

CPDVR103V3USBP-HF

RoHS Device

Halogen Free



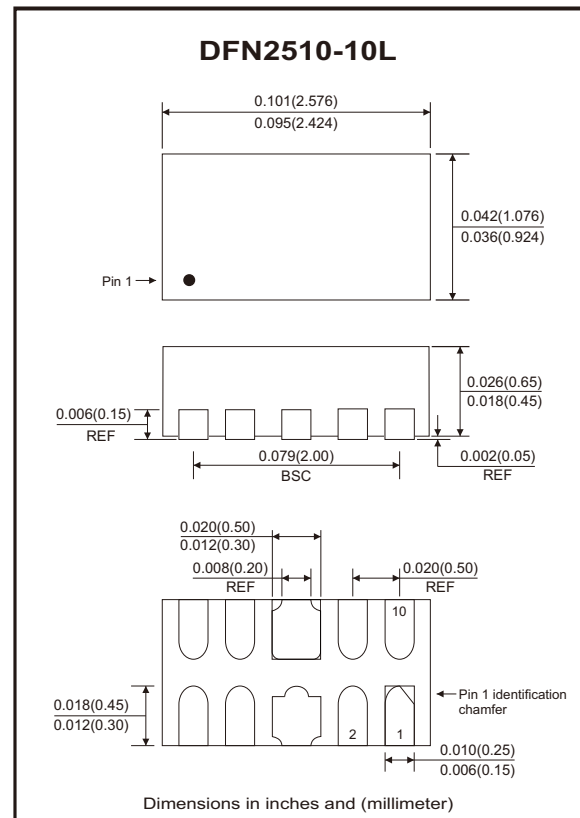
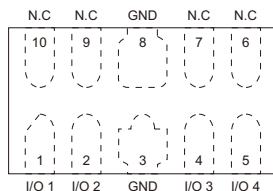
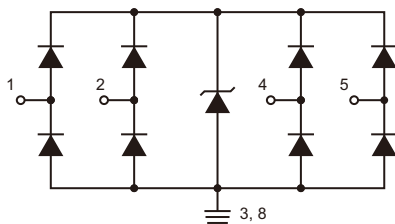
Features

- Protects two or four I/O line.
- Low leakage current.
- IEC 61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 10\text{kV}$ (contact)

Mechanical data

- Case: DFN2510-10L package.
- 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}	20	W
Peak pulse current	$T_P = 8/20\mu\text{s}$	I_{PP}	5	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 15 ± 10	kV
Lead soldering temperature		T_L	260 (10 sec)	$^\circ\text{C}$
Operating junction temperature range		T_J	-55 to +125	$^\circ\text{C}$
Storage temperature range		T_{STG}	-55 to +150	$^\circ\text{C}$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse working voltage	Any I/O to GND	V_{RWM}			3.3	V
Reverse breakdown voltage	$I_T = 1\text{mA}$ (Note 1)	V_{BR}	4			V
Reverse leakage current	$V_{RWM} = 3.3\text{V}$ (Note 1)	I_R		0.01	0.1	μA
Diode forward voltage	$I_F = 15\text{mA}$ (Note 1)	V_F		0.85	1.2	V
Hold current voltage	$I_H = 120\text{mA}$ (Note 1)	V_h		1.5		V
Clamping voltage	$I_{PP} = 1\text{A}$, $T_P = 8/20\mu\text{s}$ (Note 1)	V_C		2.1		V
	$I_{PP} = 5\text{A}$, $T_P = 8/20\mu\text{s}$ (Note 1)	V_C		2.9	4	
Junction capacitance	$V_R = 2.5\text{V}$, $f = 1\text{MHz}$, Between I/O pins	C_J		0.24		pF
	$V_R = 2.5\text{V}$, $f = 1\text{MHz}$, Any I/O pin to GND	C_J		0.32		

Note: 1. Any I/O pin to GND.

Typical Rating and Characteristic Curves (CPDVR103V3USBP-HF)

Fig.1 - Pulse Waveform

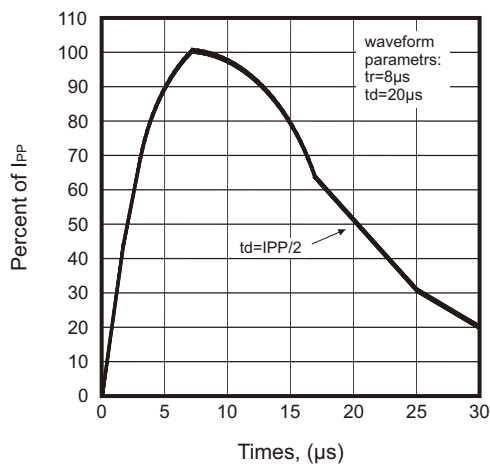


Fig.2 - Non-Repetitive Peak Power vs. Pulse Time

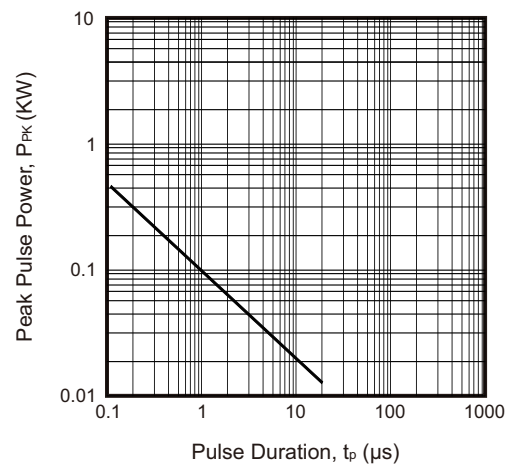


Fig.3 - Power Derating Curve

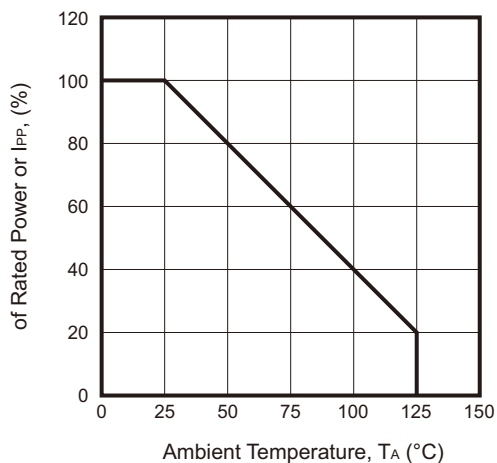
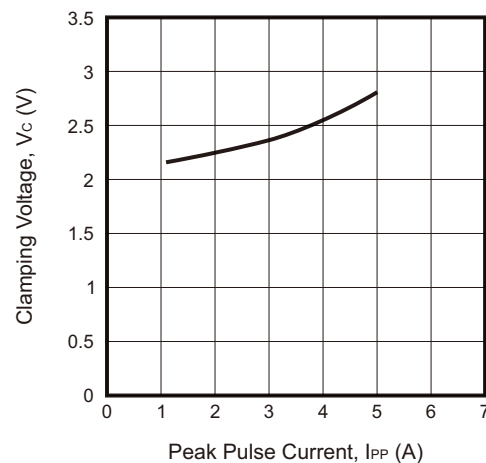
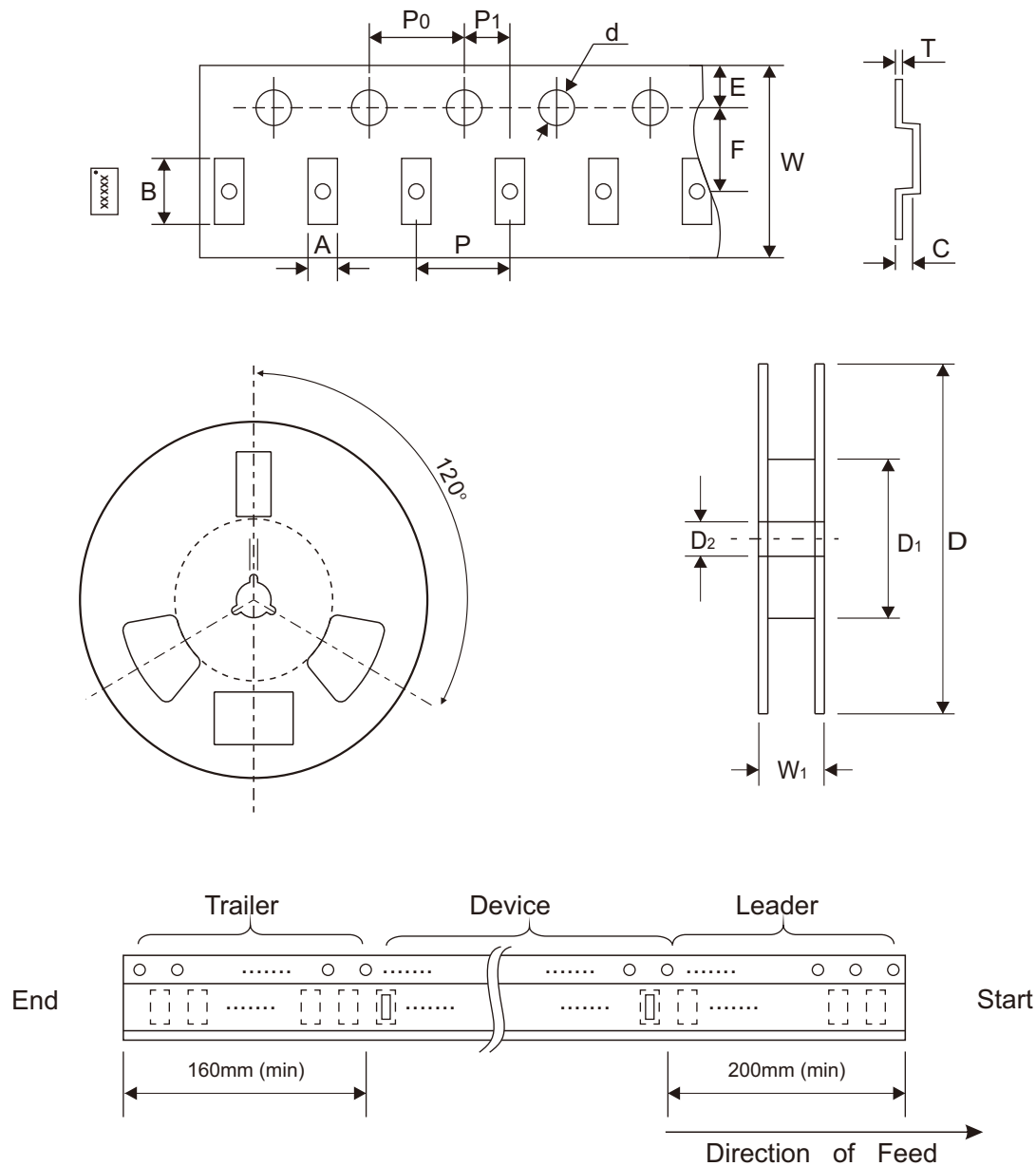


Fig.4 - Peak Pulse Current vs. Clamping Voltage Curve



Reel Taping Specification



DFN2510-10L	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	1.20 ± 0.05	2.70 ± 0.10	0.80 ± 0.05	1.50 ± 0.10	178.00 ± 1.00	55.00 ± 1.00	13.00 ± 1.00
	(inch)	0.047 ± 0.002	0.106 ± 0.004	0.031 ± 0.002	0.059 ± 0.004	7.008 ± 0.039	2.165 ± 0.039	0.512 ± 0.039

DFN2510-10L	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.23 ± 0.05	8.00 ± 0.10	15.80 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.009 ± 0.002	0.315 ± 0.004	0.622 ± 0.039

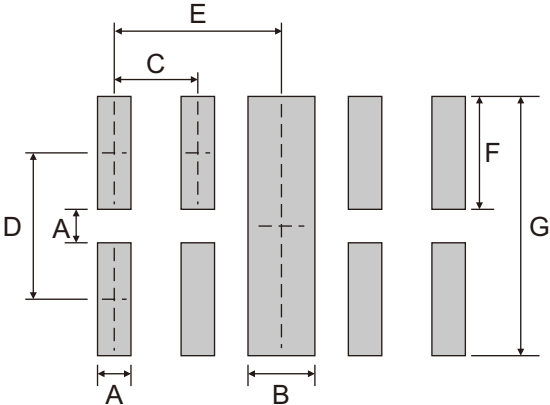
Marking Code

Part Number	Marking Code
CPDVR103V3USBP-HF	3324P



Suggested P.C.B. PAD Layout

SIZE	DFN2510-10L	
	(mm)	(inch)
A	0.20	0.008
B	0.20	0.008
C	0.50	0.020
D	0.88	0.035
E	1.00	0.039
F	0.68	0.027
G	1.56	0.061



Standard Packaging

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