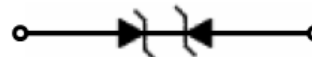


Transient Voltage Suppressors ESD Protection Diode



DFN1006-2L Package



Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-----------|--|-------------|------------------|
| PD | Total Power Dissipation on FR-5 Broad | 150 | mW |
| T_L | Max Lead Solder Temperature range (10 Second Duration) | 260 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55 to +150 | $^\circ\text{C}$ |
| T_{opr} | Max operation Temperature Range | +125 | $^\circ\text{C}$ |
| ESD | IEC61000-4-2 Air Discharge | ± 20 | KV |
| | Contact Discharge | ± 25 | |

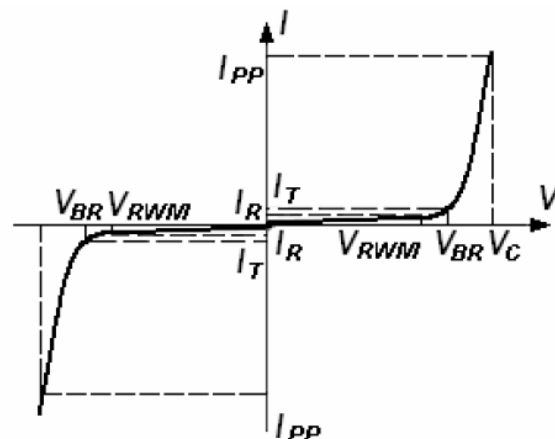
These ratings are limiting values above which the serviceability of the diode may be impaired.

Specification Features:

- § Capacitance Typ. 15pF
- § Small Body Outline Dimensions
- § Low Leakage Current
- § ESD Rating of Class 3 (>16kV) per Human Body Model
- § RoHS Compliant
- § Green EMC
- § Matte Tin(Sn) Lead Finish

Electrical Parameter

| Symbol | Parameter |
|-----------|---|
| I_{PP} | Maximum Reverse Peak Pulse Current |
| V_C | Clamping Voltage @ I_{PP} |
| V_{RWM} | Working Peak Reverse Voltage |
| I_R | Maximum Reverse Leakage Current @ V_{RWM} |
| I_T | Test Current |
| V_{BR} | Breakdown Voltage @ I_T |



Electrical Characteristics (T_A = 25°C unless otherwise noted)

| Device Type | V _{RWM} (Volts) | I _R @ V _{RWM} (μA) | V _{BR} @ I _T (Note 1) (Volts) | | I _T (mA) | I _{PP+} (A) | V _C @ Max I _{PP+} (Volts) | P _{PK+} (W) | C @ V _R = 0V, f = 1MHz (pF) |
|-------------|-----------------------------|---|---|-----|------------------------|-------------------------|--|-------------------------|--|
| | Max | Max | Min | Max | | Max | Max | Max | Typ. |
| ESD5451L | 5.0 | 0.5 | 5.6 | --- | 1.0 | 5 | 12 | 60 | 15 |

+ Surge current waveform per Figure 1.

Note 1: V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.

SURGE CURRENT WAVEFORM:

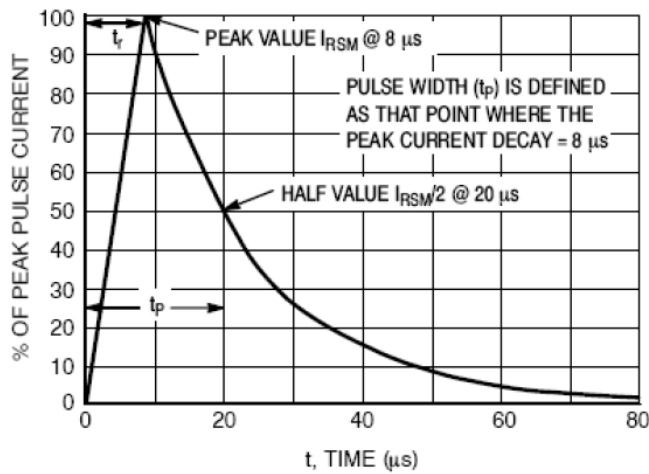
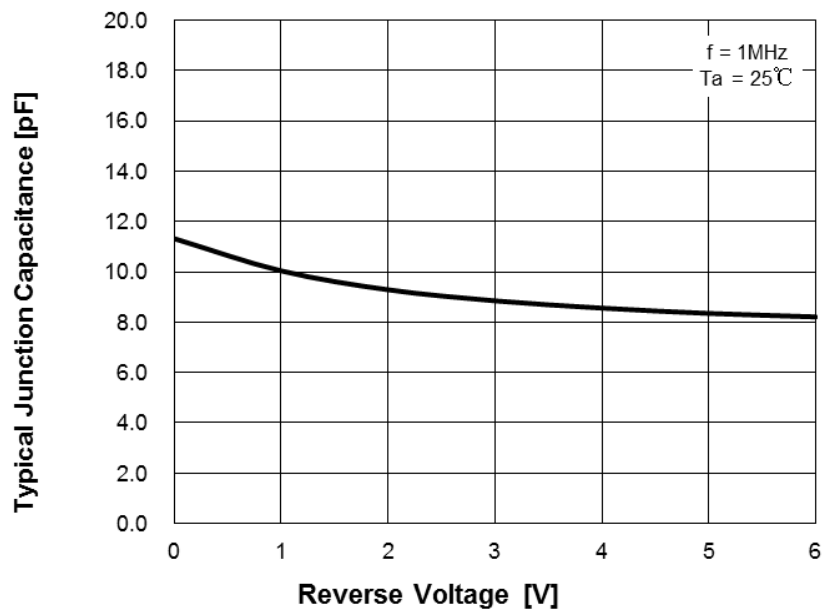
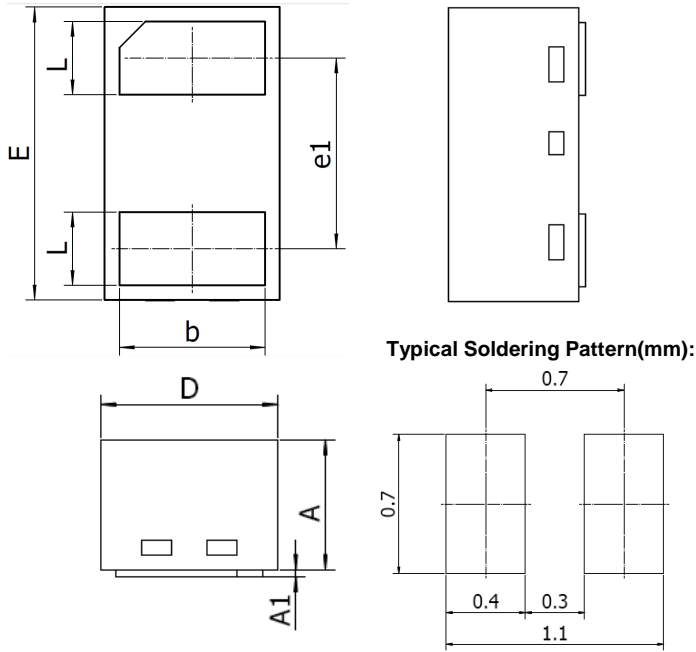


Figure 1. 8 x 20 μs Pulse Waveform

CAPACITANCE CURVE:



Package Outline



| DIM | MILLIMETERS | | INCHES | |
|-----|-------------|------|------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.46 | 0.50 | 0.018 | 0.020 |
| A1 | --- | 0.03 | --- | 0.001 |
| b | 0.45 | 0.55 | 0.018 | 0.022 |
| D | 0.55 | 0.65 | 0.022 | 0.026 |
| E | 0.95 | 1.05 | 0.037 | 0.041 |
| e1 | Typ. 0.65 | | Typ. 0.026 | |
| L | 0.20 | 0.30 | 0.008 | 0.012 |

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