

Features

- Ultra small package: 1.0x0.6x0.5mm
- Low operating voltage: $\pm 5V$
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
- – IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 20kV$
Contact discharge: $\pm 15kV$
- – IEC61000-4-5 (Lightning) 5A (8/20 μs)
- RoHS Compliant
- Lead Finish: NiPdAu

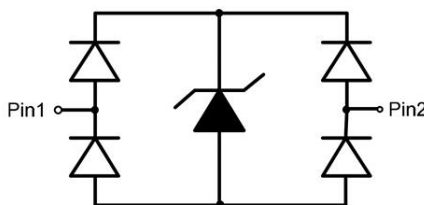
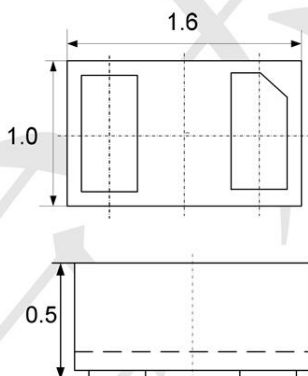
Mechanical Characteristics

- Package: DFN1006-2 (0402)
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Shipping Qty @10000/7Inch Tape & Reel

Applications

- USB 2.0 and USB 3.0
- HDMI 1.3 and HDMI 1.4
- SATA and eSATA
- DVI
- IEEE 1394
- PCI Express
- Portable Electronics
- Notebooks

Dimensions and Pin Configuration



Marking: S1

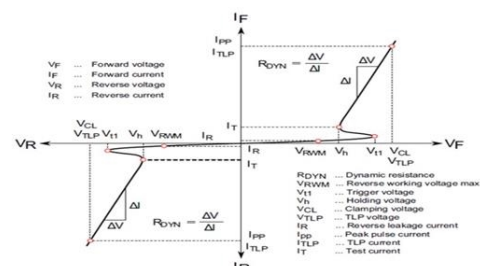
Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	35	W
Peak Pulse Current (8/20μs)	I _{PP}	5	A
ESD per IEC 61000-4-2 (Air)	VESD	±20	kV
ESD per IEC 61000-4-2 (Contact)		±15	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

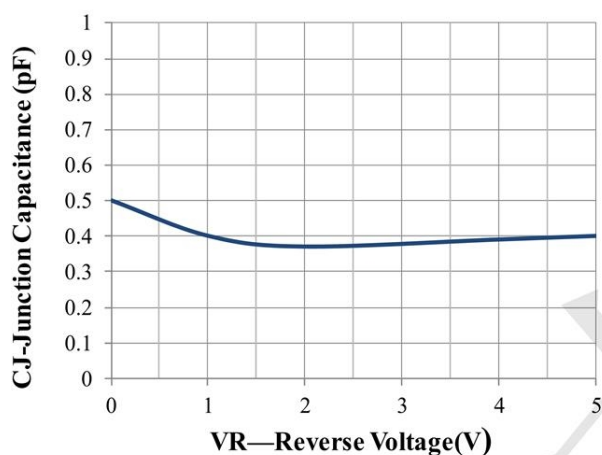
Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			5	V	
Breakdown Voltage	V _{BR}	8.0			V	I _T = 1mA
Holding Voltage	V _h	2.6		4.0	V	I _T = 100mA
Reverse Leakage Current	I _R			0.2	μA	V _{RWM} = 5.0 V
Clamping Voltage	V _C		5		V	I _{PP} = 1A (8 x 20μs pulse)
Clamping Voltage	V _C		6	8	V	I _{PP} = 5 A (8 x 20μs pulse)
Junction Capacitance	C _J		0.5		pF	V _R = 0V, f = 1MHz

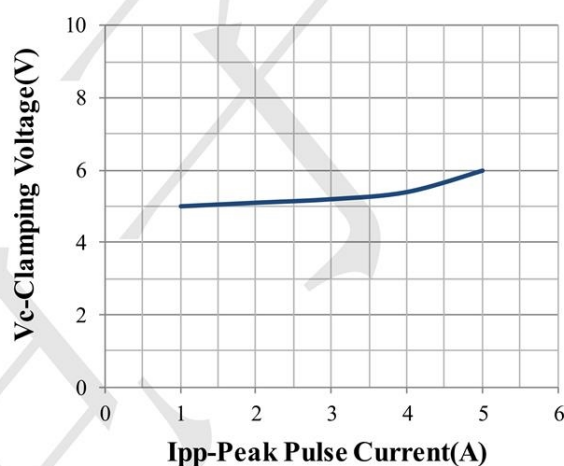
Symbol	Parameter
I _T	Test Current
I _{PP}	Maximum Reverse Peak Pulse Current
V _C	Clamping Voltage @I _C



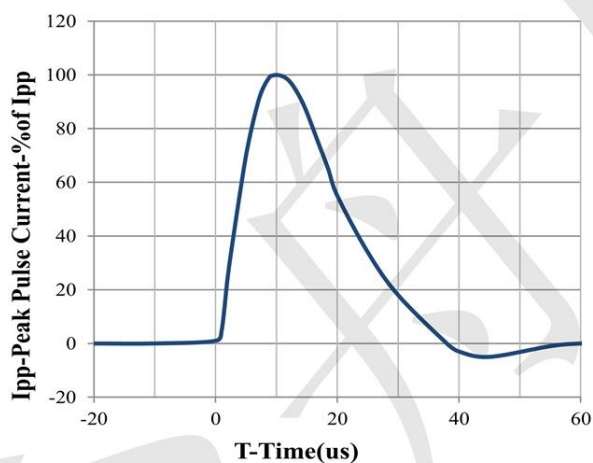
Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)



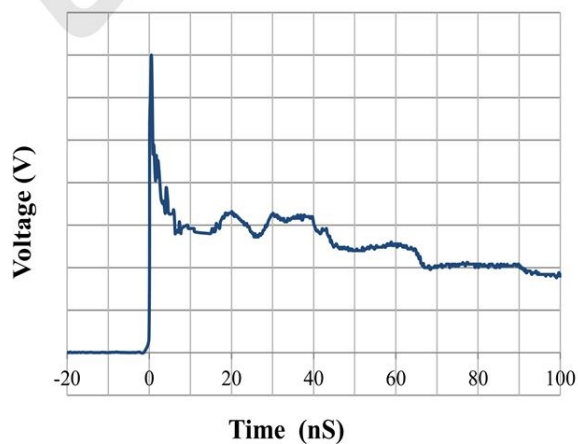
Junction Capacitance vs. Reverse Voltage



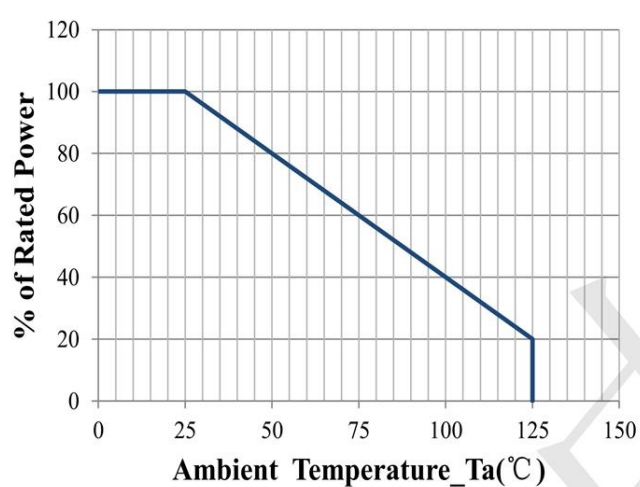
Clamping Voltage vs. Peak Pulse Current



8 X 20us Pulse Waveform

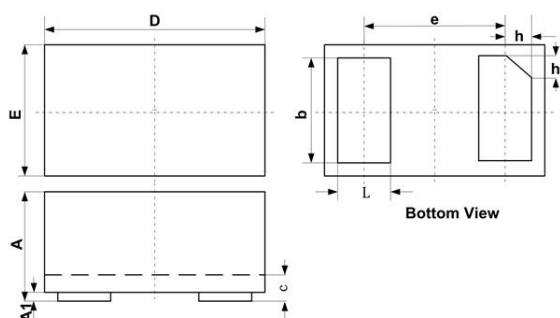


IEC61000-4-2 Pulse Waveform



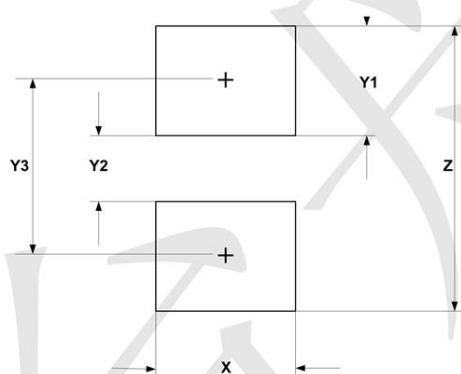
Power Derating Curve

DFN1006-2 Package Outline Drawing (0402)



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