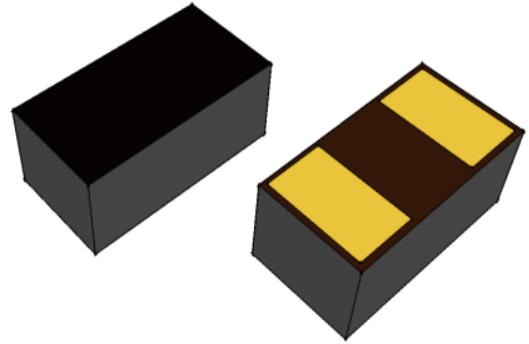


»Features

- The best ESD protection for high speed, low voltage applications
- RoHS compliant and halogen free
- Ultra low capacitance, 0.05 pF (typ.)
- Low leakage current (<10nA)
- Fast response time (<1ns)
- Bi-directional, single line protection
- Surface mount



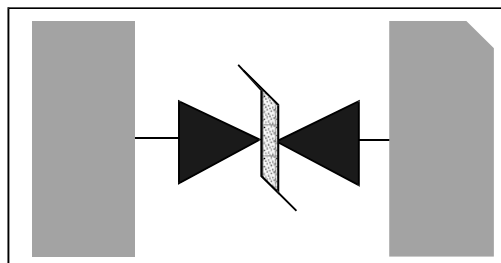
»Applications

- Smart Phone/Mobile Internet Device
- Laptop/Desktop Computer
- Antennas
- High Speed Ethernet
- USB 2.0 and USB 3.0
- Lightning and Thunder Bolt Interface

»Mechanical Data

- Surface mount
- RoHS Compliant
- Halogen Free

»Schematic & PIN Configuration



DFN1006

»Absolute Maximum Rating

Rating	Symbol	Conditions	Value	Units
ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air)	V_{ESD}		± 8 ± 15	kV
Lead Soldering Temperature	T_L		260(10seconds)	$^{\circ}C$
Operating Temperature	T_O		-40 to + 125	$^{\circ}C$
Storage Temperature	T_{stg}		-55 to + 125	$^{\circ}C$

»Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Continuous Operating Voltage	V_{DC}				15	V
Trigger Voltage	V_T	IEC61000-4-2 8KV contact discharge		450		V
Leakage Current	I_L	$V_{DC}=15V, T=25^{\circ}C$			10	nA
Clamping Voltage	V_C	IEC61000-4-2 8KV contact discharge		40		V
Capacitance	C_P	Measured at 10MHz		0.05		pF
ESD Pulse Withstand	Pulses	IEC61000-4-2 8KV contact discharge	1000			

»ESD Clamping Test

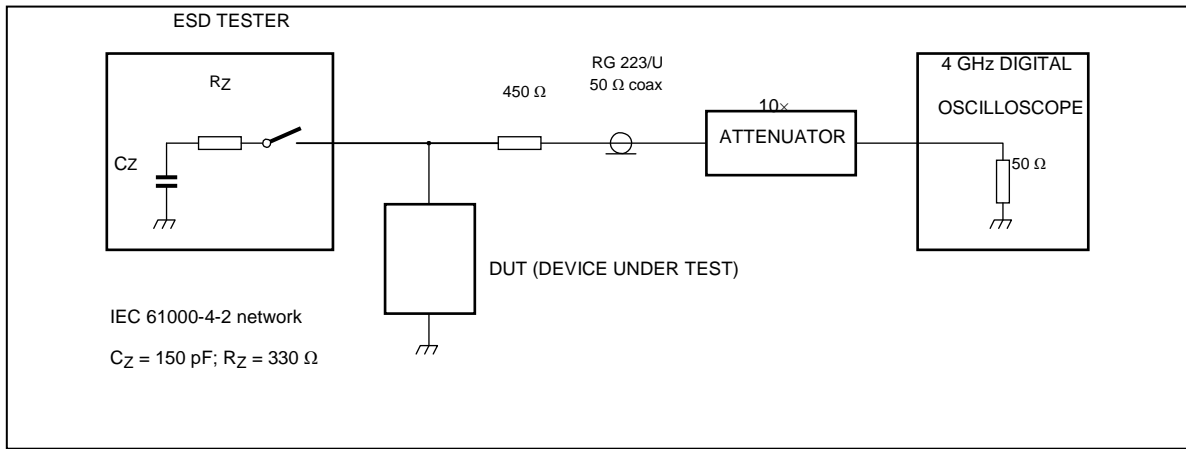


Fig.1 ESD Clamping Test Waveform

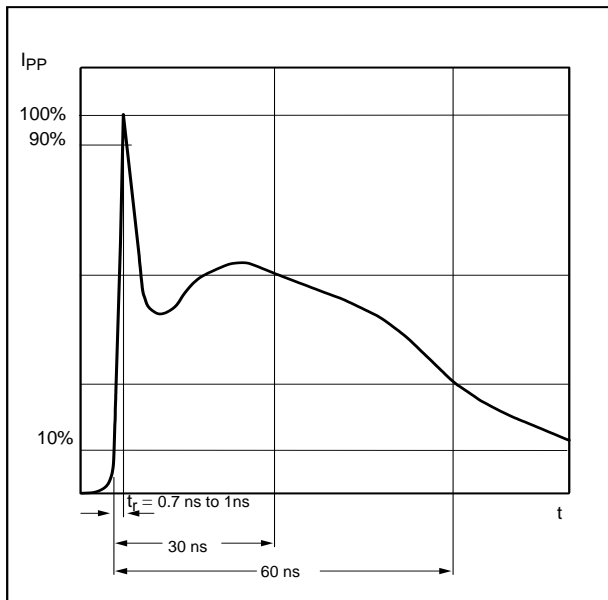


Fig.2 ESD Waveform after Clamping

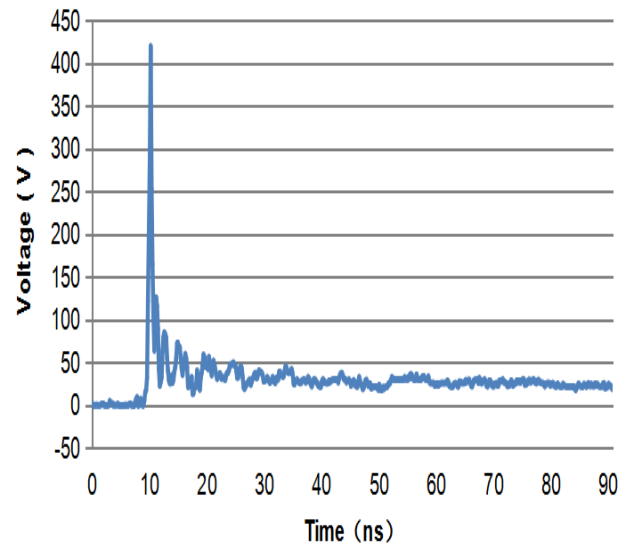
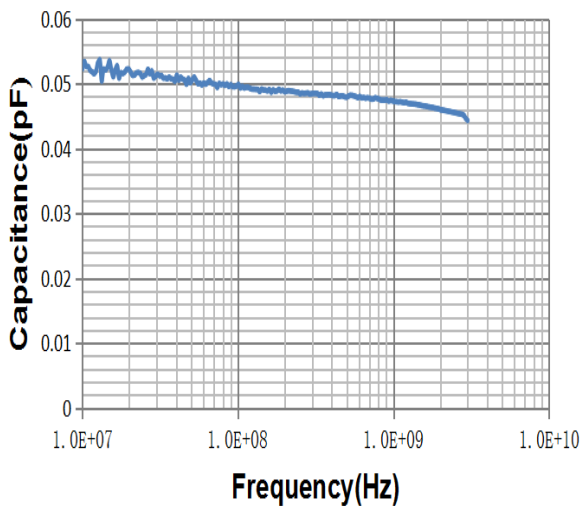
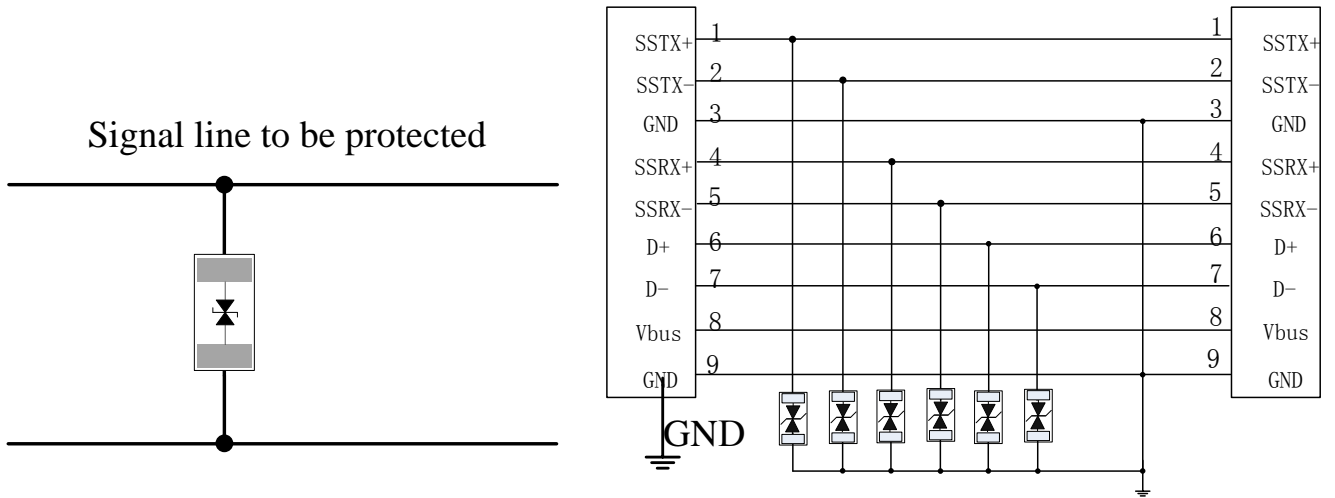


Fig.3 Capacitance VS Frequency



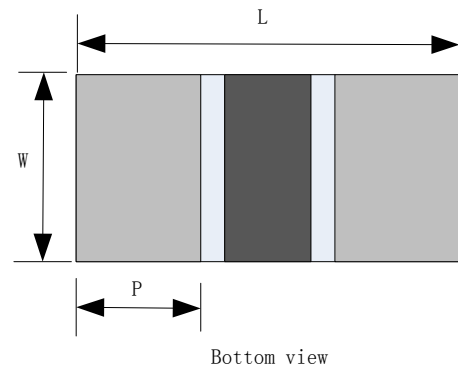
»Outline Drawing – DFN1006



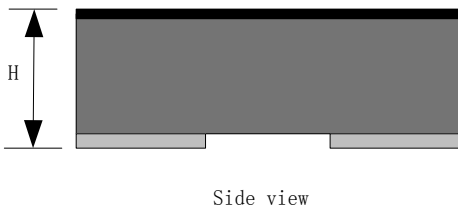
BNLXES15AAA1-133 in Signal line protected

BNLXES15AAA1-133 in USB3.0 application

»Outline Drawing – DFN1006



Dimension	Unit: Millimeters		
	Min.	Typ.	Max.
L	0.90	1.00	1.10
W	0.42	0.52	0.62
P	0.15	0.25	0.35
H	0.25	0.38	0.45



»Ordering information

Order code	Package	Base qty	Delivery mode
BNLXES15AAA1-133	DFN1006	10k	Tape and reel