



DWLC41F3V6U ESD Protection Diode

Feature

- Uni-directional ESD protection of six lines
- 60Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 3.3V
- Junction Capacitance: 0.25pF (Typ IO-IO)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 20kV$ contact $\pm 20kV$ air
- IEC 61000-4-5 (Lightning) 7A (8/20 μs)

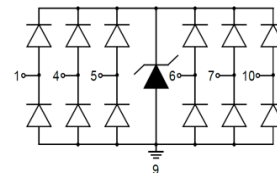
Application

- 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
DWLC41F3V6U	DFN4120-10L	.3V6U/LOT	6000 pcs	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}	-	60	W
Peak pulse current ($t_p=8/20\mu\text{s}$)@ 25°C	I_{PP}		7	A
ESD (IEC61000-4-2 air discharge) @ 25°C	V_{ESD}	-	± 20	kV
ESD (IEC61000-4-2 contact discharge) @ 25°C	V_{ESD}	-	± 20	kV
Junction temperature	T_J	-	150	$^{\circ}\text{C}$
Operating temperature	T_{OP}	-40	125	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55	150	$^{\circ}\text{C}$
Lead temperature	T_L	-	260	$^{\circ}\text{C}$

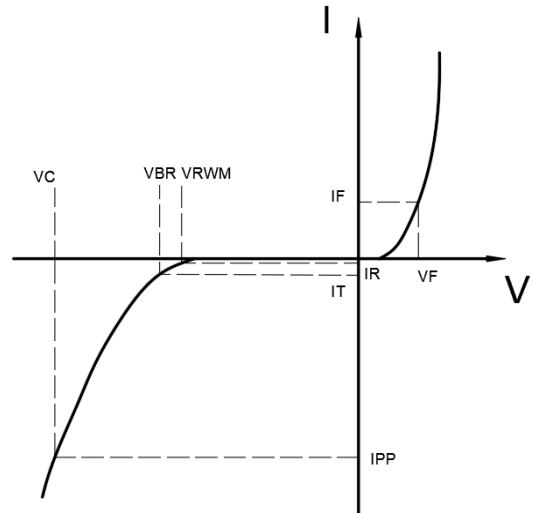
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	4.0			V
Reverse Leakage Current	I_R	$V_{RWM}=3.3\text{V}$			1.0	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}$; $t_p=8/20\mu\text{s}$		8.0	10.0	V
Clamping Voltage	V_C	$I_{PP}=7\text{A}$; $t_p=8/20\mu\text{s}$		11.0	13.0	V
Junction Capacitance	C_J	IO-GND $V_R=0\text{V}$; $f=1\text{MHz}$		0.5	0.7	pF
		IO-IO $V_R=0\text{V}$; $f=1\text{MHz}$		0.25	0.35	pF

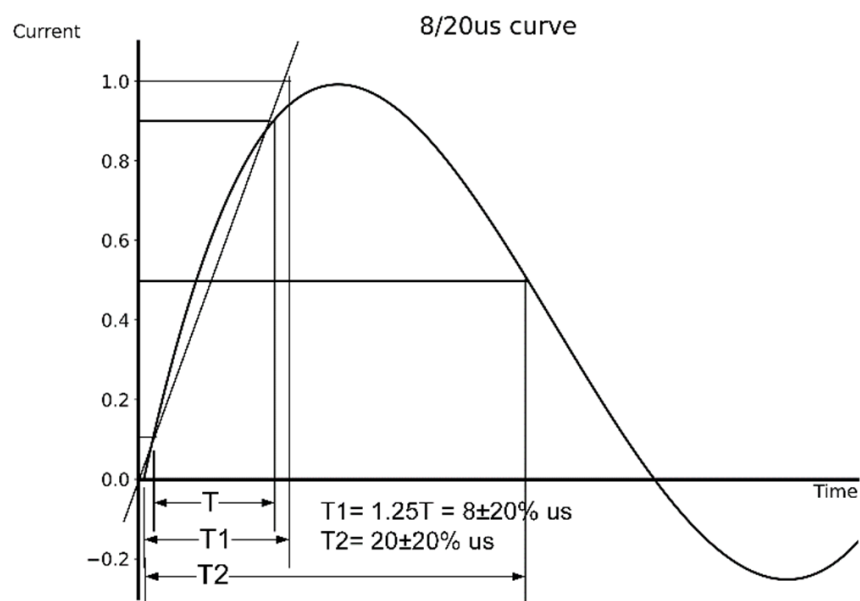


Electrical Parameters

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}
I_F	Forward Current
V_F	Forward Voltage @ I_F

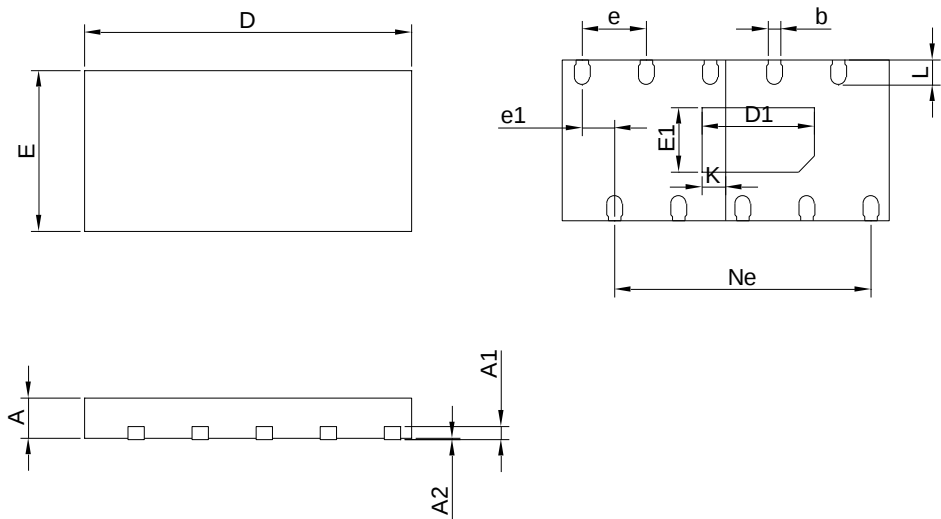


Typical Characteristics





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				