

»Features

- 32Watts peak pulse power ($t_p = 8/20\mu s$)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 20kV$ contact $\pm 25kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20 μs)



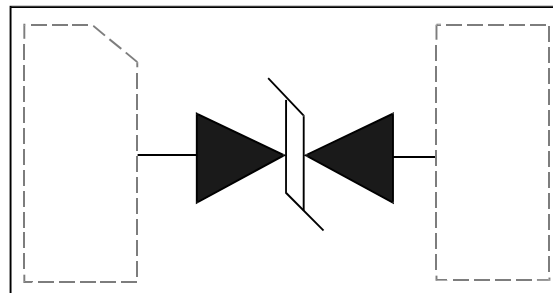
»Applications

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

»Mechanical Data

- DFN1006 package
- Molding compound flammability rating: UL94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

»Schematic & PIN Configuration



DFN1006

»Absolute Maximum Rating

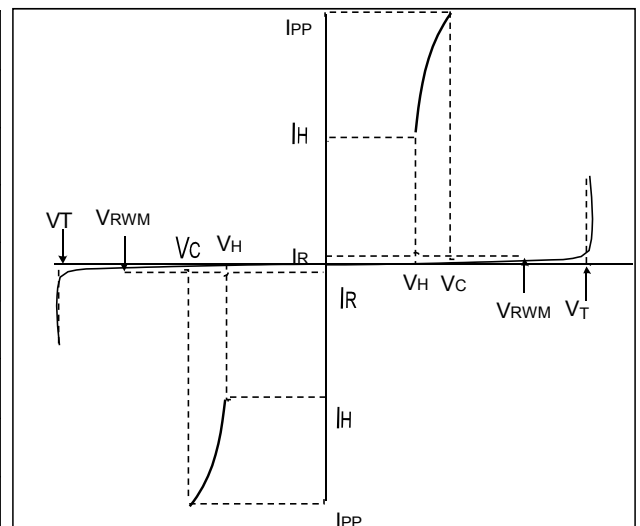
| Rating | Symbol | Value | Units |
|--|-----------|----------------|-------|
| Peak Pulse Power ($t_p = 8/20\mu s$) | P_{PP} | 32 | Watts |
| Peak Pulse Current ($t_p = 8/20\mu s$) (note1) | I_{pp} | 4 | A |
| ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact) | V_{ESD} | 25 20 | kV |
| Lead Soldering Temperature | T_L | 260(10seconds) | °C |
| Junction Temperature | T_J | -55 to + 125 | °C |
| Storage Temperature | T_{stg} | -55 to + 125 | °C |

»Electrical Characteristics

| Parameter | Symbol | Conditions | Min | Typical | Max | Units |
|---------------------------|-----------|-----------------------------|-----|---------|------|-------|
| Reverse Stand-Off Voltage | V_{RWM} | | | | 18.0 | V |
| Holding Voltage | V_H | $I_T=I_H$ | | 3.0 | | V |
| Holding Current | I_H | | 35 | | | mA |
| Reverse Leakage Current | I_R | $V_{RWM}=18V, T=25^\circ C$ | | | 500 | nA |
| Clamping Voltage | V_C | $I_{PP}=4A, t_p=8/20\mu s$ | | | 8 | V |
| Trigger Voltage | V_T | | | 18 | 20 | V |
| Junction Capacitance | C_j | $V_R = 0V, f = 1MHz$ | | 0.5 | 0.6 | 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_T | Trigger voltage |
| I_T | Test Current |
| V_H | Holding voltage |
| I_H | Holding Current |



Note: 8/20μs pulse waveform

»Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

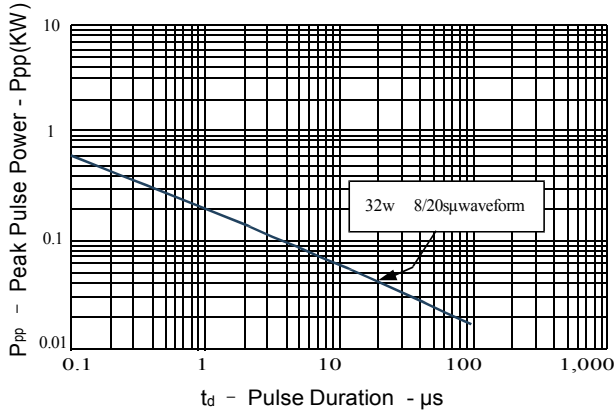


Figure 2: Power Derating Curve

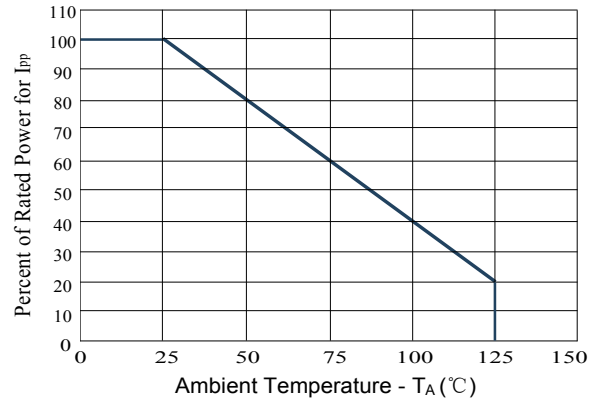


Figure3: Pulse Waveform

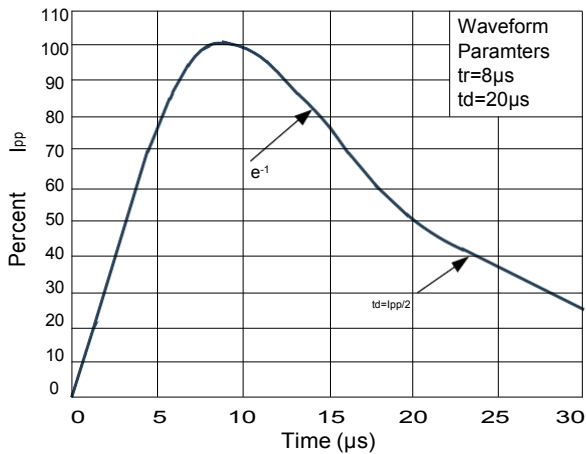


Figure 4: Clamping Voltage vs. Ipp

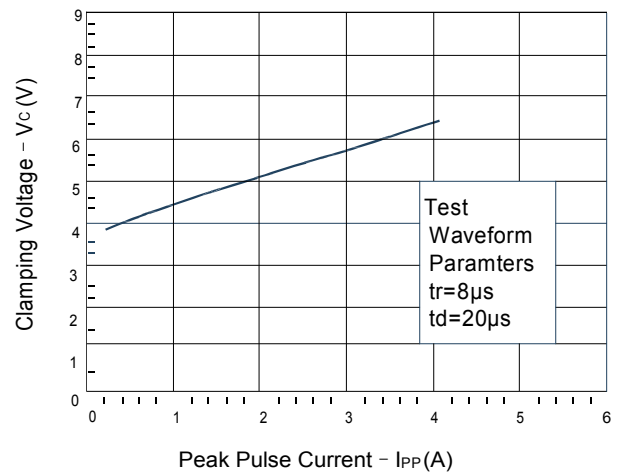


Figure5: Positive Clamping voltage (TLP)

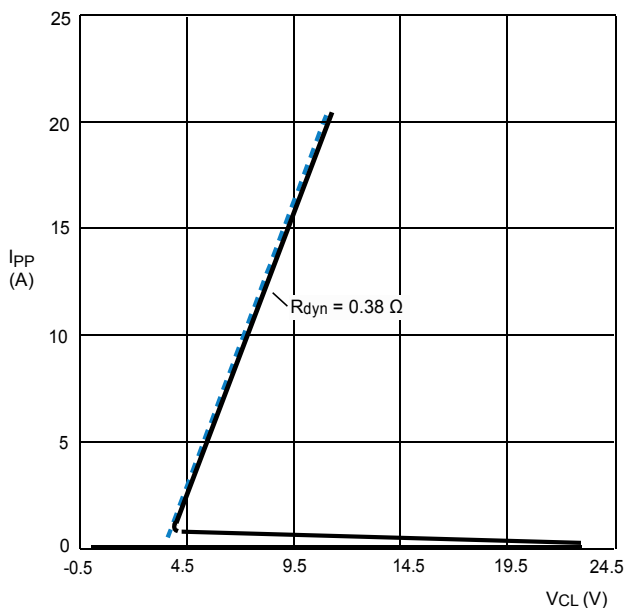
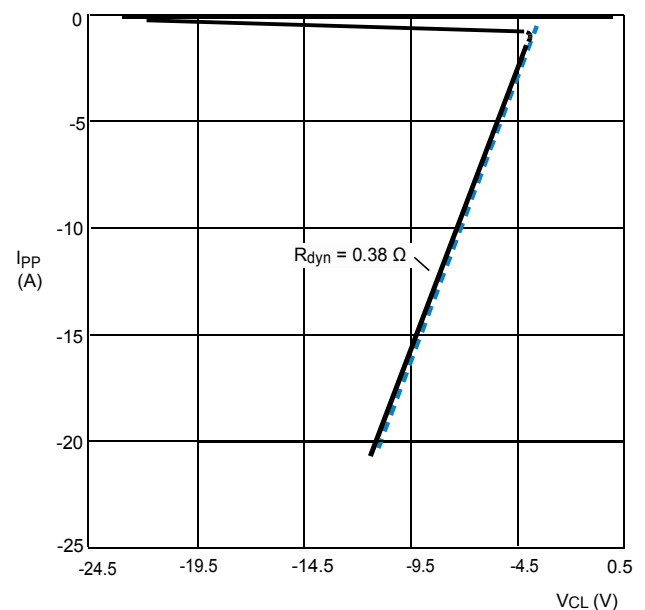
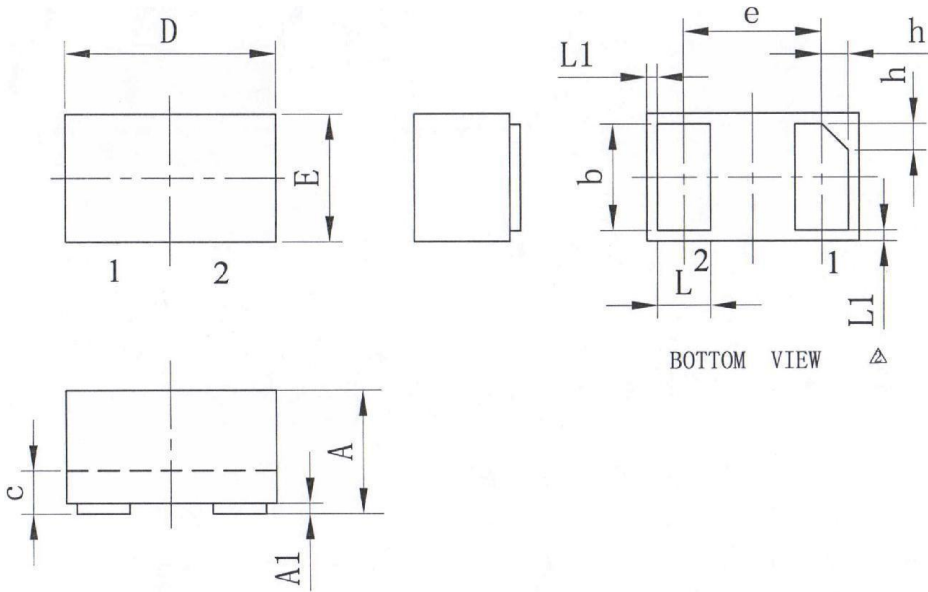


Figure6: Negative Clamping voltage (TLP)

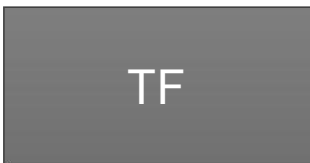


»Outline Drawing – DFN1006



| SYMBOL | MILLIMETER | | |
|--------------|------------|------|------|
| | MIN | NOM | MAX |
| A | 0.45 | 0.50 | 0.55 |
| A1 | 0 | 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 |
| 载体尺寸 (mm) | 20*20 | | |

»Marking



»Ordering information

| Order code | Package | Base qty | Delivery mode |
|-------------|---------|----------|---------------|
| BSDFN2C181U | DFN1006 | 10k | Tape and reel |

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