MSKSEMI
SEMICONDUCTOR

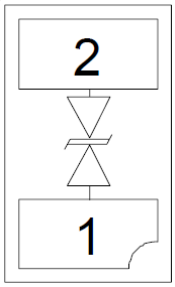
# ESD9FN5.0C

## Features

◇ 84W (8/20μs) Peak Pulse Power
◇ Bidirectional ESD Protection
◇ SOD-882 Package
◇ RoHS Compliant
◇ Matte Tin Lead finish (Pb-Free)
◇ Protects One Line
◇ Meet IEC61000-4-2 Level 4:
Contact Discharge: 30kV
Air Discharge: 30kV

## Circuit Diagram


## PIN Diagram




## Applications

◇ Communication System
◇ Portable Instrumentation
◇ Audio and Video Equipment
◇ Computers and Peripherals
◇ Cellular Handsets and Accessories

## Ordering information

| Device | Package | Reel Size | Qty / Reel |
|---|---|---|---|
| ESD9FN5.0C | DFN1006 | 7 inch | 10000 |

## Maximum Ratings (Ta = 25℃)

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $P_{PK}$ | Peak Pulse Power | 84 | W |
| $I_{PP}$ | Peak Pulse Current | 6 | A |
| $V_{ESD}$ (Contact) | Contact ESD Voltage per IEC61000-4-2 | 30 | kV |
| $V_{ESD}$ (Air) | Air ESD Voltage per IEC61000-4-2 | 30 | kV |
| TJ | Junction Temperature | -55 to +150 | ℃ |
| TSTG | Storage Temperature | -55 to +150 | ℃ |

## Electrical Characteristics (Ta = 25℃)

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| VRWM | Reverse Working Peak Voltage | | | | 5 | V |
| VBR | Reverse Breakdown Voltage | IT = 1mA | 6 | | 9.5 | V |
| IR | Reverse Leakage Current | VRWM = 5V | | | 0.5 | μA |
| VC | Clamping Voltage | IPP = 1A (8/20μs) | | | 9 | V |
| VC | Clamping Voltage | IPP = 6A (8/20μs) | | | 14 | V |
| CJ | Capacitance | VR = 0V, f = 1MHz | | | 15 | pF |

## Typical Performance Curves

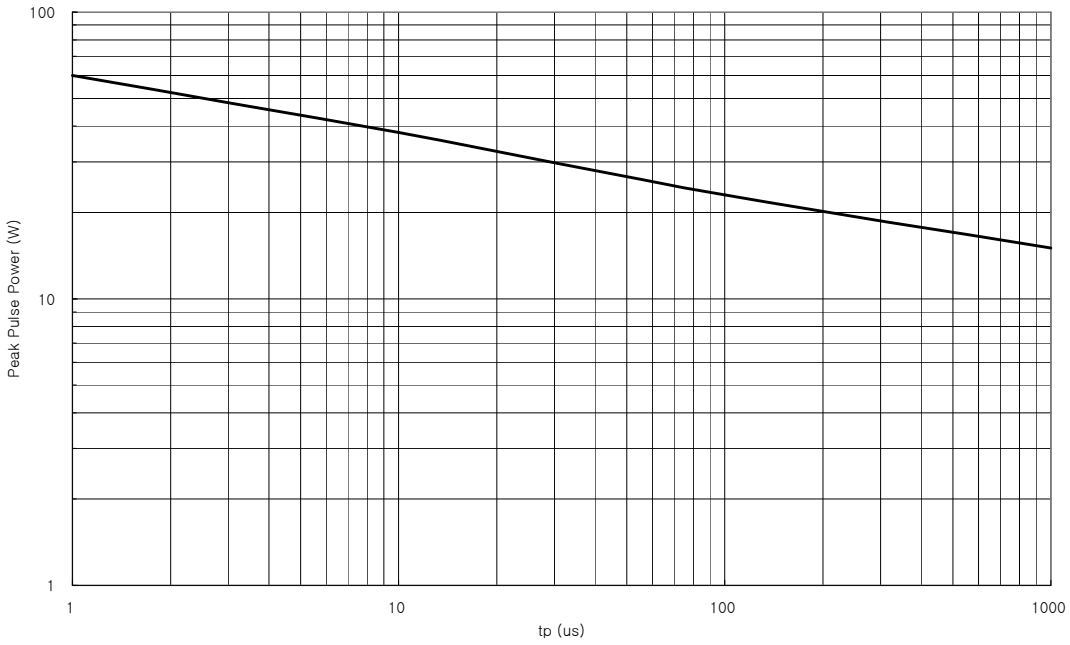



Figure 1. Peak Pulse Power Derating

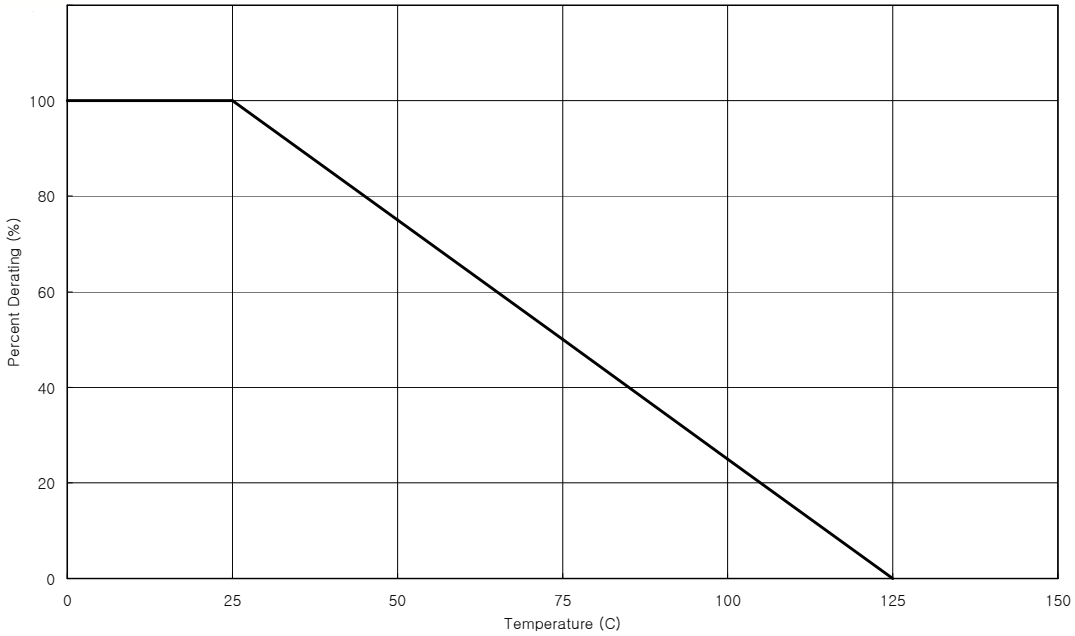



Figure 2. Peak Pulse Power Derating vs Temperature

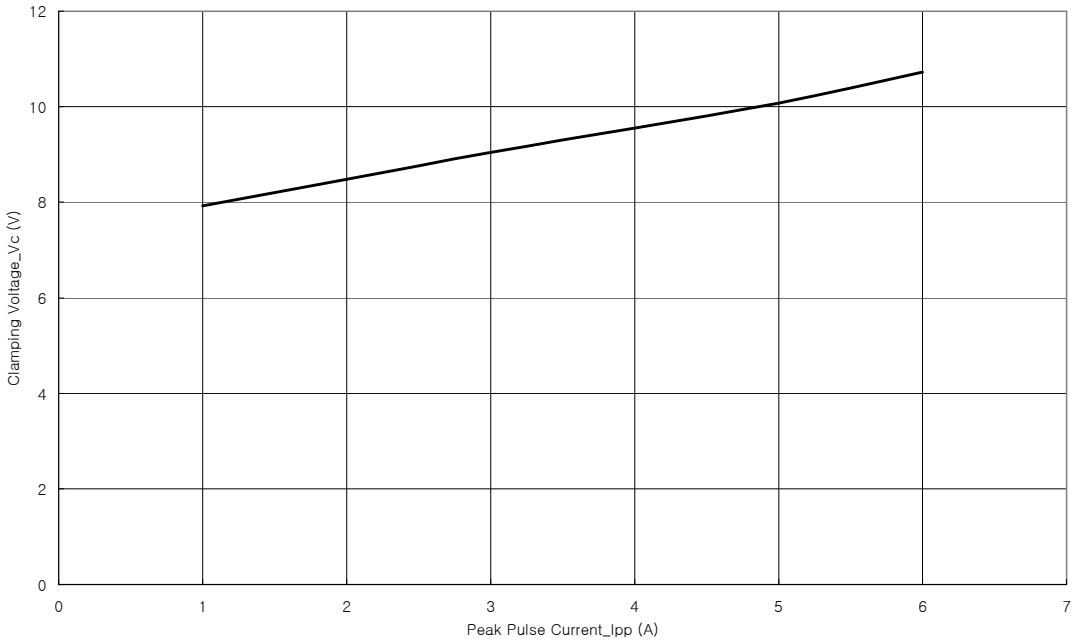



Figure 3. Peak Pulse Current vs Clamping Voltage

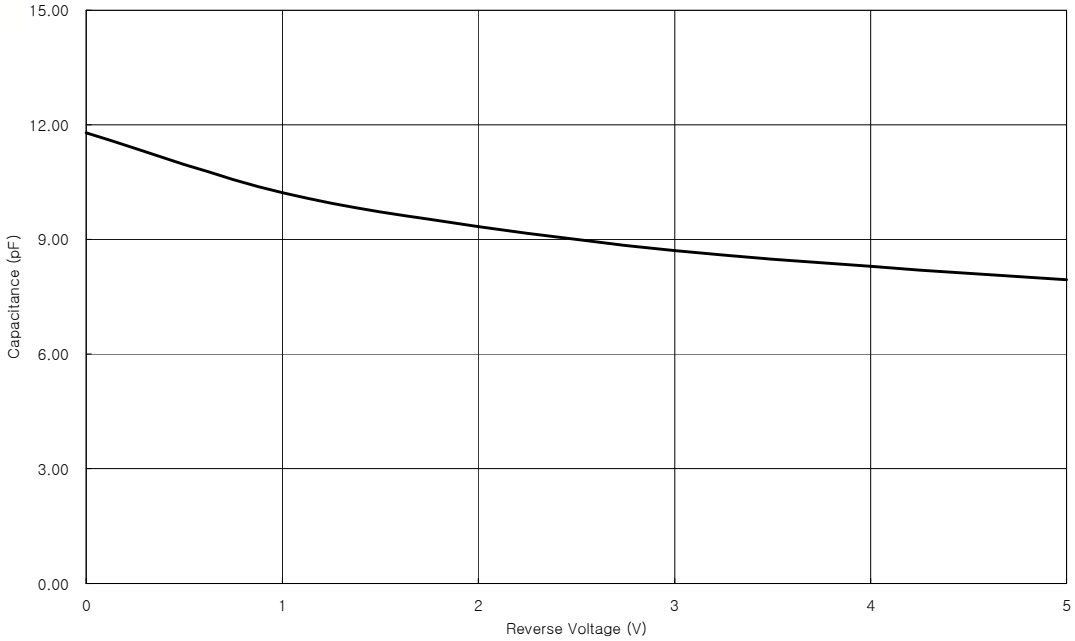
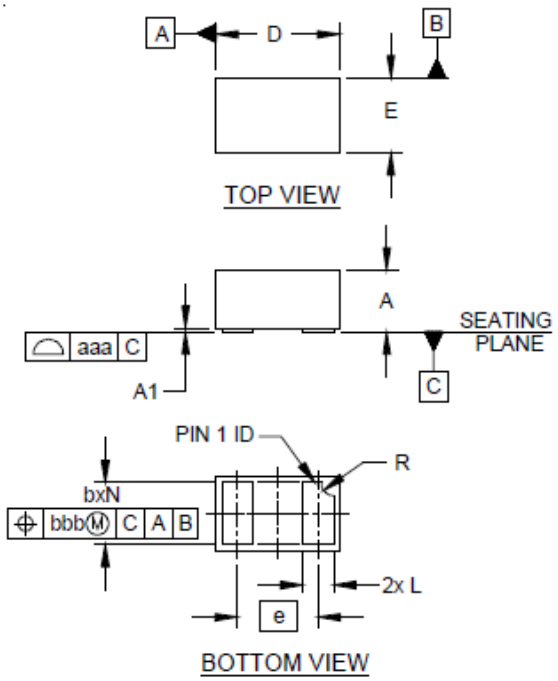



Figure 4. Reverse Voltage vs Capacitance

## DFN1006 Dimension




| DIMENSIONS | | | | | | |
|---|---|---|---|---|---|---|
| DIM | INCHES | | | MILLIMETERS | | |
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | .016 | .020 | .022 | 0.40 | 0.50 | 0.55 |
| A1 | .000 | .001 | .002 | 0.00 | 0.03 | 0.05 |
| b | .018 | .020 | .022 | 0.45 | 0.50 | 0.55 |
| D | .035 | .039 | .043 | 0.90 | 1.00 | 1.10 |
| E | .020 | .024 | .028 | 0.50 | 0.60 | 0.70 |
| e | .026 BSC | | | 0.65 BSC | | |
| L | .008 | .010 | .012 | 0.20 | 0.25 | 0.30 |
| R | .002 | .004 | .006 | 0.05 | 0.10 | 0.15 |
| N | 2 | | | 2 | | |
| aaa | .003 | | | 0.08 | | |
| bbb | .004 | | | 0.10 | | |