

Descriptions

This is working voltage 7V ESD protection diode in a DFN0603-2L package

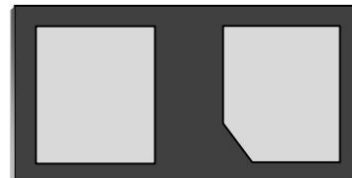
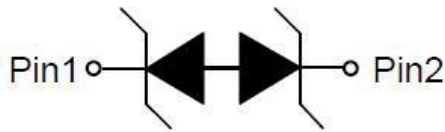
Features

- 70 Watts Peak Pulse Power per Line ($t_p = 8/20\mu s$)
- Small Body Outline Dimensions
- Protects one I/O or Power Line
- Low Clamping Voltage
- Working Voltage: 7V
- Low Leakage Current

Applications

- Laptop Computers
- Cellular Phones
- Digital Cameras
- Personal Digital Assistants (PDAs)

Equivalent Circuit & Pinning



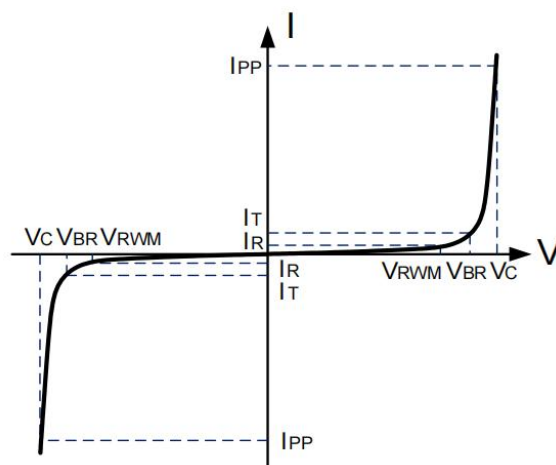
DFN0603-2L

Absolute Maximum Ratings($T_a=25^{\circ}\text{C}$)

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	70	W
Peak Pulse Current ($t_p=8/20\mu\text{s}$)	I_{PP}	5	A
Operating Temperature	T_J	-55 to + 125	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}\text{C}$

Electrical Parameters

Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Reverse Stand-Off Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



Electrical Characteristics(Ta=25°C)

CTESD7V0LA2ZA-2						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				7	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	8		12	V
Reverse Leakage Current	I_R	$V_{RWM}=7V$			500	nA
Clamping Voltage	V_C	$I_{PP}=5A, t_p=8/20\mu s$		11	14	V
Dynamic Resistance ^{1,2}	R_{DYN}	$TLP=0.2/100ns$		0.1		Ω
ESD Clamping Voltage ¹	V_C	$I_{PP} = 4A$ $t_p = 0.2/100ns$		9.5		V
ESD Clamping Voltage ¹	V_C	$I_{PP} = 16A$ $t_p = 0.2/100ns$		11		V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		11	15	pF

Notes :

1、TLP Setting : $t_p=100ns, t_r=0.2ns, I_{TLP}$ and V_{TLP} sample window: $t_1=70ns$ to $t_2=90ns$.2、Dynamic resistance calculated from $I_{PP}=4A$ to $I_{PP}=16A$ using "Best Fit" .

Electrical Characteristic Curve

Figure 1: Peak Pulse Power vs. Pulse Time

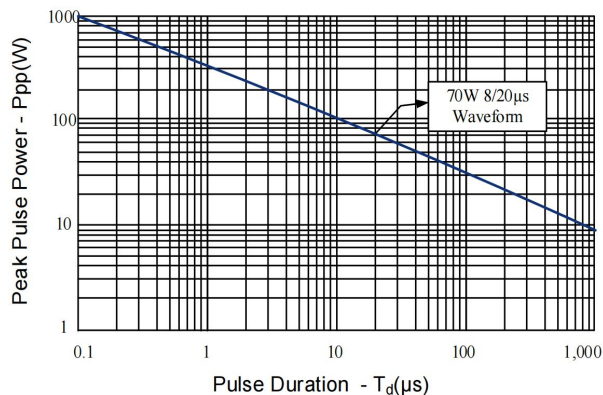


Figure 2: Power Derating Curve

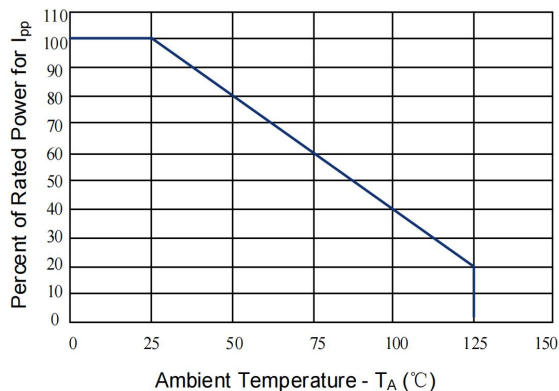


Figure 3: Clamping Voltage vs. Peak Pulse Current

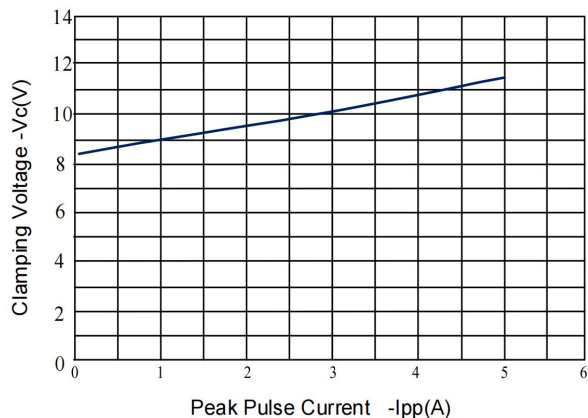


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

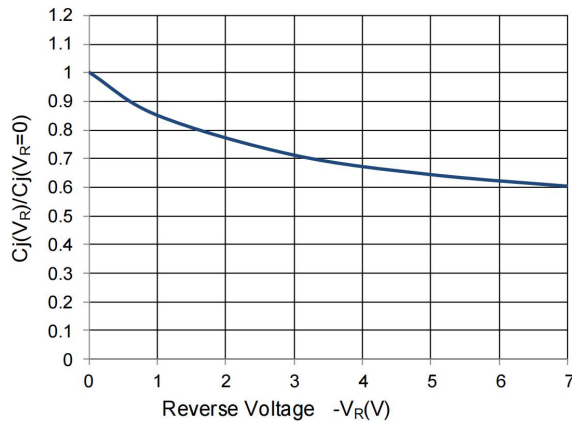


Figure 5: TLP Positive I-V Curve

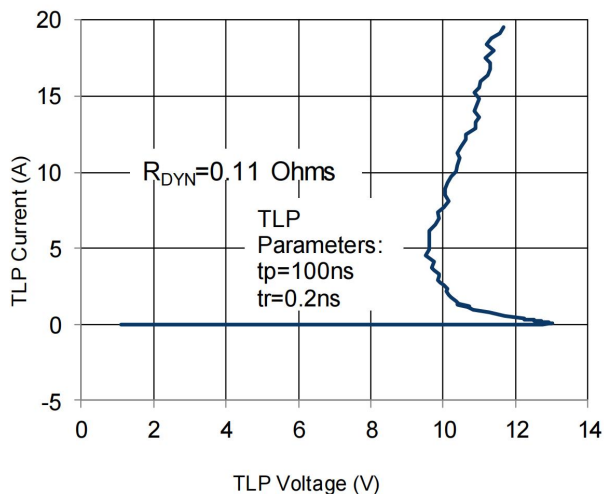
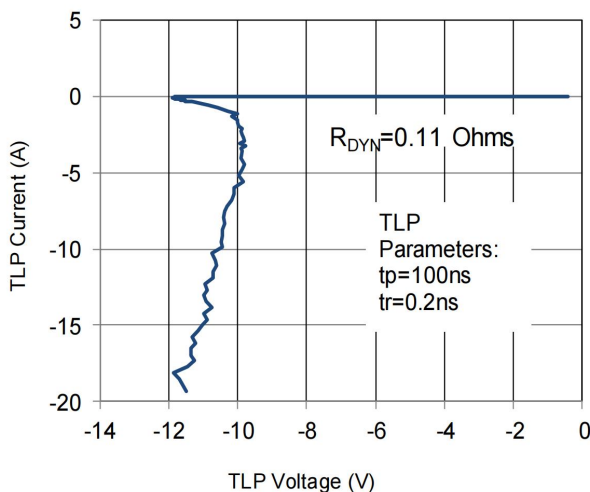
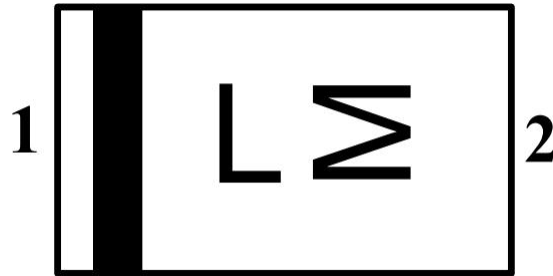


Figure 6: TLP Negative I-V Curve



Marking Instructions



L=Specific Device Code
M=Month Code

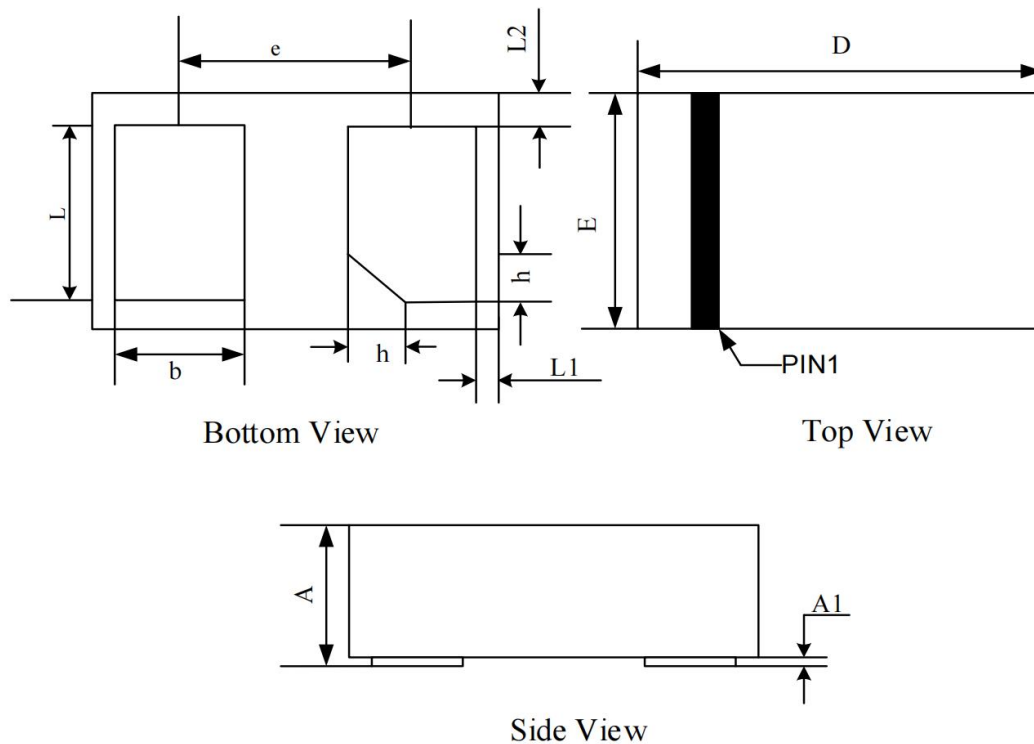
Packaging SPEC

REEL

Package Type	Units/Reel
DFN0603-2L	15000

Package Outline Dimensions

DFN0603-2L



SYMBOL	MILLIMETERS		
	NOM	MIN	MAX
A	--	0.280	0.320
A1	--	--	0.050
D	0.620	0.590	0.640
E	0.320	0.290	0.340
b	0.180	0.155	0.205
L	0.240	0.215	0.265
h	--	0.050	0.100
L1	0.040REF		
L2	0.040REF		
e	0.360BSC		