



ESD2V5V0C

Bi-directional ESD Protection Diode in DFN0603 Package Datasheet

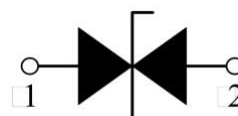
Features

- Capacitance: 15pF(typ.)
- 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 μs): 8A

Pin Description



Schematic Diagram



Applications

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

Order Information

Type	Package	Size(mm)	Delivery Form	Delivery Quantity
ESD2V5V0C	DFN0603	0.62x0.32x0.32	7" T&R	15000

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	-	± 30	kV
		IEC 61000-4-2; Air Discharge	-	± 30	kV
P _{PP}	Peak Pulse Power	t _P = 8/20 μs	-	80	W
I _{PPM}	Rated Peak Pulse Current	t _P = 8/20 μs	-	8	A
T _A	Ambient Temperature Range	-	-55	125	°C
T _{stg}	Storage Temperature Range	-	-55	150	°C

Electrical Characteristics (TA = 25 °C, unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _{RWM}	Reverse Working Voltage	T _A = 25 °C	-	-	5.0	V
V _{BR}	Breakdown Voltage	I _R = 1mA; T _A = 25 °C	5.6	6.5	8.4	V
I _R	Reverse Leakage Current	V _{RWM} = 5V; T _A = 25 °C	-	-	0.1	μA
		I _{PP} = 1A, t _P = 8/20 μs	-	-	6	V
V _C	Clamping Voltage	I _{PP} = 8A, t _P = 8/20 μs	-	-	10	V
C _J	Junction Capacitance	V _R = 0V, f = 1 MHz	-	15	18	pF

Typical Characteristics
ESD2V5V0C

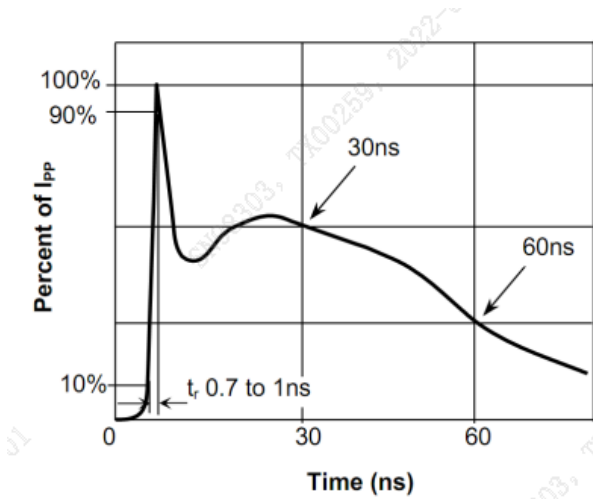


Fig.1 Pulse Waveform-ESD(IEC61000-4-2)

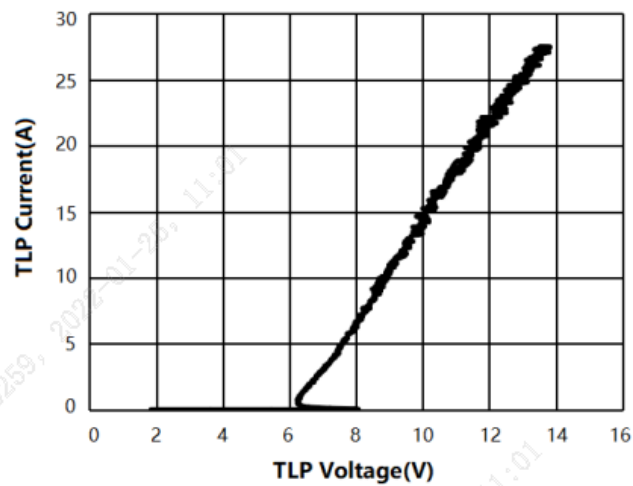


Fig.2 Transmission Line Pulse (TLP)

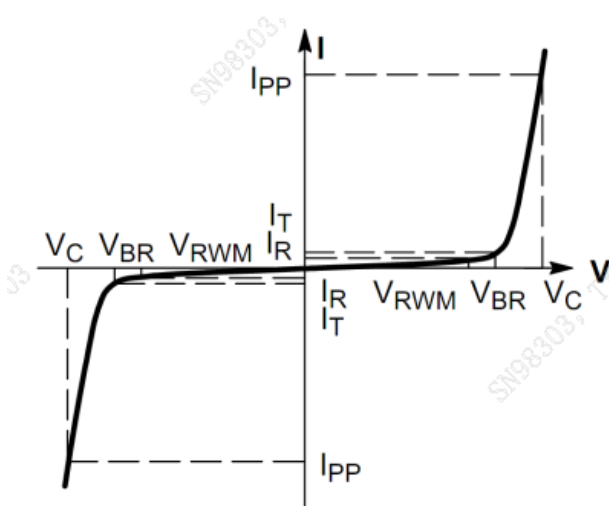


Fig.3 V-I Characteristics for Bidirectional Diode

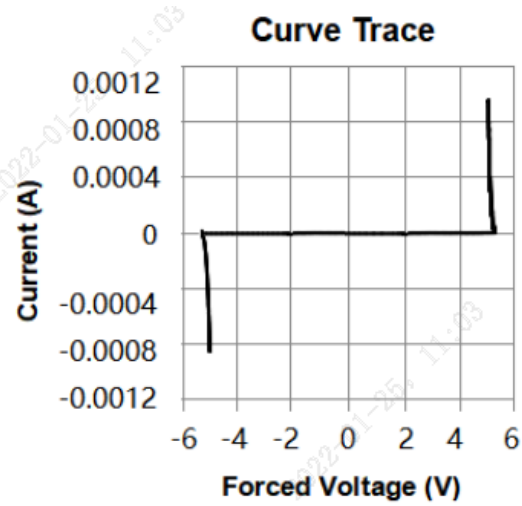


Fig.4 IV Curve

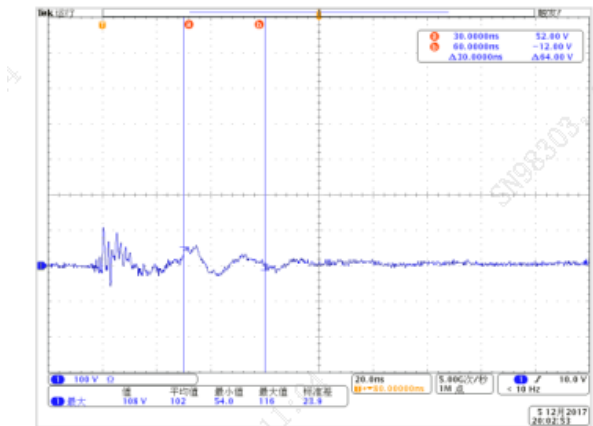


Fig.5 Clamping Voltage at IEC61000-4-2
+8kV Pulse Waveform

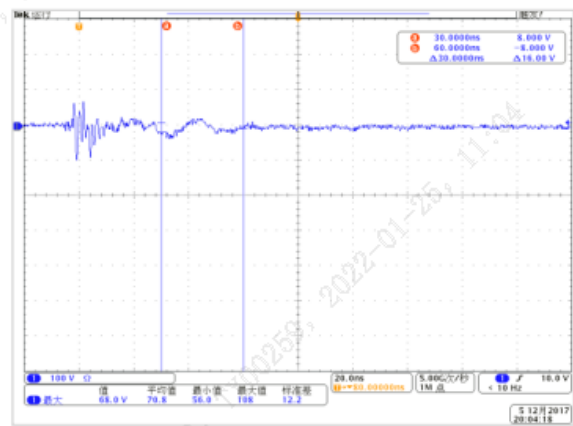


Fig.6 Clamping Voltage at IEC61000-4-2
-8kV Pulse Waveform

Package Outline Dimensions

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.280	0.320	0.011	0.013
D	0.290	0.350	0.011	0.014
E	0.590	0.650	0.023	0.026
D1	0.220	0.280	0.009	0.011
E1	0.340	0.400	0.013	0.016
L	0.160	0.220	0.006	0.009

