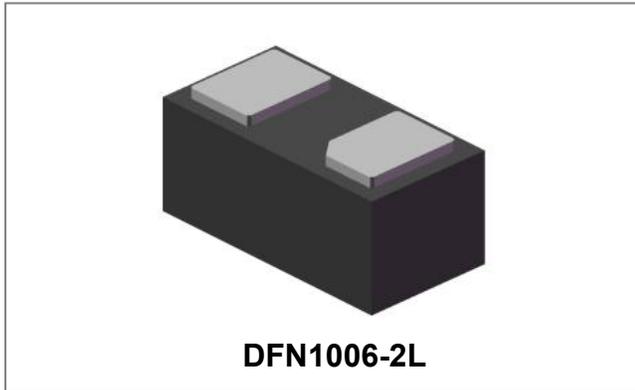


SESD5V0V1BLA Bidirectional ESD Diode



Description

SESD5V0V1BLA is a very low capacitance bidirectional ElectroStatic Discharge (ESD) protection diodes. It's designed in a DFN1006 leadless ultra small Surface Mounted Device (SMD) plastic package to protect one signal line from the damage caused by ESD and other transients.

Circuit Diagram



Features

- Ultra small SMD plastic package
- Bidirectional ESD protection of one line
- Max. Peak pulse power: Ppp=40W
- Low clamping voltage: $V_{CL}=12V$
- Ultra low leakage current
- ESD protection up to 30KV
- IEC 61000-4-2(ESD)±15KV(air),±8KV(contact)
- IEC 61000-4-5 (surge) ;4A (8/20us)
- This is a Halogen Free Device

Applications

- Computers and peripherals
- Communication systems
- Audio and video equipment
- Portable electronics
- Cellular handsets and accessories
- 10/100 Mbit/s Ethernet
- Subscriber Identity Module card protection
- FireWire

Mechanical Characteristics

- DFN1006-2L package
- Marking: X1
- Molding compound flammability rating: UL 94V-0

Maximum Ratings

Characteristics	Symbol	Max.	Units
Peak Pulse Power (tp=8/20us)	P _{PK}	40	Watts
Peak Pulse Current (tp=8/20us)	I _{PP}	4	A
Lead Soldering Temperature	T _L	260(10 seconds)	°C
Operating Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-65 to +150	°C

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

Characteristics	Symbol	Condition	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V _{RWM}				5.0	V
Breakdown Voltage	V _{BR}	I _R =5mA	5.8	7.5	7.8	V
Reverse Leakage Current	I _{RM}	V _{RWM} =5V, T=25°C			10	nA
Clamping Voltage	V _C	I _{PP} =4A, tp=8/20us			12	V
Diode Capacitance	C _d	V _R =0V, f=1MHz		11.4	13	pF
Differential Resistance	R _{dif}	I _R =5mA			35	Ω

Ratings and Characteristics Curves

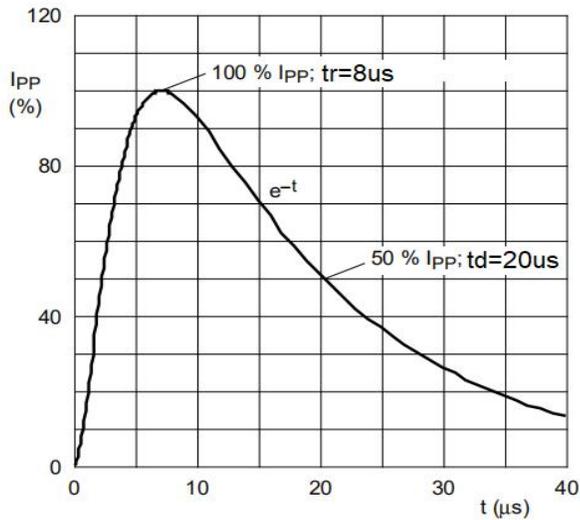


Fig 1. 8/20us Pulse Waveform

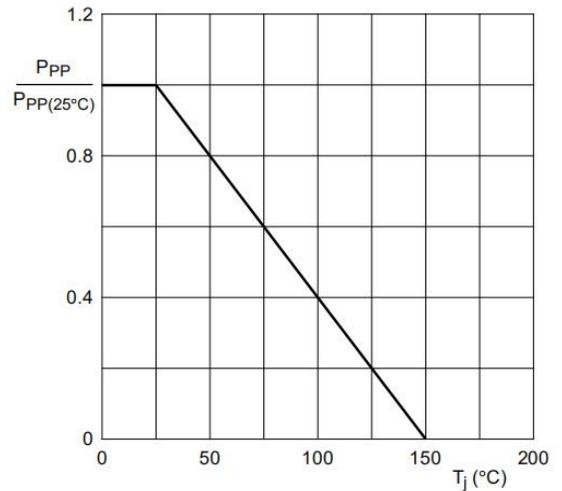


Fig 2. Relative Variation of Peak Pulse Power as a function of Junction Temperature

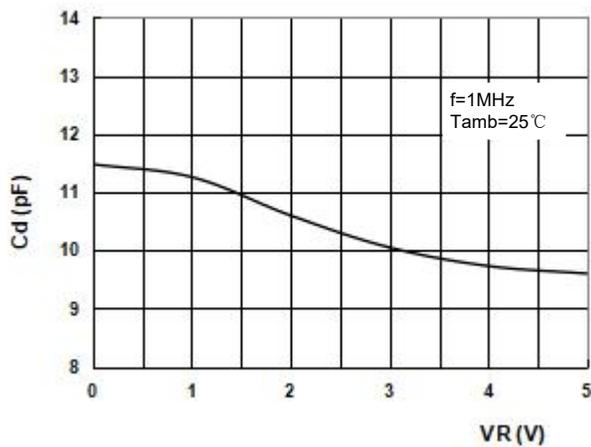


Fig3. Capacitance as a function of Reverse Voltage

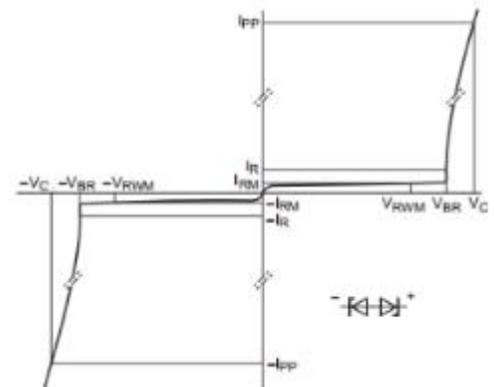
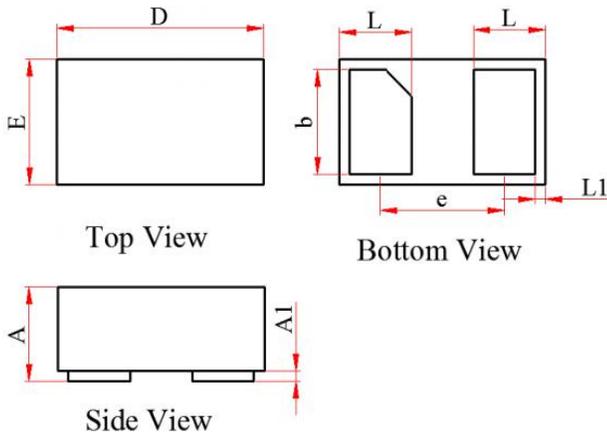


Fig4. Characteristics for a Bidirectional ESD Protection Diode

Mechanical Dimensions


Symbol	Dimension In Millimeters			Dimension In Inches		
	Normal	Min	Max	Normal	Min	Max
A	--	0.400	0.500	--	0.016	0.020
AI	--	--	0.075	--	--	0.003
D	1.000	0.950	1.050	0.039	0.037	0.041
E	0.600	0.550	0.650	0.024	0.022	0.026
b	0.500	0.450	0.550	0.020	0.018	0.022
L	0.350	0.300	0.400	0.014	0.012	0.016
L1	0.050 REF			0.002 REF		
e	0.600 BSC			0.024 BSC		

Marking Diagram


X1 = device code

Ordering Information:

Device	Package	Shipping
SESD5V0V1BLA	DFN1006-2L	10000pcs/ reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

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