

### Description

This is working voltage 5V, Bi-directional, ESD protection diode in a DFN1006 package.

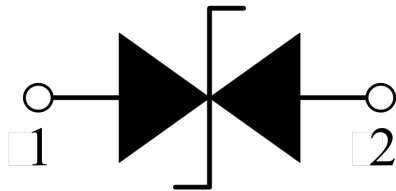
### Applications

- Smart Phone and Tablet PC
- TV and Set Top Box
- Wearable Devices
- PDA

### Features

- Capacitance: 15pF(Max.)
- Reverse Working Voltage: 5V
- IEC 61000-4-2 (ESD Air):  $\pm 30\text{KV}$
- IEC 61000-4-2 (ESD Contact):  $\pm 30\text{KV}$
- IEC 61000-4-5 (Lightning 8/20 $\mu\text{s}$ ): 8.0A

### Schematic Diagram & Pinning



### Marking

See Marking Instructions.

**Limiting Values(TA = 25 ° C, unless otherwise specified)**

Symbol	Parameter	Conditions	Min	Max	Unit
VESD	Electrostatic Discharge Voltage	IEC 61000-4-2; Contact Discharge	-	±30	kV
		IEC 61000-4-2; Air Discharge	-	±30	kV
PPP	Peak Pulse Power	tP = 8/20 μs	-	80	W
IPPM	Rated Peak Pulse Current	tP = 8/20 μs	-	8.0	A
TA	Ambient Temperature Range	-	-55	125	°C
Tstg	Storage Temperature Range	-	-55	150	°C

**Electrical Characteristics (Ta=25°C)**

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
VRWM	Reverse Working Voltage	TA = 25 °C	-	-	5.0	V
VBR	Breakdown Voltage	IR = 1mA; TA = 25 °C	5.6	-	8.4	V
IR	Reverse Leakage Current	VRWM = 5V; TA = 25 °C	-	-	0.1	μA
VC	Clamping Voltage	I <sub>PP</sub> =8A, t <sub>P</sub> =8/20μs	-	-	10	V
CJ	Junction Capacitance	VR = 0V, f = 1 MHz	-	-	15	pF

Typical Characteristics

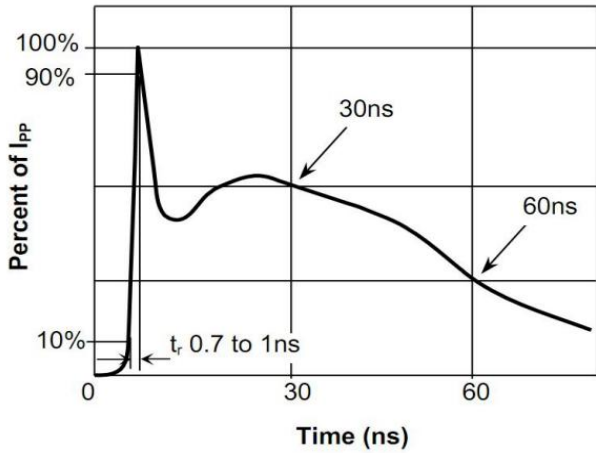


Fig.1 Pulse Waveform-ESD (IEC61000-4-2)

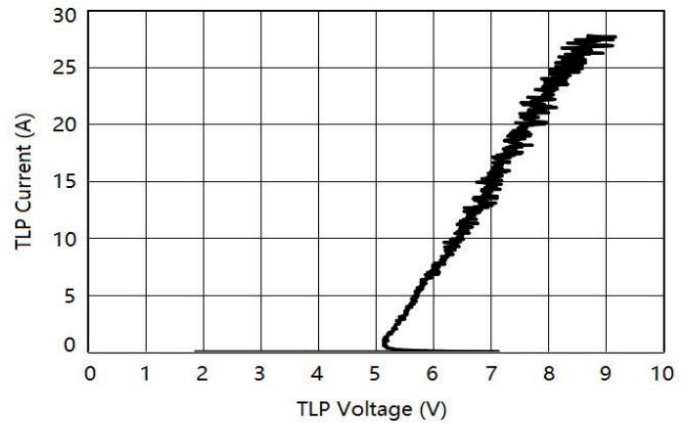


Fig.2 Transmission Line Pulse (TLP)

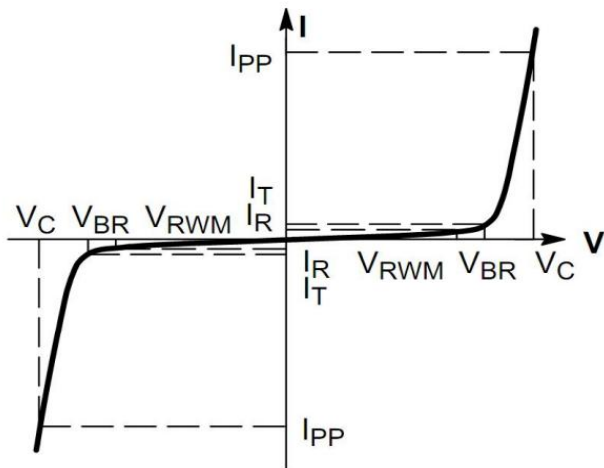


Fig.3 V-I Characteristics for Bidirectional Diode

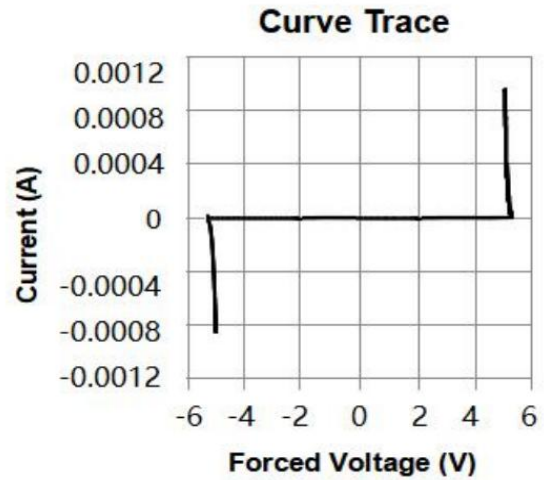


Fig.4 IV Curve

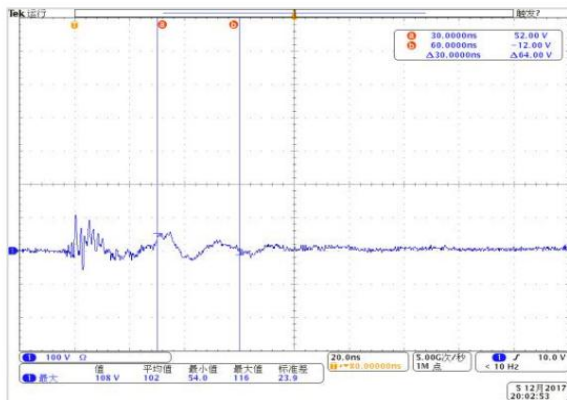


Fig.5 Clamping Voltage at IEC61000-4-2  
+8kV Pulse Waveform

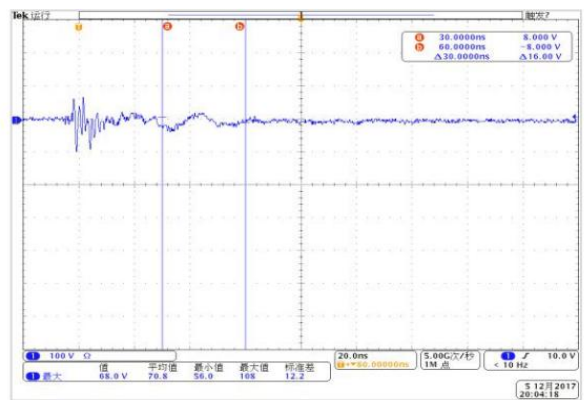
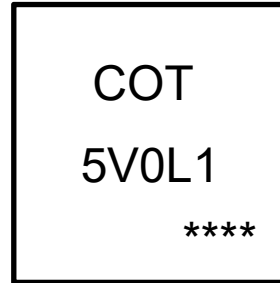


Fig.6 Clamping Voltage at IEC61000-4-2  
-8kV Pulse Waveform

Marking Information

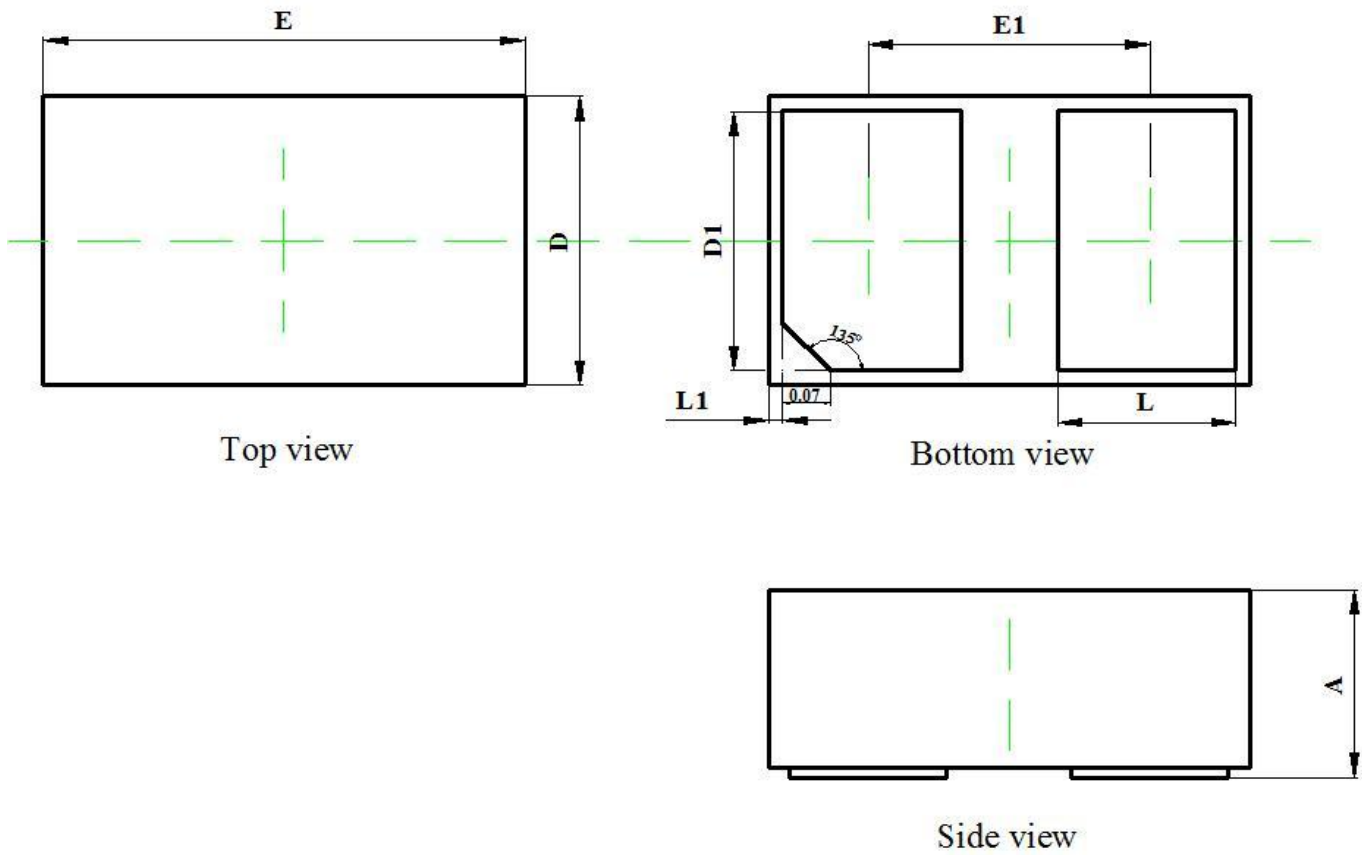


- Note:
- COT: Company Logo
  - 5V0L1: Product Type.
  - \*\*\*\*: Lot No. Code, code change with Lot No.

Order Information

Type	Package	Size (mm)	Delivery Form	Delivery Quantity
CTESD5V0L1B2ZP	DFN1006	1.00x0.60x0.40	7" T&R	10,000

Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
<b>A</b>	0.350	0.450	0.014	0.018
<b>D</b>	0.550	0.650	0.022	0.026
<b>E</b>	0.950	1.050	0.037	0.041
<b>D1</b>	0.420	0.520	0.017	0.020
<b>E1</b>	0.550	0.650	0.022	0.026
<b>L</b>	0.270	0.370	0.011	0.015
<b>L1</b>	0.000	0.100	0.000	0.004