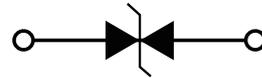
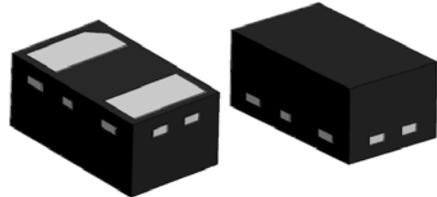


## Low capacitance bidirectional ESD protection diode

**Features**

- ◇ 30W (8/20 $\mu$ s) Peak Pulse Power
- ◇ Low Capacitance ESD Protection
- ◇ RoHS Compliant
- ◇ Matte Tin Lead finish (Pb-Free)
- ◇ Protect One High Speed Data Line
- ◇ Meet IEC61000-4-2 Level 4:
  - Contact Discharge > 8kV
  - Air Discharge > 15kV

**DFN1006**

**Package Outline**

**MARKING: CB**
**Applications**

- ◇ Communication System
- ◇ Portable Instrumentation
- ◇ Audio and Video Equipment
- ◇ Computers and Peripherals
- ◇ USB 1.1, USB 2.0 Ports

**Electrical Characteristics (TA=25°C unless otherwise specified)**

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				5	V
VBR	Reverse Breakdown Voltage	IT = 1mA	5.5		9.5	V
IR	Reverse Leakage Current	VRWM = 5V			0.1	$\mu$ A
VC	Clamping Voltage	IPP = 1A (8/20 $\mu$ s)			12	V
VC	Clamping Voltage	IPP = 2A (8/20 $\mu$ s)			15	V
CJ	Capacitance	VR = 0V, f = 1MHz		3.0	3.5	pF

## Absolute Maximum Ratings (TA=25°C unless otherwise specified)

Symbol	Parameter	Value	Unit
PPK	Peak Pulse Power	30	W
IPP	Peak Pulse Current	2	A
VESD (Contact)	Contact ESD Voltage per IEC61000-4-2	30	kV
VESD (Air)	Air ESD Voltage per IEC61000-4-2	30	kV
TJ	Junction Temperature	-55 to +150	°C
TSTG	Storage Temperature	-55 to +150	°C

## Typical Characteristics

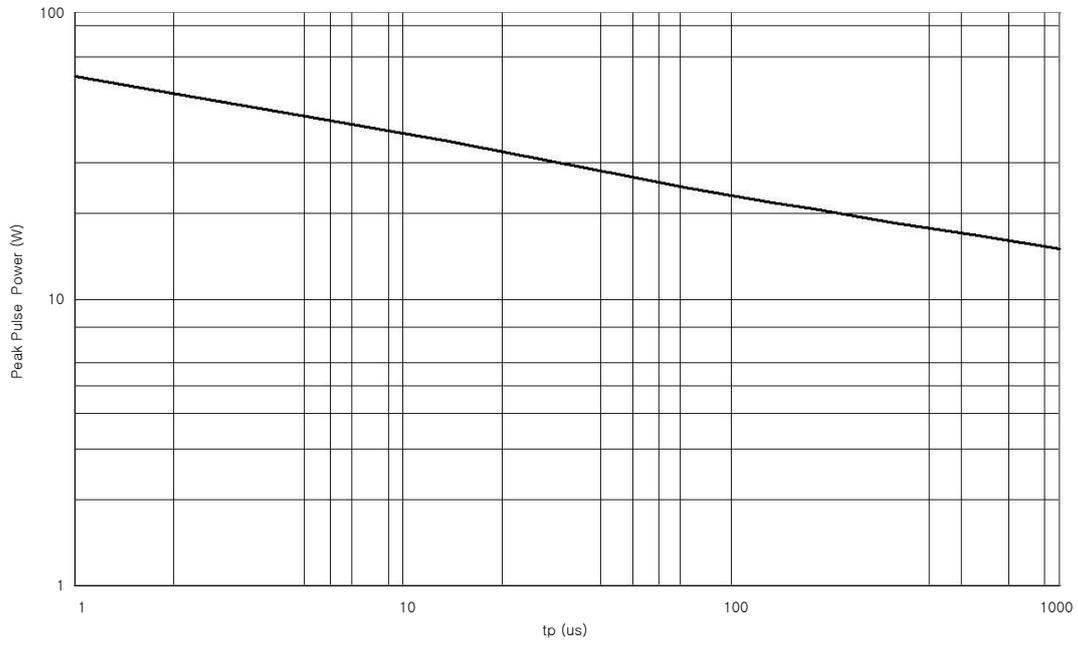


Figure 1. Peak Pulse Power Derating

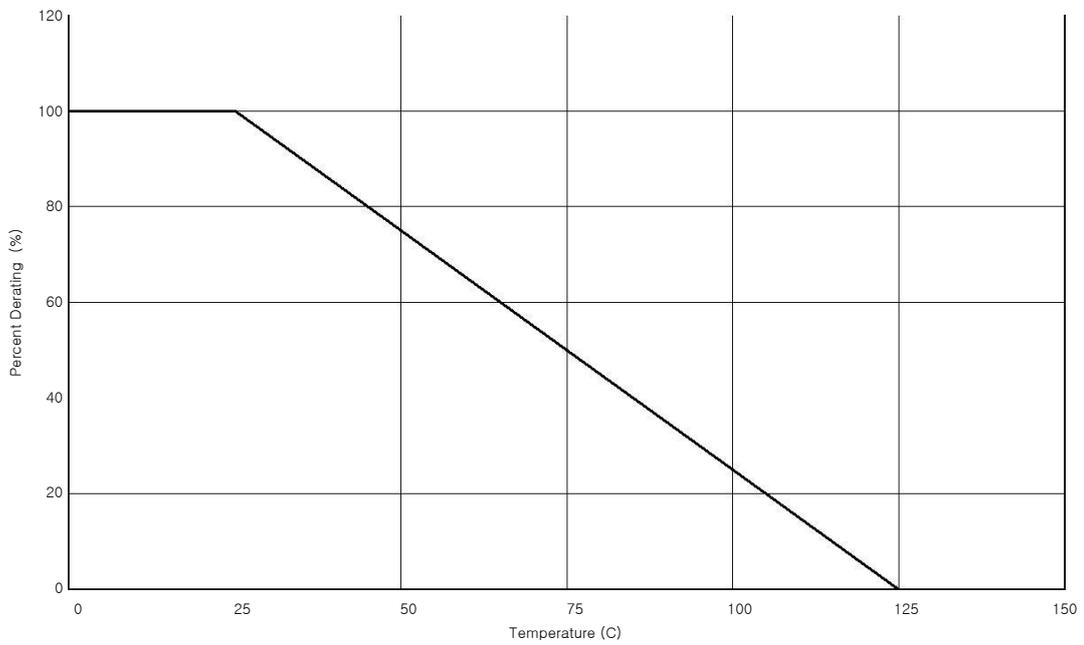


Figure 2. Peak Pulse Power Derating vs Temperature

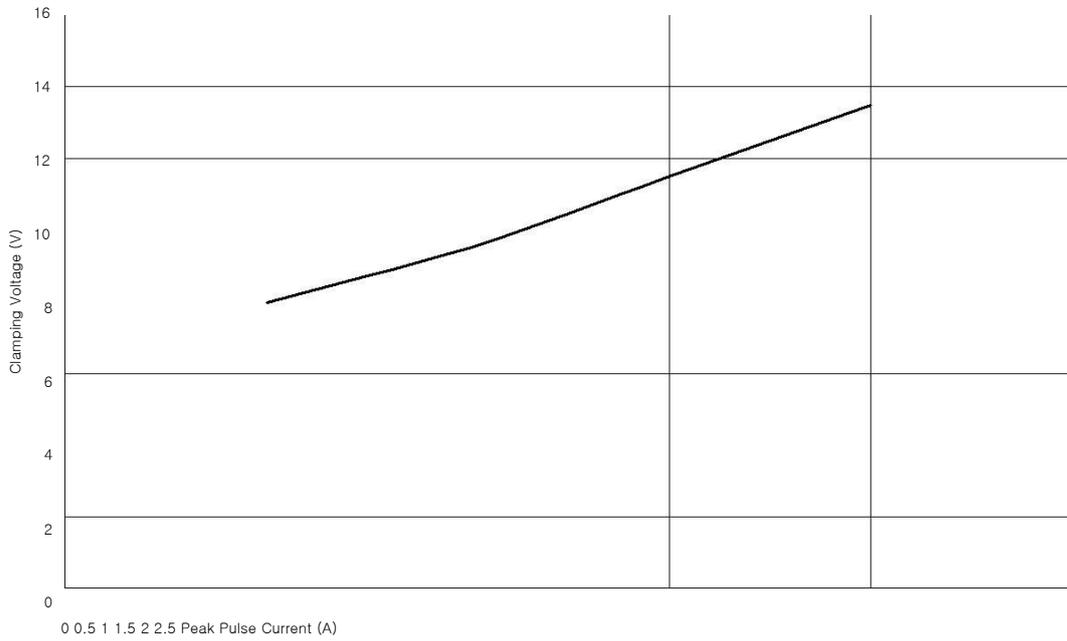


Figure 3. Peak Pulse Current vs Clamping Voltage

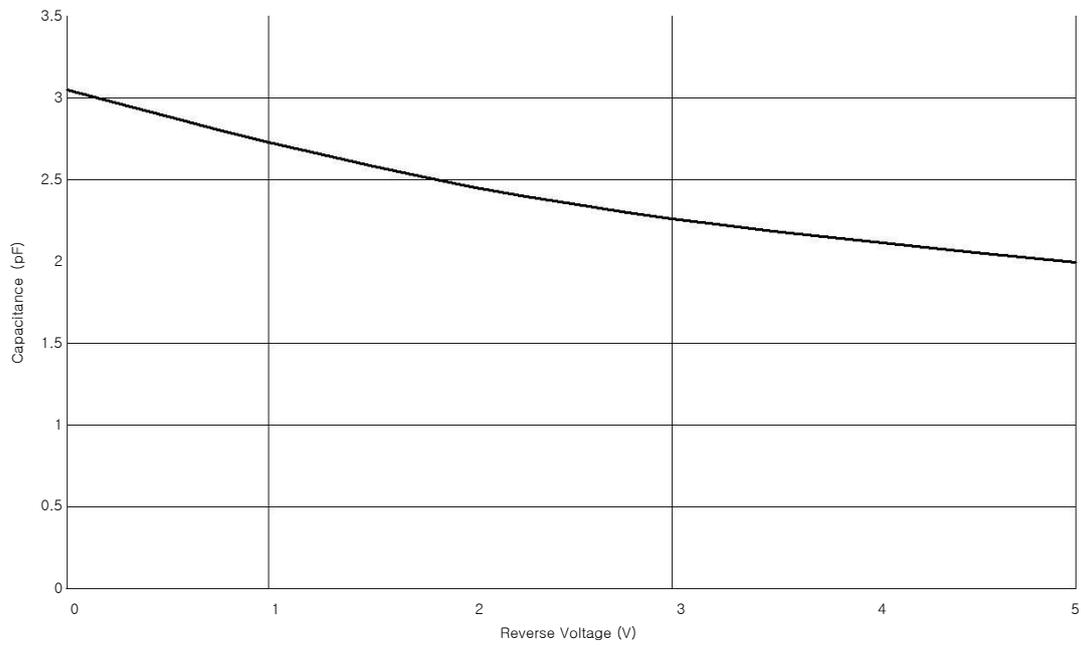
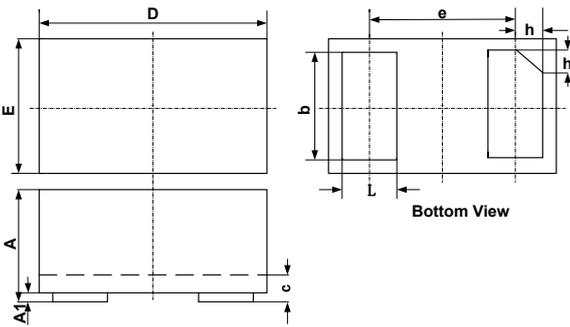


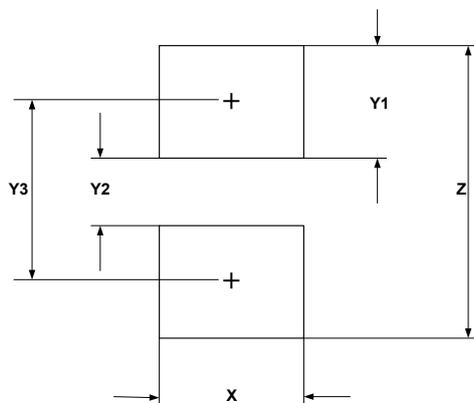
Figure 4. Reverse Voltage vs Capacitance

## DFN1006-2L Package Outline Drawing



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.45	0.50	0.55	0.018	0.020	0.022
c	0.12	0.15	0.18	0.005	0.006	0.007
D	0.95	1.00	1.05	0.037	0.039	0.041
e	0.65 BSC			0.026 BSC		
E	0.55	0.60	0.65	0.022	0.024	0.026
L	0.20	0.25	0.30	0.008	0.010	0.012
h	0.07	0.12	0.17	0.003	0.005	0.007

## Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	0.60	0.024
Y1	0.50	0.020
Y2	0.30	0.012
Y3	0.80	0.032
Z	1.30	0.052