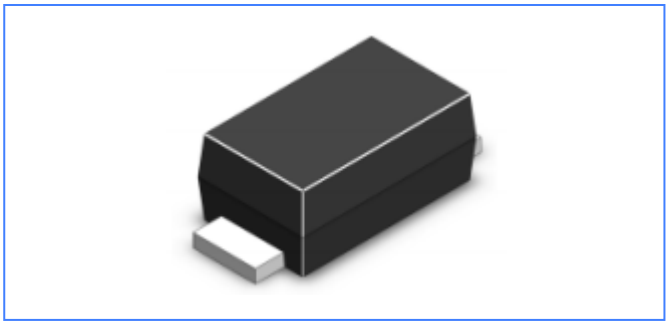
ESD5V0D9B

Description

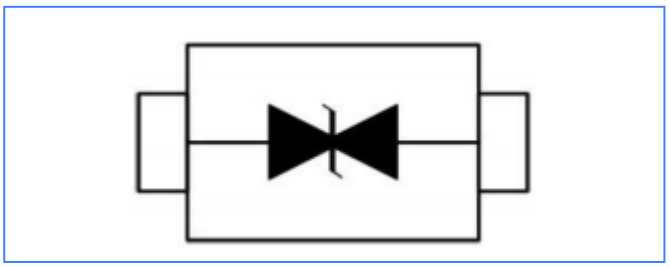
ESD5V0D9B is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

Features

- 150 Watts Peak Pulse Power per Line (tp=8/20μs)
- Operating voltage: 5V
- Low leakage current
- Package: SOD-923
- Low clamping voltage
- Complies with following standards:
  – IEC 61000-4-2 (ESD) immunity test
  Air discharge: ±15kV
  Contact discharge: ±8kV



Functional Diagram



Applications

- Cellular Phones
- Portable Devices
- Digital Cameras
- Power Supplies

Absolute Maximum Ratings(Tamb=25 ℃ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P_{PP}	150	Watts
ESD per IEC 61000−4−2 (Air)	V_{ESD}	±15	KV
ESD per IEC 61000−4−2 (Contact)		±8	KV
Lead Soldering Temperature	TL	260 (10 sec)	°C
Operating Temperature Range	T_J	-55 to +125	°C
Storage Temperature Range	T_{STJ}	-55 to +150	°C

Electrical Characteristics (TA = 25 ℃ unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	It = 1mA	6			V
Reverse Leakage Current	I_R	V_R =V_{RWM}			1	μA
Clamping Voltage	V_C	@I_{PP}			18.6	V
Junction Capacitance	C_J	V_R=0V, f = 1MHz			15	pF

Characteristics Curves

Figure 1- Power Derating Curve

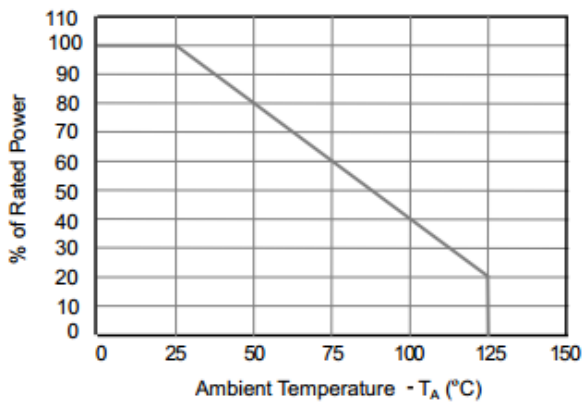


Figure 2- ESD Pulse Waveform
(according to IEC 61000-4-2)

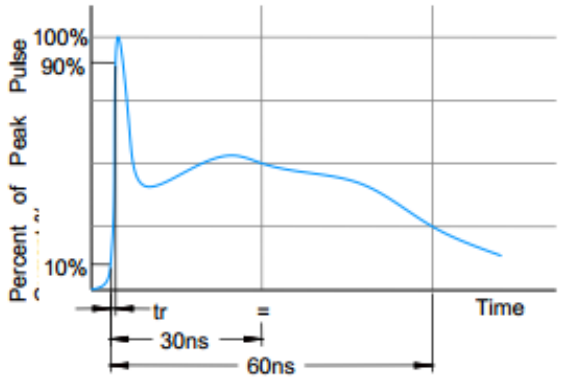
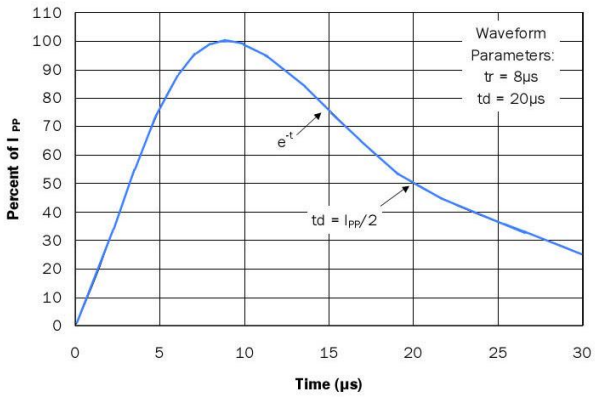
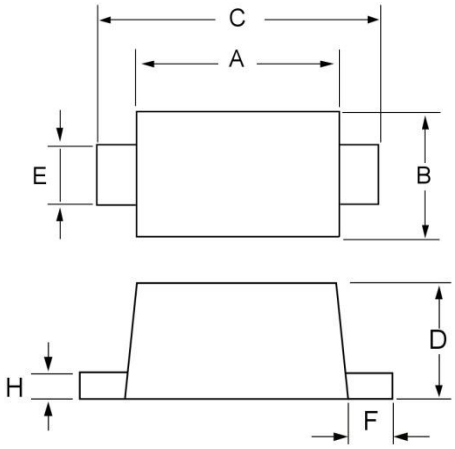


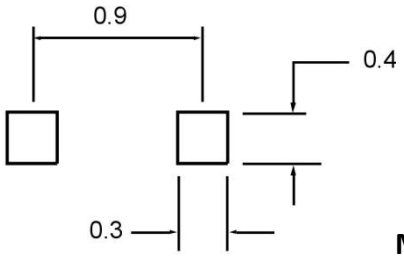
Figure3- 8/20μs Pulse Waveform



ACKAGE OUTLINE DIMENSIONS in millimeters (inches) :



Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.030	0.033	0.75	0.85
B	0.022	0.026	0.55	0.65
C	0.037	0.041	0.95	1.05
D	0.014	0.017	0.36	0.43
E	0.006	0.010	0.15	0.25
F	0.002	0.006	0.05	0.15
H	0.003	0.007	0.07	0.17



Mounting Pad Layout(mm)

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.