

Features

- Operating voltage: 80V
- Peak Pulse Power (8/20 μ s):240W
- Ultra low leakage: nA level
- Low clamping voltage
- -IEC 61000-4-2 (ESD) immunity test
Air discharge: ± 25 kV
Contact discharge: ± 20 kV
- -IEC61000-4-4 (EFT) 40A (5/50ns)
- 3-pin leadless package
- These are Pb-Free Devices
- Response Time is Typically < 1 ns

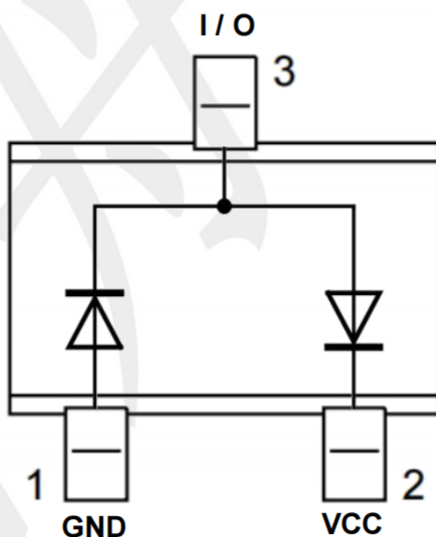
Mechanical Characteristics

- Package: SOT-323
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound
- Terminal Connections: See Diagram Below
- -IEC 61000-4-2 (ESD) immunity test

Applications

- Analog audio
- Antenna power supply
- I²C-bus protection
- Video line protection
- Telecommunication networks

Dimensions and Pin Configuration



SOT-323

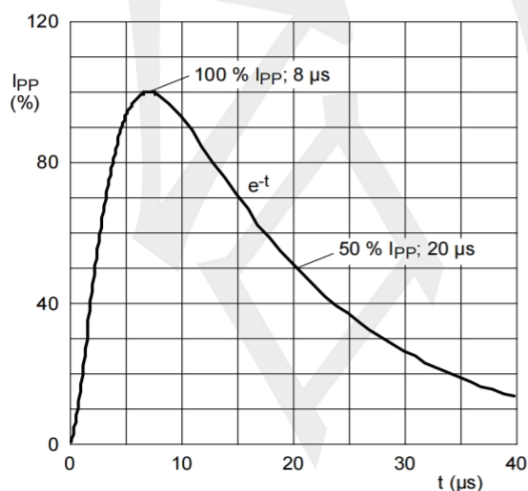
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pk}	240	W
Peak Pulse Current (8/20μs)	I _{pp}	22	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	±25 ±20	KV
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

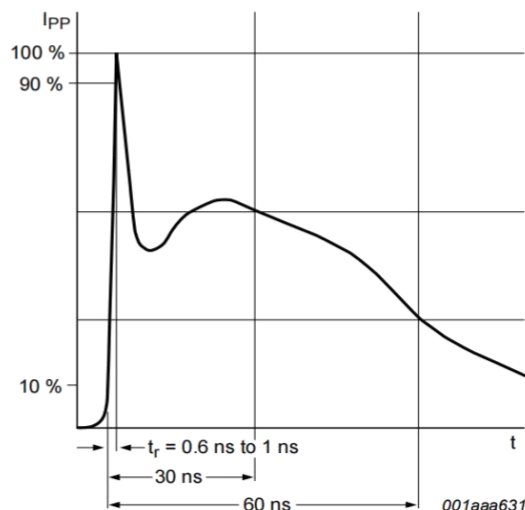
Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}	--	--	80	V	
Forward Voltage	V _F	0.4	0.7	1.2	V	I _T = 1mA
Leakage Current	I _R	--	--	500	nA	V _{RWM} =80V
Clamping Voltage(V _F)	V _C	--	--	22	V	I _{pp} =22A(8x 20us pulse)
Junction Capacitance	C _J	--	0.5	1.0	pF	V _R =0V, f =1MHz

Characteristic Curves

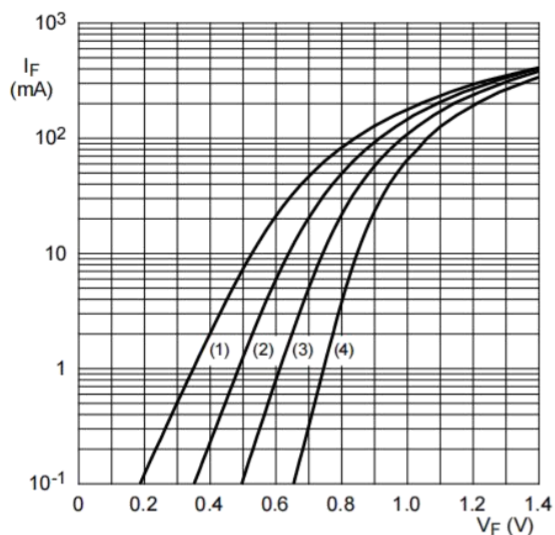


8/20 μs pulse waveform according to IEC 61000-4-5



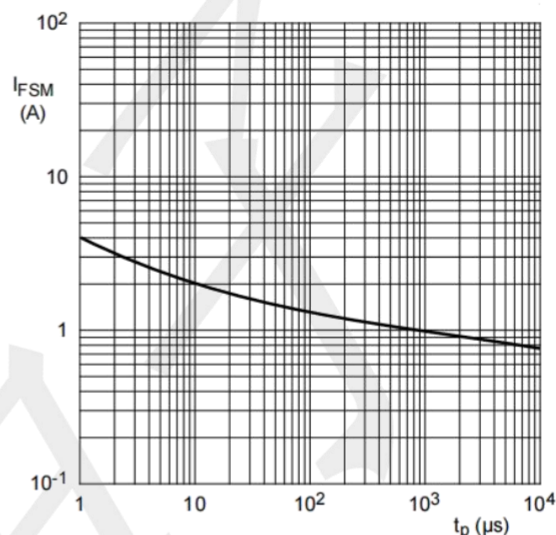
ESD pulse waveform according to IEC 61000-4-2

Characteristic Curves



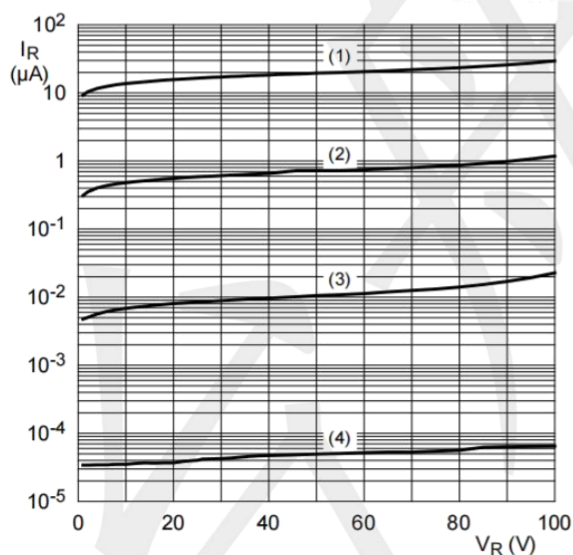
- (1) $T_{amb} = 150\text{ }^{\circ}\text{C}$
- (2) $T_{amb} = 85\text{ }^{\circ}\text{C}$
- (3) $T_{amb} = 25\text{ }^{\circ}\text{C}$
- (4) $T_{amb} = -40\text{ }^{\circ}\text{C}$

Forward current as a function of forward voltage; typical values



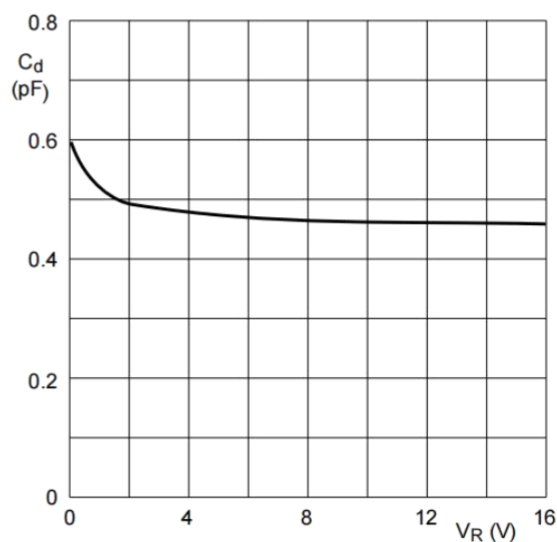
Based on square wave currents.
 $T_{j(\text{init})} = 25\text{ }^{\circ}\text{C}$

Non-repetitive peak forward current as a function of pulse duration; typical values



- (1) $T_{amb} = 150\text{ }^{\circ}\text{C}$
- (2) $T_{amb} = 85\text{ }^{\circ}\text{C}$
- (3) $T_{amb} = 25\text{ }^{\circ}\text{C}$
- (4) $T_{amb} = -40\text{ }^{\circ}\text{C}$

Reverse current as a function of reverse voltage; typical values

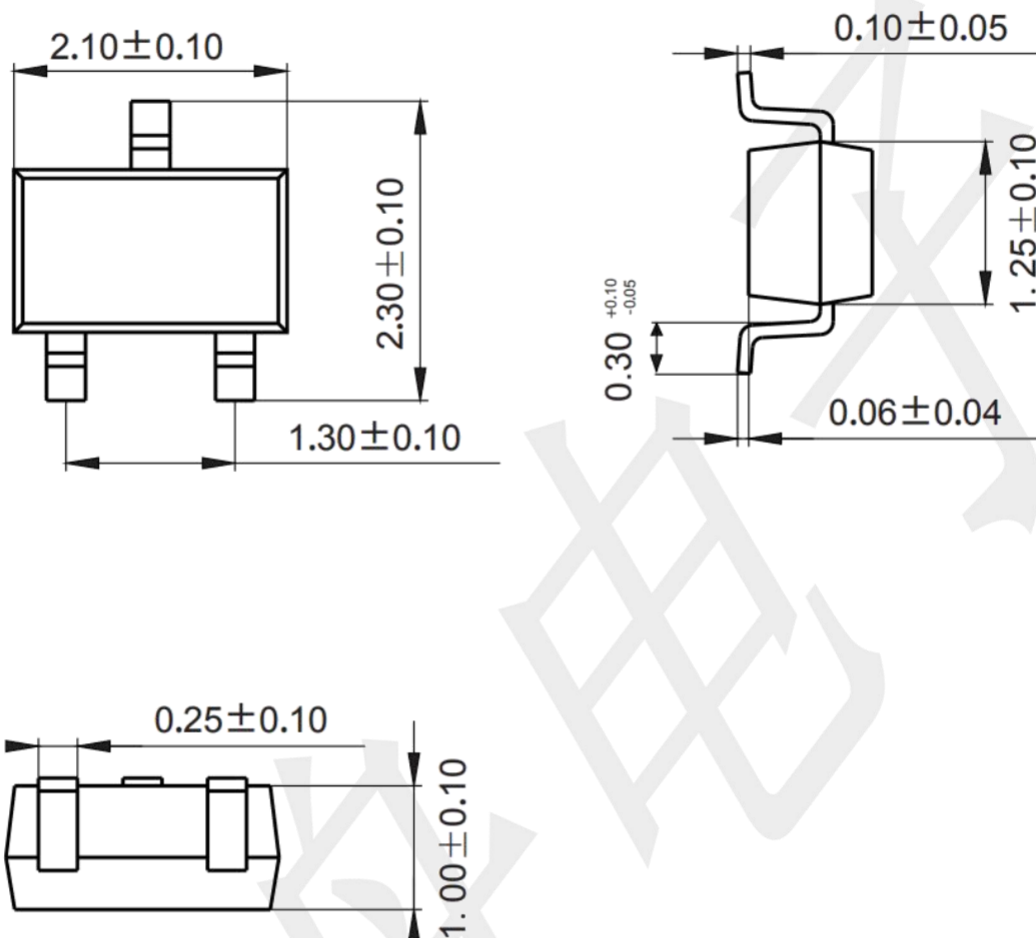


$f = 1\text{ MHz}$; $T_{amb} = 25\text{ }^{\circ}\text{C}$

Diode capacitance as a function of reverse voltage; typical values

Package Outline Dimensions (unit: mm)

SOT-323



Mounting Pad Layout (unit: mm)

