



DWLC41F5V6U ESD Protection Diode

Feature

- Uni-directional ESD protection of six lines
- 60Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 5V
- Junction Capacitance: 0.3pF(Typ IO-IO)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 8kV$ contact $\pm 15kV$ air
- IEC 61000-4-5 (Lightning) 4A (8/20 μs)

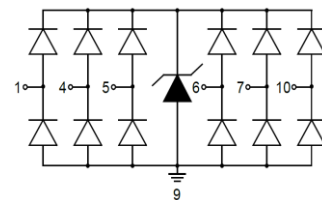
Application

- USB 2.0 and USB 3.0
- HDMI 1.3 and HDMI 1.4
- SATA and eSATA
- IEEE 1394
- PCI Express
- Notebooks

Mechanical Data

- Package: DFN4120-10L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	QTY per Reel	Reel Size
DWLC41F5V6U	DFN1006-2L	.5V6U/LOT	6000 pcs	7 inches



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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P_{PK}	60	W
Peak Pulse Current (8/20 μs)	I_{PP}	4	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 15 ± 8	kV
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Operating temperature	T_{OP}	-40 to +125	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55 to +150	$^{\circ}\text{C}$
Lead temperature	T_L	260	$^{\circ}\text{C}$

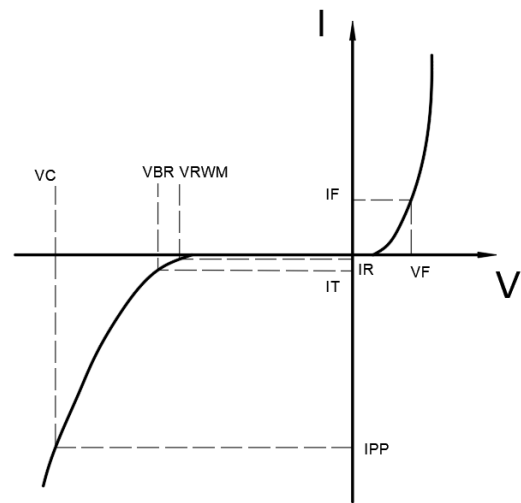
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	6			V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}$; $t_p=8/20\mu\text{s}$		10	12	V
Clamping Voltage	V_C	$I_{PP} = 4\text{A}$; $t_p=8/20\mu\text{s}$		12	15	V
Junction Capacitance	C_J	IO-GND $V_R=0\text{V}$; $f=1\text{MHz}$		0.6	0.8	pF
Junction Capacitance	C_J	IO-IO $V_R=0\text{V}$; $f=1\text{MHz}$		0.3	0.4	pF

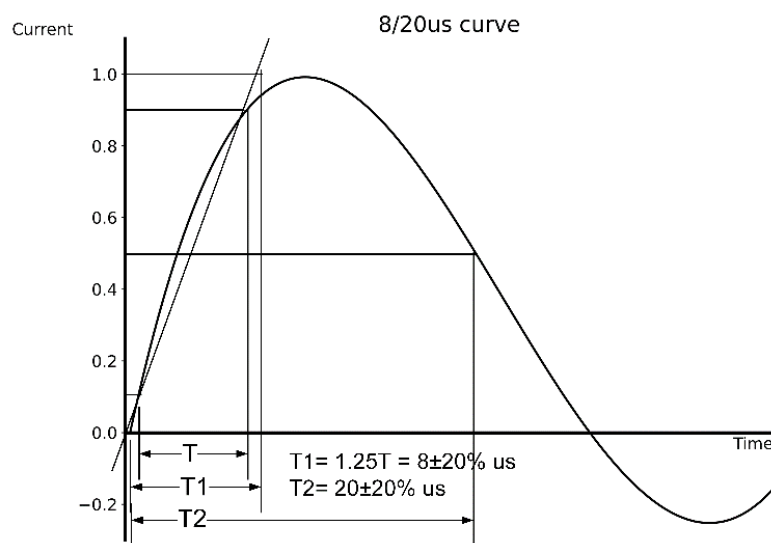


Electrical Parameters

Symbol	Parameters
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}
I_F	Forward Current
V_F	Forward Voltage @ I_F

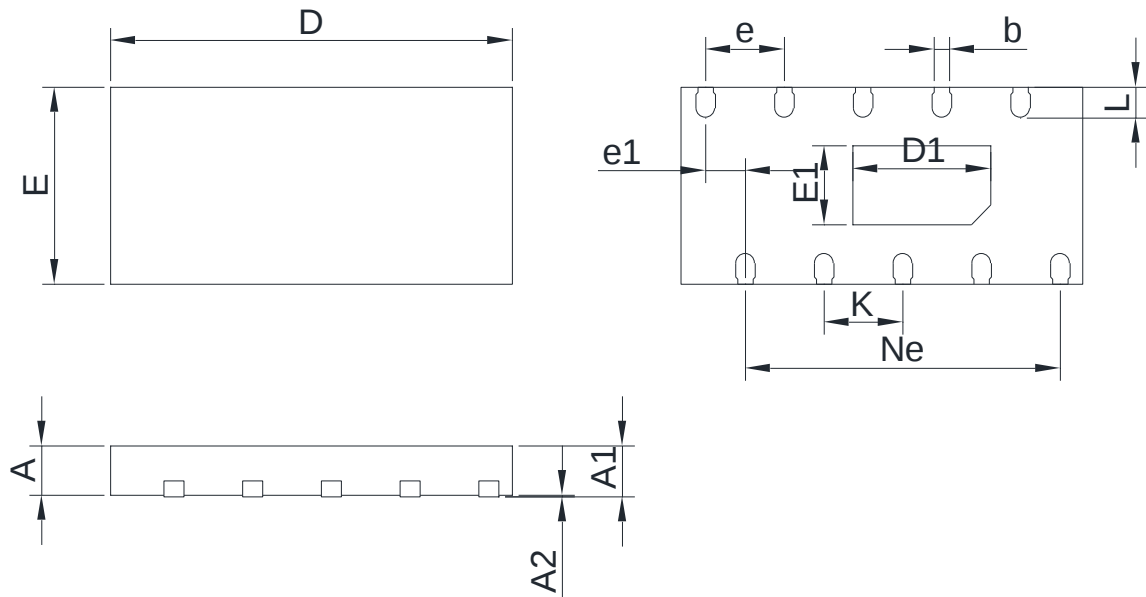


Electrical Parameters





DFN4120-10L Outline Drawing



Symbol	Millimeters			Symbol	Millimeters		
	MIN	NOM	MAX		MIN	NOM	MAX
A	0.45	0.50	0.55	L	0.25	0.30	0.35
A1	0.15 REF			b	0.15	0.20	0.25
A2	0.00	0.02	0.05	e	0.80 BSC		
D	4.05	4.10	4.15	Ne	3.20 BSC		
E	1.95	2.00	2.05	e1	0.40 BSC		
D1	1.35	1.40	1.45	K	0.25	0.30	0.35
E1	0.75	0.80	0.85				