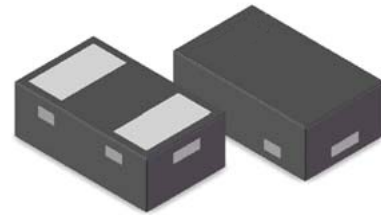




## Features

- 30Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ( $C_j = 2.5pF$  typ.)
- Protection one data/power line to:
- IEC 61000-4-2  $\pm 25kV$  contact  $\pm 25kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 2.5A (8/20 $\mu s$ )



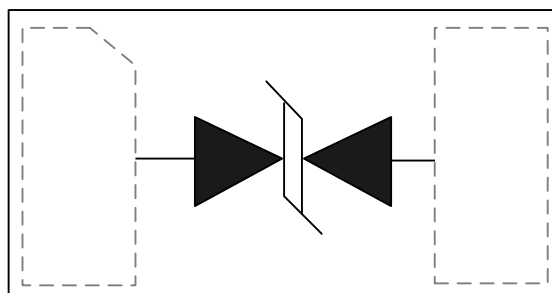
## Applications

- Laptop Computers
- Cellular Phones
- Personal Digital Assistants (PDA's)
- Digital Cameras

## 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

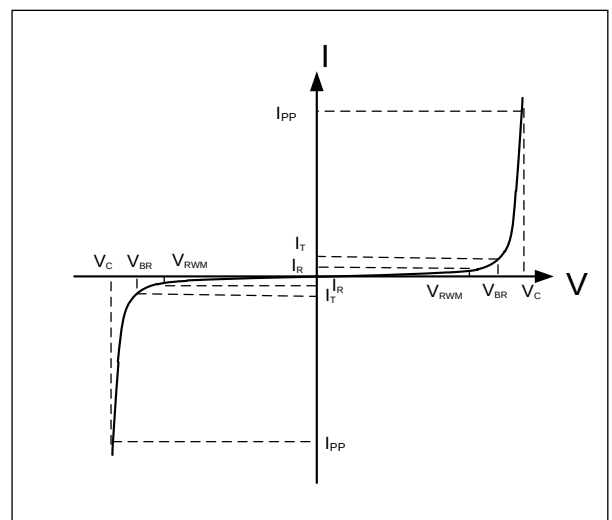
| Rating                                                         | Symbol    | Value          | Units |
|----------------------------------------------------------------|-----------|----------------|-------|
| Peak Pulse Power ( $t_p = 8/20\mu s$ )                         | $P_{PP}$  | 30             | Watts |
| Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)               | $I_{PP}$  | 2.5            | A     |
| ESD per IEC 61000-4-2 (Air)<br>ESD per IEC 61000-4-2 (Contact) | $V_{ESD}$ | 25<br>25       | 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 | $V_{RWM}$ |                                  |     |         | 5.0 | V       |
| Reverse Breakdown Voltage | $V_{BR}$  | $I_T = 1mA$                      | 5.5 |         |     | V       |
| Reverse Leakage Current   | $I_R$     | $V_{RWM} = 5V, T = 25^\circ C$   |     |         | 0.1 | $\mu A$ |
| Peak Pulse Current        | $I_{PP}$  | $t_p = 8/20\mu s$                |     |         | 2.5 | A       |
| Clamping Voltage          | $V_C$     | $I_{PP} = 2.5A, t_p = 8/20\mu s$ |     |         | 11  | V       |
| Junction Capacitance      | $C_j$     | $V_R = 0V, f = 1MHz$             |     | 2.5     | 3.0 | 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

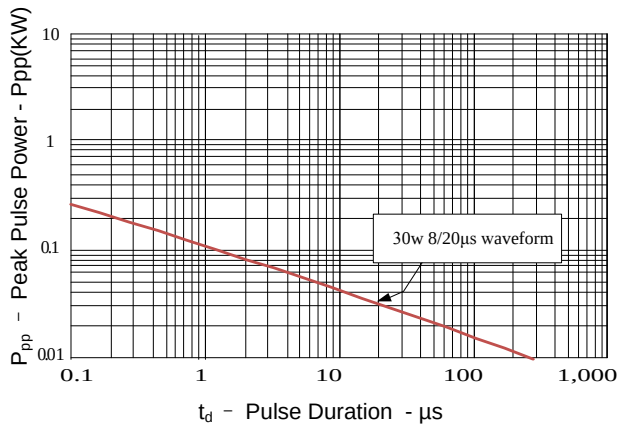


Figure 2: Power Derating Curve

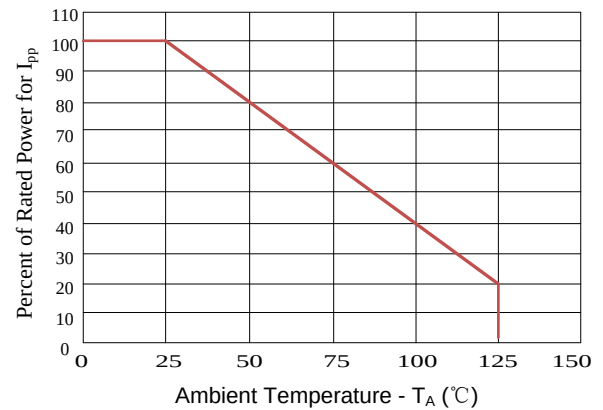


Figure3: Pulse Waveform

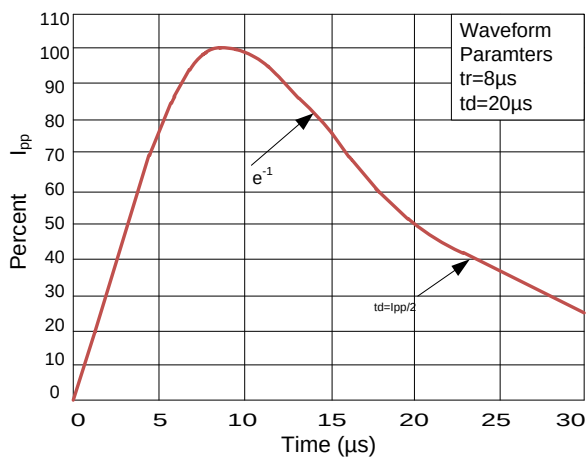
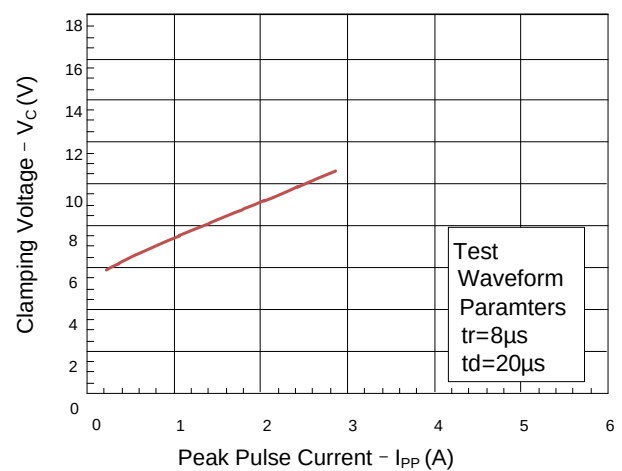
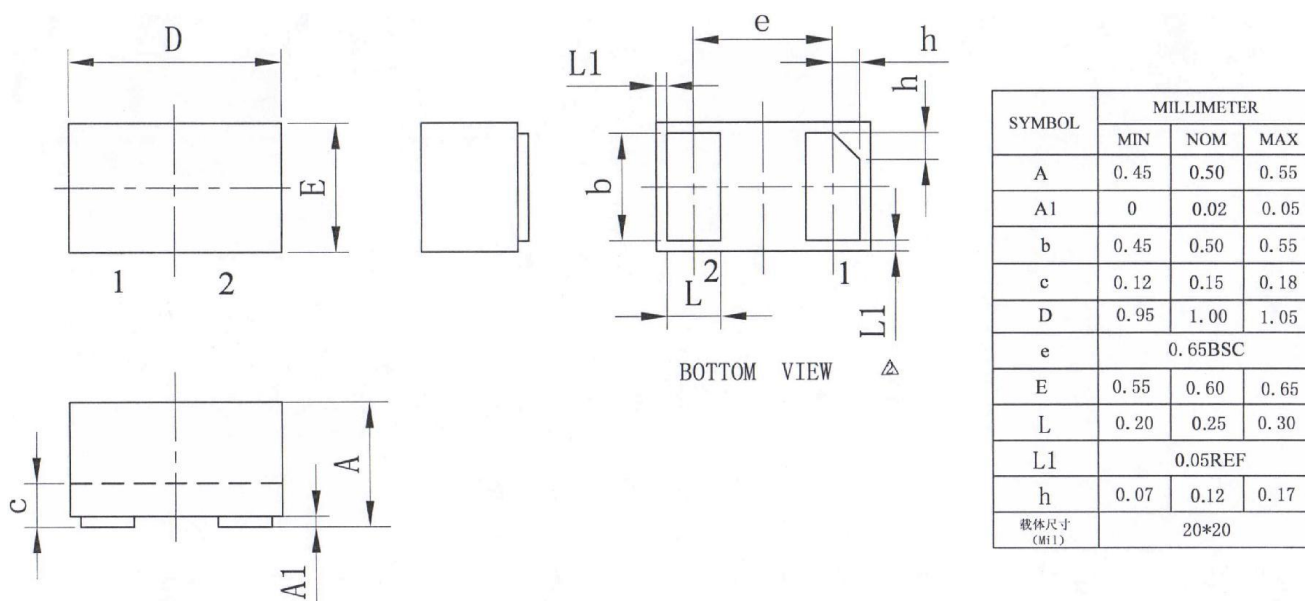


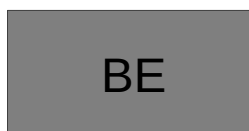
Figure 4: Clamping Voltage vs. Ipp



## Outline Drawing – DFN1006



## Marking



## Ordering information

| Order code   | Package | Base qty | Delivery mode |
|--------------|---------|----------|---------------|
| SESF4L0522PB | DFN1006 | 10000    | Tape and reel |