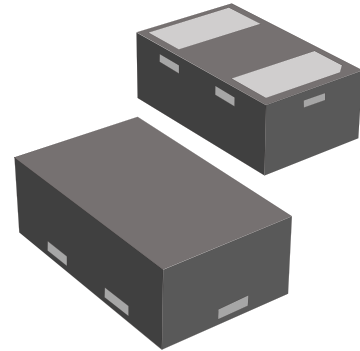


## »Features

- 1200Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Uni-directional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 30KV$
    - Contact discharge:  $\pm 30KV$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 36A (8/20us)



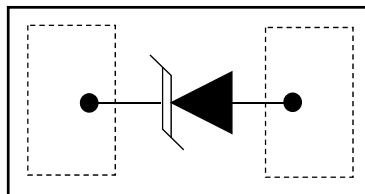
## »Applications

- Computer
- Mobile Phones and Accessories
- Digital Cameras
- Personal Digital Assistants

## »Mechanical Data

- Package: DFN1006
- UL Flammability Classification Rating 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

## »Schematic & PIN Configuration



DFN1006

## »Absolute Maximum Ratings

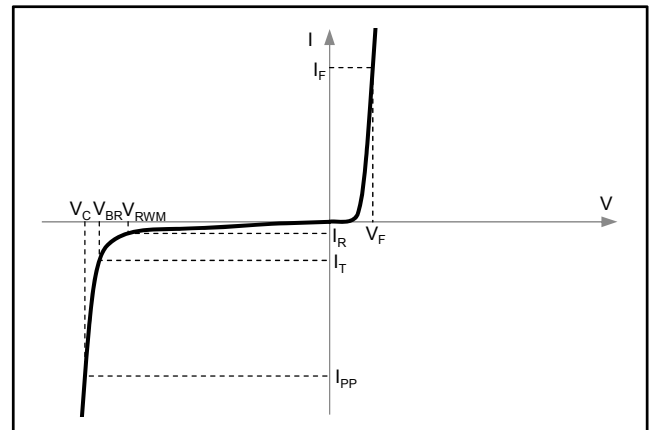
| Parameter                         | Symbol            | Value      | Units       |
|-----------------------------------|-------------------|------------|-------------|
| Reverse Working Voltage           | $V_{RWM}$         | 20         | V           |
| Peak Pulse Power (8/20 $\mu$ s)   | $P_{PP}$          | 1200       | W           |
| Peak Pulse Current (8/20 $\mu$ s) | $I_{PP}$          | 36         | A           |
| ESD per IEC 61000-4-2 (Air)       | $V_{ESD-Air}$     | 30         | KV          |
| ESD per IEC 61000-4-2 (Contact)   | $V_{ESD-Contact}$ | 30         | KV          |
| Lead Soldering Temperature        | $T_L$             | 260(10s)   | $^{\circ}C$ |
| Operating Temperature Range       | $T_J$             | -55 to 125 | $^{\circ}C$ |
| Storage Temperature Range         | $T_{STG}$         | -55 to 150 | $^{\circ}C$ |

## »Electrical Characteristics

| Parameter               | Symbol   | Conditions                     | Min | Typ  | Max | Units   |
|-------------------------|----------|--------------------------------|-----|------|-----|---------|
| Breakdown Voltage       | $V_{BR}$ | $I_T = 1mA$                    | 21  | 23.5 |     | V       |
| Reverse Leakage Current | $I_R$    | $V_{RWM} = 20V$                |     |      | 1   | $\mu A$ |
| Clamping Voltage        | $V_{C1}$ | $I_{PP1} = 10A$ , 8/20 $\mu$ s |     | 26   |     | V       |
| Clamping Voltage        | $V_C$    | $I_{PP} = 36A$ , 8/20 $\mu$ s  |     | 30   |     | V       |
| Junction Capacitance    | $C_J$    | $V_{DC} = 0V$ , $f = 1MHz$     |     | 70   |     | pF      |

## »Electrical Parameters

| Symbol    | Definition                                  |
|-----------|---------------------------------------------|
| $I_{PP}$  | 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                                |
|           |                                             |



## »Typical Characteristics

Fig.1 - Peak Pulse Power Rating

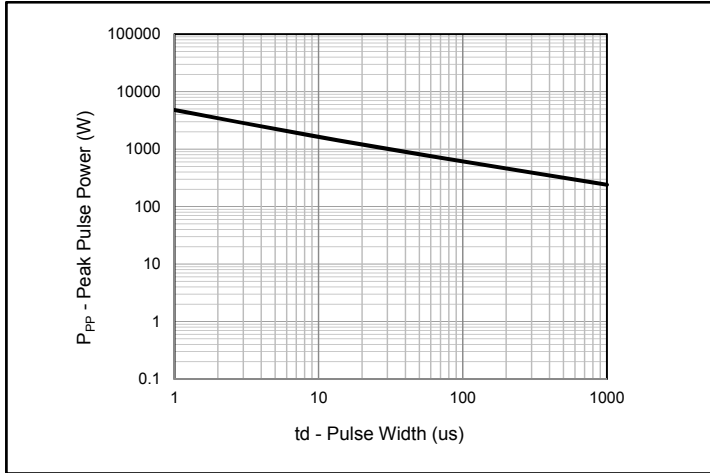


Fig.2 - Pulse Derating Curve

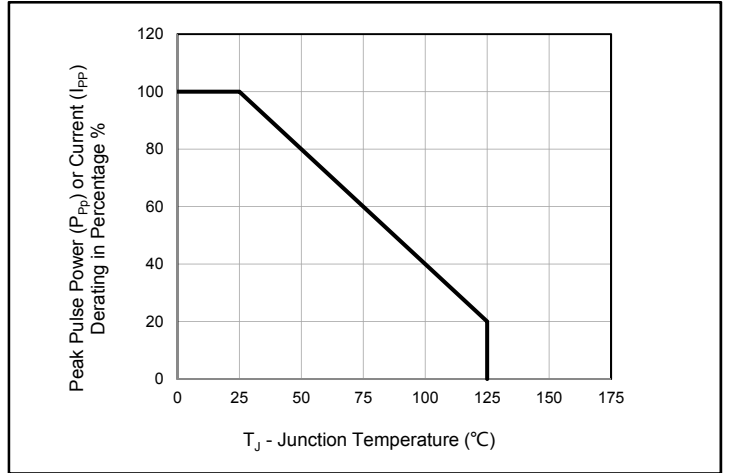


Fig.3 - 8/20us Pulse Waveform

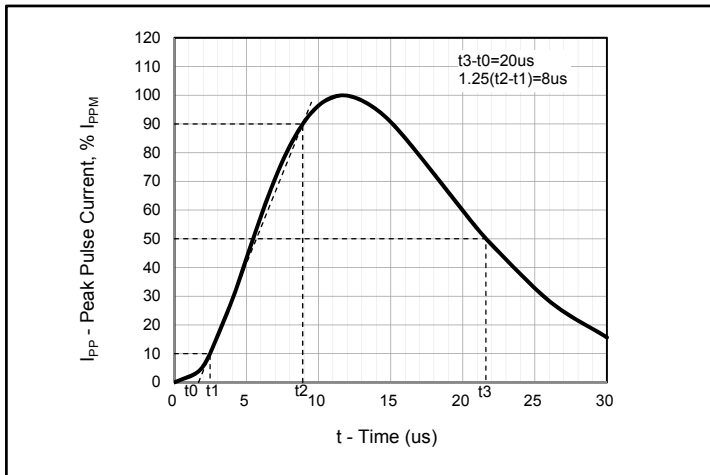
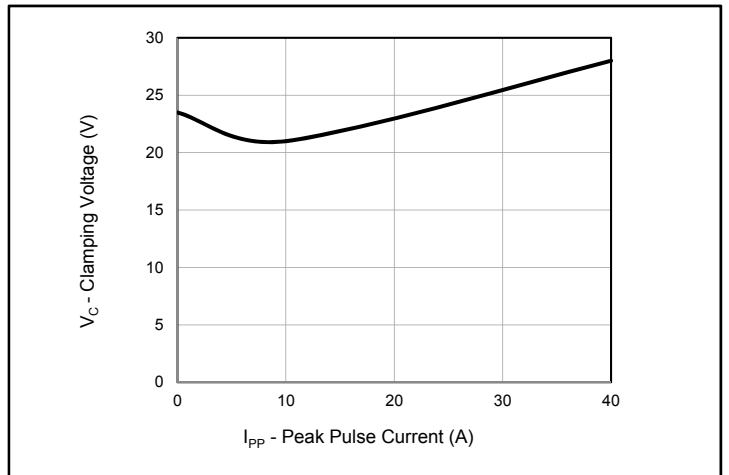
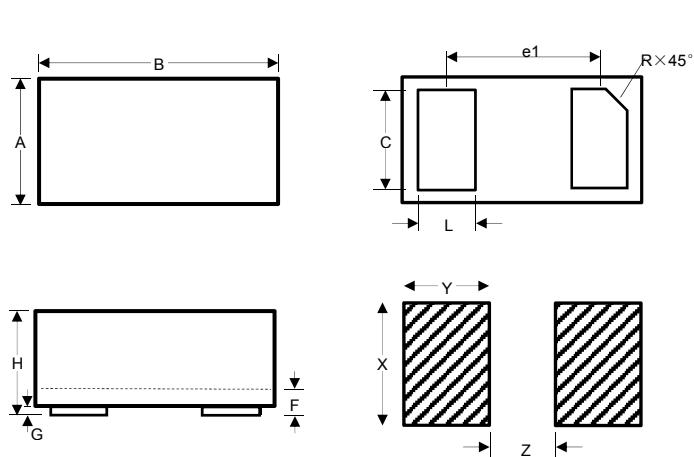


Fig.4 - Clamping Voltage

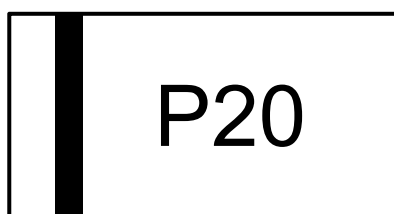


## »Outline Drawing



| DFN1006 |             |      |      |        |       |       |
|---------|-------------|------|------|--------|-------|-------|
| SYMBOL  | Millimeters |      |      | Inches |       |       |
|         | MIN         | NOM  | MAX  | MIN    | NOM   | MAX   |
| A       | 0.55        | 0.6  | 0.65 | 0.022  | 0.024 | 0.026 |
| B       | 0.95        | 1    | 1.05 | 0.037  | 0.039 | 0.041 |
| C       | 0.45        | 0.5  | 0.55 | 0.018  | 0.02  | 0.022 |
| L       | 0.2         | 0.25 | 0.3  | 0.008  | 0.01  | 0.012 |
| e1      |             | 0.65 |      |        | 0.026 |       |
| H       | 0.45        | 0.5  | 0.55 | 0.018  | 0.02  | 0.022 |
| R       | 0.07        | 0.12 | 0.17 | 0.003  | 0.005 | 0.007 |
| X       |             | 0.6  |      |        | 0.024 |       |
| Y       |             | 0.5  |      |        | 0.02  |       |
| Z       |             | 0.3  |      |        | 0.012 |       |

## »Marking



Marking Code: P20

## »Ordering Information

| Order Code | Package | Base Quantity | Delivery Mode |
|------------|---------|---------------|---------------|
| BDFN2A201V | DFN1006 | 10000         | Tape and Reel |