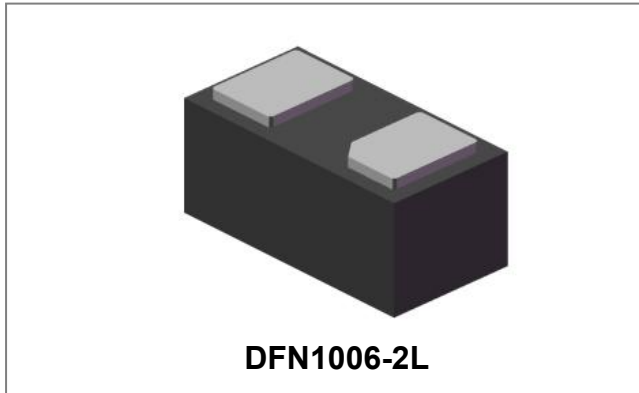


## SESD5V0S1UL Unidirectional ESD Diode



### Description

Unidirectional ElectroStatic Discharge (ESD) protection diodes in a DFN1006 leadless ultra small Surface Mounted Device (SMD) plastic package designed to protect one signal line from the damage caused by ESD and other transients.

### Circuit Diagram



### Features

- Ultra small SMD plastic package
- ESD protection of one line
- Max. Peak pulse power: Ppp=150W
- Low clamping voltage: V<sub>CL</sub>=20V
- Ultra low leakage current
- ESD protection up to 30KV
- IEC 61000-4-2(ESD)±15KV(air),±8KV(contact)
- IEC 61000-4-5 (surge) ;15A (8/20us)
- AEC-Q101 qualified

### Applications

- Computers and peripherals
- Communication systems
- Audio and video equipment
- High-speed data lines
- Parallel ports

### Mechanical Characteristics

- DFN1006-2L package
- Marking: G3
- Molding compound flammability rating: UL 94V-0

### Maximum Ratings

Characteristics	Symbol	Max.	Units
Peak Pulse Power (tp=8/20us)	P <sub>PK</sub>	150	Watts
Peak Pulse Current (tp=8/20us)	I <sub>PP</sub>	15	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	6.4	6.6	7.2	V
Reverse Leakage Current	I <sub>RM</sub>	V <sub>RWM</sub> =5V, T=25°C			1	uA
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =1A, tp=8/20us			9	V
Clamping Voltage	V <sub>C</sub>	I <sub>PP</sub> =15A, tp=8/20us			20	V
Diode Capacitance	C <sub>d</sub>	V <sub>R</sub> =0V, f=1MHz		150	200	pF
Differential Resistance	R <sub>dif</sub>	I <sub>R</sub> =1mA			80	Ω

**Ratings and Characteristics Curves**

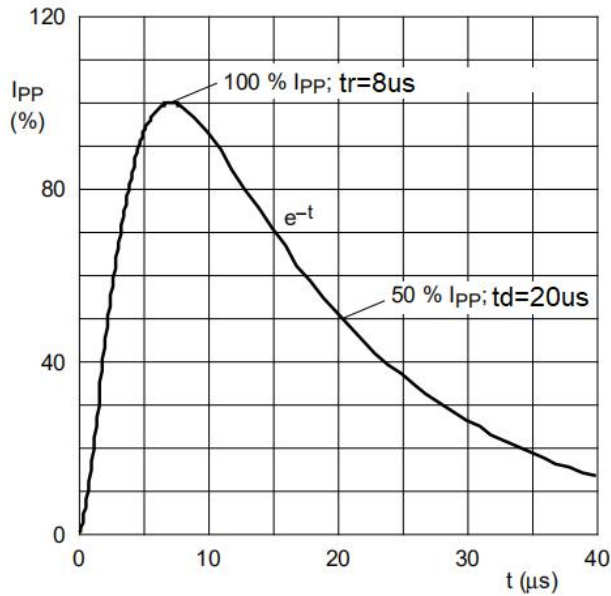


Fig 1. 8/20us pulse waveform

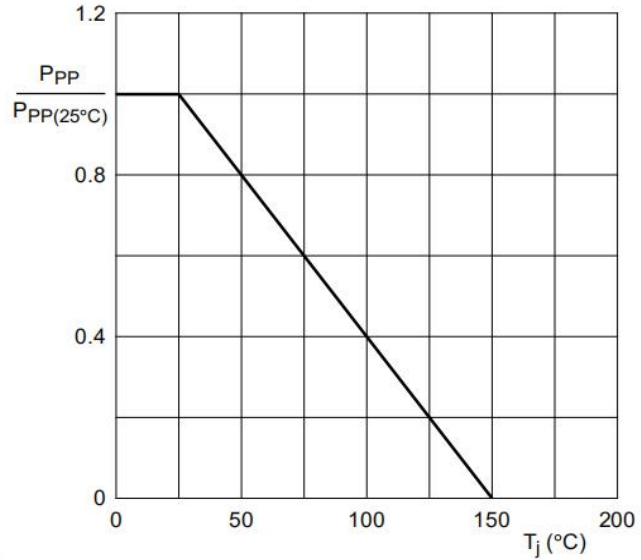


Fig 2. Relative variation of peak pulse power as a function of junction temperature

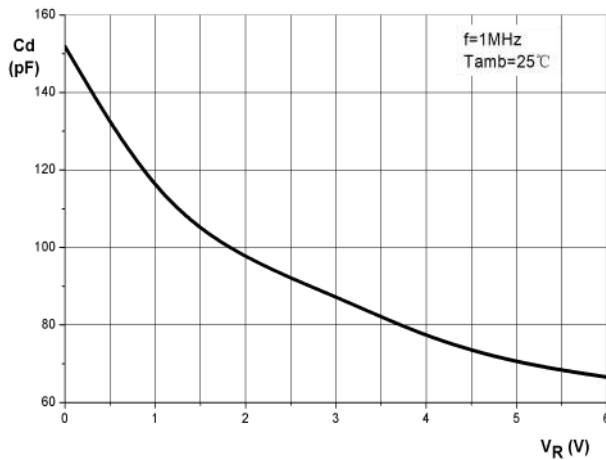


Fig 3. Capacitance as a function of reverse voltage

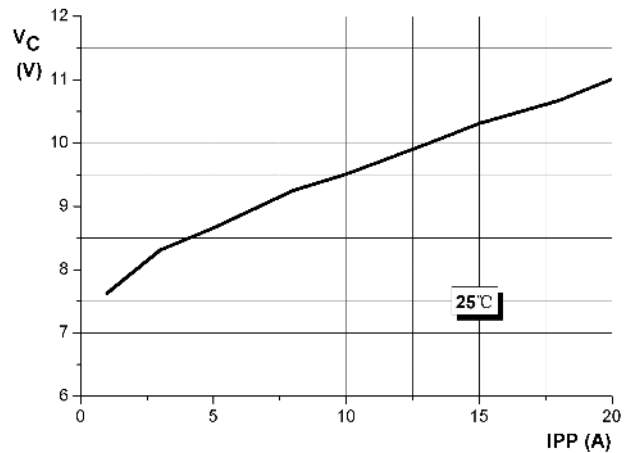
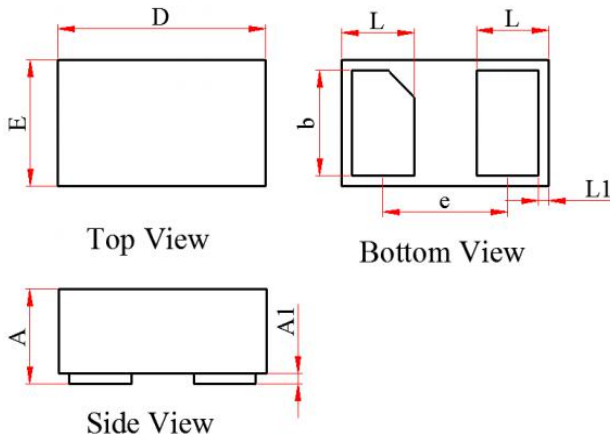


Fig 4. Clamping voltage as a function of peak pulse current

**Mechanical Dimensions**


Symbol	Dimension In Millimeters			Dimension In Inches		
	Normal	Min	Max	Normal	Min	Max
A	--	0.400	0.500	--	0.016	0.020
Al	--	--	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**


| = cathode  
 G3 = device code

**Ordering Information:**

Device	Package	Shipping
SESD5V0S1UL	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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