

ESD5V0K5

Features

- Uni-directional ESD protection of five lines
- Low reverse stand-off voltage: 5V
- Low reverse clamping voltage
- Low leakage current
- SOT-363 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)
- AEC-Q101 qualified

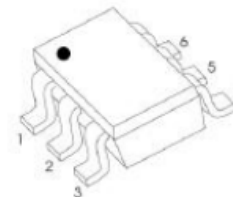
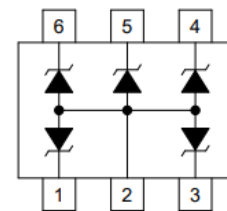
Description

The ESD5V0K5 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 five 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.

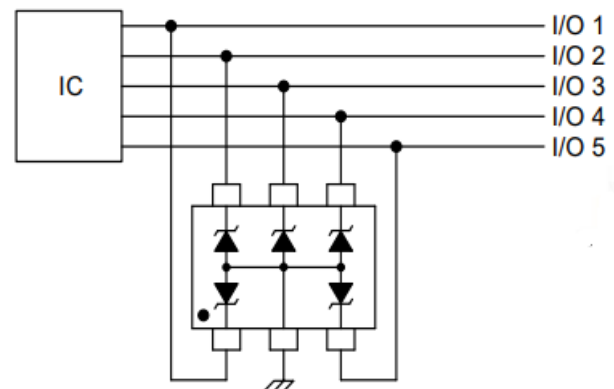
Applications

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

Circuit Diagram



Application Examples



Absolute Maximum Ratings

Tamb=25°C unless otherwise specified

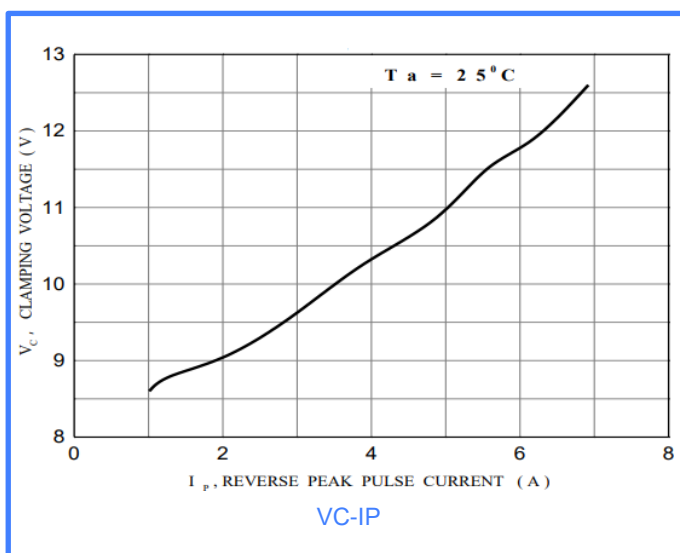
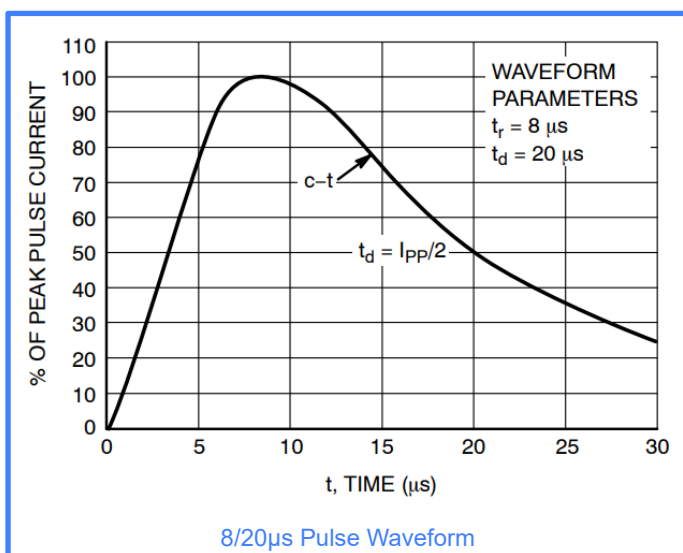
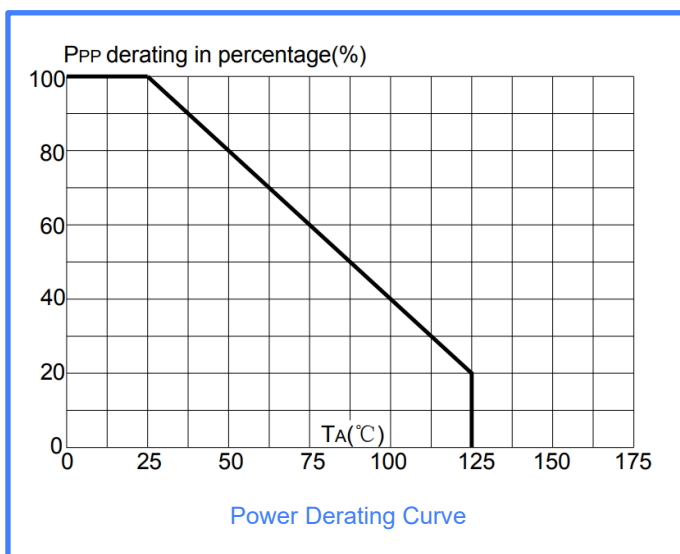
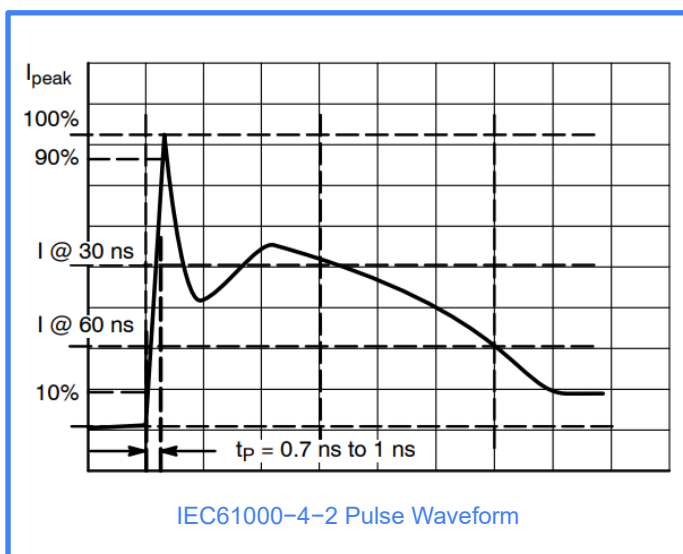
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P _{pp}	60	W
Maximum Reverse Peak Pulse Current	I _{pp}	5	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 25	KV
ESD per IEC 61000-4-2 (Contact)		± 25	
Storage Temperature Range	T _{STJ}	-55 to +150	°C
Operating Temperature Range	T _J	-55 to +150	°C

Electrical Characteristics

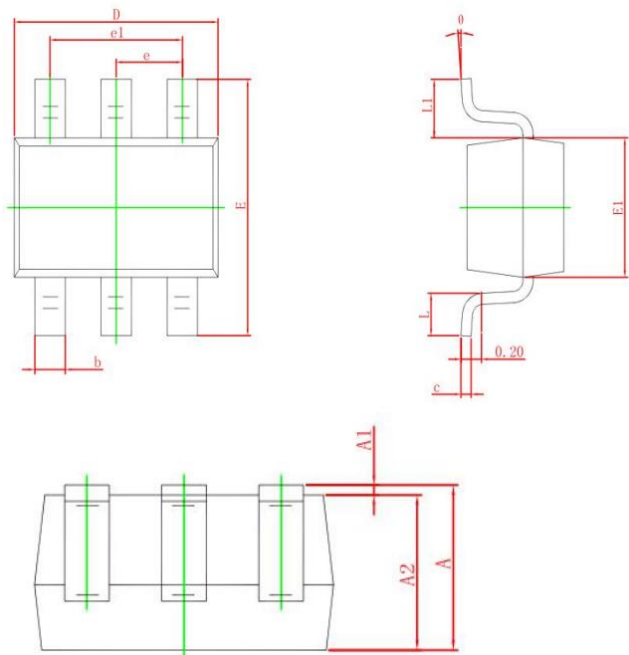
TA=25°C unless otherwise specified

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-363 Dimensions(mm)



Symbol	Dim in mm		
	min	nor	max
A	0.90	1.00	1.10
A1	0.00	0.05	0.10
A2	0.90	0.95	1.00
b	0.15	0.25	0.35
c	0.08	0.12	0.15
D	2.00	2.10	2.20
E	2.15	2.30	2.45
E1	1.15	1.25	1.35
e	0.650TPY.		
e1	1.2	1.3	1.4
L	0.26	0.36	0.46
L1	0.525REF		
θ	0°	4°	8°

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.