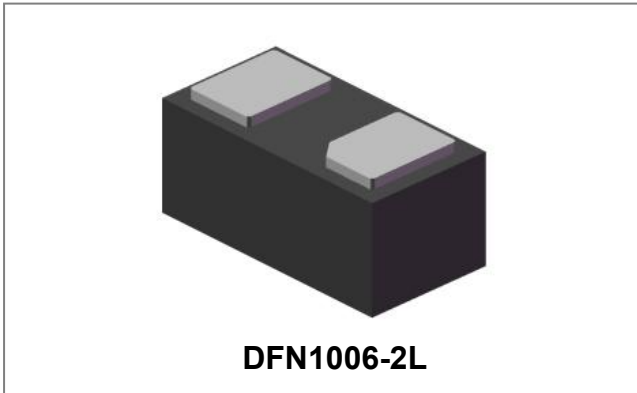


## SESD5V0V1BLA Bidirectional ESD Diode



### 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=45W
- Low clamping voltage:  $V_{CL}=12.5V$
- Ultra low leakage current
- ESD protection up to 30KV
- IEC 61000-4-2(ESD) $\pm 15KV$ (air), $\pm 8KV$ (contact)
- IEC 61000-4-5 (surge) ;4A (8/20us)

### 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

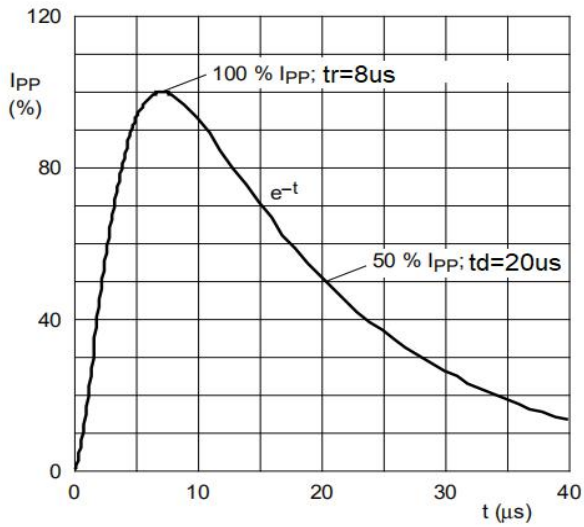
### Maximum Ratings

Characteristics	Symbol	Max.	Units
Peak Pulse Power (tp=8/20us)	P <sub>PK</sub>	45	Watts
Peak Pulse Current (tp=8/20us)	I <sub>PP</sub>	4	A
Lead Soldering Temperature	T <sub>L</sub>	260(10 seconds)	°C
Operating Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-65 to +150	°C

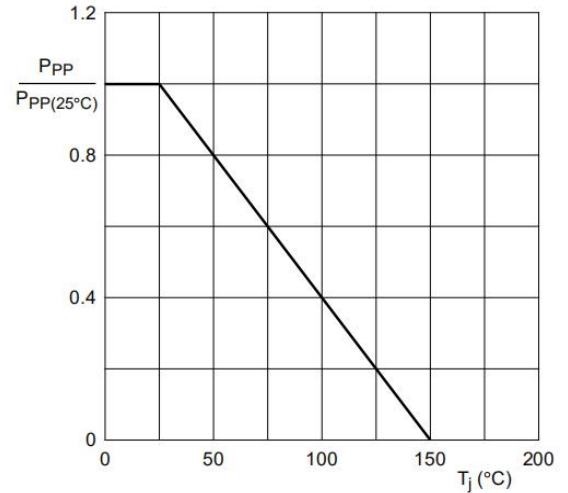
### Electrical Characteristics(T=25°C unless otherwise specified)

Characteristics	Symbol	Condition	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V <sub>RWM</sub>				5.0	V
Breakdown Voltage	V <sub>BR</sub>	I <sub>R</sub> =5mA	5.8	7.5	7.8	V
Reverse Leakage Current	I <sub>RM</sub>	V <sub>RWM</sub> =5V, T=25°C			10	nA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =4A, tp=8/20us			12.5	V
Diode Capacitance	C <sub>d</sub>	V <sub>R</sub> =0V, f=1MHz		13	15	pF
Differential Resistance	R <sub>dif</sub>	I <sub>R</sub> =5mA			35	Ω

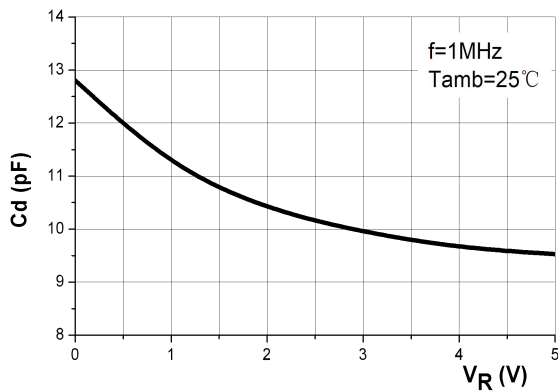
**Ratings and Characteristics Curves**



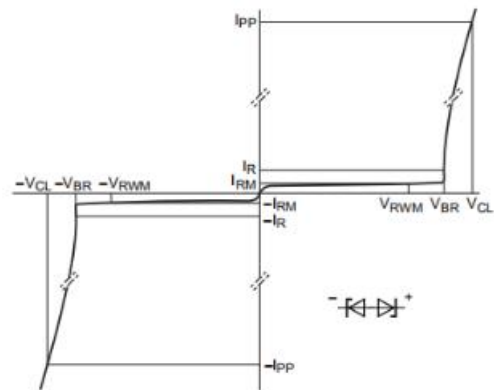
**Fig 1. 8/20us Pulse Waveform**



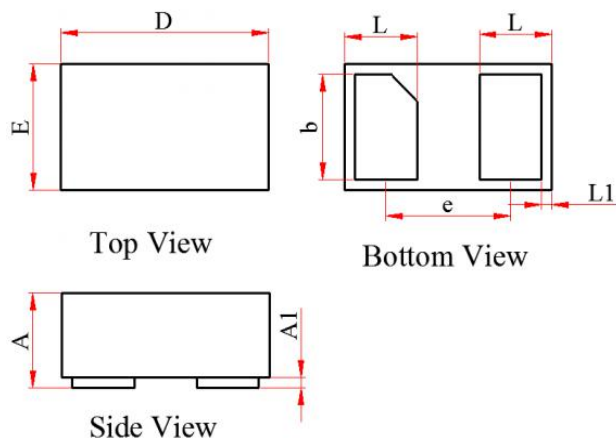
**Fig 2. Relative Variation of Peak Pulse Power as a function of Junction Temperature**



**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	5000pcs/ 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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