground
Breakdown Voltage	V _{BR}	3.6	4.2	--	V	I _T = 1mA, Any I/O pin to ground
Reverse Leakage Current	I _R	--	1	--	uA	V _{RWM} =3.3V, Any I/O pin to ground
Forward Voltage	V _F	0.5	0.8	1.0	V	I _F = 10mA
Clamping Voltage	V _C	--	12.5	--	V	I _{pp} =4.5A(8x 20us pulse), Any I/O pin to ground
Clamping Voltage	V _C	--	12	--	V	I _{pp} =8A(8x 20us pulse), VCC pin to ground
Junction Capacitance	C _{vo-GND}	--	0.45	0.8	pF	V _R =0V, f=1MHz, Any I/O to GND
	C _{I/O- I/O}	--	0.25	0.5	pF	V _R =0V, f=1MHz, between I/O pins

Symbol	Parameter
V _C	Clamping Voltage @ I _{pp}
I _{pp}	Peak Pulse Current
V _{BR}	Breakdown Voltage @ I _T
I _T	Test Current
I _R	Reverse Leakage Current @ V _{RWM}
V _{RWM}	Reverse Standoff Voltage
V _F	Forward Voltage @ I _F
I _F	Forward Current



V-I characteristics for a uni-directional TVS

Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

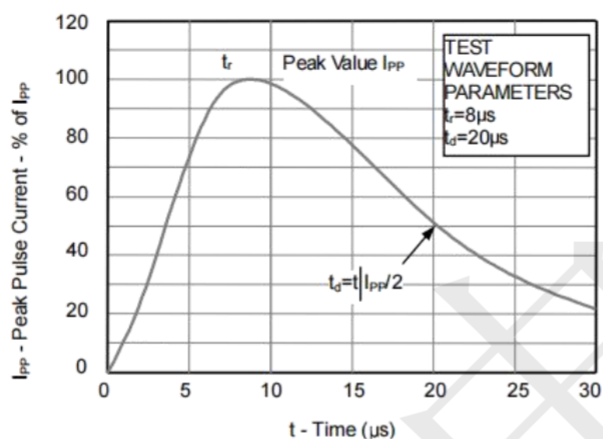


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

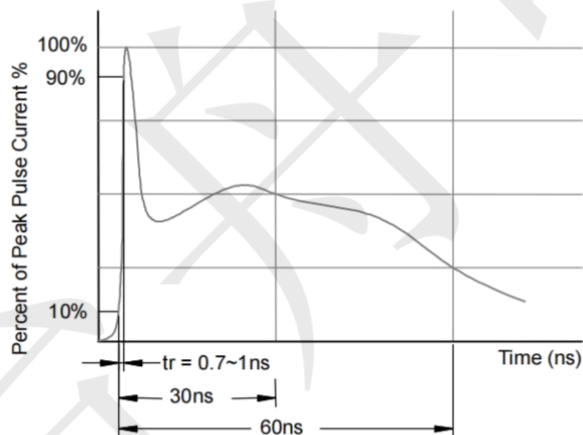
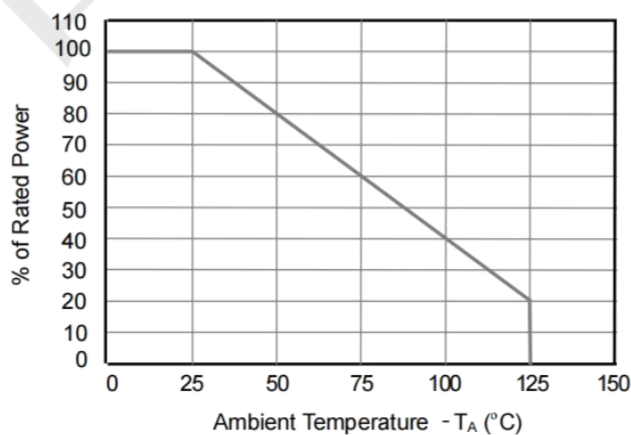
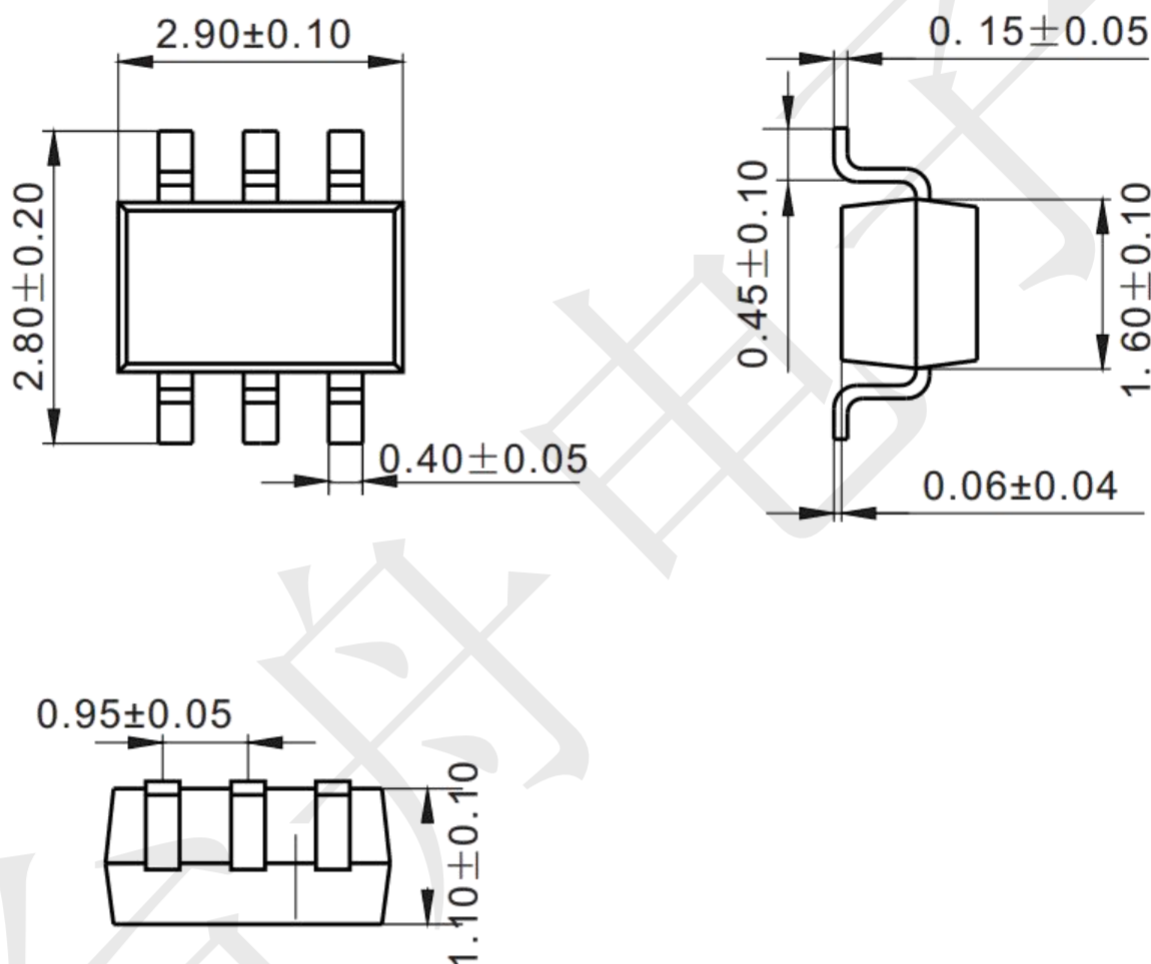


Fig3. Power Derating Curve



Package Outline Dimensions (unit: mm)

SOT23-6



Mounting Pad Layout (unit: mm)

