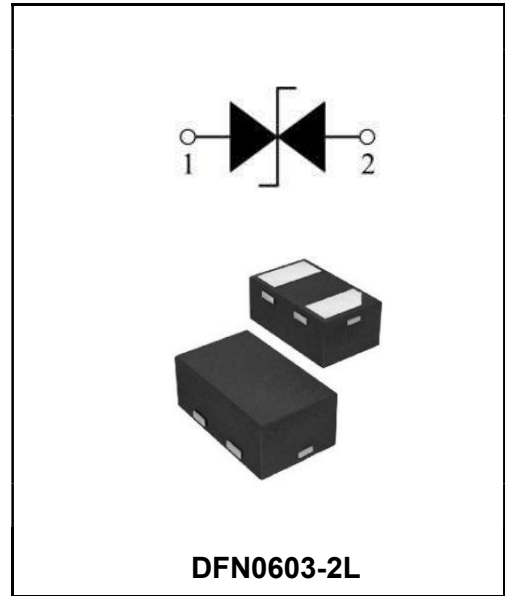


Bi-directional ESD Protection Diode
Features

- ◆Capacitance: 15pF(typ.)
- ◆Reverse Working Voltage: 5V
- ◆IEC 61000-4-2 (ESD Air): ±25KV
- ◆IEC 61000-4-2 (ESD Contact): ±25KV
- ◆IEC 61000-4-5 (Lightning 8/20μs): 7A

Application

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


Marking Code

ESD0603B5V0C

A5.

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	-	±25	kV
		IEC 61000-4-2; Air Discharge	-	±25	kV
P _{PP}	Peak Pulse Power	t _P = 8/20 μs		70	W
I _{PPM}	Rated Peak Pulse Current	t _P = 8/20 μs		7	A
T _A	Operating 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	TA = 25 °C	-	-	5.0	V
V _{BR}	Breakdown Voltage	I _R = 1mA; TA = 25 °C	5.6	6.5	8.4	V
I _R	Reverse Leakage Current	V _{RWM} = 5 V; TA = 25 °C	-	-	0.1	μA
V _C	Clamping Voltage	I _{PP} =1A, t _P =8/20μs	-	-	6	V
		I _{PP} =7A, t _P =8/20μs	-	-	10	V
C _J	Junction Capacitance	V _R = 0V, f = 1 MHz	-	15	18	pF

Typical Characteristics

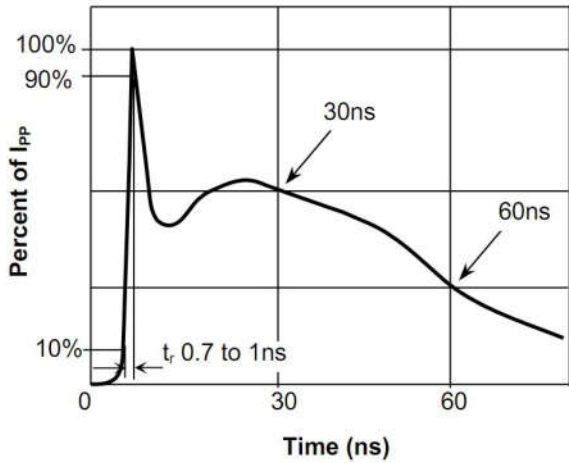


Fig.1 Pulse Waveform-ESD (IEC61000-4-2)

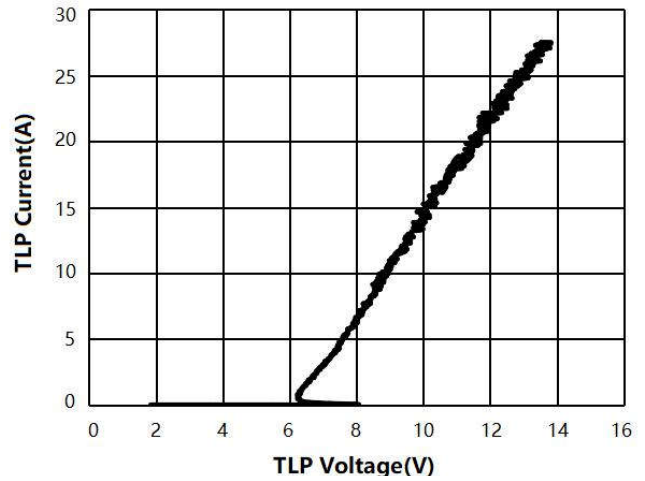


Fig.2 Transmission Line Pulse (TLP)

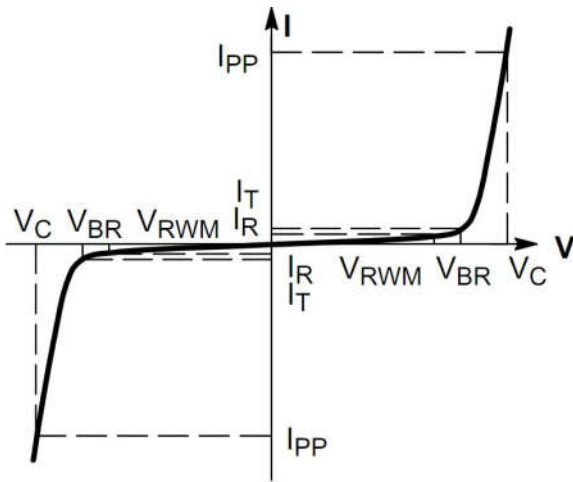


Fig.3 V-I Characteristics for Bidirectional Diode

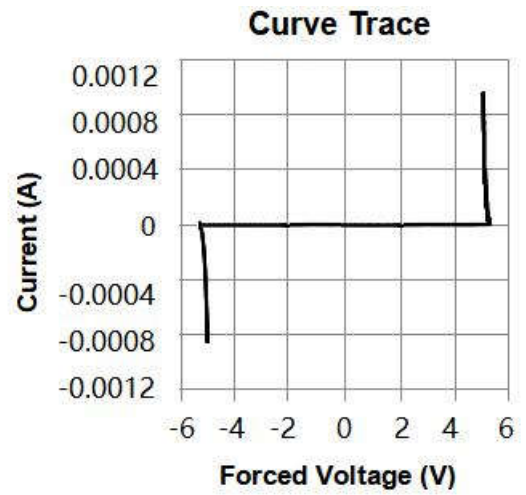


Fig.4 IV Curve

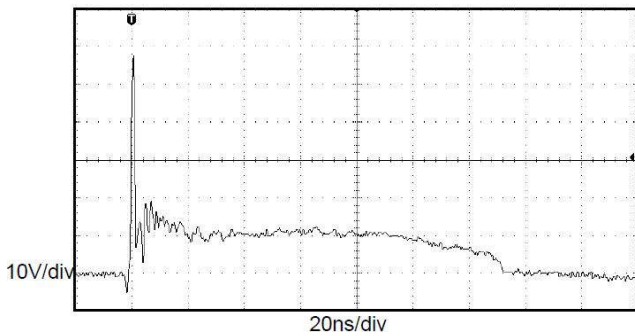


Fig.5 Clamping Voltage at IEC61000-4-2 -8kV Pulse Waveform

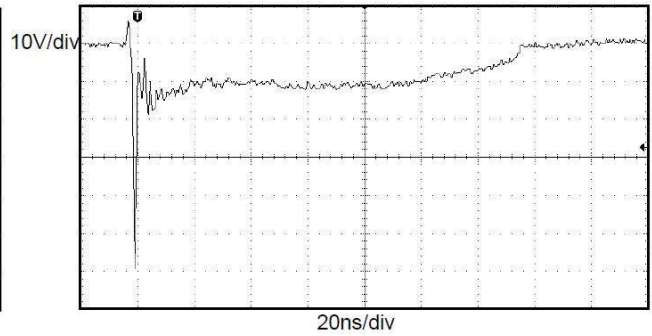
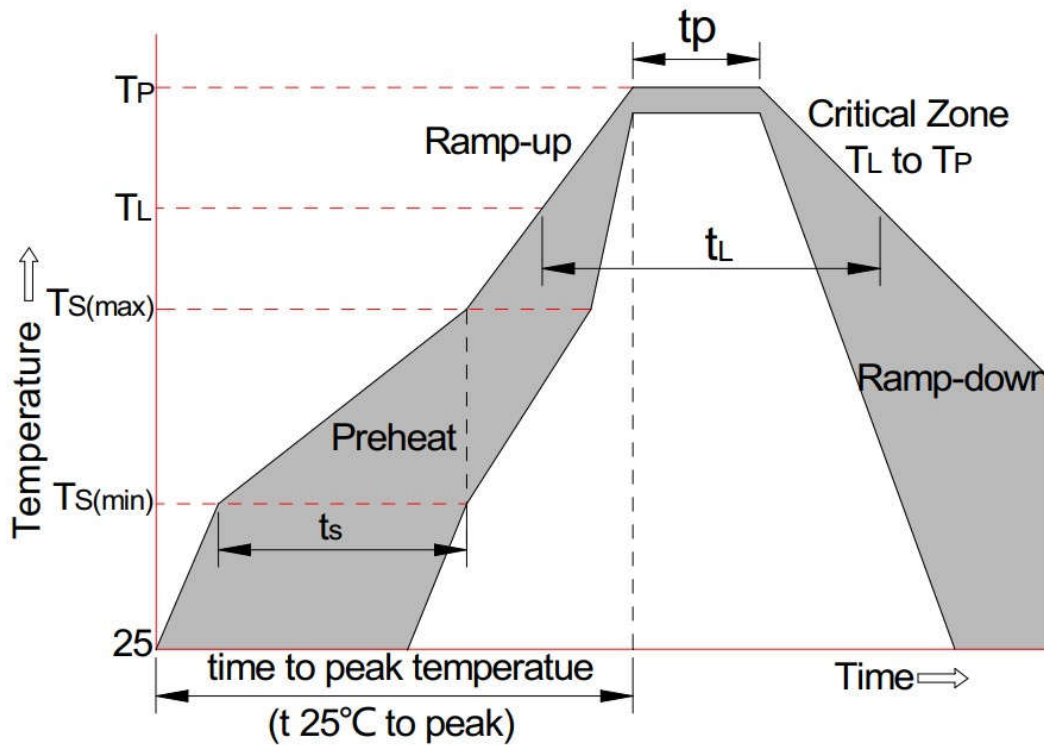


Fig.6 Clamping Voltage at IEC61000-4-2 +8kV Pulse Waveform



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) (t_s)	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

Ordering information

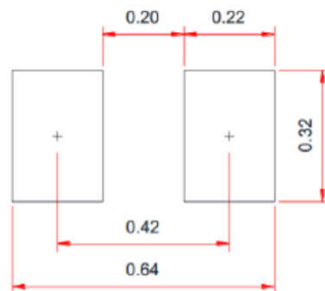
Package	Packing Description	Packing Quantity
DFN0603-2L	Tape/Reel,7"reel	15000PCS/Reel 450000PCS/Carton

Package Dimensions

DFN0603-2L

Dim.	Millimeter(mm)		Inches	
	Min.	Max.	Min.	Max.
A	0.28	0.32	0.011	0.013
D	0.29	0.35	0.0114	0.014
E	0.59	0.65	0.023	0.026
D1	0.22	0.28	0.026	0.011
E1	0.15	0.21	0.006	0.008
L	0.16	0.22	0.006	0.009
L1	-	0.100	-	0.004

The recommended mounting pad size(mm)



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