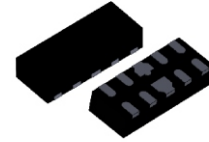


CPDVR103V3U-HF

RoHS Device

Halogen Free



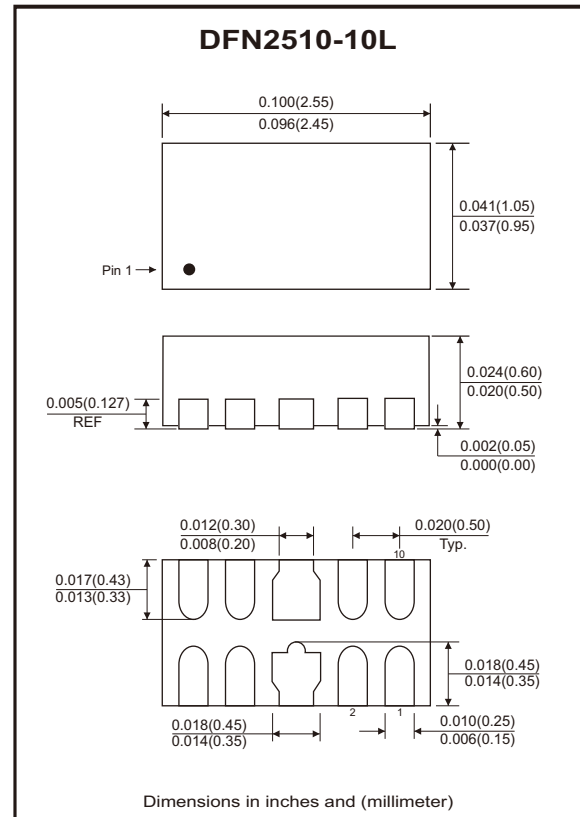
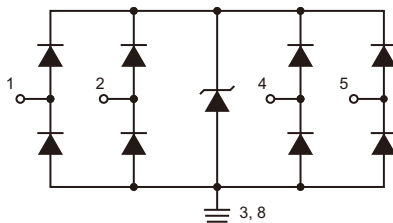
Features

- Ultra-low capacitance.
- IEC 61000-4-2 (Air): $\pm 21\text{kV}$
IEC 61000-4-2 (Contact): $\pm 16\text{kV}$
IEC 61000-4-5 (Surge): 6A ($8/20\mu\text{s}$)

Mechanical data

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

Circuit Diagram



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	ESD	± 16	kV
	IEC 61000-4-2; air discharge		± 21	kV
Peak pulse current	IEC 61000-4-5; $t_p = 8/20\mu\text{s}$	I_{PP}	6	A
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	I/O to GND	V_{RWM}			3.3	V
Breakdown voltage	$I_R = 1\text{mA}$; I/O to GND	V_{BR}		6.5	8.5	V
Forward voltage	$I_F = 15\text{mA}$; I/O to GND	V_F		1.0		V
Reverse leakage current	$V_{RWM} = 3.3\text{V}$; I/O to GND	I_R			1.0	μA
Surge clamping voltage (8/20 μs)	$I_{PP} = 5\text{A}$; Any I/O to GND (positive)	V_C		6.2	7.0	V
Clamping voltage (tp=100ns, tr=1ns)	$I_{TLP} = 1\text{A}$; I/O Pin to GND (positive)	V_C		3.7		V
	$I_{TLP} = 8\text{A}$; I/O Pin to GND (positive)	V_C		4.9		V
	$I_{TLP} = 16\text{A}$; I/O Pin to GND (positive)	V_C		6.1		V
TLP dynamic resistance (tp=100ns, tr=1ns)	I/O to GND (positive)	R_{DYN}		0.25		Ω
Junction capacitance	$V_R = 0\text{V}$, f = 1MHz, I/O to GND	C_J		0.45	0.50	pF
	$V_R = 1.65\text{V}$, f = 1MHz, I/O to GND	C_J		0.44	0.50	pF

Typical Rating and Characteristic Curves (CPDVR103V3U-HF)

Fig.1 - Clamping Voltage (TLP)

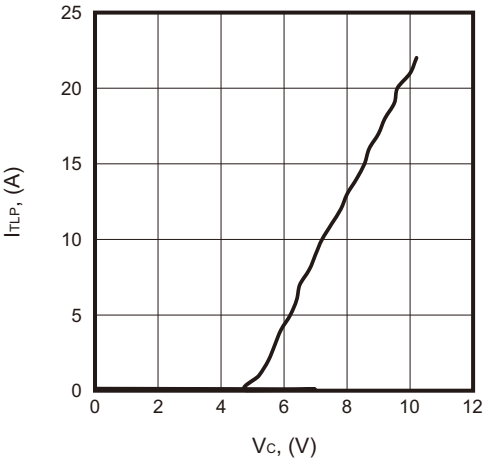


Fig.2 - Junction Capacitance

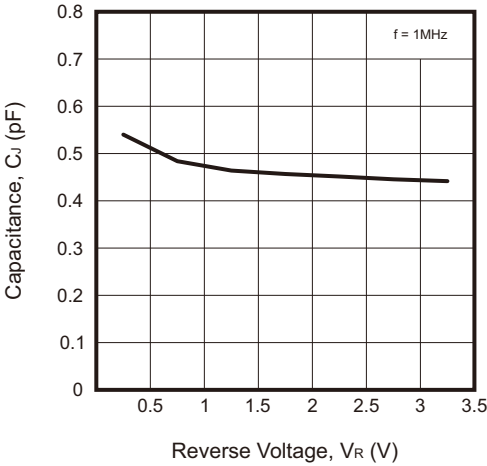


Fig.3 - Insertion loss S21 of I/O to GND

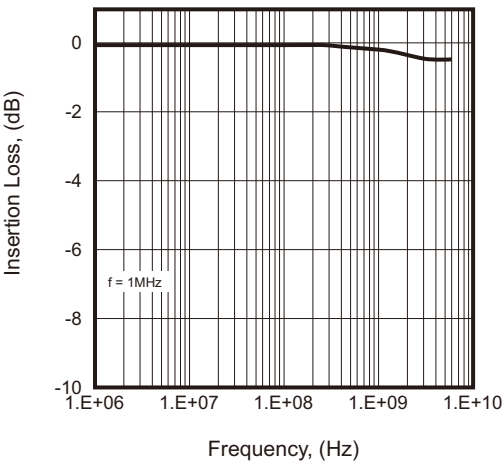


Fig.4 - ESD Clamping of I/O to GND
(+8kV Contact per IEC 61000-4-2)

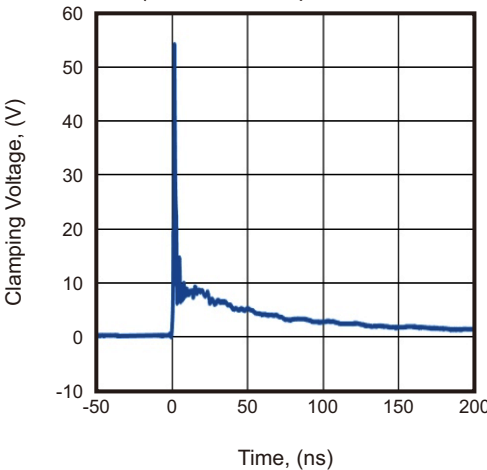
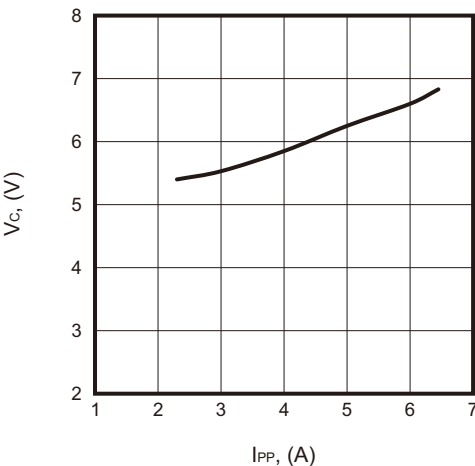
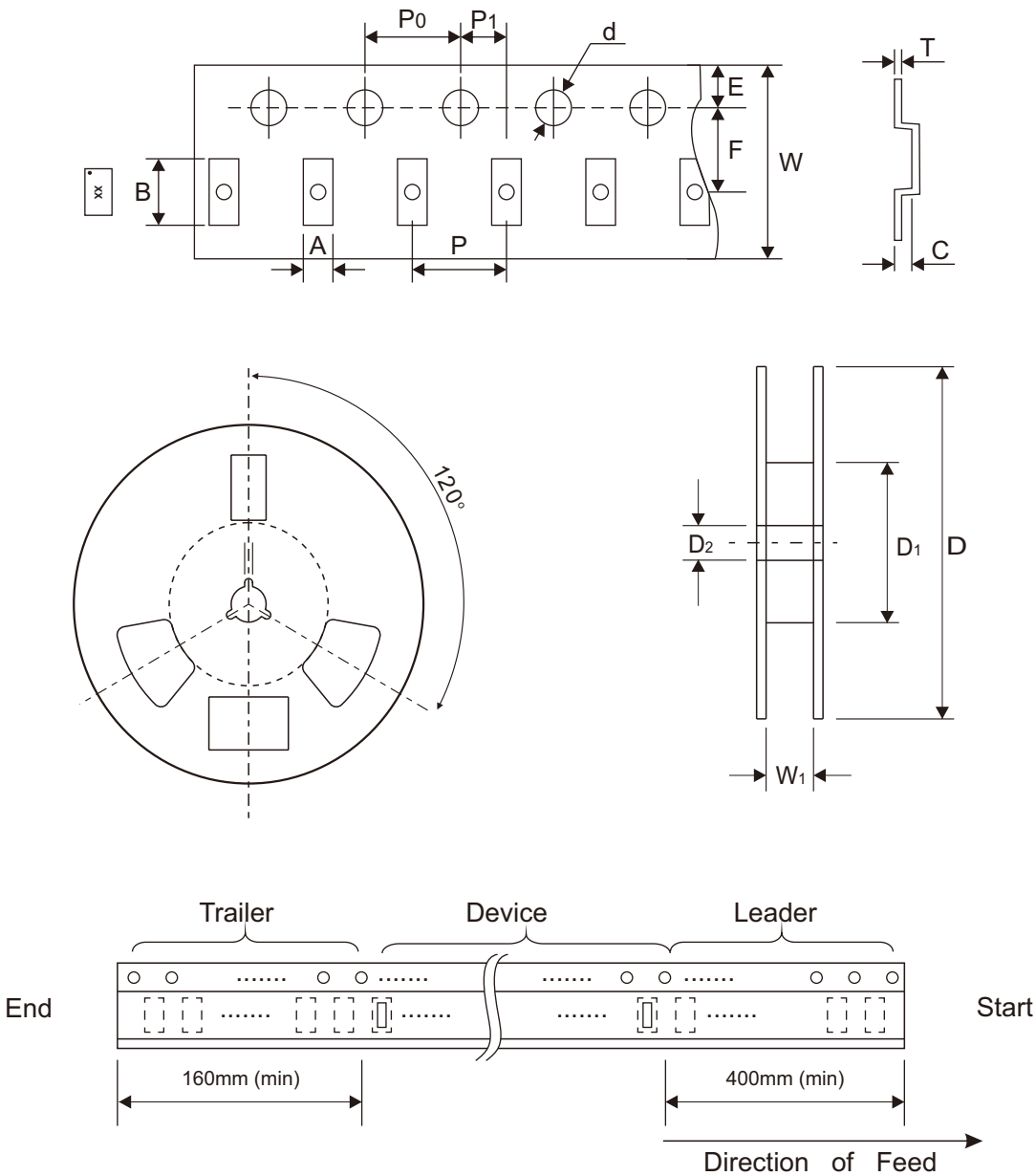


Fig.5 - Surge Clamping (IEC 61000-4-5)



Reel Taping Specification

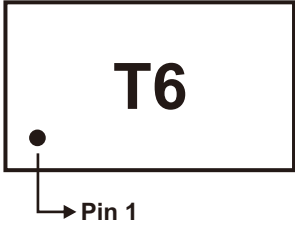


DFN2510-10L	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.20 ± 0.05	2.70 ± 0.05	0.70 ± 0.05	1.55 ± 0.05	178 ± 2.00	60.00 ± 1.00	13.20 ± 0.30
	(inch)	0.047 ± 0.002	0.106 ± 0.002	0.028 ± 0.002	0.061 ± 0.002	7.008 ± 0.079	2.362 ± 0.039	0.520 ± 0.012

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 ± 0.05	8.00 ± 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 ± 0.002	0.315 ± 0.004	0.449 Max

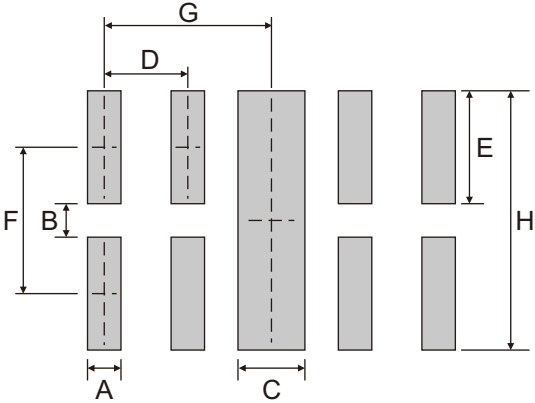
Marking Code

Part Number	Marking Code
CPDVR103V3U-HF	T6



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



Standard Packaging

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