DESCRIPTION

The ES15AGCDF is available in DFN1006 package.

APPLICATION

- Smart phone/Mobile Internet Device
- Laptop/Desktop Computer
- Antennas
- Hight Speed Ethernet
- USB 3.0/3.1
- HDMI 1.4/2.0
- SATA and eSATA interface

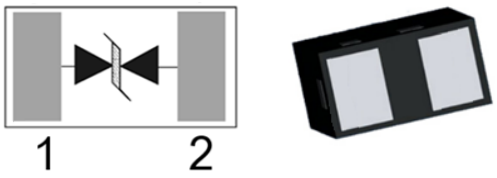
FEATURE

- The best ESD protection for highspeed low voltage applications
- Ultralow capacitance, 0.05 PF (typ)
- Low leakage current (<10nA)
- Fast response current (<1ns)
- Bi-directional, single line protection
- IEC 61000-4-2 (ESD Air Discharge): ±15 kV
  IEC 61000-4-2 (ESD Contact Discharge): ±8 kV

MACHANICAL DATA

- Surface mount
- RoHS compliant
- Halogen Free

PIN DESCRIPTION



PIN#	DESCRIPTION
1,2	Anode

ORDERING INFORMATION

Package Type	Part Number
DFN1006	ES15AGCDF
Note	SPQ: 10,000pcs/Reel
AiT provides all RoHS Compliant Products	

ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise specified.

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air)	V_{ESD}	±8 ±15	kV
Lead Solder Temperature	T_L	260 (10sec)	°C
Operating Temperature	To	-55/+125	°C
Storage Temperature	T_{STG}	-40/+125	°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise specified.

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			10	nA
Clamping Voltage	V_C	IEC61000-4-2 8KV Contact discharge		40		V
Capacitance	C_J	Measured at 10MHz		0.05		pF

TYPICAL PERFORMANCE CHARACTERISTICS

Fig1. ESD Clamping Test

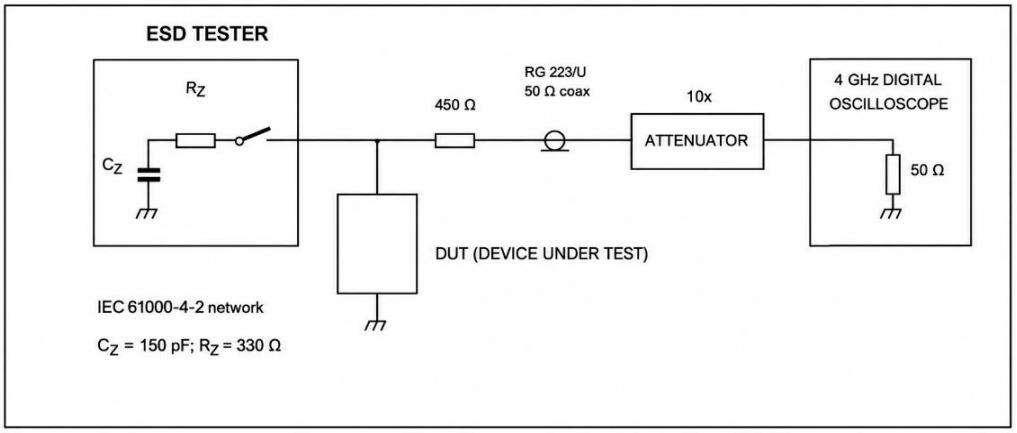


Fig 2. ESD Clamping Test Waveform

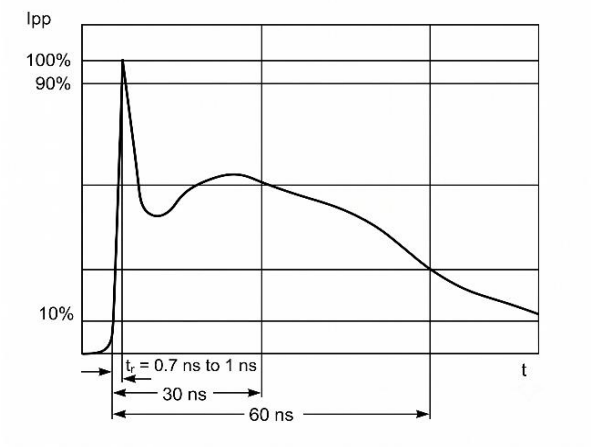


Fig 3. ESD Waveform after Clamping

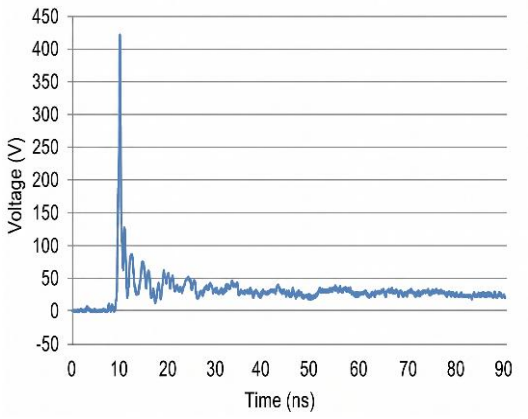


Fig 4. Capacitance VS Frequency

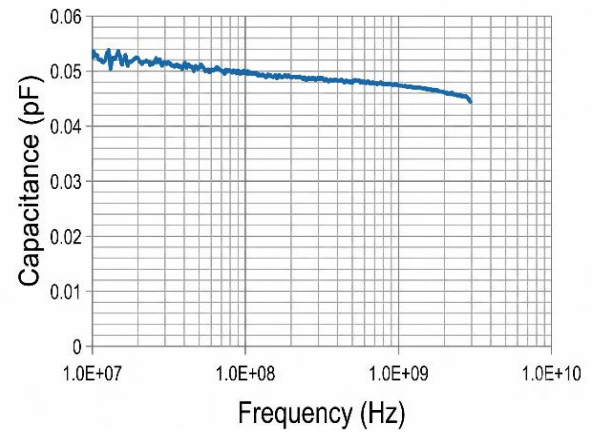
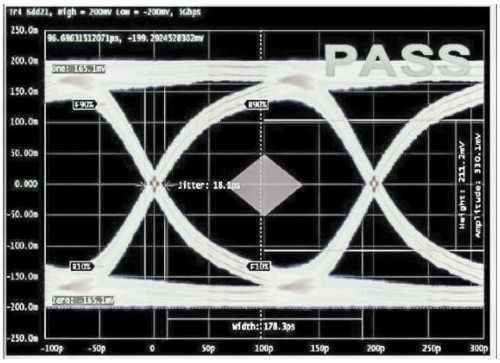


Fig 5. USB3.0 mask at 5.0 Gbps



TYPICAL APPLICATION CIRCUIT

Fig 6. Signal line protected

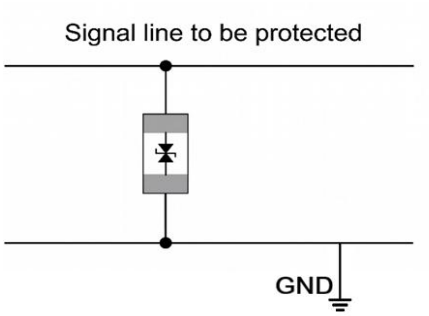
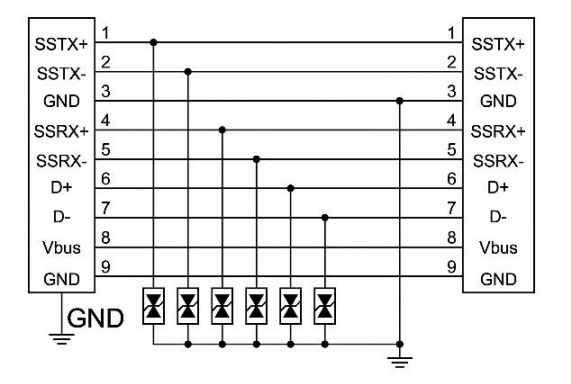
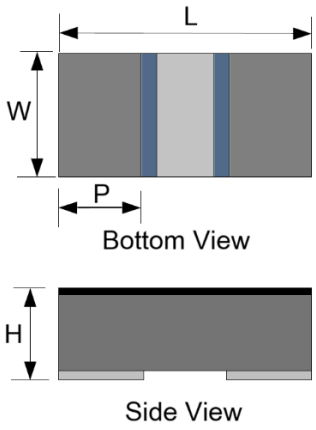


Fig 7. USB3.0/3.1 Application

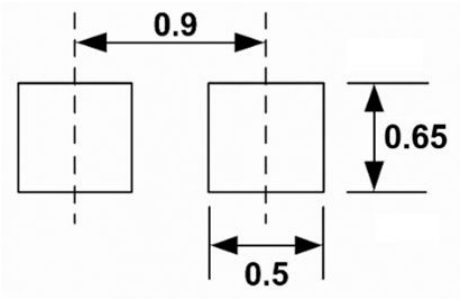


PACKAGE INFORMATION

Dimension in DFN1006 Package



Recommended Pad Layout



Symbol	Min.	Max.
L	0.90	1.10
W	0.42	0.62
P	0.15	0.35
H	0.25	0.45

UNIT: mm

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