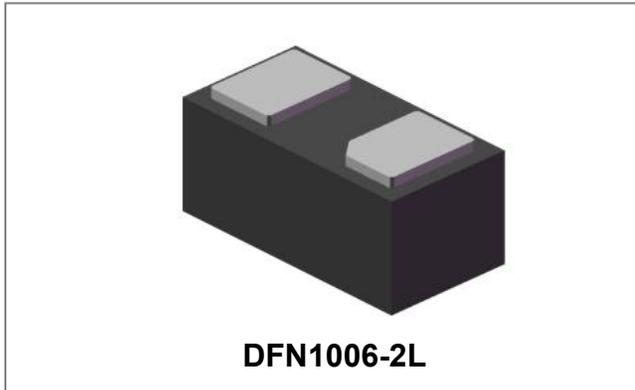


SESD5V0S1ULA Unidirectional ESD Diode



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=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

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) | °C |
| Operating Temperature | T _J | 150 | °C |
| Storage Temperature | T _{STG} | -65 to +150 | °C |

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°C | | | 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 | C _d | V _R =0V, f=1MHz | | 120 | 150 | pF |
| Differential Resistance | R _{dif} | I _R =1mA | | | 80 | Ω |

Ratings and Characteristics Curves

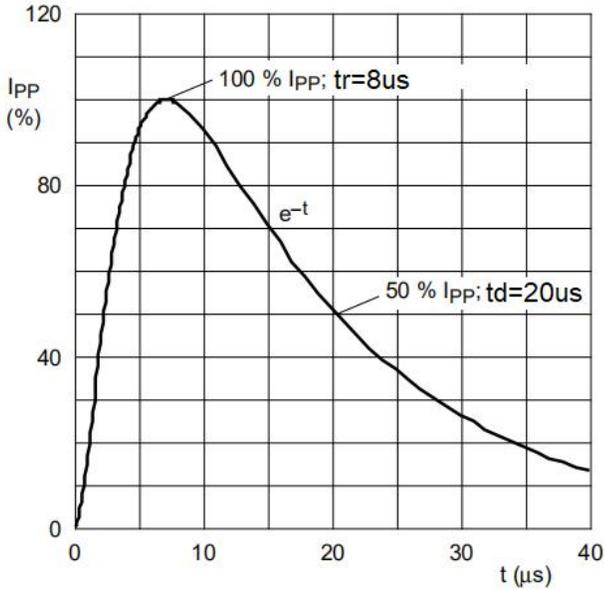


Fig 1. 8/20us pulse waveform

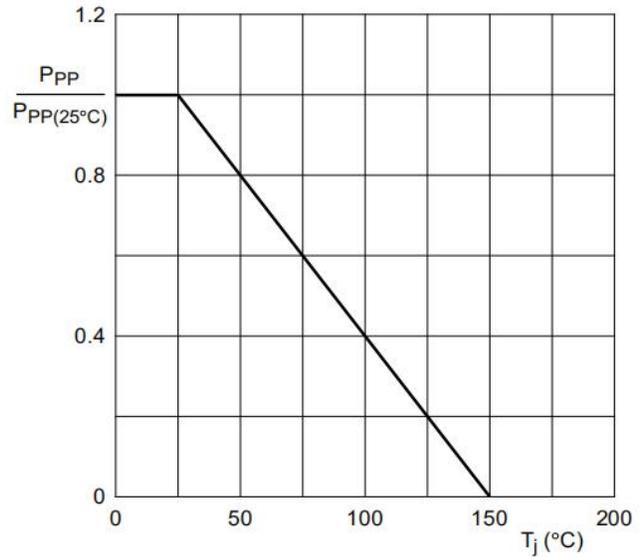


Fig 2. Relative variation of peak pulse power as a function of junction temperature

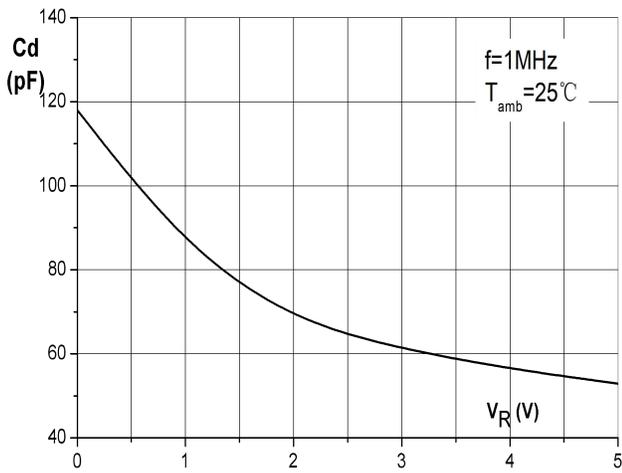


Fig 3. capacitance as a function of reverse voltage

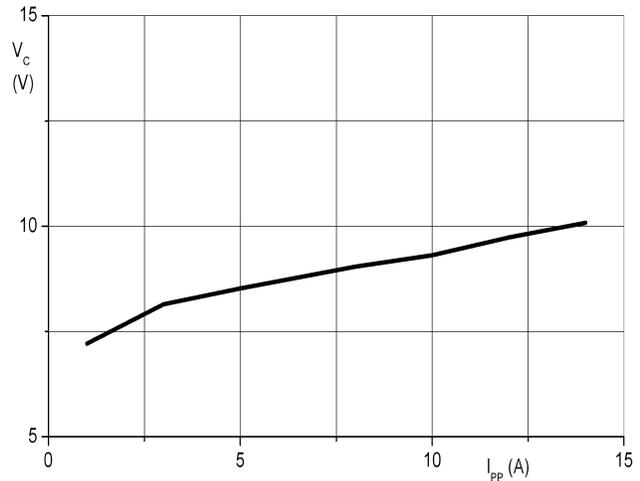
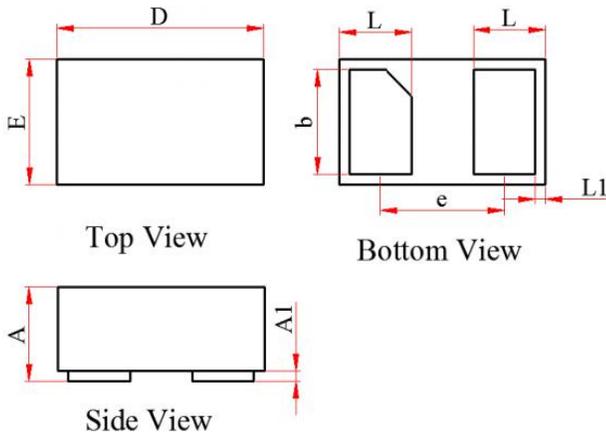


Fig 4. Clamping voltage as a function of peak pulse current

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
 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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