

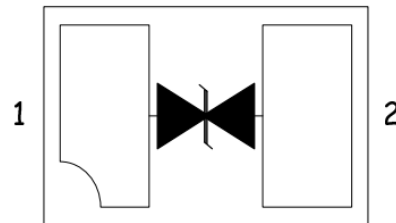
Features

- Ultra low leakage: nA level
- Operating voltage: 3.3V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 25\text{kV}$
 - Contact discharge: $\pm 20\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 4A (8/20 μs)
- RoHS Compliant

Dimensions DFN1006



Pin Configuration



Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

Mechanical Characteristics

- Package: DFN1006
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 10,000 pcs
- Reel Size: 7 inch
- Device Marking: 3B

Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|------------------|-------------|------|
| Peak Pulse Power (8/20 μs) | Ppp | 56 | W |
| ESD per IEC 61000-4-2 (Air) | V _{ESD} | ± 25 | Kv |
| ESD per IEC 61000-4-2 (Contact) | | ± 20 | |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{STJ} | -55 to +150 | °C |

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

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|--------|------------------------------|--------------------|-----|------|-----|------|
| VRWM | Reverse Working Peak Voltage | | | | 3.3 | V |
| VBR | Reverse Breakdown Voltage | IT = 1mA | 4.2 | | | V |
| IR | Reverse Leakage Current | VRWM = 3.3V | | | 0.1 | μA |
| VC | Clamping Voltage | IPP = 1 A (8/20μs) | | | 10 | V |
| VC | Clamping Voltage | IPP = 4 A (8/20μs) | | | 14 | V |
| CJ | Capacitance | VR = 0V, f = 1MHz | | 0.45 | 0.6 | pF |

Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

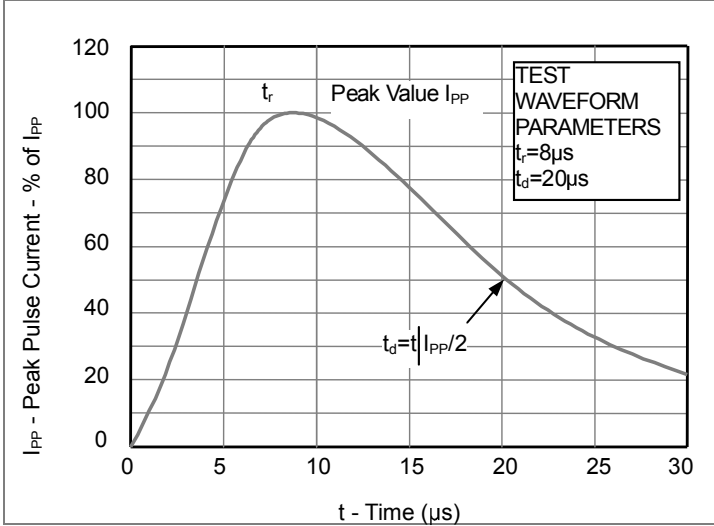


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

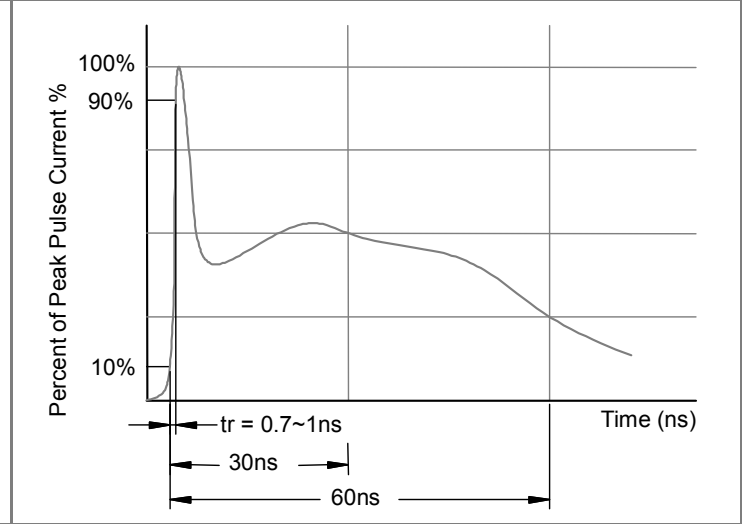
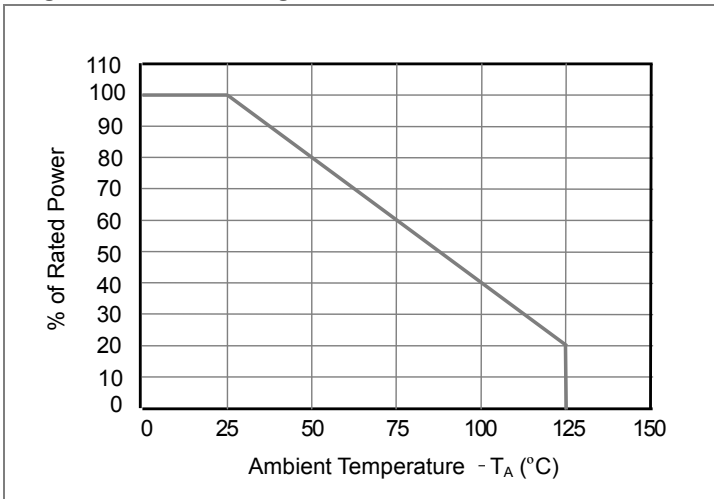
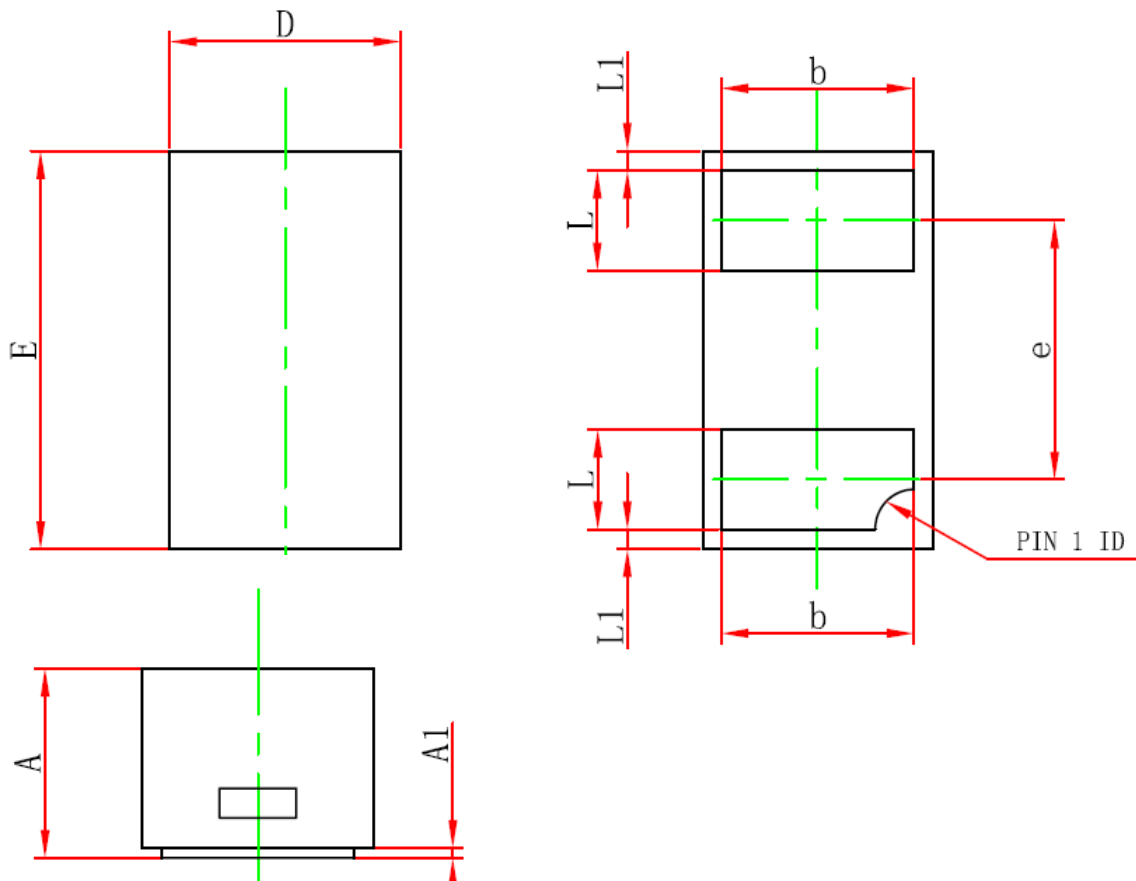


Fig3. Power Derating Curve



DFN1006 PACKAGE OUTLINE & DIMENSIONS



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.400 | 0.500 | 0.016 | 0.020 |
| A1 | 0.000 | 0.050 | 0.000 | 0.002 |
| D | 0.550 | 0.650 | 0.022 | 0.026 |
| E | 0.950 | 1.050 | 0.037 | 0.041 |
| b | 0.400 | 0.600 | 0.016 | 0.024 |
| e | 0.650TYP. | | 0.026TYP. | |
| L | 0.150 | 0.350 | 0.006 | 0.014 |
| L1 | 0.050REF. | | 0.002REF. | |