Description

This is working voltage 3.3V ,Bi-directional,ESD protection diode in a DFN1006 package.

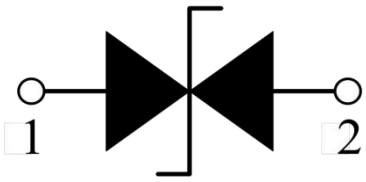
Applications

- Computers and peripherals
- Digital Cameras
- Audio and video equipment
- Cellular handsets and accessories
- Portable electronics

Features

- Capacitance: 0.25pF(typ.)
- Reverse Working Voltage: 3.3V
- IEC 61000-4-2 (ESD Air): ± 25KV
- IEC 61000-4-2 (ESD Contact): ±20KV
- IEC 61000-4-5 (Lightning 8/20μs): 4A

Schematic Diagram& Pinning



Marking

See Marking Instructions.

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

Symbol	Parameter	Conditions	Min	Max	Unit
V_{ESD}	Electrostatic Discharge Voltage	IEC 61000-4-2; Contact Discharge	-	±20	kV
		IEC 61000-4-2; Air Discharge	-	±25	kV
P_{PP}	Peak Pulse Power	t_P = 8/20 μs	-	80	W
I_{PPM}	Rated Peak Pulse Current	t_P = 8/20 μs	-	4	A
T_A	Ambient Temperature Range	-	-55	125	℃
T_{stg}	Storage Temperature Range	-	-55	150	℃

Electrical Characteristics (Ta=25℃)

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V_{RWM}	Reverse Working Voltage	T_A = 25 °C	-	-	3.3	V
V_{BR}	Breakdown Voltage	I_R = 1mA; T_A = 25 °C	4.7	5.8	7.0	V
I_R	Reverse Leakage Current	V_{RWM} = 3.3V; T_A = 25 °C	-	-	1	μA
V_C	Clamping Voltage	I_{PP}= 1A, t_P =8/20μs	-	10	-	V
		I_{PP}=4A, t_P =8/20μs	-	18	20	V
C_J	Junction Capacitance	V_R = 0V, f = 1 MHz	-	0.25	0.40	pF

Typical Characteristics

Fig.1 - Peak Pulse Power Rating

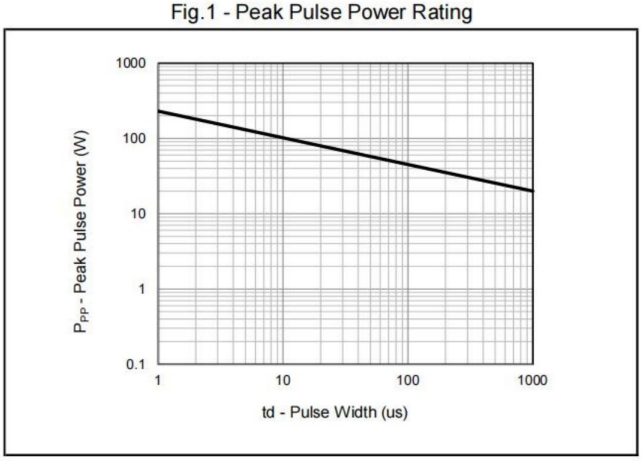


Fig.2 - Pulse Derating Curve

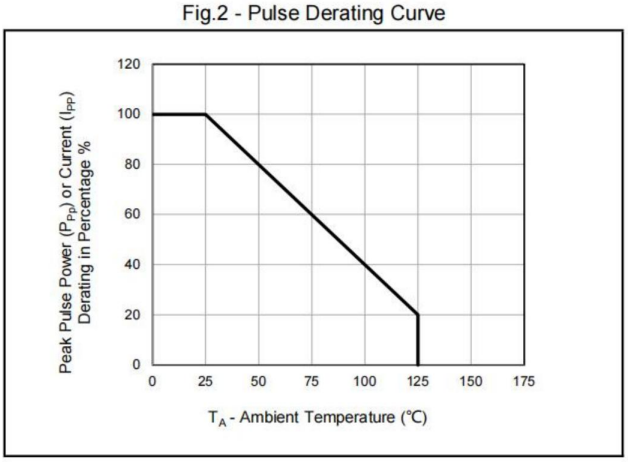


Fig.3 - 8/20us Pulse Waveform

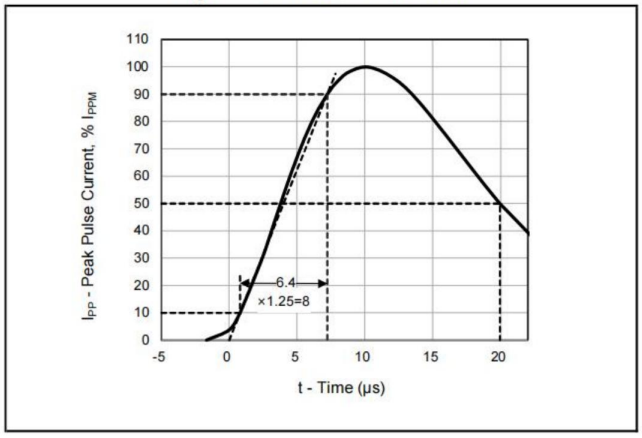


Fig.4 - Typical Clamping Voltage

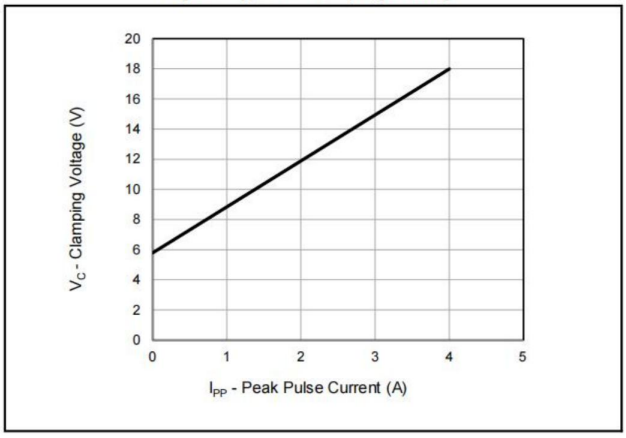


Fig.5 - ESD Pulse Waveform (IEC61000-4-2)

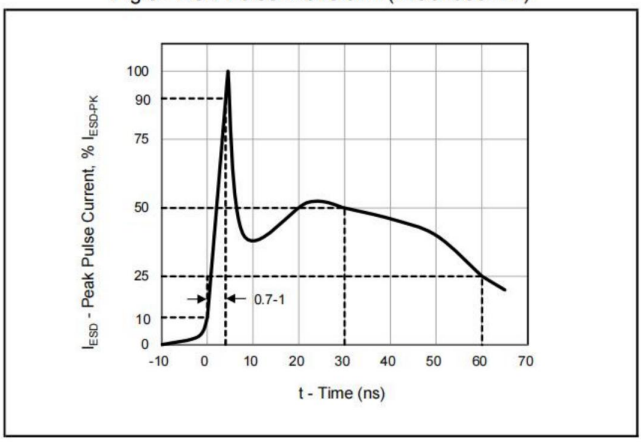
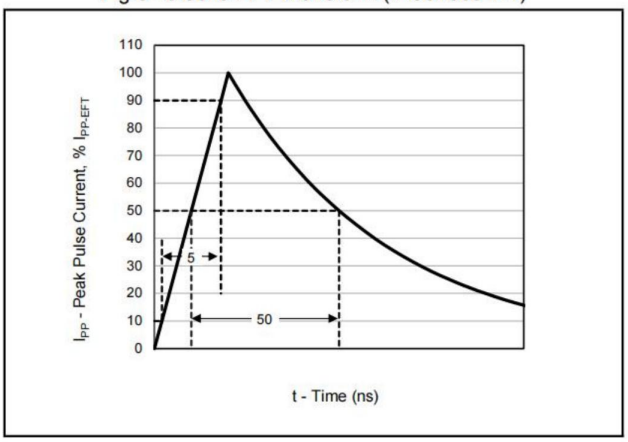
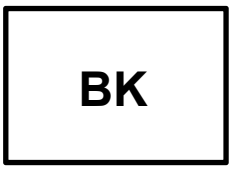


Fig.6 - 5/50ns EFT Waveform (IEC61000-4-4)



Marking Information

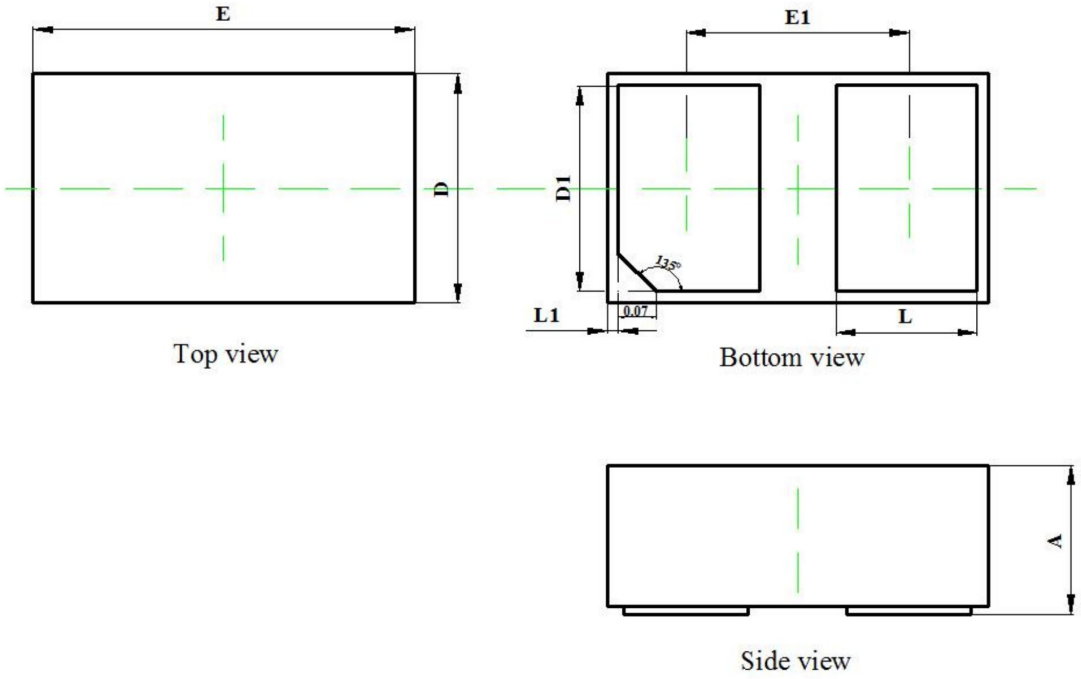


Note：
"BK" is part number, fixed

Order Information

Type	Package	Size (mm)	Delivery Form	Delivery Quantity
CTESD3V3X1ZP	DFN1006	1.00x0.60x0.475	7” T&R	10,000

Package Outline Dimensions



Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C