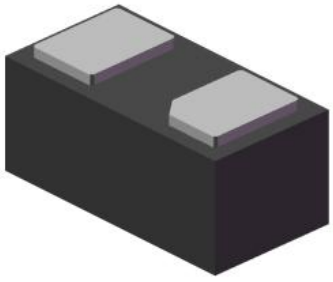
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SESD5V0S1ULA Unidirectional ESD Diode



DFN1006-2L

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=110W
- 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) ;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: G2
- Molding compound flammability rating: UL 94V-0

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Maximum Ratings:

Characteristics	Symbol	Max.	Units
Peak Pulse Power (tp=8/20us)	P_{PK}	110	Watts
Peak Pulse Current (tp=8/20us)	I_{PP}	11	A
Lead Soldering Temperature	T_L	260(10 seconds)	℃
Operating Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-65 to +150	℃

Electrical Characteristics:

Characteristics	Symbol	Condition	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Breakdown Voltage	V_{BR}	I_R=5mA	6.4	6.6	7.2	V
Reverse Leakage Current	I_{RM}	V_{RWM}=5V,T=25℃			1	uA
Clamping Voltage	V_C	I_{PP}=1A, tp=8/20us			9	V
Clamping Voltage	V_C	I_{PP}=11A, tp=8/20us			12	V
Diode Capacitance	Cd	V_R=0V, f=1MHz		120	150	pF
Differential Resistance	Rdif	I_R=1mA			80	Ω

Ratings and Characteristics Curves

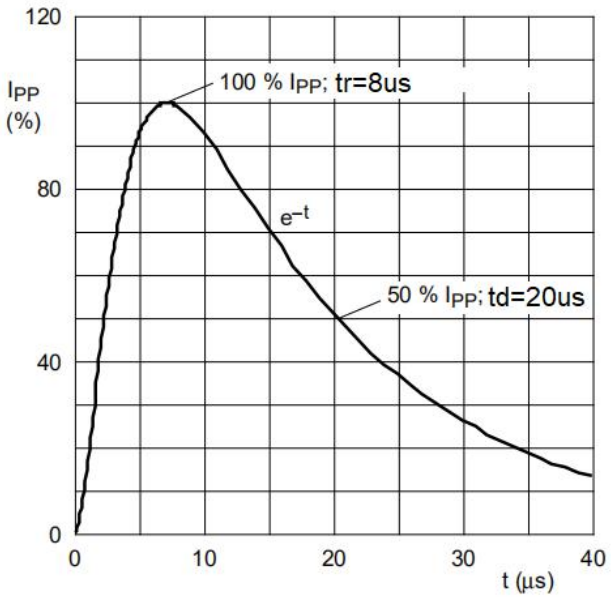


Fig 1. 8/20us pulse waveform

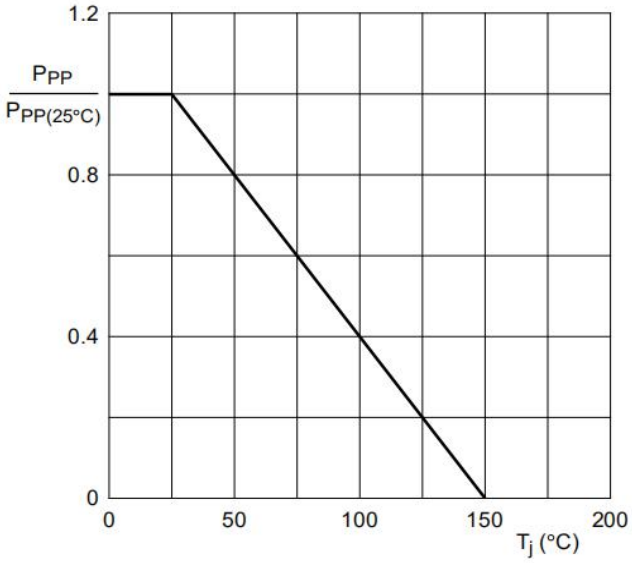


Fig 2. Relative variation of peak pulse power as a function of junction temperature

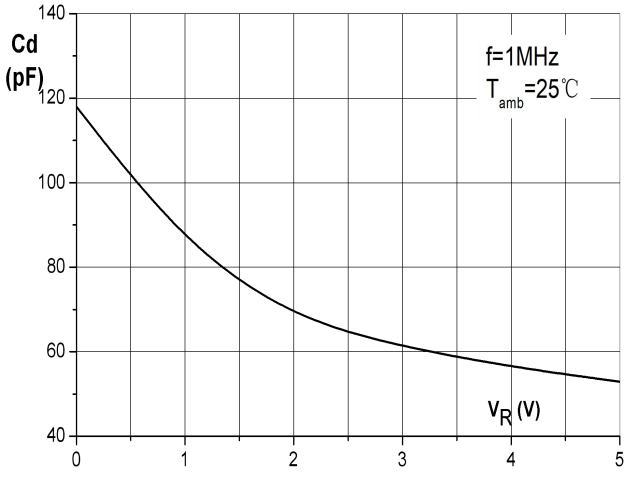


Fig 3. capacitance as a function of reverse voltage

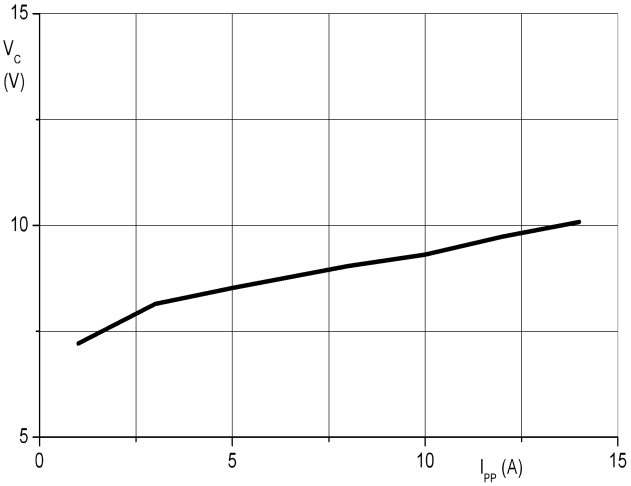
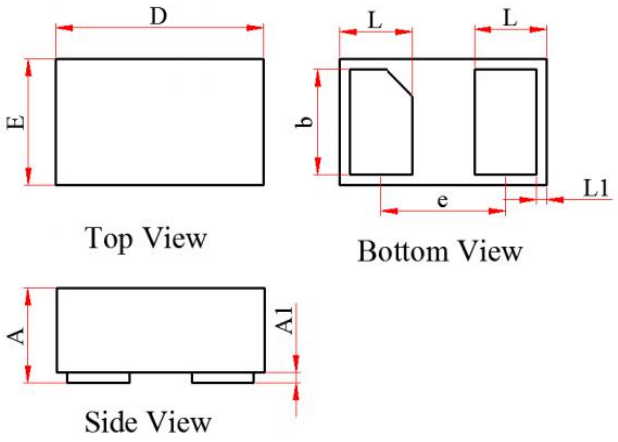


Fig 4. Clamping voltage as a function of peak pulse current

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Mechanical Dimensions



Symbol	Dimension In Millimeters			Dimension In Inches		
	Normal	Min	Max	Normal	Min	Max
A	--	0.400	0.500	--	0.016	0.020
A1	--	--	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
G2 = device code

Ordering Information:

Device	Package	Shipping
SESD5V0S1ULA	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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