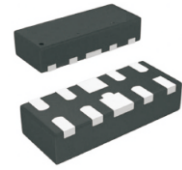


CPDVR105V0UA-HF

RoHS Device

Halogen Free



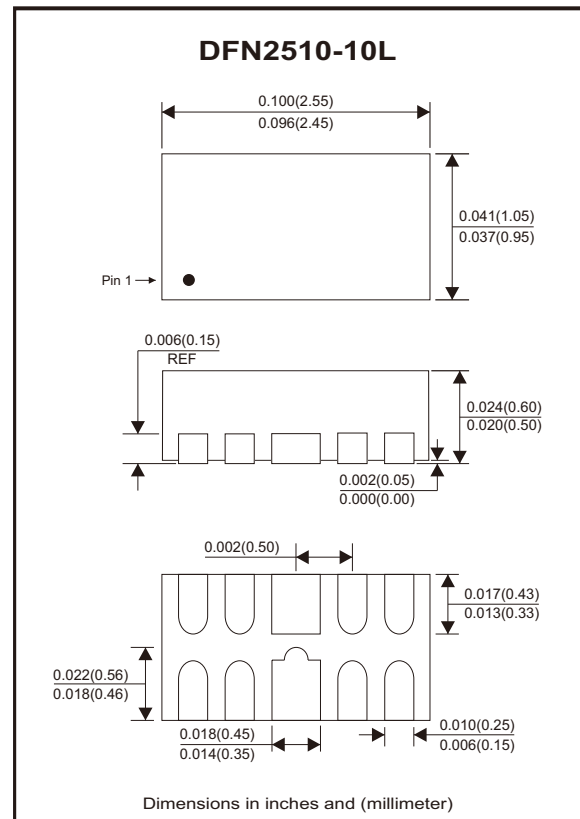
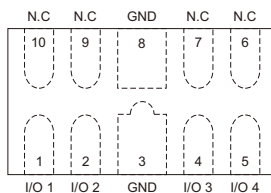
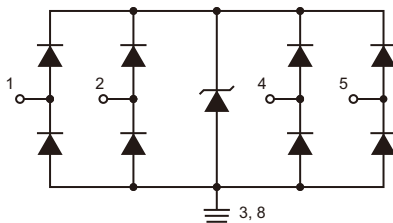
Features

- Ultra-low capacitance.
- IEC 61000-4-2 (Air): $\pm 19\text{kV}$
IEC 61000-4-2 (Contact): $\pm 16\text{kV}$
IEC 61000-4-5 (Surge): 3A ($8/20\mu\text{s}$)
- Flow-through design.
- Protects four high-speed lines.
- Low capacitance: $< 1\text{pF}$ maximum (I/O to ground).

Mechanical data

- Case: DFN2510-10L package, molded plastic.
- Mounting position: Any.

Circuit Diagram



Applications

- HDMI 1.3 and HDMI 1.4
- V-By-One
- USB 3.0
- MHL
- eDP
- LVDS interfaces
- eSATA interfaces
- HDMI 2.0

Maximum Rating (at $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Electrostatic discharge voltage	IEC 61000-4-2; contact discharge	V_{ESD}	± 16	kV
	IEC 61000-4-2; air discharge		± 19	kV
Peak pulse current	IEC 61000-4-5; $t_p = 8/20\mu\text{s}$	I_{PP}	3	A
Operating junction temperature range		T_J	-55 to $+125$	$^\circ\text{C}$
Storage temperature range		T_{STG}	-65 to $+150$	$^\circ\text{C}$

Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse working voltage	I/O Pin to GND	V_{RWM}			5	V
Breakdown voltage	$I_R = 1mA$; Any I/O to GND	V_{BR}	6	8	10	V
Reverse leakage current	$V_{RWM} = 5V$; Any I/O to GND	I_R		10	100	nA
Surge clamping voltage ($t_p = 8/20\mu s$)	$I_{PP} = 1A$; Any I/O Pin to GND	V_C		12	12.5	V
	$I_{PP} = 3A$; Any I/O Pin to GND			14	15.5	V
TLP clamping voltage ($t_p = 10/100ns$)	$I_{PP} = 16A$; Any I/O Pin to GND	V_C		10.5	12.5	V
Dynamic resistance $t_p = 10/100ns$, $t_r = 1ns$	I/O Pin to GND	R_{DYN}		0.2		Ω
Junction capacitance	$V_R = 0V$, $f = 1MHz$, I/O to GND	C_J		0.6	0.8	pF
	$V_R = 0V$, $f = 1MHz$, between I/O Pins			0.25	0.4	pF

Rating and Characteristic Curves (CPDVR105V0UA-HF)

Fig.1 - 8/20 μs Peak Pulse Current Waveform ACC. IEC 61000-4-5

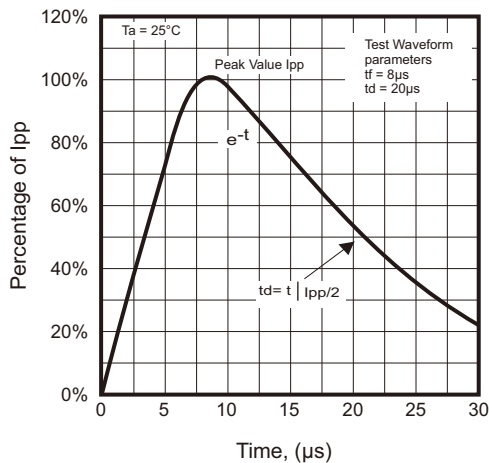


Fig.2 - TLP Curve

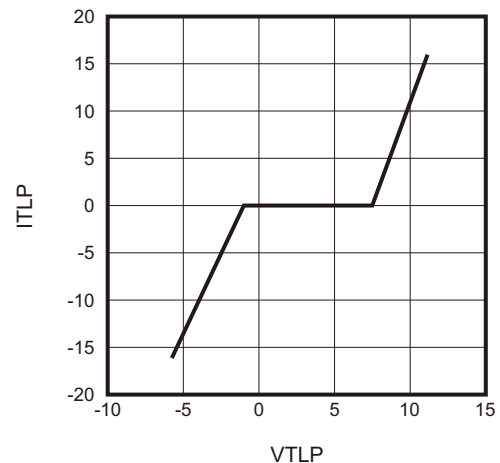


Fig.3 - Surge Clamping Voltage (IEC 61000-4-5)

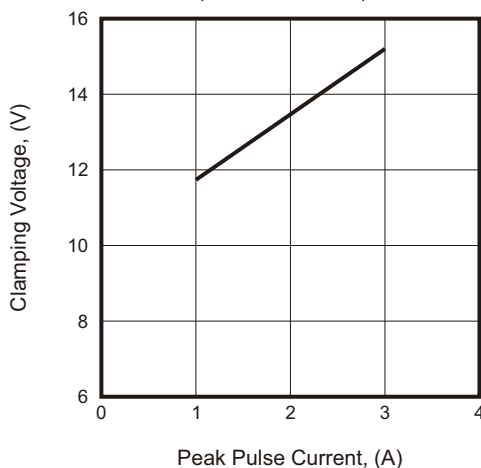
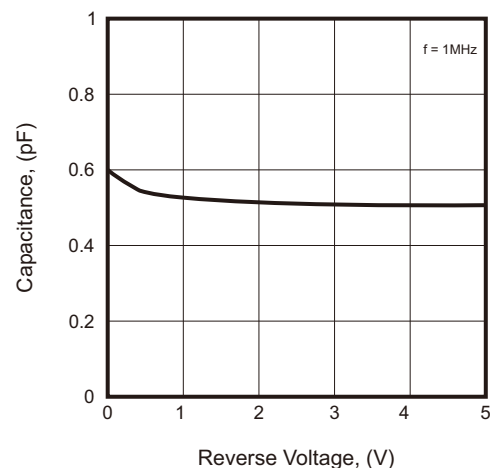
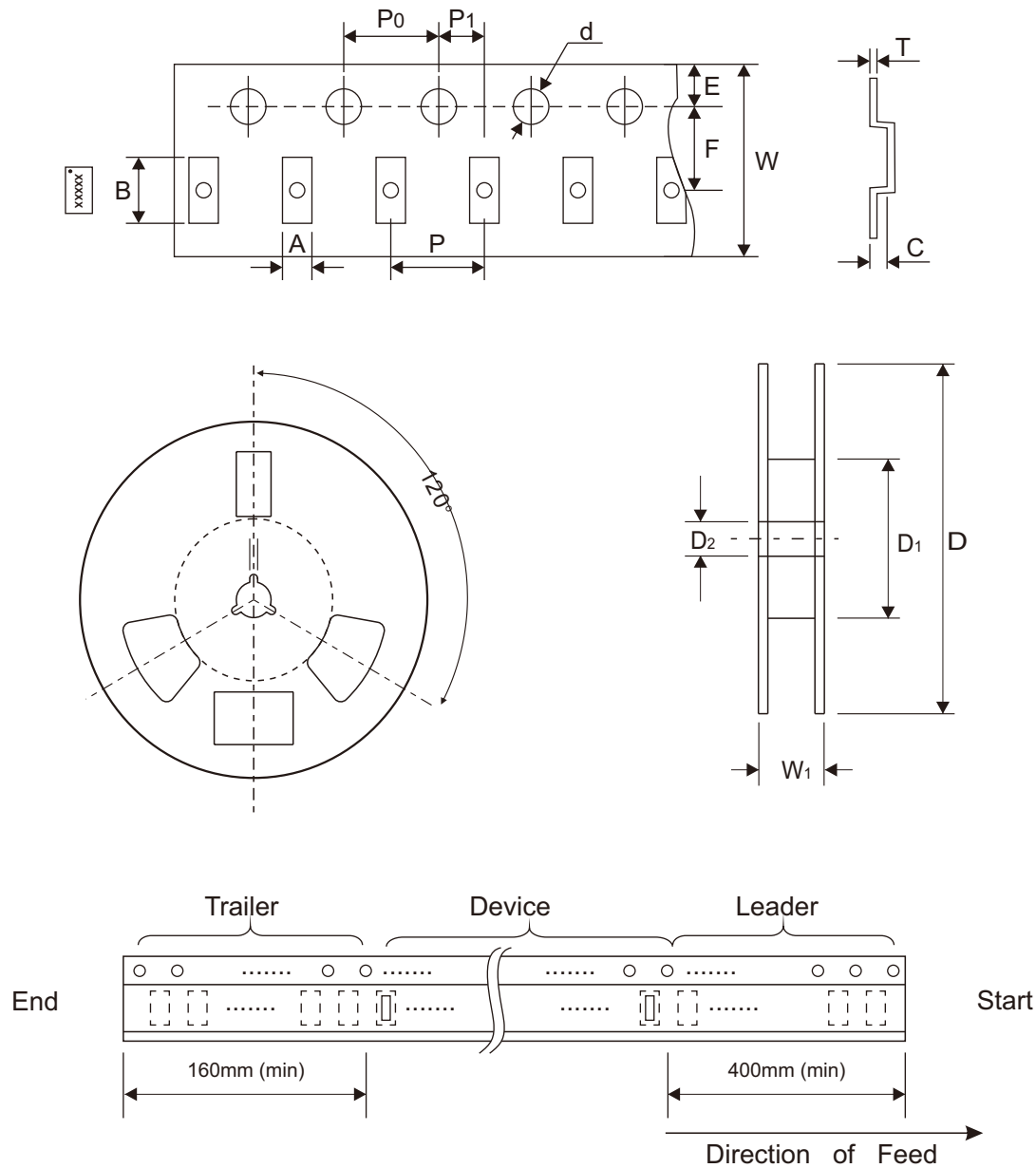


Fig.4 - Junction Capacitance



Reel Taping Specification

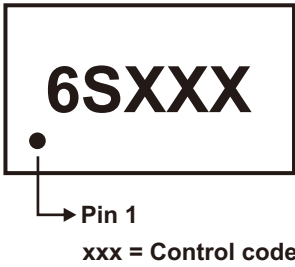


DFN2510-10L	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.23 ± 0.05	2.70 ± 0.05	0.70 ± 0.05	1.25 + 0.10	178 ± 2.00	60.00 ± 1.00	13.20 ± 0.30
	(inch)	0.048 ± 0.002	0.106 ± 0.002	0.028 ± 0.002	0.049 + 0.004	7.008 ± 0.079	2.362 ± 0.039	0.520 ± 0.012

DFN2510-10L	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.25 ± 0.03	8.00 + 0.30 - 0.10	11.40 Max
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.010 ± 0.001	0.315 + 0.012 - 0.004	0.449 Max

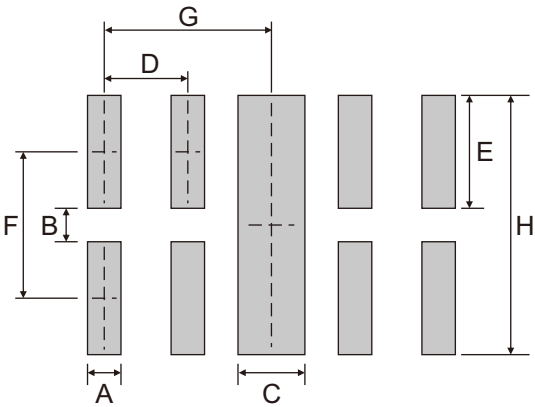
Marking Code

Part Number	Marking Code
CPDVR105V0UA-HF	6S



Suggested P.C.B. PAD Layout

SIZE	DFN2510-10L	
	(mm)	(inch)
A	0.20	0.008
B	0.20	0.008
C	0.40	0.016
D	0.50	0.020
E	0.675	0.027
F	0.875	0.034
G	1.00	0.039
H	1.55	0.061



Note: 1.The pad layout is for reference purposes only.

Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DFN2510-10L	3,000	7