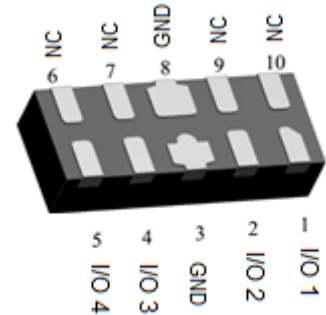
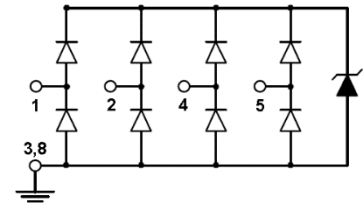


Features

- Suitable replacement for MLV'S ESD protection
- Protects four I/O lines
- Ultra low capacitance
- Low clamping voltage
- RoHS compliant with Halogen-free
- ESD / transient protection of high speed data lines
 - IEC 61000-4-2 (ESD): ± 15 kV (air), ± 15 kV (contact)

HF



DFN2510-10L

Typical Applications

- HDMI
- DVI
- USB3.0
- USB2.0 up to 480Mb/s

Mechanical Data

- Case: DFN2510-10L
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
ESDU3V3AG4	DFN2510-10L	3000 pcs / Tape & Reel	UA

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

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air)	$V_{\text{ESD-A}}$	± 15	kV
IEC 61000-4-2; ESD (Contact)	$V_{\text{ESD-C}}$	± 15	kV
Reverse Stand-off Voltage	V_{RWM}	3.3	V
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PP}	65	W
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	5	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Operating Temperature	T_J	$-55 \sim +125$	$^\circ\text{C}$
Storage Temperature	T_{STG}	$-55 \sim +150$	$^\circ\text{C}$

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$ Pin-1, -2, -4, -5 to pin-3, -8	3.7	-	6.0	V
Reverse Leakage Current	I_R	$V_{\text{Pin-1, -2, -4, -5}} = 3.3\text{V}$ $V_{\text{pin-3, -8}} = 0\text{V}$	-	-	10	nA
Forward Voltage	V_F	$I_F = 15\text{mA}$ Pin-3, -8 to pin-1, -2, -4, , -5	-	-	1.2	V
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$, ($t_p = 8/20\mu\text{s}$, I/O pin to GND)	-	-	8.5	V
		$I_{PP} = 5\text{A}$, ($t_p = 8/20\mu\text{s}$, I/O pin to GND)	-	-	13	V
Diode Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$ (I/O pin to I/O)	-	0.4	0.5	pF
		$V_R = 0\text{V}$, $f = 1\text{MHz}$ (I/O pin to GND)	-	0.6	1.0	pF

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

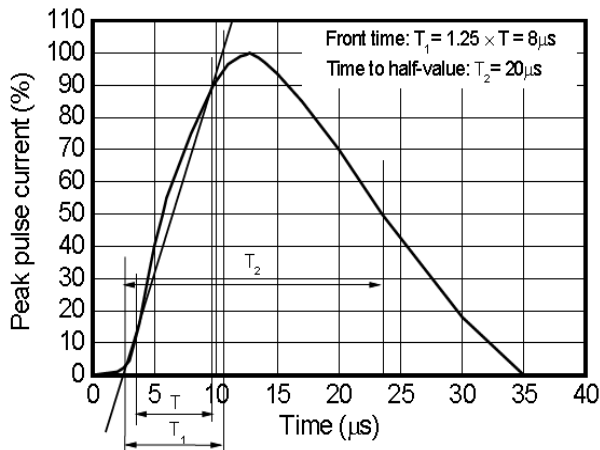


Fig 1 8/20 μs waveform per IEC61000-4-5

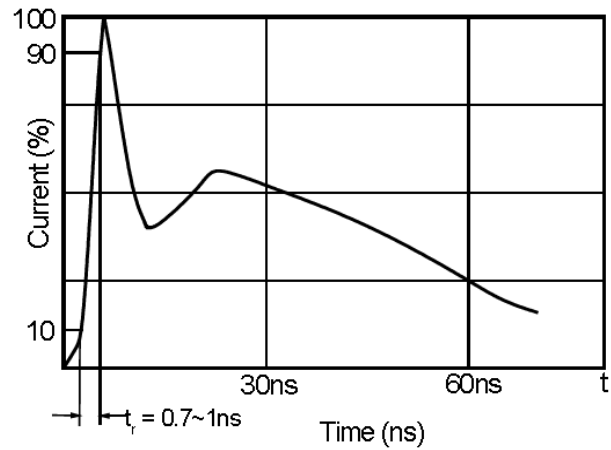


Fig 2 ESD pulse waveform according to IEC61000-4-2

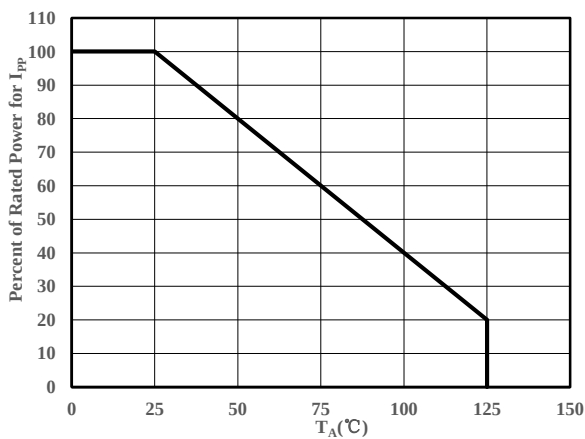


Fig 3 Power Derating Curve

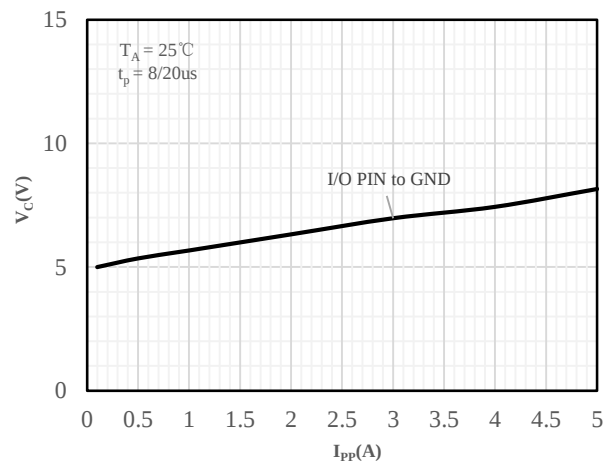


Fig 4 Clamping Voltage vs. Peak Pulse Current

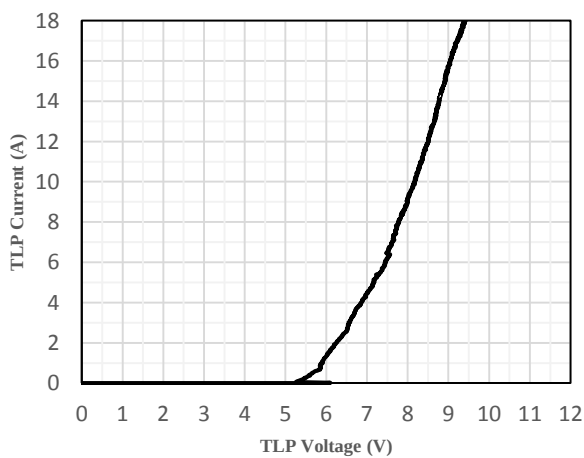
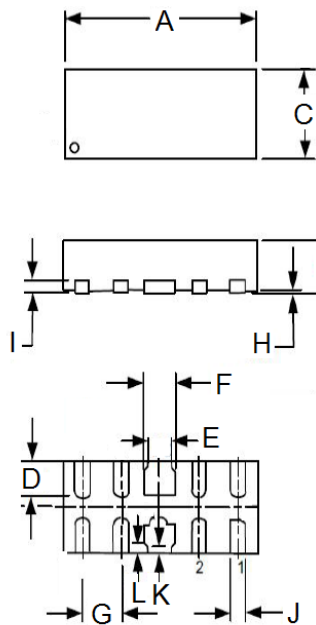


Fig 5 TLP Measurement

Package Outline Dimensions (Unit: mm)



DFN2510-10L		
Dimension	Min.	Max.
A	2.450	2.550
B	0.450	0.550
C	0.950	1.050
D	0.350	0.450
E	0.200	0.450
F	0.350	0.450
G	0.400	0.600
H	0.000	0.002
I	0.100	0.200
J	0.100	0.250
K	0.000	0.050
L	0.000	0.075

Mounting Pad Layout (Unit: mm)

DFN2510-10L

