

CPDVR103V3SBPU-E5-HF

RoHS Device
Halogen Free



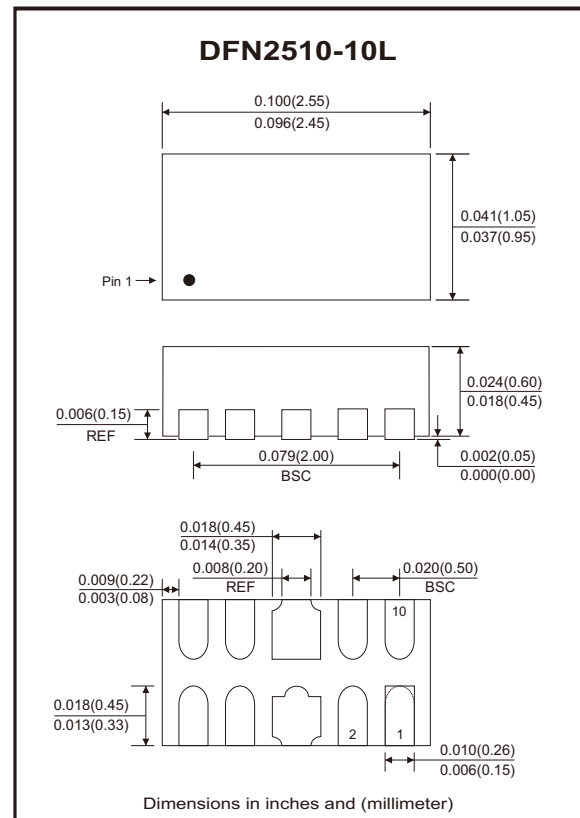
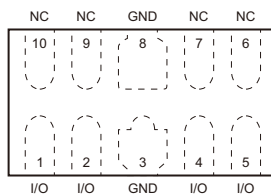
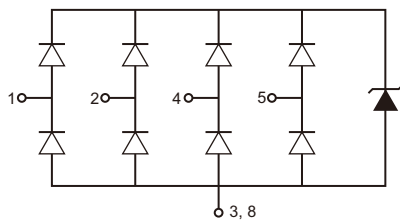
Features

- IEC 61000-4-2 (ESD) $\pm 20\text{kV}$ (air/contact).
- Protecting 4 Uni-directional lines.
- Low clamping voltage.
- Low leakage current.

Mechanical data

- Case: DFN2510-10L, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.

Circuit Diagram



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

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	$T_P = 8/20\mu\text{s}$	P_{PP}	40	W
Peak pulse current	$T_P = 8/20\mu\text{s}$	I_{PP}	8	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 20	kV
Lead temperature		T_L	260	$^\circ\text{C}$
Junction temperature		T_J	150	$^\circ\text{C}$
Storage temperature range		T_{STG}	-55 to +150	$^\circ\text{C}$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-off voltage		V_{RWM}			3.3	V
Breakdown voltage	$I_T = 1\text{mA}$	V_{BR}	5	7.3		V
Reverse leakage current	$V_{RWM} = 3.3\text{V}$	I_R			100	nA
Clamping voltage	$I_{PP} = 1\text{A}$, $T_P = 8/20\mu\text{s}$	V_C		1	3	V
	$I_{PP} = 8\text{A}$, $T_P = 8/20\mu\text{s}$	V_C		3.5	5	V
Dynamic resistance	$I_R = 16\text{A}$, $T_{amb} = 25^{\circ}\text{C}$	R_{DYN}		0.2		Ω
Junction capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$, IO to GND	C_J		0.45	0.5	pF
	$V_R = 1.5\text{V}$, $f = 1\text{MHz}$, IO to GND	C_J		0.35	0.4	pF
	$V_R = 2.5\text{V}$, $f = 1\text{MHz}$, IO to GND	C_J		0.32	0.38	pF
	$V_R = 0\text{V}$, $f = 1\text{MHz}$, IO to IO	C_J		0.22	0.25	pF

Typical Rating and Characteristic Curves (CPDVR103V3SBPU-E5-HF)

Fig.1 - I — V Curve

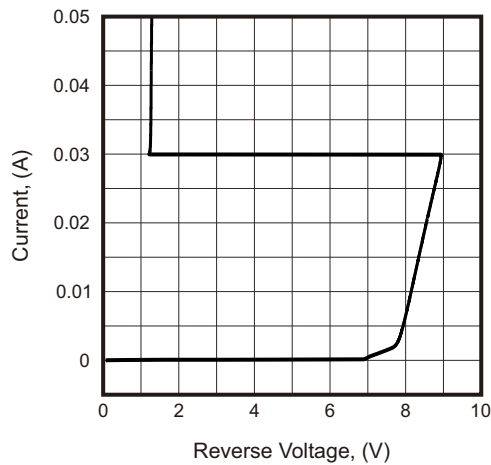


Fig.2 - Leakage Current Curve

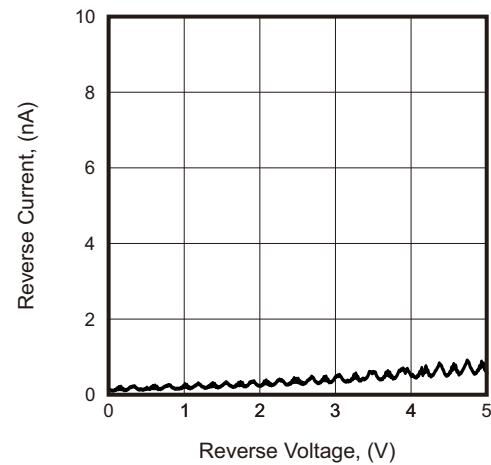


Fig.3 - C — V Curve

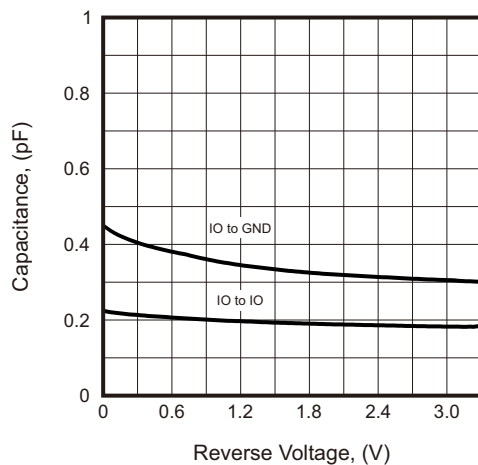


Fig.4 - I_{PP} Curve

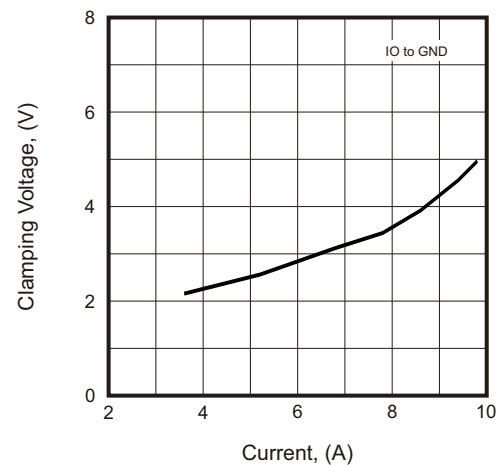


Fig.5 - TLP-Negative Pulse

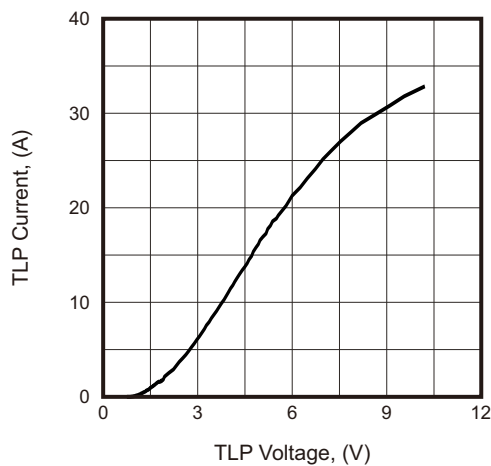
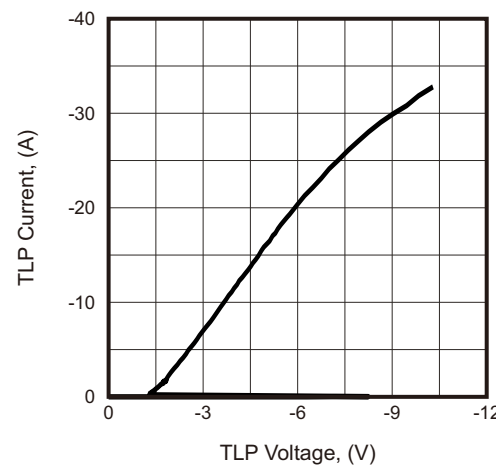


Fig.6 - TLP-Positive Pulse



Typical Rating and Characteristic Curves (CPDVR103V3SBPU-E5-HF)

Fig.7 - 8/20 μ s Pulse Waveform
According to IEC 61000-4-5

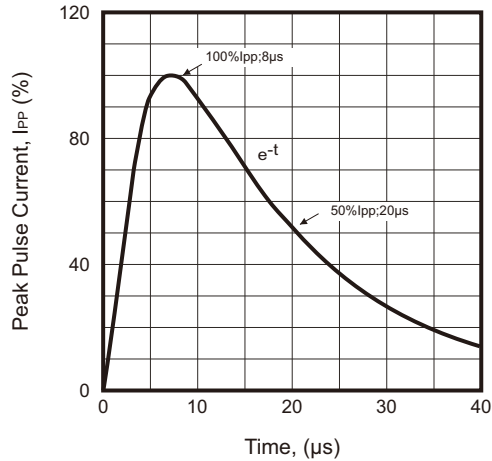


Fig.8 - ESD Pulse Waveform
According to IEC 61000-4-2

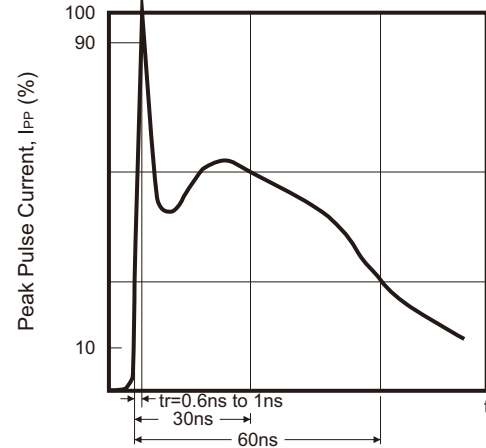


Fig.9 - HDMI2.1 Eye Pattern 12Gbps (Without DUT)

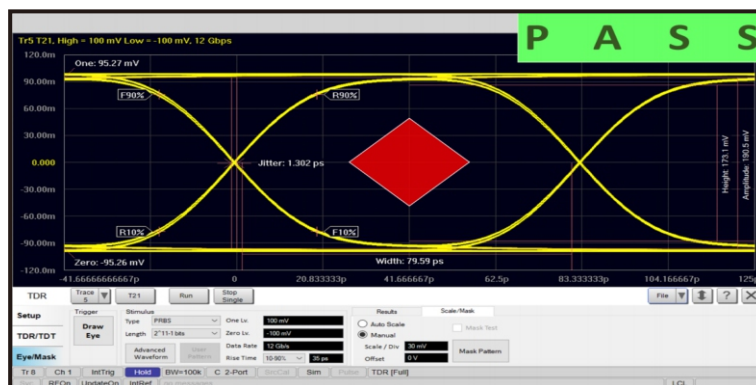
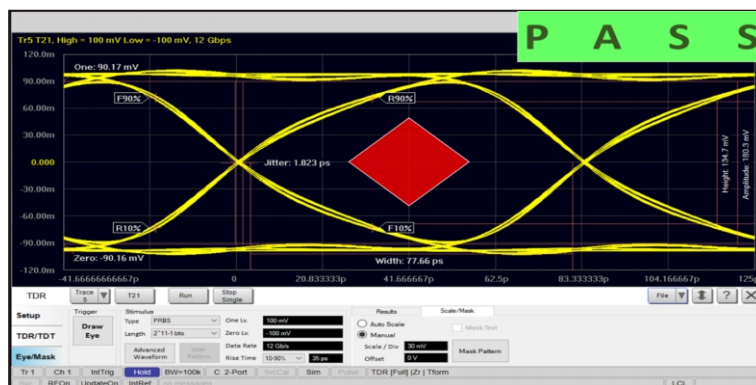
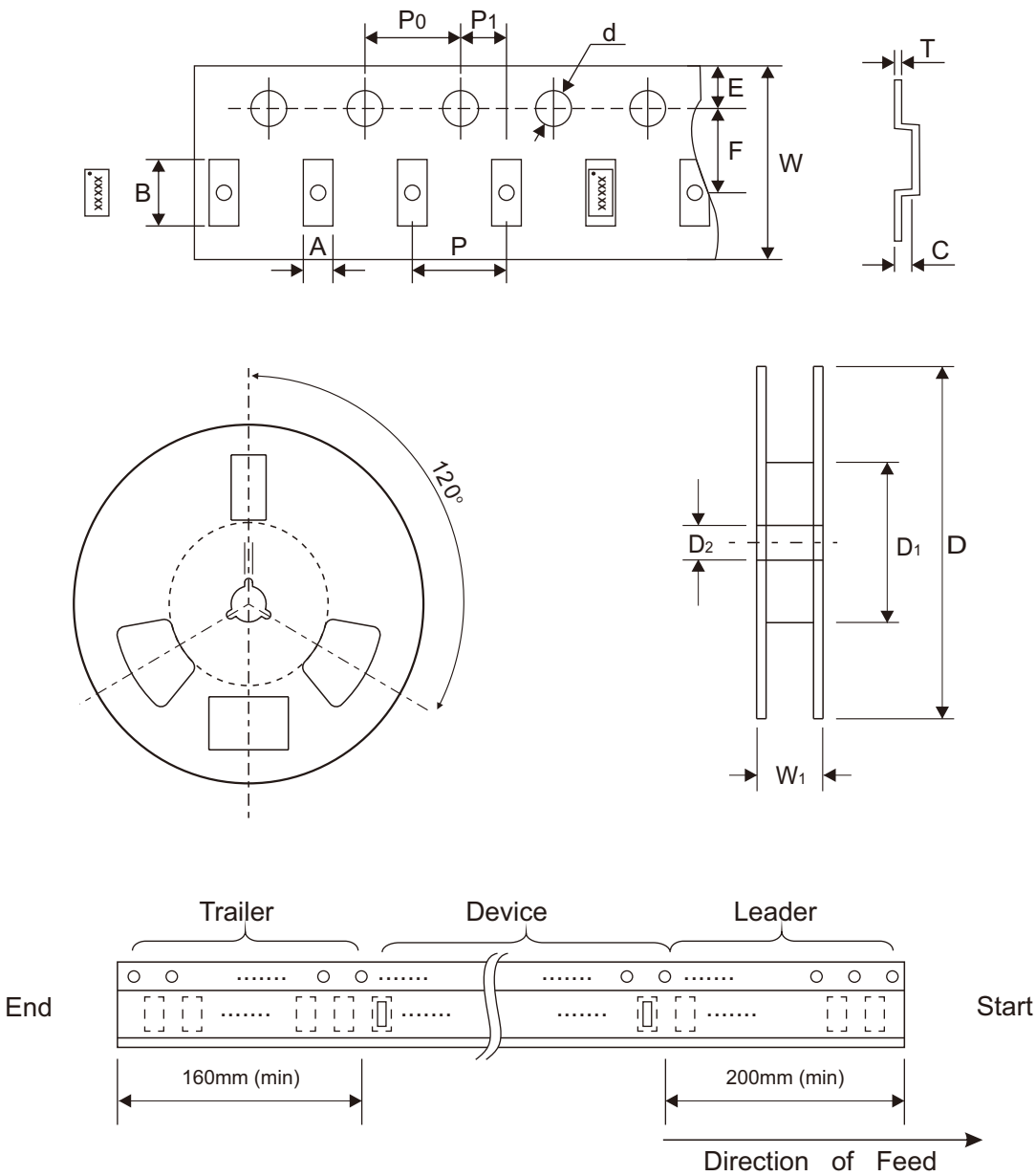


Fig.10 - HDMI2.1 Eye Pattern 12Gbps (With DUT)



Reel Taping Specification

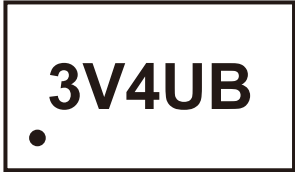


DFN2510-10L	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.18 ± 0.05	2.68 ± 0.05	0.72 ± 0.05	1.55 ± 0.05	178.00 ± 1.00	54.40 ± 0.40	13.00 ± 0.20
	(inch)	0.046 ± 0.002	0.106 ± 0.002	0.028 ± 0.002	0.061 ± 0.002	7.008 ± 0.039	2.142 ± 0.016	0.512 ± 0.008

DFN2510-10L	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	$1.75 + 0.05 - 0.10$	3.50 ± 0.05	4.00 ± 0.05	4.00 ± 0.05	2.00 ± 0.05	0.20 ± 0.02	8.00 ± 0.10	12.30 ± 0.20
	(inch)	$0.069 + 0.002 - 0.004$	0.138 ± 0.002	0.157 ± 0.002	0.157 ± 0.002	0.079 ± 0.002	0.008 ± 0.001	0.315 ± 0.004	0.484 ± 0.008

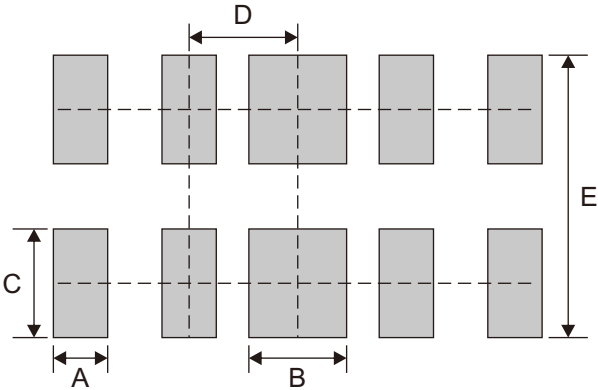
Marking Code

Part Number	Marking Code
CPDVR103V3SBPU-E5-HF	3V4UB



Suggested P.C.B. PAD Layout

SIZE	DFN2510-10L	
	(mm)	(inch)
A	0.25	0.010
B	0.45	0.018
C	0.50	0.020
D	0.50	0.020
E	1.30	0.051



Standard Packaging

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