## Descriptions

This is working voltage 5.0V ESD protection diode in a DFN1610-2L package.

## Features

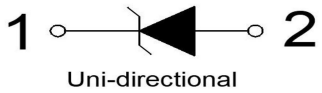
- 2-pin lead-less package
- Junction capacitance (Max value: 1000pF)
- Peak Pulse Current (8/20μs) Max：130A
- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- Low clamping voltage
- Low leakage current
- Working voltages:5V
- RoHS Compliant

| Parameter | Value | Unit |
|---|---|---|
| $V_{RWM}$ | 5.0 | V |
| $C_J$ | 1000 | pF |

## Applications

- Cellular Handsets and Accessories
- Display Ports
- MDDI Ports
- USB Ports

## Equivalent Circuit & Pinning




**DFN1610-2L**

## Absolute Maximum Ratings(Ta=25℃)

| Parameters | Symbol | Value | Unit |
|---|---|---|---|
| Peak Pulse Power (tp=8/20μs waveform) | $P_{PP}$ | 1950 | W |
| Peak Pulse Current (8/20μs) | $I_{PP}$ | 130 | A |
| ESD per IEC 61000−4−2 (Air)<br>ESD per IEC 61000−4−2 (Contact) | $V_{ESD}$ | ±30<br>±30 | KV |
| Operating Temperature Range | $T_J$ | −55 to +125 | °C |
| Storage Temperature Range | Tstg | −55 to +150 | °C |

## Electrical Characteristics(Ta=25℃)

| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Reverse Working Voltage | $V_{RWM}$ | | | | 5 | V |
| Reverse Breakdown Voltage | $V_{BR}$ | $I_R$ = 1mA | 6 | | 9 | V |
| Reverse Leakage Current | $I_R$ | $V_R$ = 5V | | | 1 | uA |
| Clamping voltage | $V_C$ | $I_{PP}$ = 10A,$T_P$=8/20us | | | 9.5 | V |
| Clamping voltage | $V_C$ | $I_{PP}$ = 130A,$T_P$=8/20us | | | 15 | V |
| Junction capacitance | $C_J$ | $V_R$ =0V,f = 1MHz | | | 1000 | pF |

## Electrical Characteristic Curve

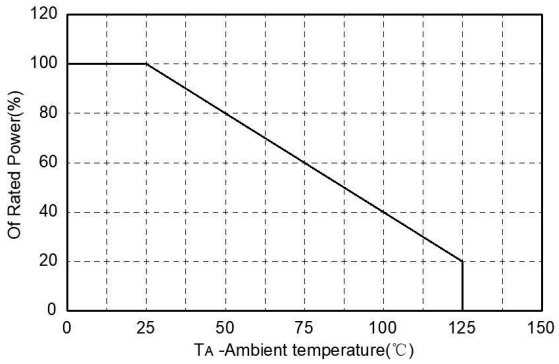



FIG1：Power rating derating curve

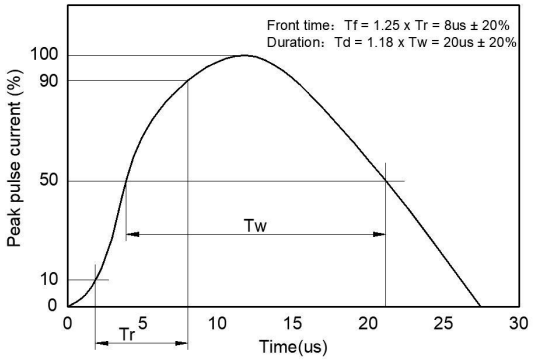



FIG2： pulse Waveform

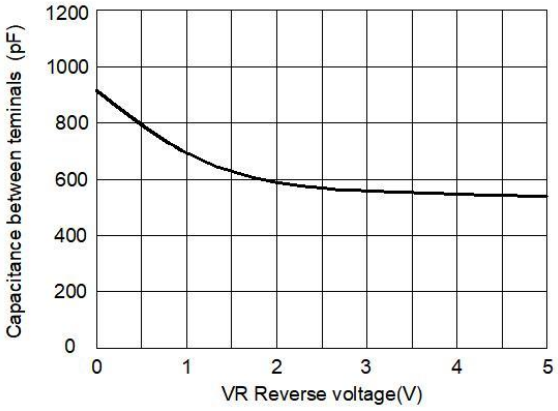



FIG3：Capacitance between teminals charateristics

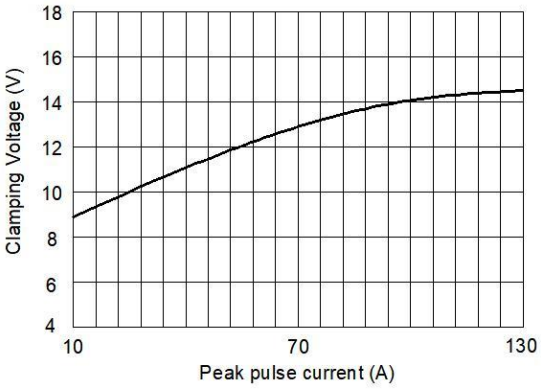


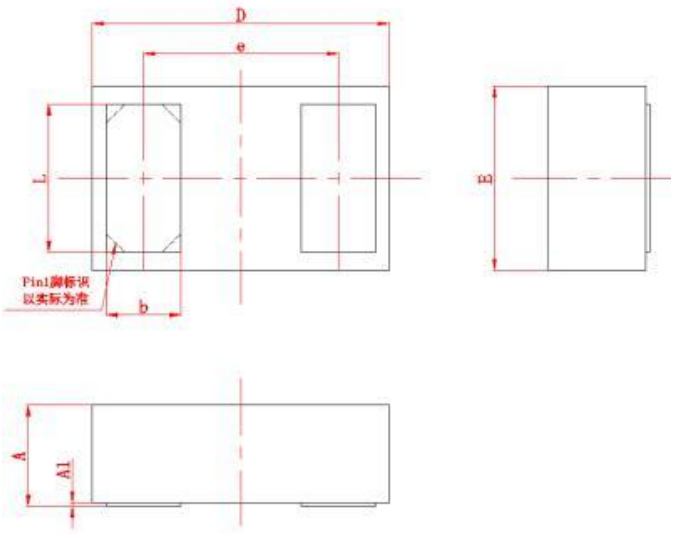

FIG4: Clamping Voltage vs. Peak Pulse Current

## Marking Instructions


5P=normal marking

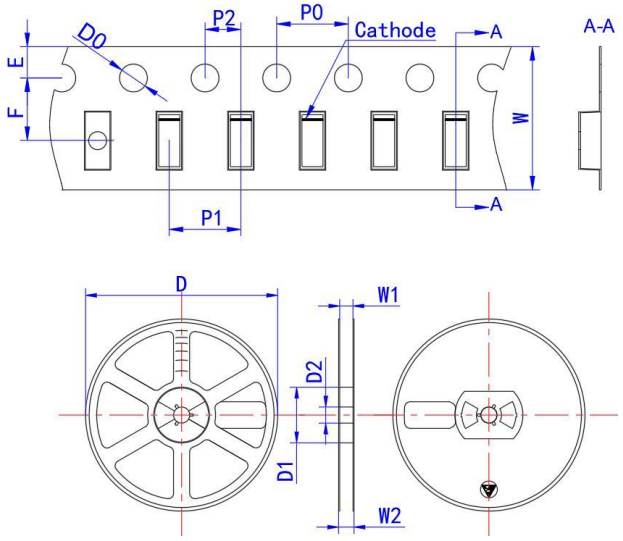

H5T=special marking

## Package mechanical data




| Symbol | Dimension in Millimeters | |
|---|---|---|
| | min | max |
| A | 0.50 | 0.6 |
| A1 | 0 | 0.05 |
| D | 1.5 | 1.7 |
| E | 0.9 | 1.1 |
| e | (1.05) | |
| b | 0.35 | 0.45 |
| L | 0.75 | 0.95 |

## Tape & reel specification - DFN1610




| Symbol | Dimension in Millimeters |
|---|---|
| **Tape** | |
| D0 | 1.50+0.10/-0.00 |
| E | 1.75±0.10 |
| F | 3.50±0.10 |
| P0 | 4.00±0.10 |
| P1 | 4.00±0.10 |
| P2 | 2.00±0.10 |
| W | 8.00+0.3/-0.1 |
| **Reel** | |
| D | 178.00±2.00 |
| D1 | 54.40±1.00 |
| D2 | 13.00±1.00 |
| W1 | 9.50±1.00 |
| W2 | 12.30±1.00 |