



DWUC10F5V4UB-Q ESD Protection Diode

Feature

- Uni-directional ESD protection of four lines
- 50Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 5V
- Junction Capacitance: 0.2pF(Typ Between I/O pins)
- Low clamping voltage
- Low leakage current
- AEC-Q101 qualified
- IEC 61000-4-2 $\pm 20kV$ contact $\pm 25kV$ air
- IEC 61000-4-5 (Lightning) 3A (8/20 μs)

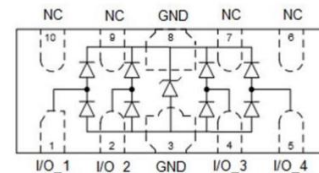
Application

- USB 3.0
- HDMI 2.0
- 10/100/1000 ethernet
- Notebook computers
- SIM ports
- ATM interface

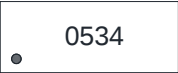
Mechanical Data

- Package: DFN2510-10L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	QTY per Reel	Reel Size
DWUC10F5V4UB-Q	DFN2510-10L		3000 pcs	7 inches



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

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power ($t_p=8/20\mu\text{s}$)@ 25°C	P_{PK}	-	50	W
Peak pulse current ($t_p=8/20\mu\text{s}$)@ 25°C	I_{PP}		3.0	A
ESD (IEC61000-4-2 air discharge) @ 25°C	V_{ESD}	-	± 25	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	$^{\circ}\text{C}$

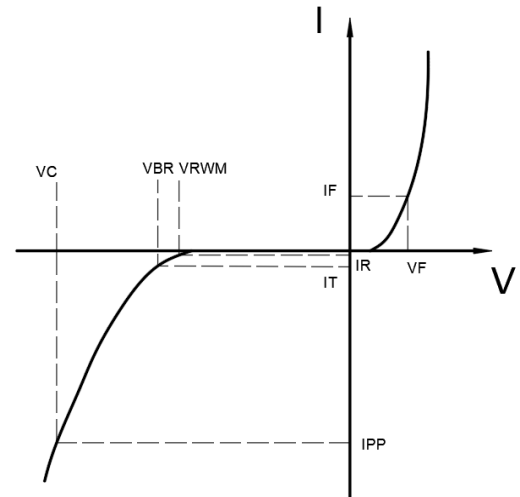
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameters	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	6.0	7.5	8.5	V
Reverse Leakage Current	I_R	$V_{RWM}=5\text{V}$			1.0	μA
Clamping Voltage	V_{CL}	$I_{PP}=1\text{A}$; $T_P=8/20\mu\text{s}$		9.0	11.0	V
Clamping Voltage	V_{CL}	$I_{PP}=3\text{A}$; $T_P=8/20\mu\text{s}$		12.0	15.0	
Junction capacitance	C_J	I/O pins to ground; $V_R=0\text{V}$; $f=1\text{MHz}$		0.4	0.5	pF
		Between I/O pins; $V_R=0\text{V}$; $f=1\text{MHz}$		0.2	0.25	

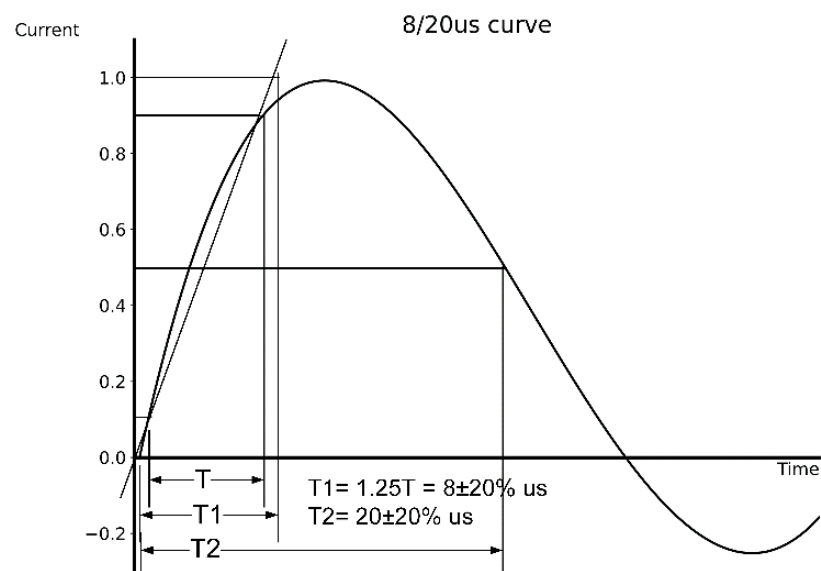


Electrical Parameters

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

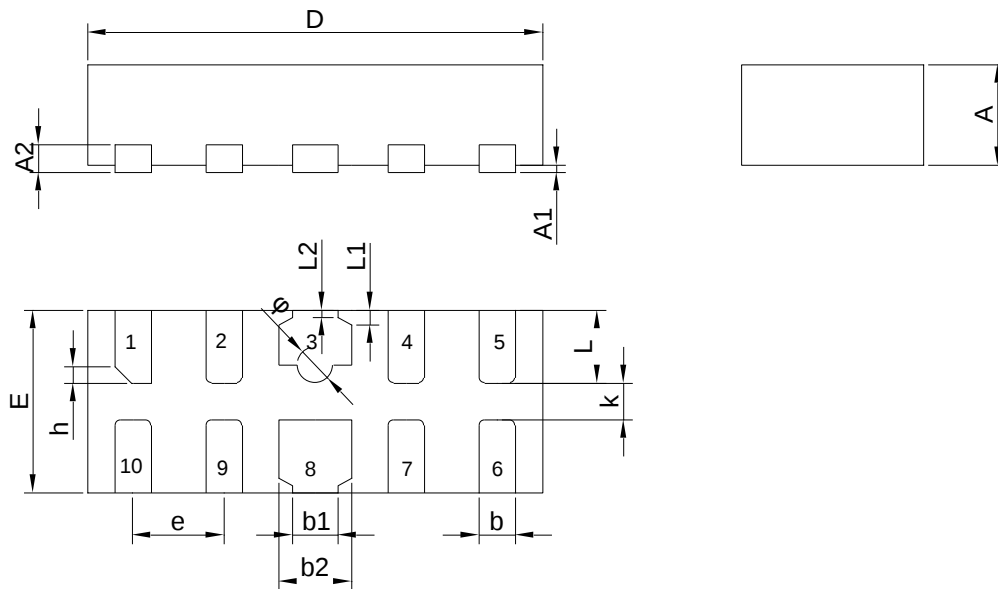


Typical Characteristics





DFN2510-10L Outline Drawing



Dimensions in Millimeter							
Symbol	Min.	Nom.	Max.	Symbol	Min.	Nom.	Max.
A	0.500	0.550	0.600	D	2.450	2.500	2.550
A1	0.00	/	0.05	E	0.950	1.00	1.050
A2	0.122	0.152	0.200	e	0.450	0.500	0.550
b	0.150	0.200	0.250	h	0.080	0.120	0.150
b1	0.200	0.250	0.300	k	0.150	0.200	0.250
b2	0.350	0.400	0.450	L	0.350	0.400	0.450
L1	0.075 REF			L2	0.05 REF		
φ	0.150	0.200	0.250				