

Features

- Low operating voltage: 70V
- Ultra low capacitance: 0.8pF typical (I/O to I/O)
- 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)
- IEC61000-4-5(Lightning):24A(8/20 μs)
- These are Pb-Free Devices
- Response Time is Typically < 1 ns

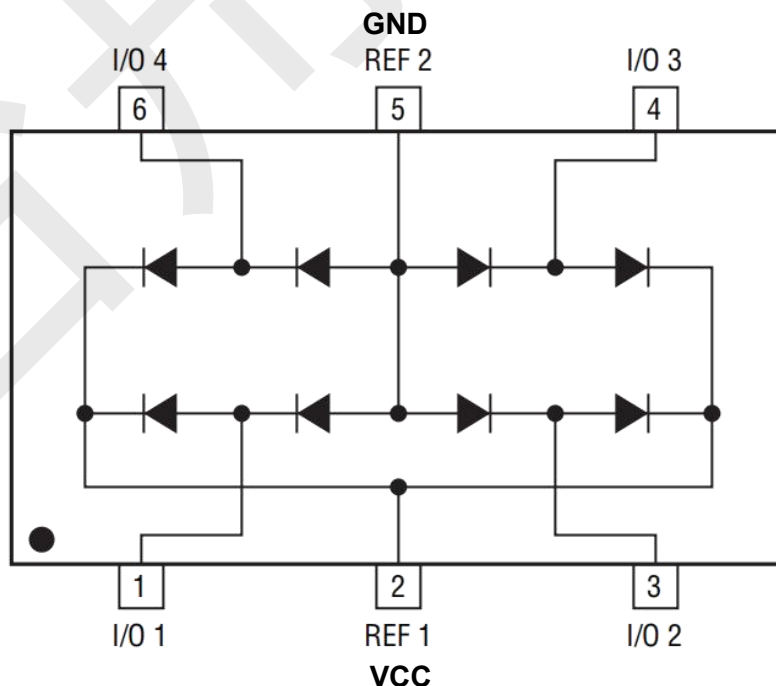
Mechanical Characteristics

- 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
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- USB 2.0 power and data line

Dimensions and Pin Configuration



Circuit and Pin Schematic

Absolute Maximum Ratings

(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Current (8/20μs)	Ipp	24	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
Peak Reverse Stand-Off Voltage	VRWM	--	--	70	V	
Breakdown Voltage	VBR	85	--	--	V	IT= 50uA
Forward Voltage	VF	--	0.7	1.2	V	IF = 1mA
Reverse Leakage Current	IR	--	--	1.0	uA	VRWM=70V
Clamping Voltage	VC	--	--	1.5	V	Ipp=1A(8x 20us pulse),
Clamping Voltage	VC	--	--	7.0	V	Ipp=24A(8x 20us pulse),
Junction Capacitance	C _{I/O-GND}	--	1.6	--	pF	VR=0V,f=1MHz,Any I/O to GND
	C _{I/O- I/O}	--	0.8	--	pF	VR=0V,f=1MHz,between I/O pins

Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

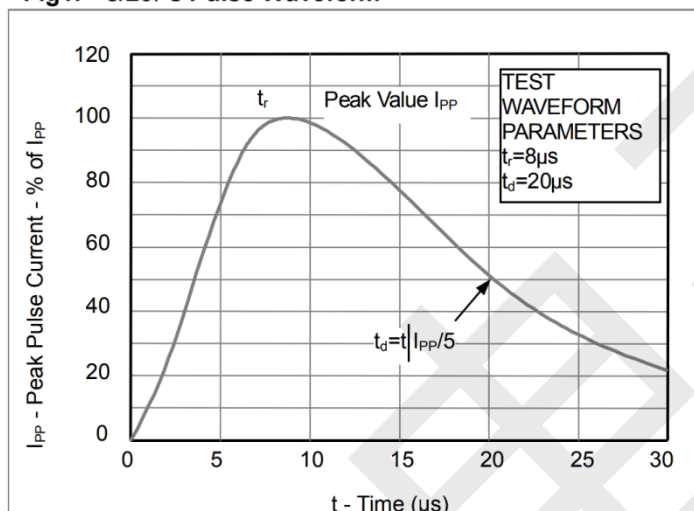


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

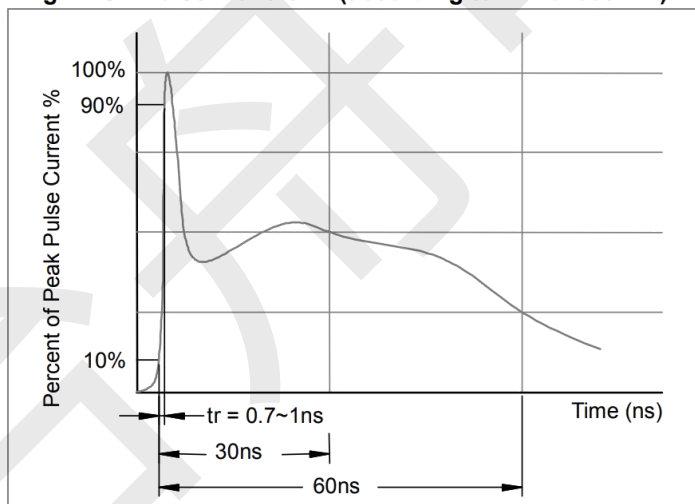
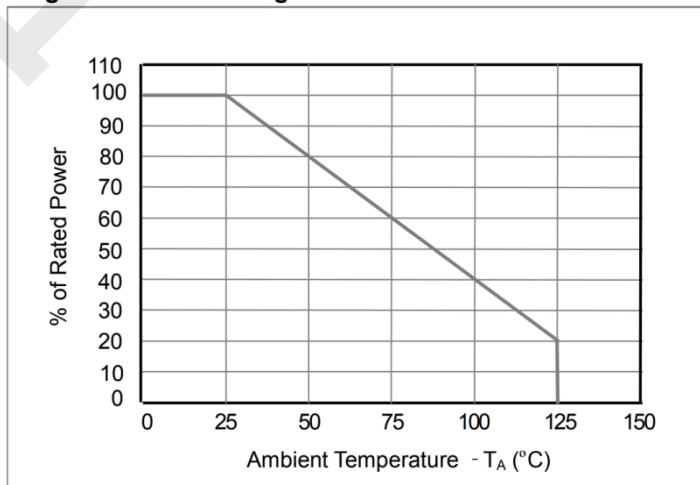
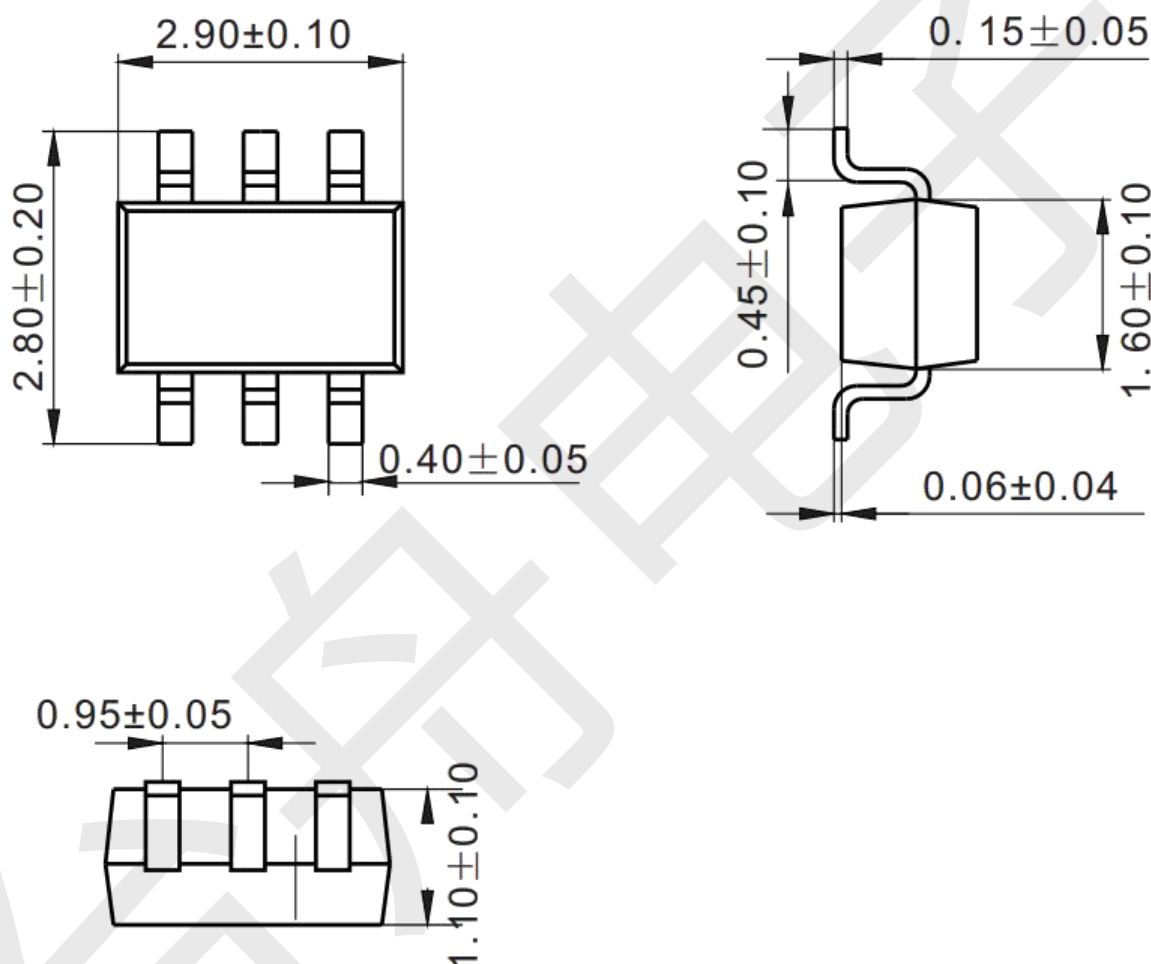


Fig3. Power Derating Curve



Package information (Unit: mm)

SOT23-6



Mounting Pad Layout (unit: mm)

