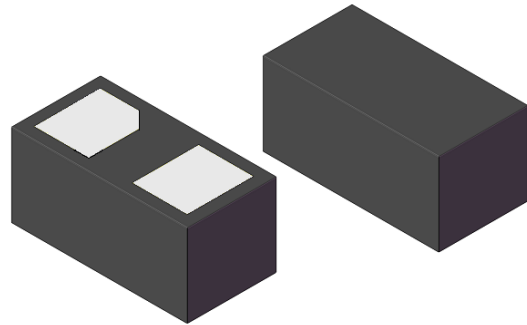




## Features

- 100Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Tiny DFN1006 package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2  $\pm 30kV$  contact  $\pm 30kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20 $\mu s$ )



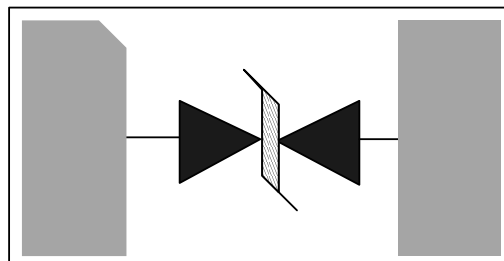
## Applications

- 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: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

## Schematic & PIN Configuration



**DFN1006**

## Absolute Maximum Rating

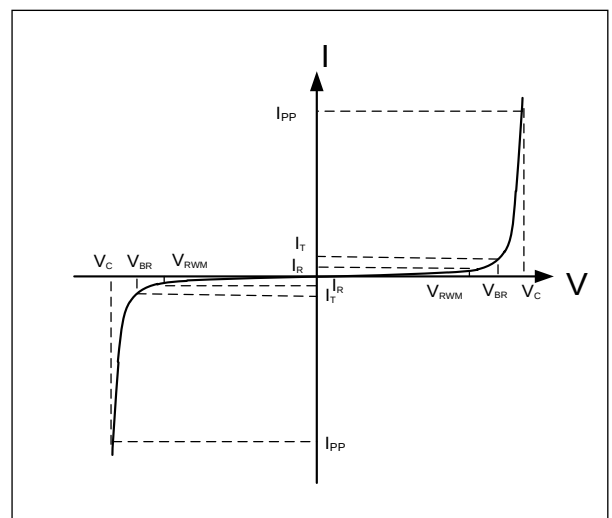
| Rating                                                         | Symbol    | Value          | Units |
|----------------------------------------------------------------|-----------|----------------|-------|
| Peak Pulse Power ( $t_p = 8/20\mu s$ )                         | $P_{PP}$  | 100            | Watts |
| Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)               | $I_{PP}$  | 4              | A     |
| ESD per IEC 61000-4-2 (Air)<br>ESD per IEC 61000-4-2 (Contact) | $V_{ESD}$ | 30<br>30       | 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 | $V_{RWM}$ |                                 |      |         | 12.0 | V       |
| Reverse Breakdown Voltage | $V_{BR}$  | $I_T = 1mA$                     | 13.3 |         |      | V       |
| Reverse Leakage Current   | $I_R$     | $V_{RWM} = 12V, T = 25^\circ C$ |      | 0.1     | 0.5  | $\mu A$ |
| Peak Pulse Current        | $I_{PP}$  | $t_p = 8/20\mu s$               |      |         | 5    | A       |
| Clamping Voltage          | $V_C$     | $I_{PP} = 4A, t_p = 8/20\mu s$  |      |         | 25   | V       |
| Junction Capacitance      | $C_j$     | $V_R = 0V, f = 1MHz$            |      | 10      |      | 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 $\mu s$  pulse waveform.

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

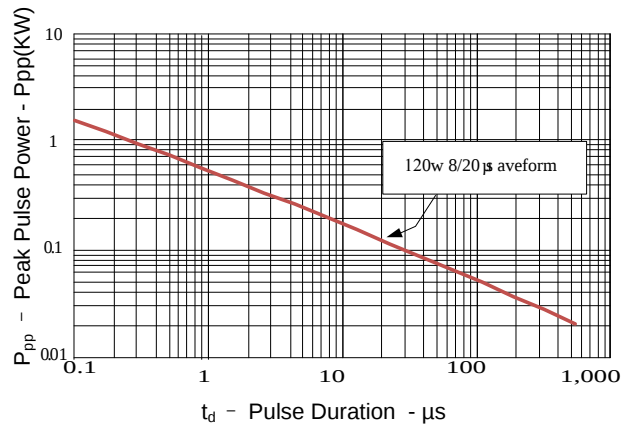


Figure 2: Power Derating Curve

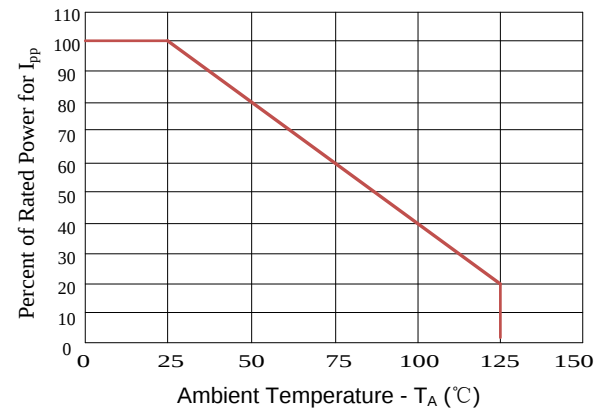


Figure3: Pulse Waveform

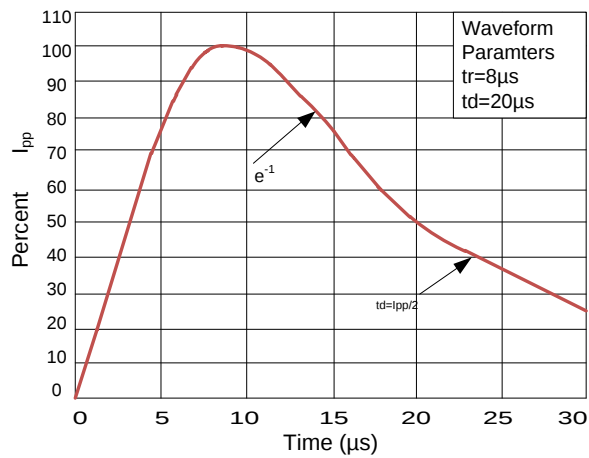
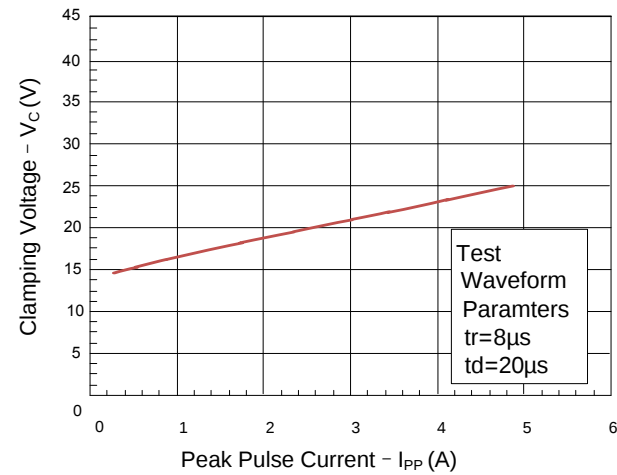
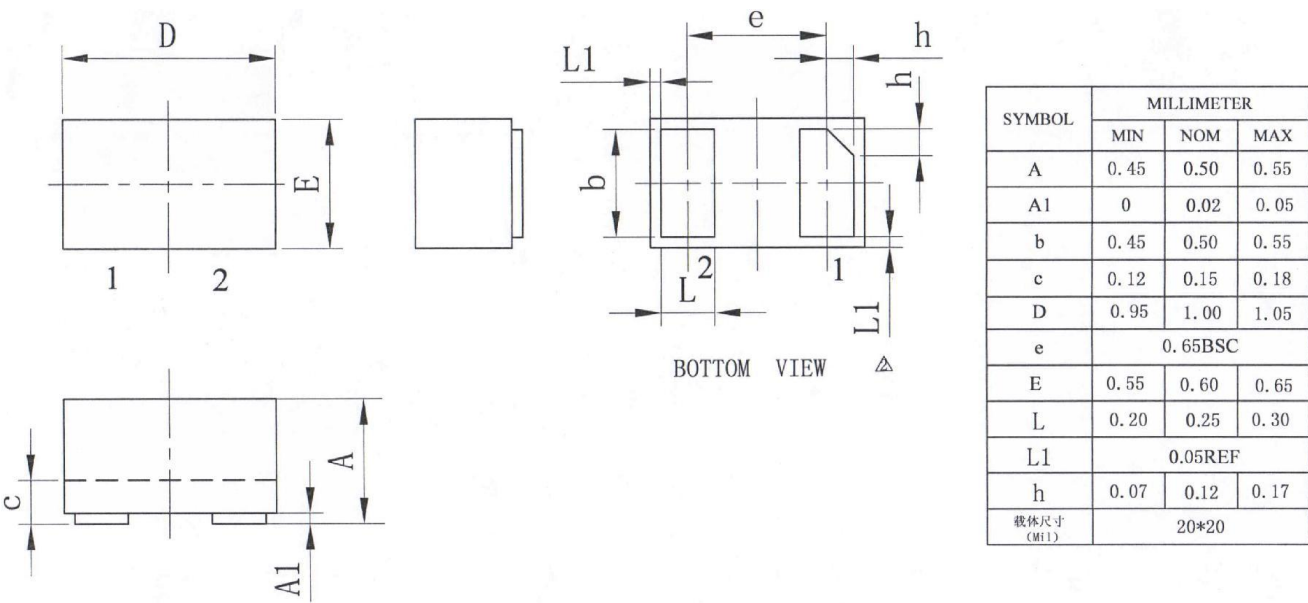


Figure 4: Clamping Voltage vs. Ipp



Outline Drawing – DFN1006



Marking



Ordering information

|              |         |          |               |
|--------------|---------|----------|---------------|
| Order code   | Package | Base qty | Delivery mode |
| SESF4N1222PA | DFN1006 | 10k      | Tape and reel |