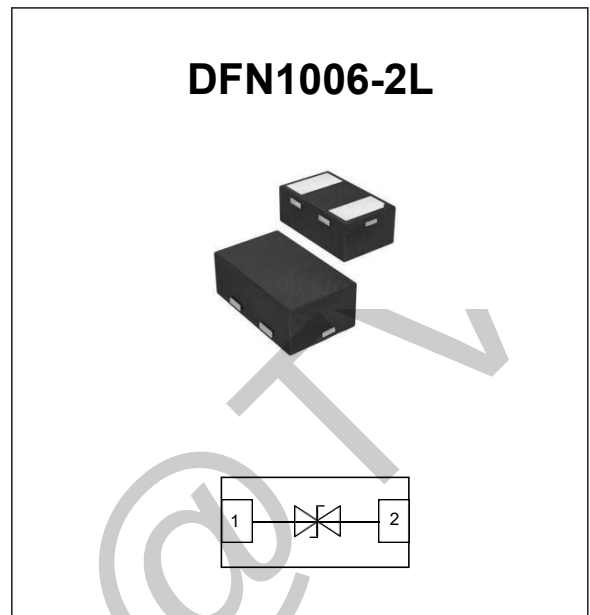


## Features

- Ultra small package: 1.0 x 0.6 x 0.5mm
- Ultra low capacitance: 0.16pF typical
- Ultra low leakage: nA level
- Low operating voltage: 3.3V
- Low clamping voltage
- 2-pin leadless package
- IEC 61000-4-2 (ESD): Air  $\pm 11\text{kV}$ , Contact  $\pm 11\text{kV}$
- IEC 61000-4-5 (Lightning): 6A (8/20 $\mu\text{s}$ )
- RoHS Compliant

## Mechanical Data

- Package: DFN1006-2 (1.0 x 0.6 x 0.5mm)
- Case Material: "Green" Molding Compound
- Terminal Connections: See Diagram Below



## Applications

- Smart Phones
- Display Ports and MDDI Ports
- USB Ports
- Digital Cameras
- Digital Video Interface (DVI)
- PCI Express and Serial SATA Ports

## Ordering information

| Ordercode      | Marking | Package   | Packaging option | Basequantity    | Packagingspecification |
|----------------|---------|-----------|------------------|-----------------|------------------------|
| DCE0310A06C016 | S9      | DFN1006-2 | Tape and reel    | 10000pcs / reel | EIA STD RS-481         |

## Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

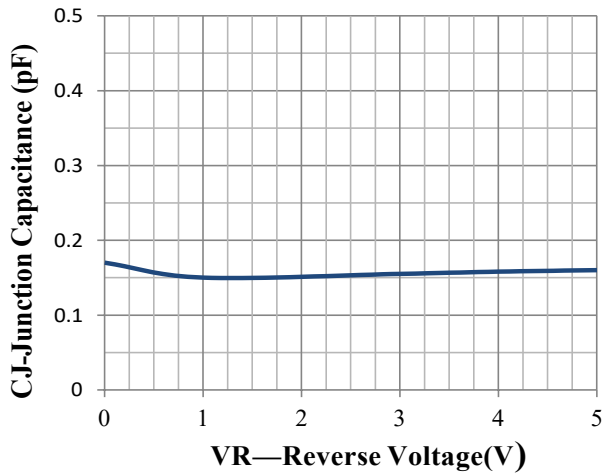
| Parameter                                      | Symbol    | Value           | Unit |
|------------------------------------------------|-----------|-----------------|------|
| Peak Pulse Power ( $T_P=8/20\mu\text{s}$ )     | $P_{PP}$  | 48              | W    |
| ESD contact/air discharge (IEC-61000-4-2)      | $V_{ESD}$ | $\pm 11/\pm 11$ | kV   |
| Peak Pulse Current ( $T_P = 8/20\mu\text{s}$ ) | $I_{PP}$  | 6               | A    |
| Junction Temperature                           | $T_J$     | -40 to +125     | °C   |
| Operation temperature                          | $T_{OP}$  | -40 to +125     | °C   |
| Storage temperature                            | $T_{STG}$ | -55 to +150     | °C   |

**Electrical Characteristics**

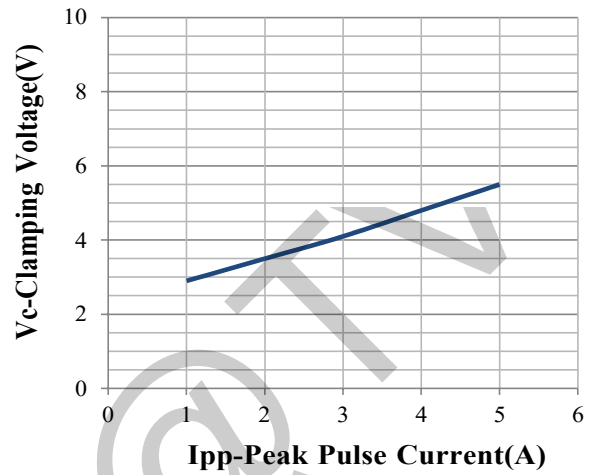
 (T<sub>A</sub> = 25 °C unless otherwise specified)

| Parameter                 | Symbol           | Condition                                     | Min | Typ  | Max | Unit |
|---------------------------|------------------|-----------------------------------------------|-----|------|-----|------|
| Reverse stand-off Voltage | V <sub>RWM</sub> |                                               | -   | -    | 3.3 | V    |
| Reverse Leakage Current   | I <sub>R</sub>   | V <sub>RWM</sub> = 3.3V                       | -   | -    | 0.2 | uA   |
| Punch-Through Voltage     | V <sub>pt</sub>  | I <sub>T</sub> = 2 μ A                        | 3.5 | -    | -   | V    |
| Snap-Back Voltage         | V <sub>SB</sub>  | I <sub>T</sub> = 50mA                         | 0.8 | -    | -   | V    |
| Clamping Voltage(TLP)     | V <sub>CL</sub>  | I <sub>PP</sub> = 16A, t <sub>p</sub> = 100ns | -   | 6    | -   | V    |
| Dynamic resistance        | R <sub>DYN</sub> |                                               | -   | 0.25 | -   | Ω    |
| Clamping Voltage(ESD)     | V <sub>CE</sub>  | VESD = 8kV Contact                            | -   | 6    | -   | V    |
| Clamping Voltage          | V <sub>C</sub>   | I <sub>PP</sub> = 1A, t <sub>p</sub> =8/20μs  | -   | 1.5  | -   | V    |
| Clamping Voltage          | V <sub>C</sub>   | I <sub>PP</sub> = 10A, t <sub>p</sub> =8/20μs | -   | 4    | -   | V    |
| Junction Capacitance      | C <sub>J</sub>   | V <sub>R</sub> =0V, f=1MHz                    | -   | 0.6  | -   | pF   |

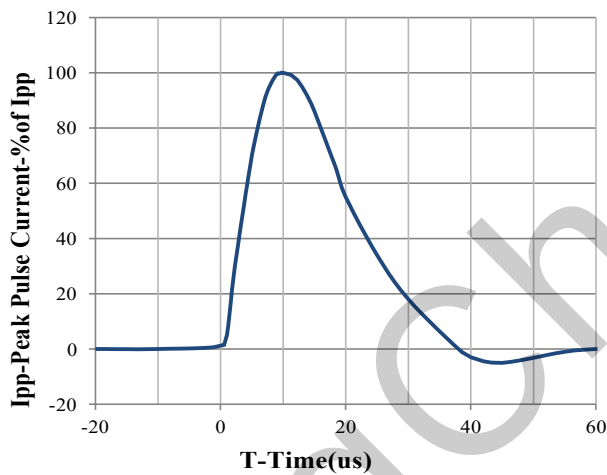
**Typical Performance Characteristics (TA=25°C unless otherwise Specified)**



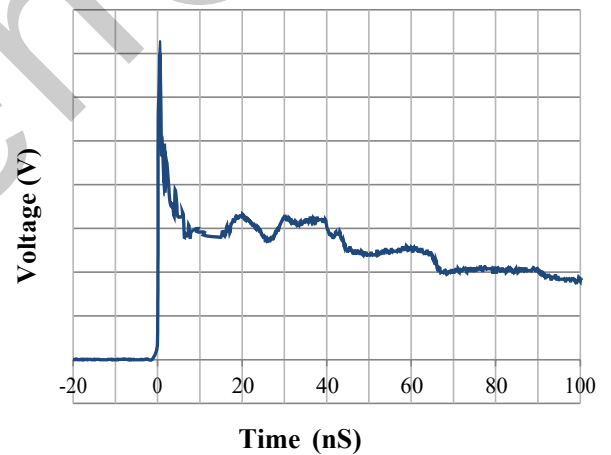
**Junction Capacitance vs. Reverse Voltage**



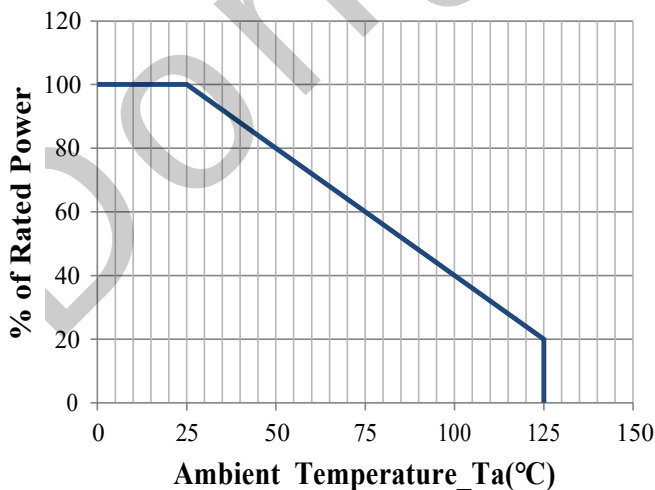
**Clamping Voltage vs. Peak Pulse Current**



**8 X 20us Pulse Waveform**

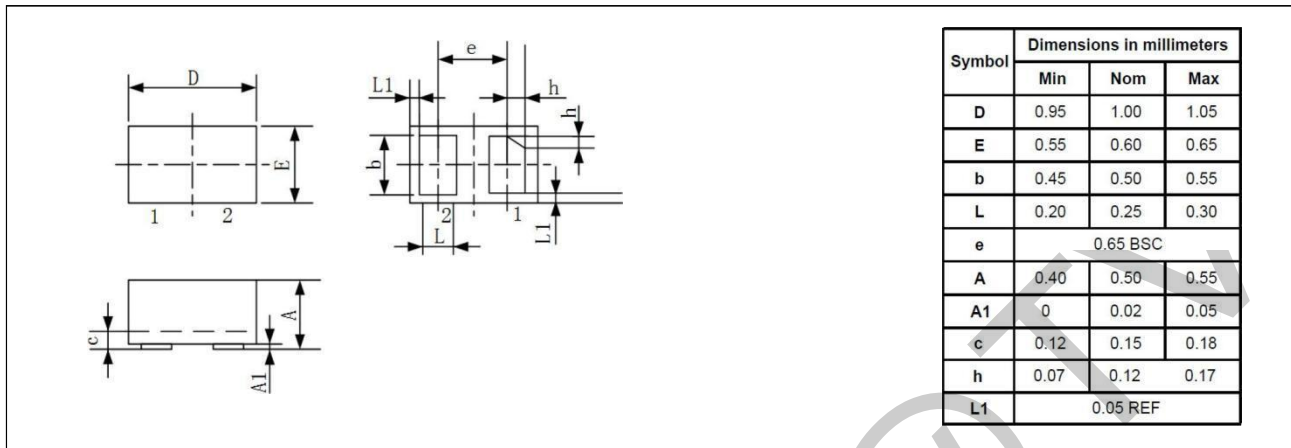


**IEC61000-4-2 Pulse Waveform**

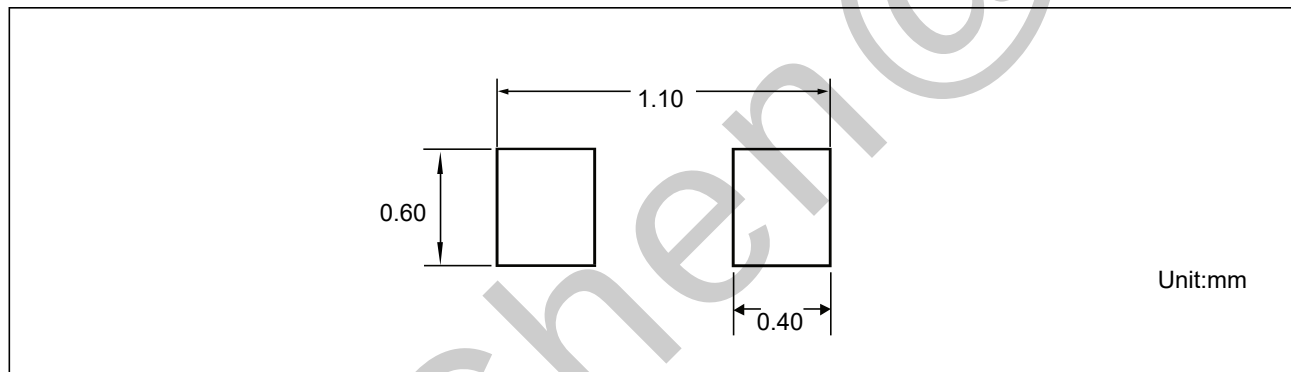


**Power Derating Curve**

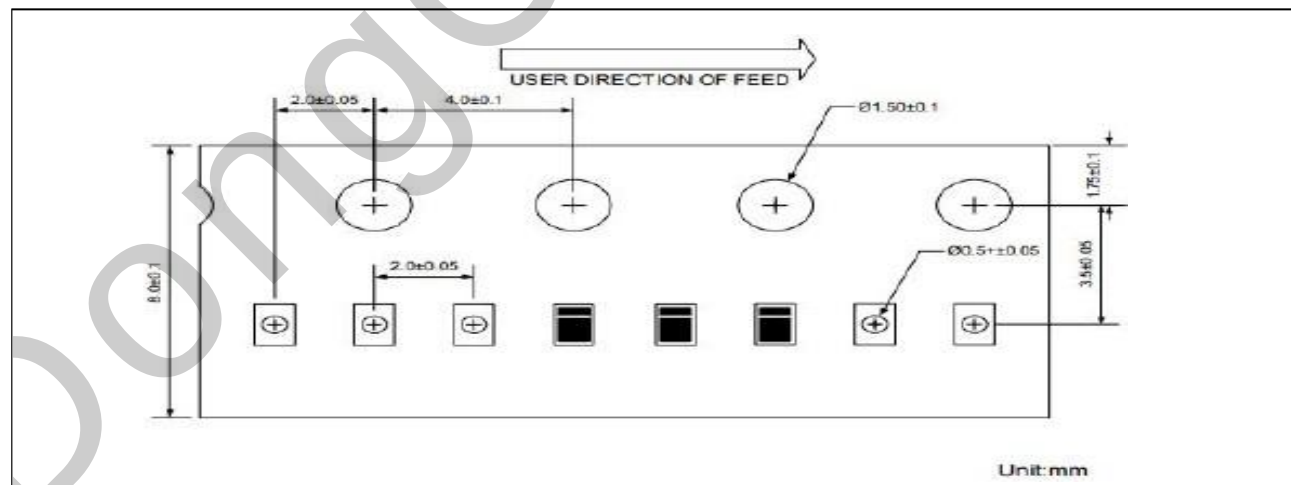
## Package Dimensions



## Pad Dimensions



## Tape and Reel Specification



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