



DWLC2X5V1BT ESD Protection Diode

Feature

- Bi-directional ESD protection of one lines
- Working voltage: 5V
- 120W Peak pulse Power (8/20us)
- Junction Capacitance: 0.3pF(Typ)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 22\text{kV}$ contact $\pm 25\text{kV}$ air
- IEC 61000-4-5 (Lightning) 4.5A (8/20 μs)

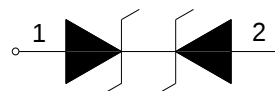
Application

- USB 2.0/3.0
- 10/100/1000 Ethernet
- Monitors and Flat Panel Displays
- Notebook Computers
- SIM ports
- ATM interface

Mechanical Data

- Package:DFN0603-2L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Circuit Diagram



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
DWLC2X5V1BT	DFN0603-2L		10000 Tape & Reel	7 inches



Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Max.	Unit
Peak pulse power ($t_p=8/20\mu\text{s}$)@ 25°C	P _{pk}	-	120	W
Peak pulse current ($t_p=8/20\mu\text{s}$)@ 25°C	I _{PP}		4.5	A
ESD (IEC61000-4-2 air discharge) @ 25°C	V _{ESD}	-	±25	kV
ESD (IEC61000-4-2 contact discharge) @ 25°C	V _{ESD}	-	±22	kV
Junction temperature	T _J	-	150	°C
Storage temperature	T _{STG}	-55	150	°C
Lead temperature	T _L	-	260	°C

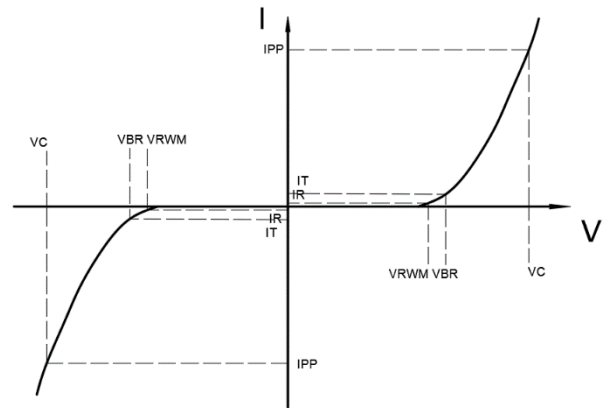
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}				5	V
Breakdown Voltage	V _{BR}	I _T = 1mA	6.5			V
Reverse Leakage Current	I _R	V _{RWM} = 5V			1.0	uA
Holding Voltage	V _C	I _{PP} =1A; $t_p=8/20\mu\text{s}$		12		V
Holding Voltage	V _C	I _{PP} =4.5A; $t_p=8/20\mu\text{s}$		22		V
Junction Capacitance	C _J	V _R = 0V, f = 1MHz		0.3		pF

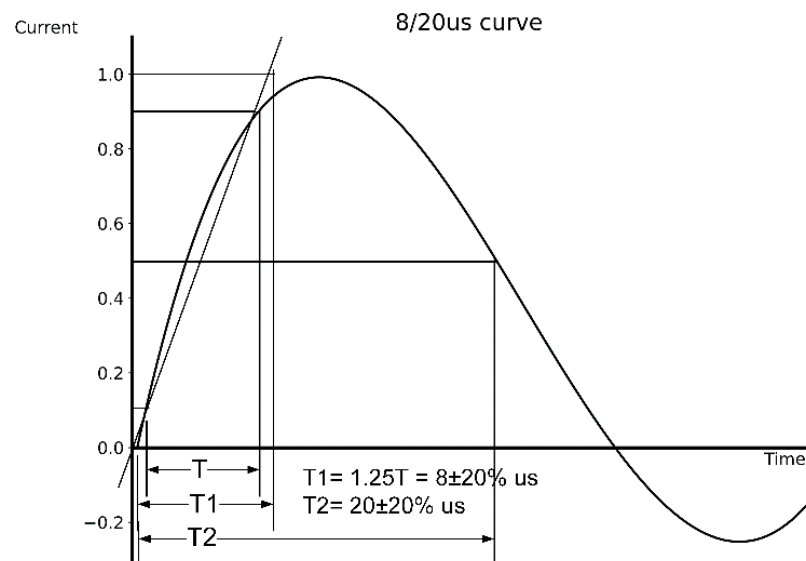


Electrical Parameters

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

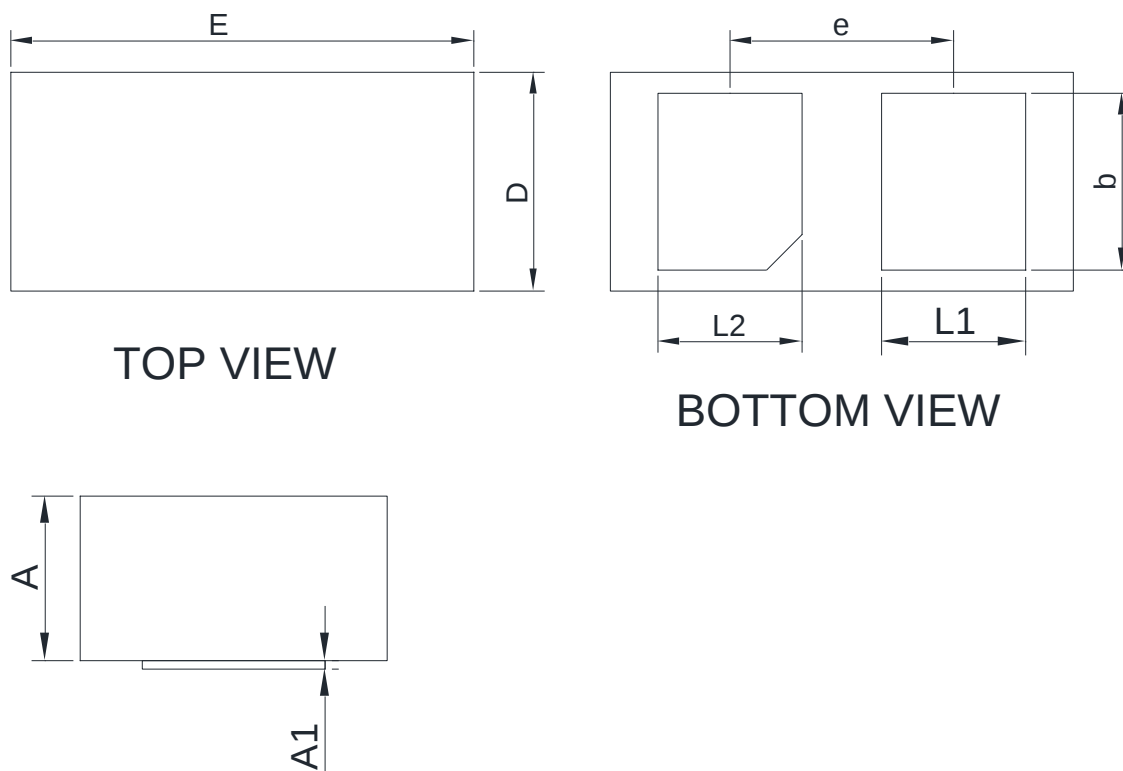


Typical Characteristics





Outline Drawing – DFN0603-2L



COMMON DIMENSIONS CUNITS MEASURE=MILLIMETER							
SYMBOL	MIN	MID	MAX	SYMBOL	MIN	MID	MAX
A	0.27	0.31	0.35	e	0.33	0.35	0.37
D	0.28	0.30	0.35	L1/L2	0.16	0.18	0.20
E	0.57	0.60	0.65	A1	0.00	-	0.015
b	0.22	0.24	0.26				