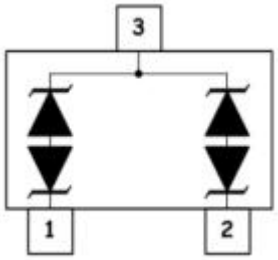
ESDLC5V0APB

Description

Designed to protect voltage sensitive electronic components from ESD and other transients. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD. The combination of small size, low capacitance, and high level of ESD protection makes them a flexible solution for applications such as HDMI, Display Port TM, and MDDI interfaces. It is designed to replace multiplayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.

Functional Diagram



Features

- Bi-directional ESD protection of two lines
- Low capacitance: 12pF(Typ.)
- Low reverse stand−off voltage: 5.0V
- Low reverse clamping voltage
- Low leakage current
- Fast response time
- Complies with following standards:
  – IEC 61000-4-2 (ESD) immunity test
  Air discharge: ±15kV
  Contact discharge: ±8kV

Applications

- Computers and peripherals
- PAD
- Audio and video equipment
- Cellular handsets and accessories
- Subscriber identity module(SIM) card protection
- Portable electronics
- Other electronics equipments communication systems

Absolute Maximum Ratings(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P_{PP}	50	Watts
ESD per IEC 61000−4−2 (Air)	V_{ESD}	±25	KV
ESD per IEC 61000−4−2 (Contact)		±25	KV
Lead Soldering Temperature	TL	260 (10 sec)	°C
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STJ}	-55 to +150	°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_t = 1mA	5.8		8	V
Reverse Leakage Current	I_R	V_R =V_{RWM}			1	μA
Clamping Voltage	V_C	@5A			10	V
Junction Capacitance	C_J	V_R=0V, f = 1MHz		12	15	pF

Characteristics Curves

Figure 1- Reverse Characteristics

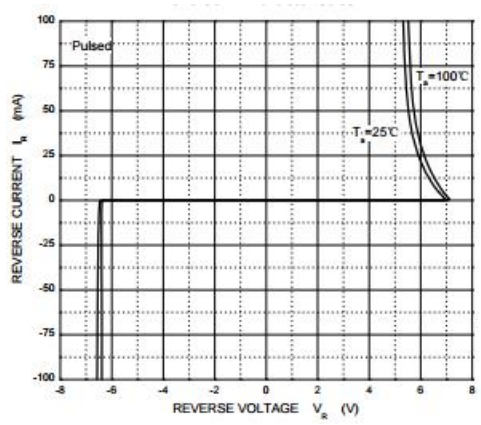


Figure 2- ESD Pulse Waveform
(according to IEC 61000-4-2)

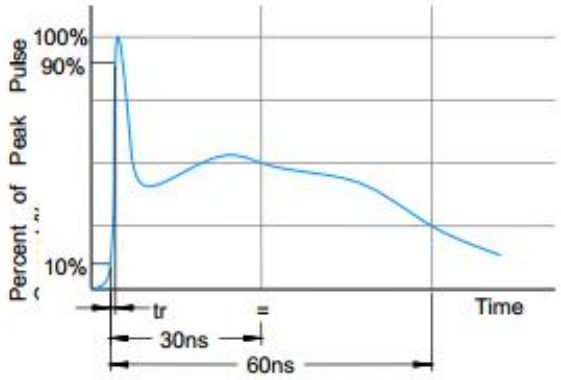


Figure3- 8/20μs Pulse Waveform

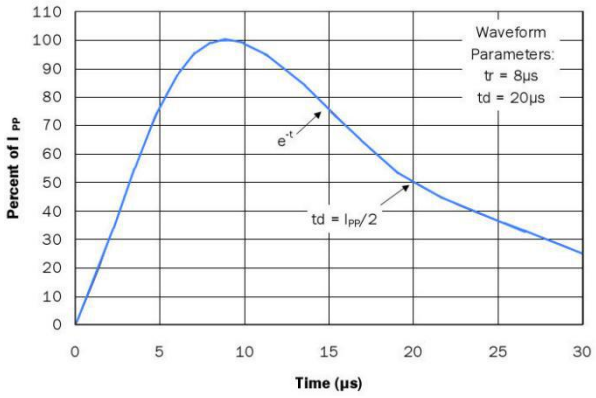
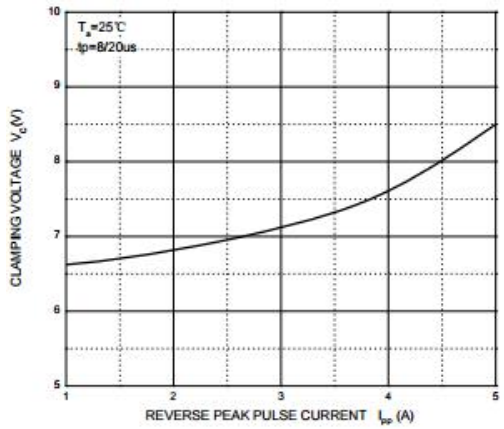
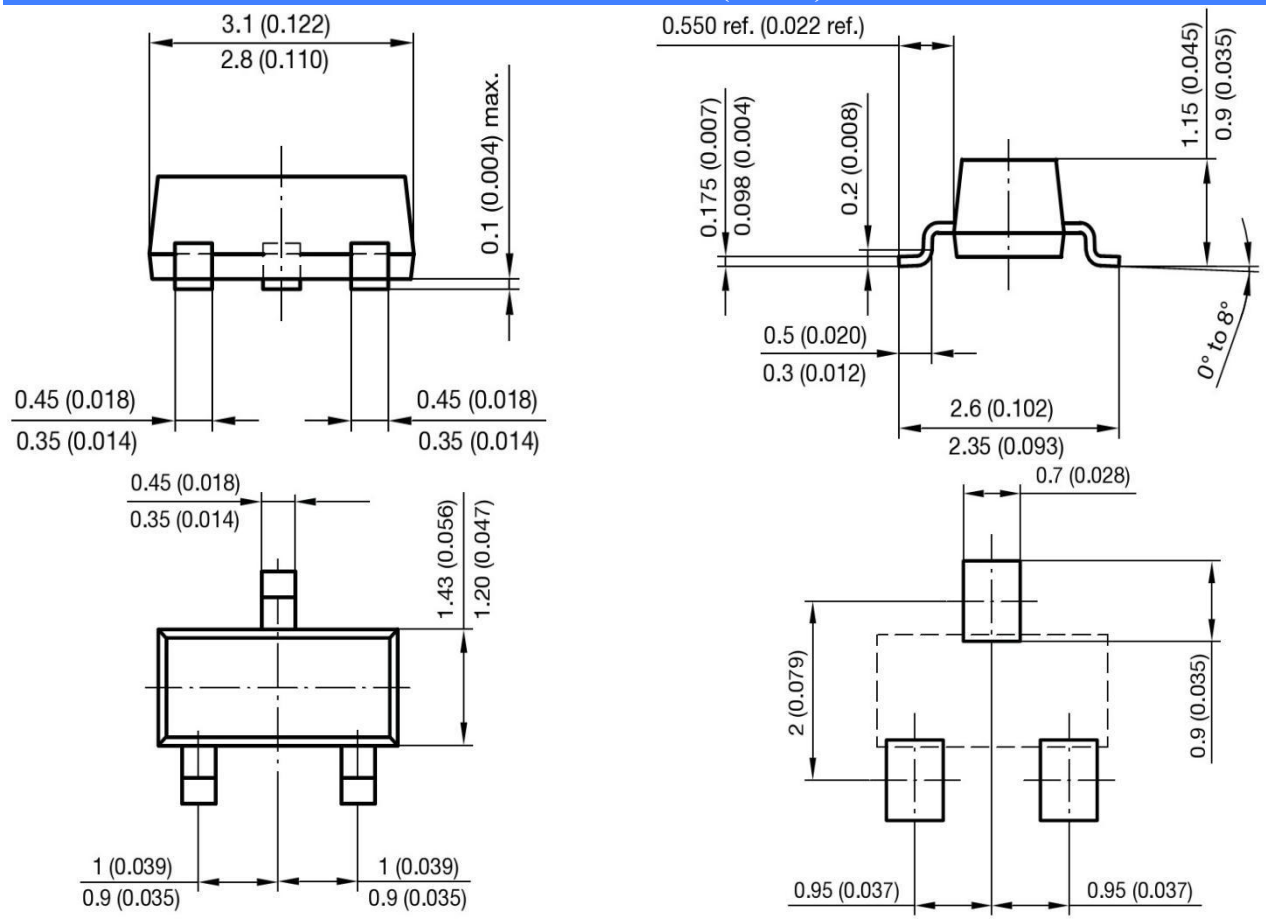


Figure 4- VC —— IPP



ACKAGE OUTLINE DIMENSIONS in millimeters (inches) :SOT-23



Mounting Pad Layout

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.