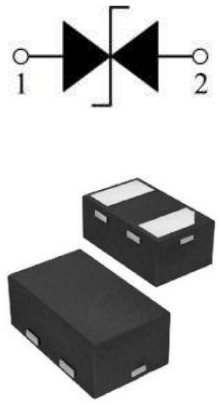
Bi-directional ESD Protection Diode

Features

- Capacitance: 10pF(typ.)
- Reverse Working Voltage: 3.3V
- IEC 61000-4-2 (ESD Air): ±30KV
- IEC 61000-4-2 (ESD Contact): ±30KV
- IEC 61000-4-5 (Lightning 8/20μs): 7A



DFN0603-2L

Application

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

Marking Code	
ESD0603B3V3B	C3

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	tP = 8/20 μs		60	W
I_{PPM}	Rated Peak Pulse Current	tP = 8/20 μs		7	A
T_A	Operating Temperature Range	-	-55	125	℃
Tstg	Storage Temperature Range	-	-55	150	℃

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

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V_{RWM}	Reverse Working Voltage	TA = 25 °C	-	-	3.3	V
V_{BR}	Breakdown Voltage	IR = 1mA	3.7	-	-	V
I_R	Reverse Leakage Current	VRWM = 3.3V	-	-	0.1	μA
V_C	Clamping Voltage	IPP=1A, tP =8/20μs	-	5.5	7.0	V
		IPP=7A, tP =8/20μs	-	8.5	10	V
CJ	Line Capacitance	VR = 0V, f = 1 MHz	-	10	15	pF

Typical Characteristics

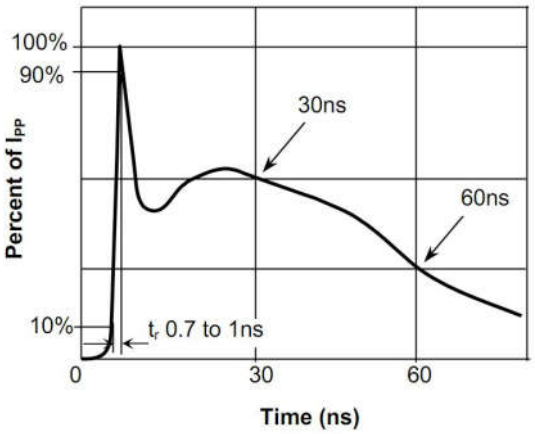


Fig.1 Pulse Waveform-ESD (IEC61000-4-2)

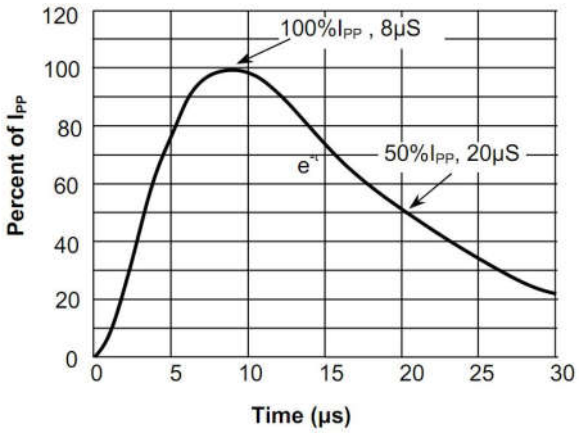


Fig.2 Pulse Waveform-8/20μs

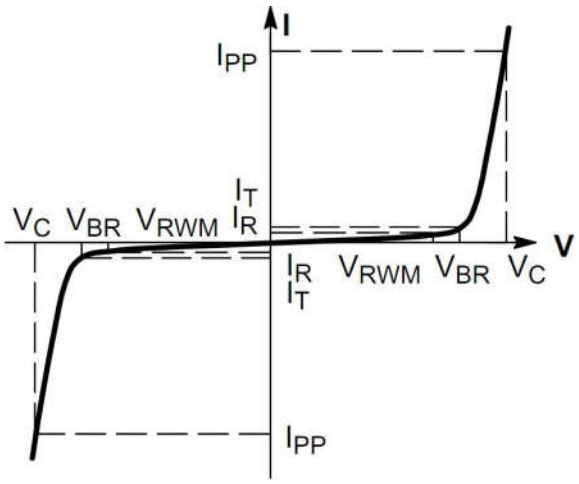


Fig.3 V-I Characteristics for Bidirectional Diode

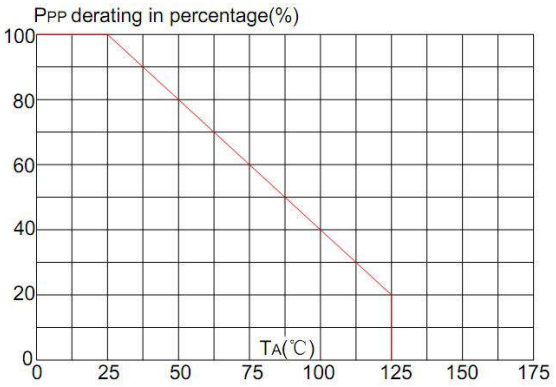
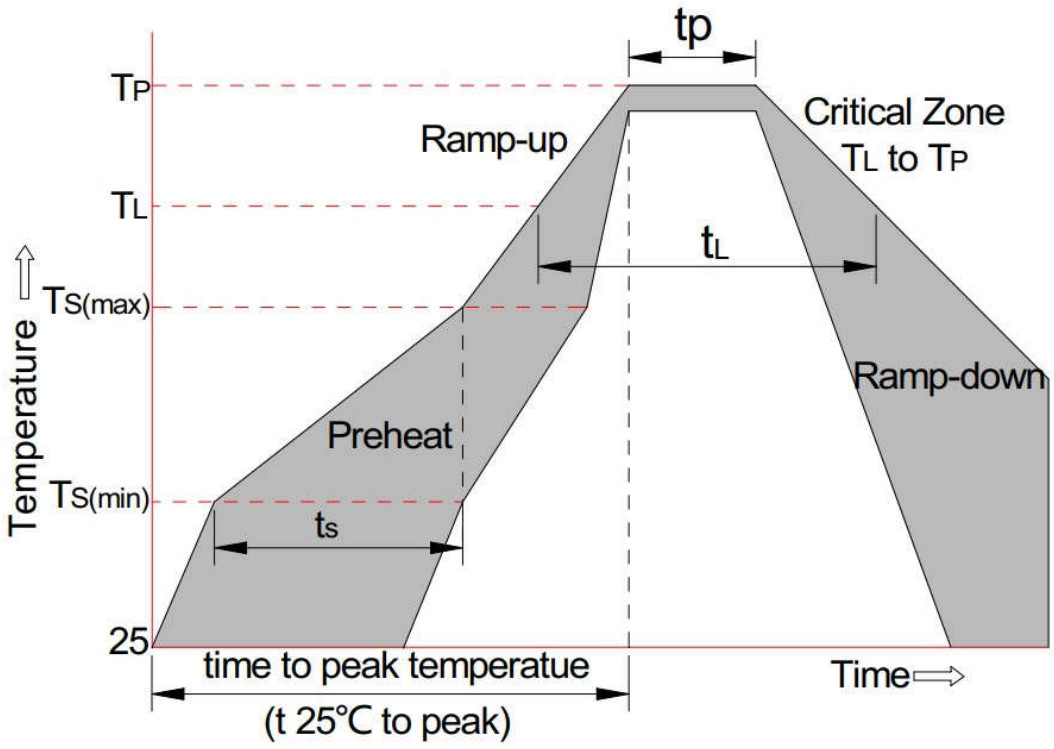


Fig.4 Power Derating Curve

Soldering Parameters



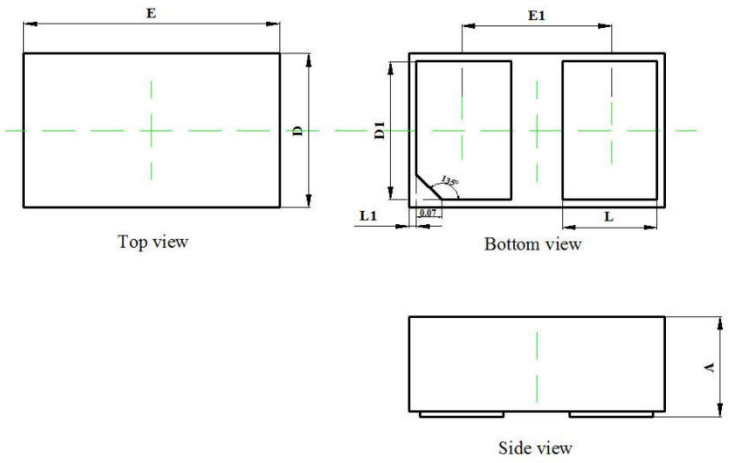
Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min (Ts(min))	+150°C
	-Temperature Max(Ts(max))	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (TL) to peak)		3°C/sec. Max
Ts(max) to TL - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(TL)(Liquid us)	+217°C
	-Temperature(tL)	60-150 secs.
Peak Temp (Tp)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (tp)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp (TP)		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

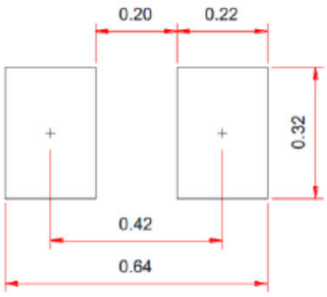
Package Dimensions

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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