

Features

- Ultra small package: 1.6x1.0x0.5mm
- Protects one data or power line
- Ultra low leakage: nA level
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 30\text{kV}$
Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-4 (EFT) 80A (5/50ns)
 - IEC61000-4-5 (Lightning) 60A (8/20 μs)
- RoHS Compliant

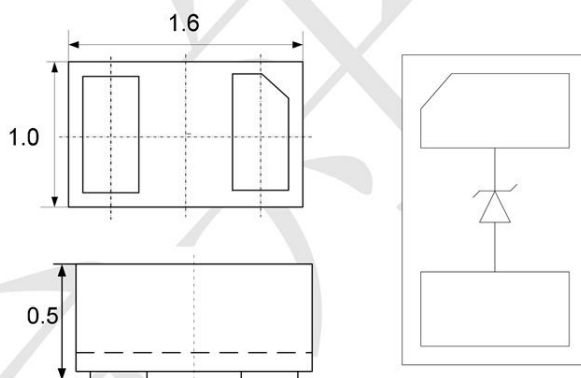
Mechanical Characteristics

- Package: DFN1610-2
- Lead Finish: NiPdAu
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Shipping Qty : 3000 Or 8000pcs/7Inch Tape & Reel

Applications

- Mobile Phones
- Battery Protection
- Power Line Protection
- Vbat pin for Mobile Devices
- Hand Held Portable Applications

Dimensions and Pin Configuration



Marking: 72 Or 72.x

**"72" is Part Number ,Fixed
"x" is internal code**

Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|---------------------------------|------------------|-------------|------|
| Peak Pulse Power (8/20μs) | P _{pk} | 1500 | W |
| Peak Pulse Current (8/20μs) | I _{pp} | 60 | A |
| ESD per IEC 61000-4-2 (Air) | V _{ESD} | ±30 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ±30 | |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{stg} | -55 to +150 | °C |

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

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|------------------|------|------|------|------|--|
| Reverse Working Voltage | V _{RWM} | 10 | | 12 | V | |
| Breakdown Voltage | V _{BR} | 12.5 | 14.5 | 15.5 | V | I _T = 1mA |
| Reverse Leakage Current | I _R | | | 50 | nA | V _{RWM} = 12V |
| Forward Voltage | V _F | | 1.0 | 1.2 | V | I _F = 10mA |
| Clamping Voltage | V _C | | | 18.5 | V | I _{PP} = 10A (8 x 20μs pulse) |
| Clamping Voltage | V _C | | | 25 | V | I _{PP} = 60A (8 x 20μs pulse) |
| Junction Capacitance | C _J | | | 400 | pF | V _R = 0V, f = 1MHz |

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

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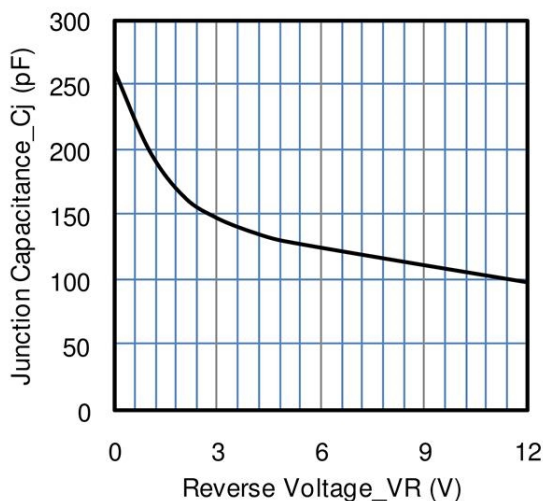


Fig1. Junction Capacitance vs. Reverse Voltage

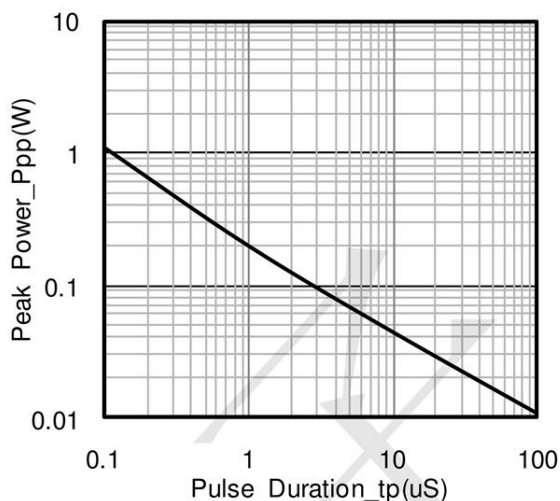


Fig2. Peak Pulse Power vs. Pulse Time

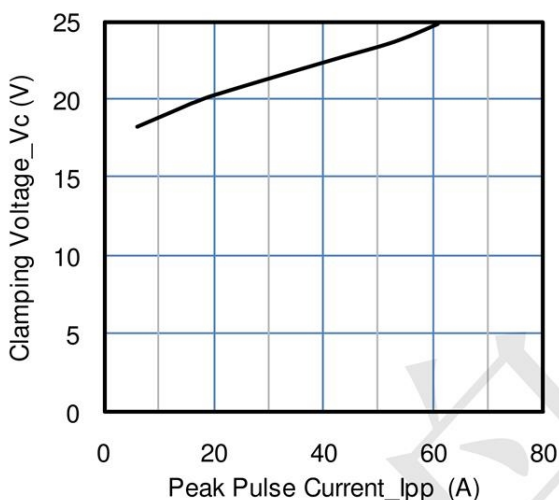


Fig3. Clamping Voltage vs. Peak Pulse Current

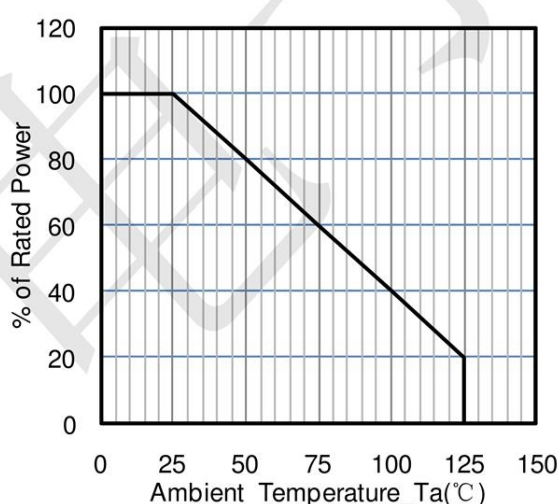


Fig4. Power Derating Curve

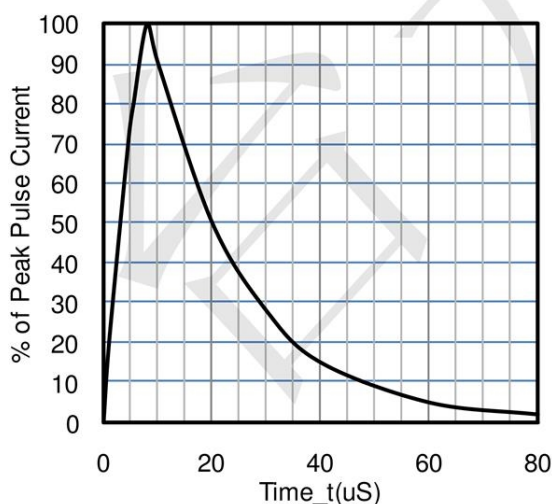
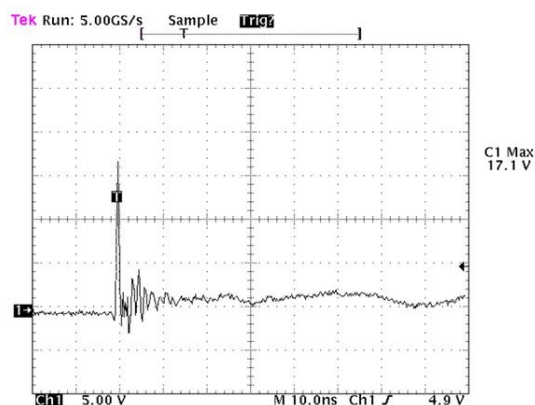
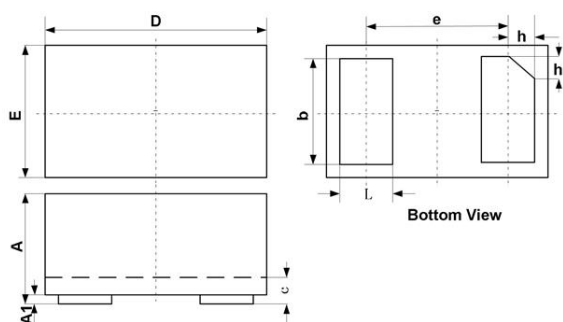


Fig 5. 8 X 20uS Pulse Waveform



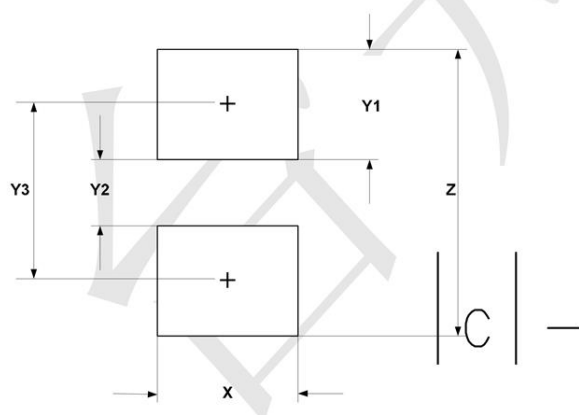
**Fig 6. ESD Clamping Voltage
8 kV Contact per IEC61000-4-2**

DFN1610-2 Package Outline Drawing



| SYM | DIMENSIONS | | | | | |
|-----|-------------|------|------|-----------|-------|-------|
| | MILLIMETERS | | | INCHES | | |
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 0.45 | 0.50 | 0.55 | 0.018 | 0.020 | 0.022 |
| A1 | 0.00 | 0.02 | 0.05 | 0.000 | 0.001 | 0.002 |
| b | 0.75 | 0.80 | 0.85 | 0.030 | 0.032 | 0.034 |
| c | 0.10 | 0.15 | 0.20 | 0.004 | 0.006 | 0.008 |
| D | 1.55 | 1.60 | 1.65 | 0.062 | 0.064 | 0.066 |
| e | 1.10 BSC | | | 0.044 BSC | | |
| E | 0.95 | 1.00 | 1.05 | 0.038 | 0.040 | 0.042 |
| L | 0.35 | 0.40 | 0.45 | 0.014 | 0.016 | 0.018 |
| h | 0.15 | 0.20 | 0.25 | 0.006 | 0.008 | 0.010 |

Suggested Land Pattern



| SYM | DIMENSIONS | |
|-----|-------------|--------|
| | MILLIMETERS | INCHES |
| X | 1.00 | 0.040 |
| Y1 | 0.62 | 0.025 |
| Y2 | 0.60 | 0.024 |
| Y3 | 1.22 | 0.049 |
| Z | 1.85 | 0.074 |