



ESD Diode

Features

- Meet IEC61000-4-2 (ESD)±15kV (air),±8kV (contact)
- Protects one bi-directional I/O line
- Working Voltage : 5V, typical capacitance : 3.0pF
- Pb free version, RoHs compliant, and Halogen free

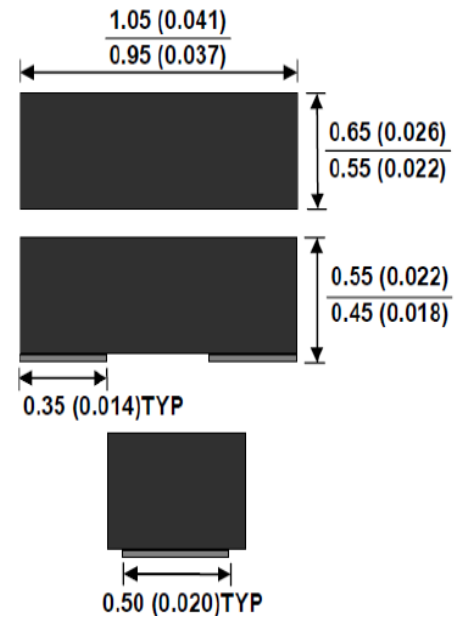
Mechanical Data

- Case: DFN1006(0402) mold package
- Terminal: Sn/Au plated, solderable per MIL-STD-750, method 2026
- Mounting position: Any
- High temperature soldering guaranteed: 260°C /10second
- Weight: 0.001 gram(approx.).
- MSL : Level 1
- Marking Code: M

Applications

- Cell Phone Handsets and Accessories
- Notebooks, Desktops, and Servers
- PCI express, SATA, USB 2.0,DVI, Display port
- Portable Instrumentation

DFN1006(0402)



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave ,60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Characteristics	Symbol	Min	Typ	Max	Unit
Peak Pulse Power(tp = 8 / 20 us)	P _{pp}		35		W
ESD per IEC 61000-4-2(Air)	V _{ESD}		±15		KV
ESD per IEC 61000-4-2(Contact)			±8	3	KV
Operating Junction Temperature	T _j	-55		150	°C
Storage Temperature	T _{stg}	-55		150	°C
Reverse Stand-Off Voltage	V _{RWM}			5	V
Reverse Breakdown Voltage, I _t = 1mA	V _{BR}	5.6			V
Reverse Leakage Current, V _{RWM} = 5V	I _R			100	nA
Clamping Voltage, I _{pp} = 1A, tp = 8/20 us	V _c			12	V
Clamping Voltage, I _{pp} = 2A, tp = 8/20 us				17	V
Junction Capacitance,Between I/O Pin and GND VR=0V, f=1MHz	C _j		3		pF

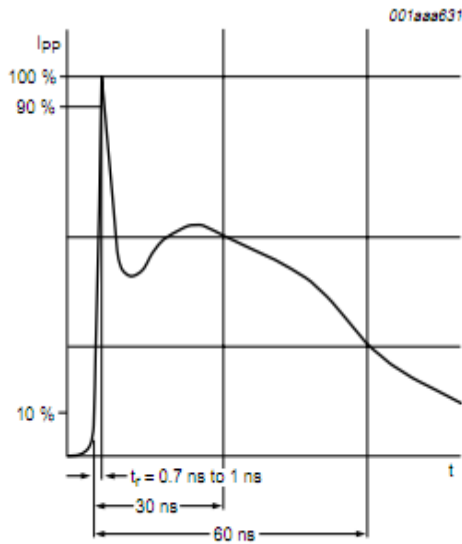


Fig 1. ESD pulse waveform according to IEC61000-4-2

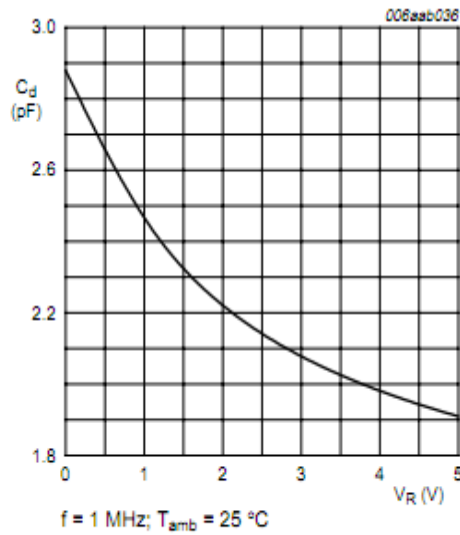
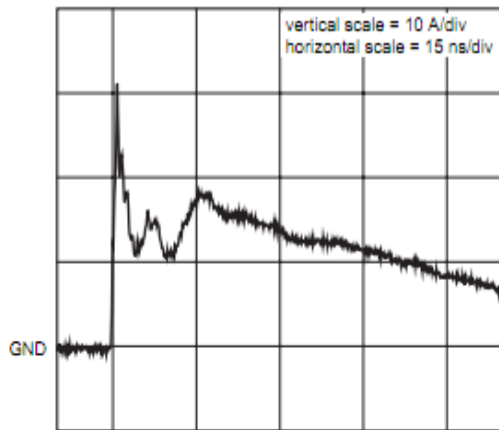
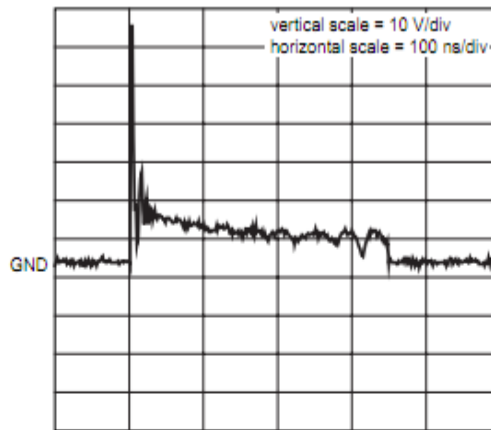


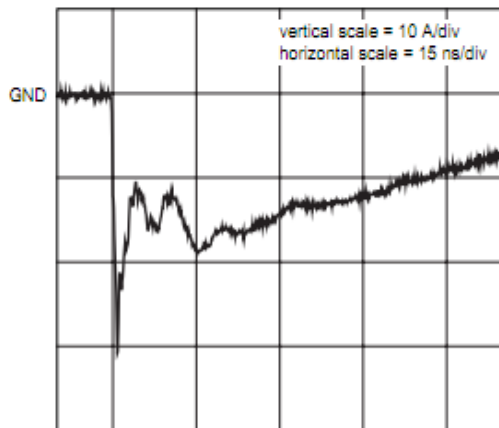
Fig 2. Diode capacitance as a function of reverse voltage



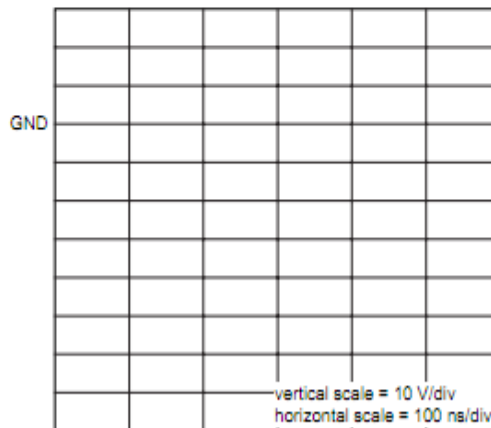
unclamped +8 kV ESD pulse waveform
(IEC 61000-4-2 network)



clamped +8 kV ESD pulse waveform
(IEC 61000-4-2 network) pin 1 to 2



unclamped -8 kV ESD pulse waveform
(IEC 61000-4-2 network)



clamped -8 kV ESD pulse waveform
(IEC 61000-4-2 network) pin 1 to 2

006aab037

Fig 3. ESD clamping test setup and waveforms



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