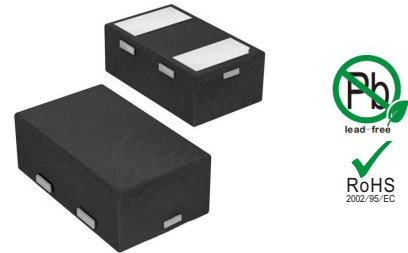


Features

- 200Watts peak pulse power ($t_p = 8/20\mu s$)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 18A (8/20 μs)



DFN1006

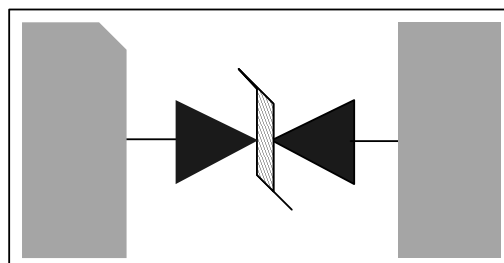
Applications

- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation

Mechanical Characteristics

- DFN1006 package
- Molding compound flammability rating:
UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Schematic & PIN Configuration



DFN1006

Absolute Maximum Rating

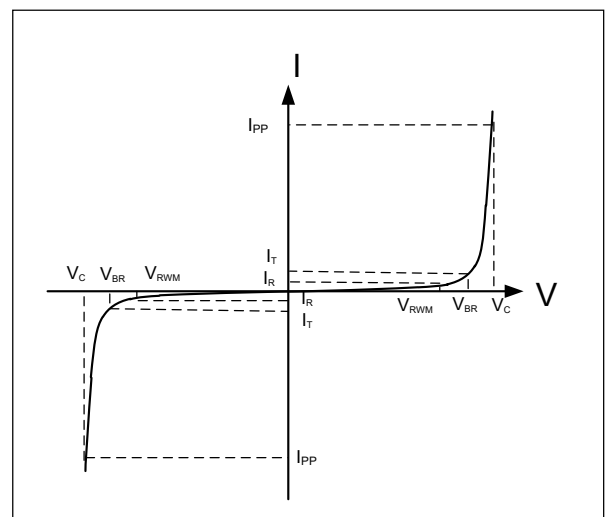
| Rating | Symbol | Value | Units |
|--|-----------|----------------|-------------|
| Peak Pulse Power ($t_p = 8/20\mu s$) | P_{PP} | 200 | Watts |
| Peak Pulse Current ($t_p = 8/20\mu s$) (note1) | I_{pp} | 18 | A |
| ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact) | V_{ESD} | 30 30 | kV |
| Lead Soldering Temperature | T_L | 260(10seconds) | $^{\circ}C$ |
| Junction Temperature | T_J | -55 to + 125 | $^{\circ}C$ |
| Storage Temperature | T_{stg} | -55 to + 125 | $^{\circ}C$ |

Electrical Characteristics

| Parameter | Symbol | Conditions | Min | Typical | Max | Units |
|---------------------------|-----------|---------------------------------|-----|---------|------|---------|
| Reverse Stand-Off Voltage | V_{RWM} | | | | 5 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T = 1mA$ | 6 | | | V |
| Reverse Leakage Current | I_R | $V_{RWM} = 5V, T = 25^{\circ}C$ | | 0.1 | 0.5 | μA |
| Peak Pulse Current | I_{PP} | $t_p = 8/20\mu s$ | | | 18 | A |
| Clamping Voltage | V_C | $I_{PP} = 18A, t_p = 8/20\mu s$ | | | 11.5 | V |
| Junction Capacitance | C_j | $V_R = 0V, f = 1MHz$ | | 30 | | pF |

Electrical Parameters (TA = 25°C unless otherwise noted)

| 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} |
| V_{BR} | Breakdown Voltage @ I_T |
| I_T | Test Current |
| | |
| | |



Note: 8/20 μs pulse waveform.

Typical Characteristics

Fig.1 Peak Pulse Power Rating Curve

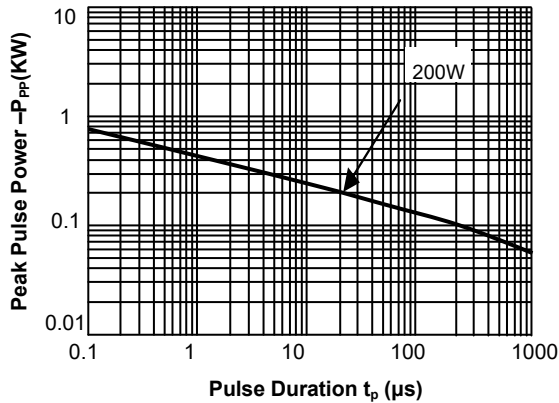


Fig.2 Pulse Derating Curve

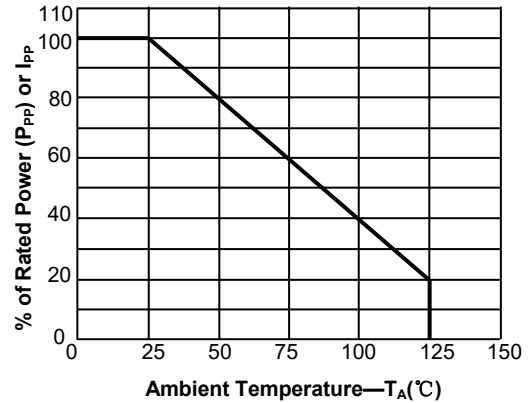


Fig.3 Pulse Waveform-8/20μs

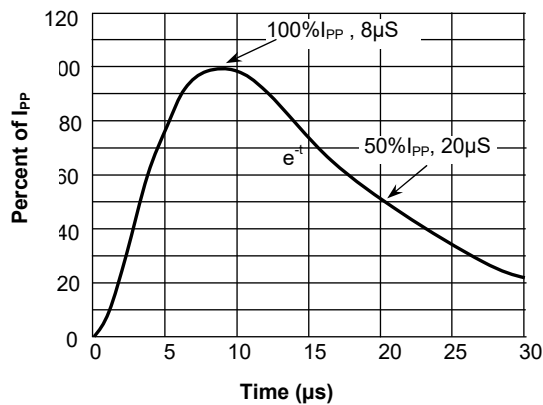


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

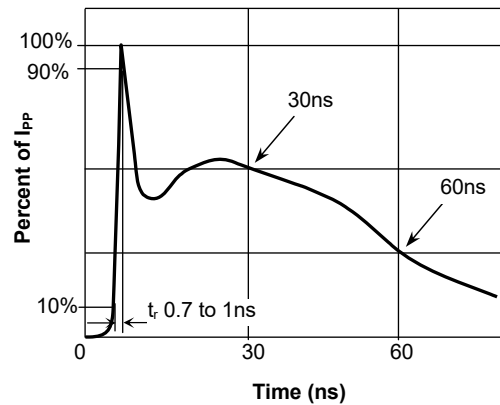


Fig.5 IEC61000-4-2 +8kV Contact Discharge

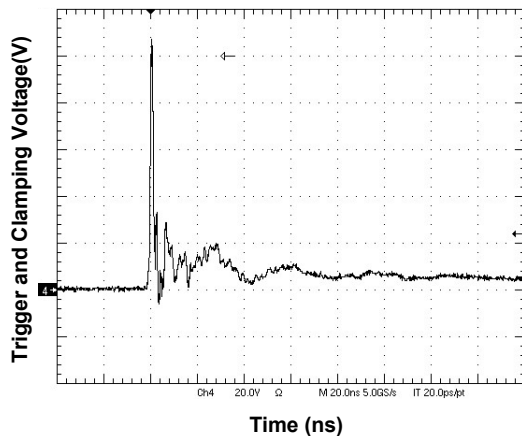
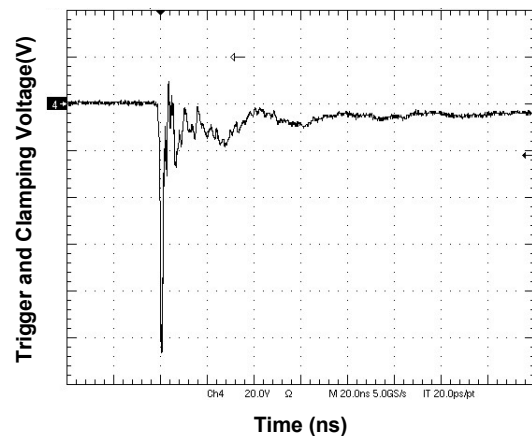
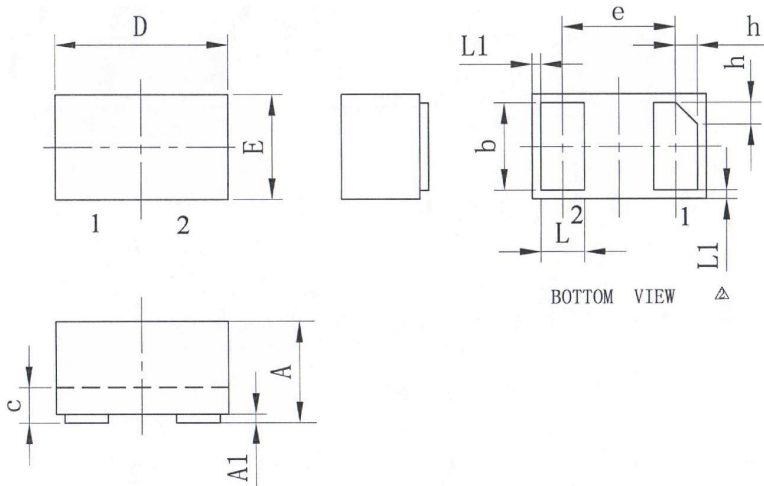


Fig.6 IEC61000-4-2 -8kV Contact Discharge

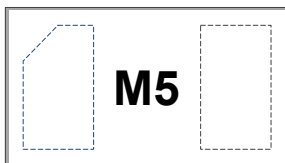


Outline Drawing – DFN1006



| SYMBOL | MILLIMETER | | |
|--------|------------|------|------|
| | MIN | NOM | MAX |
| A | 0.45 | 0.50 | 0.55 |
| A1 | 0.00 | 0.02 | 0.05 |
| b | 0.45 | 0.50 | 0.55 |
| c | 0.12 | 0.15 | 0.18 |
| D | 0.95 | 1.00 | 1.05 |
| e | 0.65BSC | | |
| E | 0.55 | 0.60 | 0.65 |
| L | 0.20 | 0.25 | 0.30 |
| L1 | 0.05REF | | |
| h | 0.07 | 0.12 | 0.17 |

Marking



Ordering information

| Order code | Package | Base qty | Delivery mode |
|----------------|---------|----------|---------------|
| PTN102G30M5B20 | DFN1006 | 10k | Tape and reel |

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[3.0SMCJ33CA-F](#) [3.0SMCJ36A-F](#) [HSPC16701B02TP](#) [JANTX1N6126A](#) [JANTX1N6462](#) [JANTX1N6465](#) [USB50805e3/TR7](#)
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