

ESD5V0J4

Features

- Uni-directional ESD protection of five lines
- Low reverse stand-off voltage: 5V
- Low reverse clamping voltage
- Low leakage current
- SOT-353 package
- Response time is typically < 1ns
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 25\text{kV}$
 - Contact discharge: $\pm 25\text{kV}$
 - IEC61000-4-5 (Lightning) 5A (8/20 μs)

Description

The ESD5V0J4 is designed to protect sensitive electronics from damage or latch-up due to ESD and other voltage induced transient events. It is designed for use in applications where board space is at a premium. Each device will protect up to four lines. It is unidirectional devices and may be used on lines where the signal polarities are above ground. The low profile SOT-363 package allows flexibility in the design of crowded circuit boards.

Applications

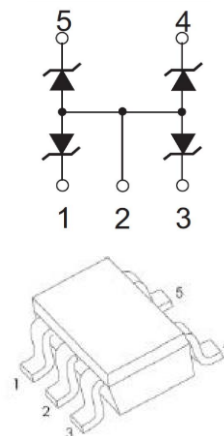
- Computers and peripherals
- Audio and video equipment
- Cellular handsets and accessories
- Portable electronics
- Other electronics equipments communication systems

Absolute Maximum Ratings

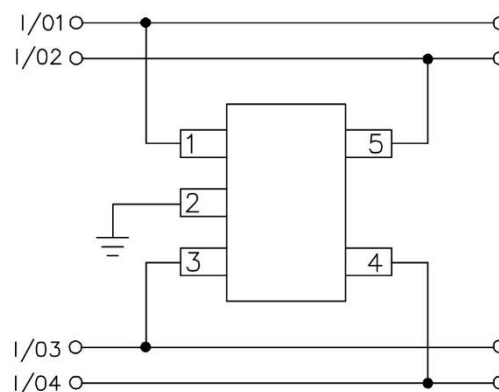
Tamb=25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{pp}	60	W
Maximum Reverse Peak Pulse Current	I _{PP}	5	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 25	KV
ESD per IEC 61000-4-2 (Contact)		± 25	
Storage Temperature Range	T _{STJ}	-55 to +150	°C
Operating Temperature Range	T _J	-55 to +150	°C

Circuit Diagram



Application Examples

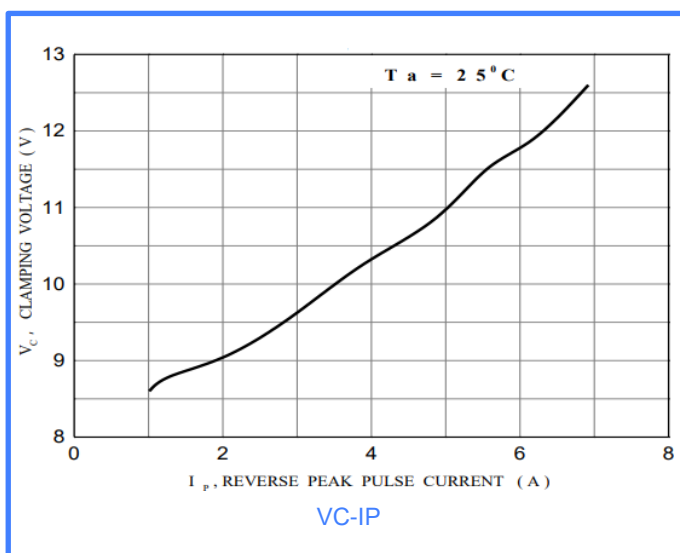
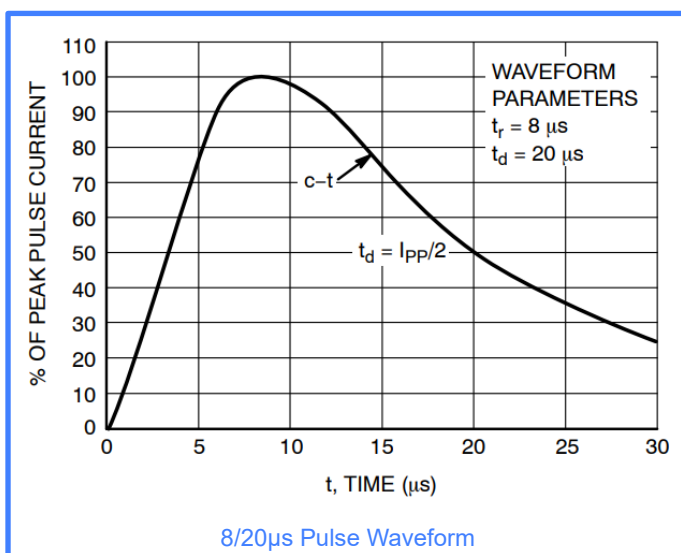
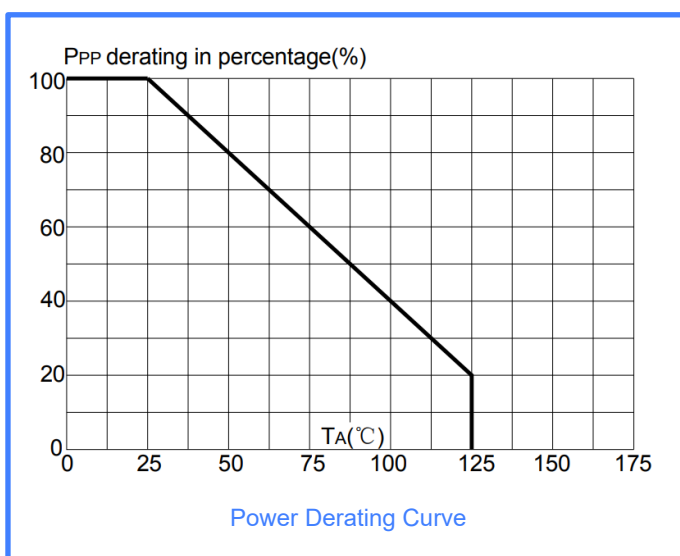
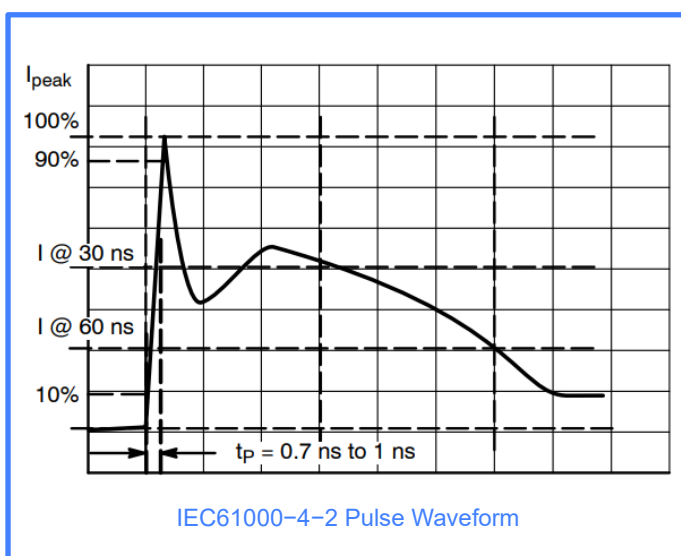


Electrical Characteristics

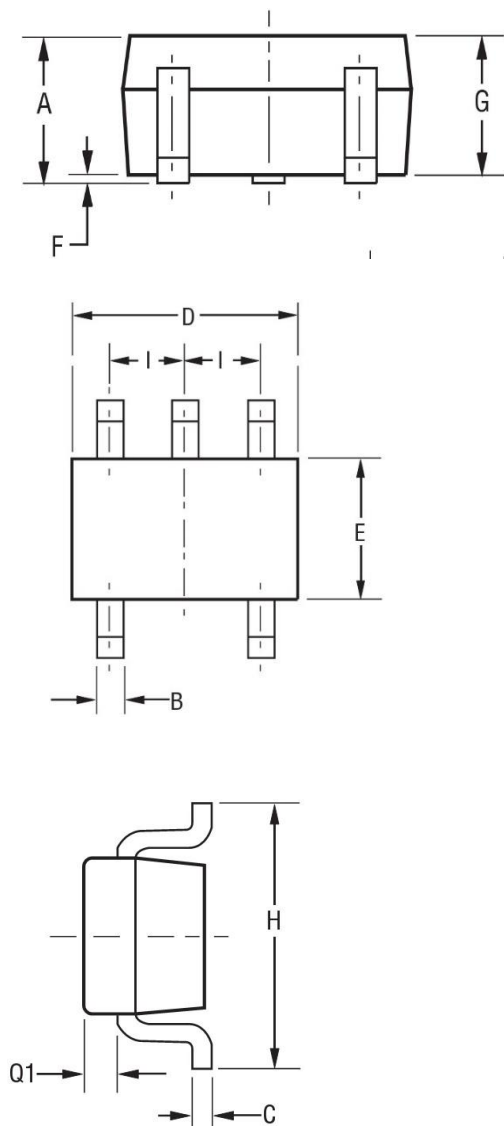
TA=25°C unless otherwise specified

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_{RWM}	Reverse Standoff Voltage	-			5	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	6	6.8	7.5	V
I_R	Reverse Leakage Current	$V_{RWM} = 5\text{V}$			1	μA
V_F	Forward voltage	$I_F = 200\text{mA}$			1.25	V
V_C	Clamping Voltage	$I_{PP} = 5\text{A}$, $t_P = 8/20\mu\text{s}$			12.5	V
C_J	Diode Capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$		32		pF

Characteristic Curves



SOT-353 Dimensions(mm)



Dimension	MM (INCHES)	
	Min.	Max.
A	$\frac{0.80}{(0.031)}$	$\frac{1.10}{(0.043)}$
B	$\frac{0.15}{(0.006)}$	$\frac{0.30}{(0.012)}$
C	$\frac{0.10}{(0.004)}$	$\frac{0.18}{(0.007)}$
D	$\frac{1.80}{(0.071)}$	$\frac{2.20}{(0.087)}$
E	$\frac{1.15}{(0.045)}$	$\frac{1.35}{(0.053)}$
F	-	$\frac{0.10}{(0.004)}$
G	$\frac{0.80}{(0.031)}$	$\frac{1.00}{(0.039)}$
H	$\frac{1.80}{(0.071)}$	$\frac{2.40}{(0.094)}$
I	TYP: $\frac{0.65}{(0.026)}$	
Q1	$\frac{0.10}{(0.004)}$	$\frac{0.40}{(0.016)}$

Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.