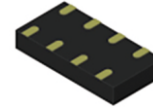


CPDVR08C2V5SP-HF

RoHS Device

Halogen Free



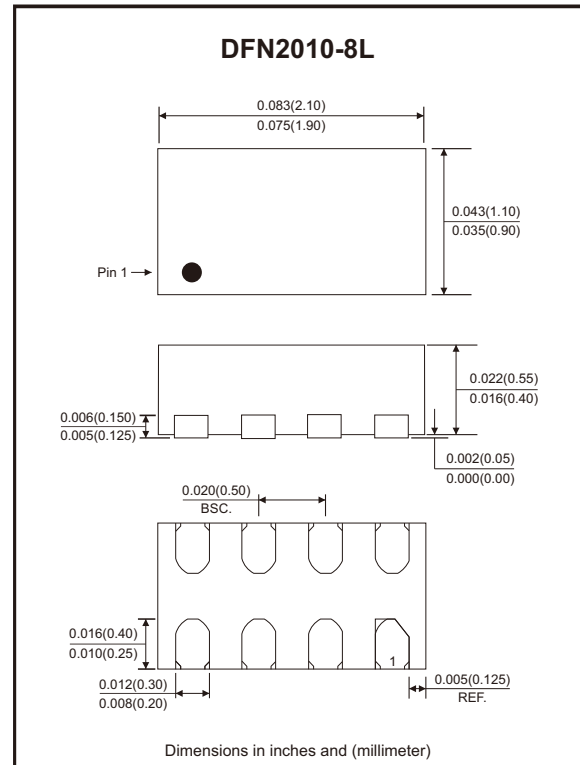
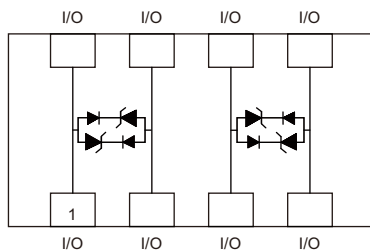
Features

- Protects eight I/O lines.
- Low leakage current.
- Response time is < 1ns.
- Low capacitance for high-speed interfaces.
- No insertion loss to 2.0GHz.
- Solid-state silicon avalanche technology.
- IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air/contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

Mechanical data

- Case: DFN2010-8L package, molded plastic.
- Terminal: 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}	440	W
Peak pulse current	$T_P = 8/20\mu\text{s}$	I_{PP}	20	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 30	kV
Lead soldering temperature		T_L	260 (10 sec)	$^\circ\text{C}$
Operating junction temperature range		T_J	-55 to +150	$^\circ\text{C}$
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	between I/O pins	V_{RWM}			2.5	V
Snap-back voltage	$I_T = 45mA$, between I/O pins	V_{SB}	2.8			V
Punch-through voltage	$I_T = 2\mu A$, between I/O pins	V_{PT}	3.5			V
Reverse leakage current	$V_{RWM} = 2.5V$, between I/O pins	I_R			0.05	μA
Clamping voltage	$I_{PP} = 1A$, $T_P = 8/20\mu s$, between I/O pins	V_C		5.6	6.5	V
	$I_{PP} = 20A$, $T_P = 8/20\mu s$, between I/O pins	V_C		15.1	22	
Junction capacitance	$V_R = 0V$, $f = 1MHz$, between I/O pins	C_J		1.1		pF
	$V_R = 2.5V$, $f = 1MHz$, between I/O pins	C_J		0.47	0.9	

Note: Junction capacitance is measured in $V_R=0V$, $f=1MHz$.

Typical Rating and Characteristic Curves (CPDVR08C2V5SP-HF)

Fig.1 - Pulse Waveform

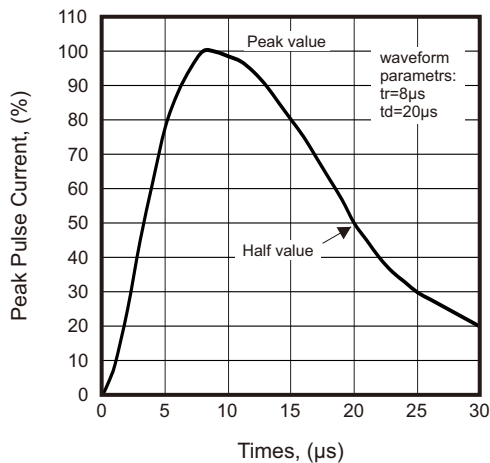


Fig.2 - Non-Repetitive Peak Pulse Power vs. Pulse Time

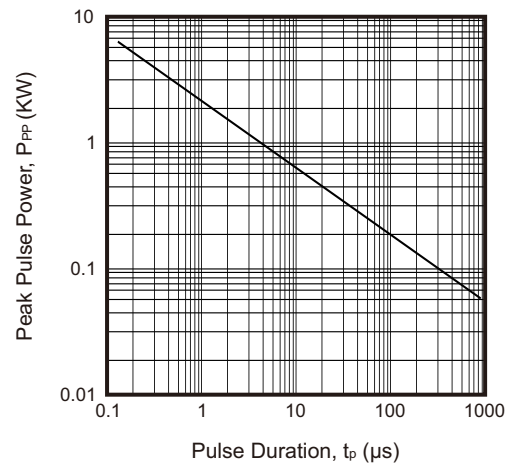


Fig.3 - Pulse Derating Curve

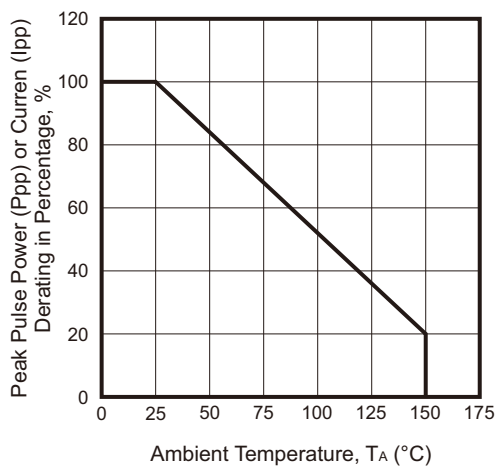
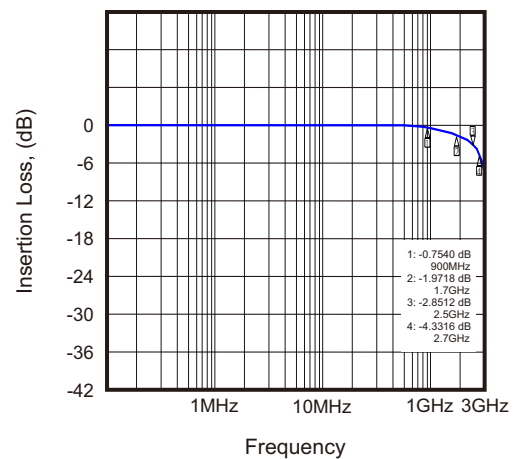
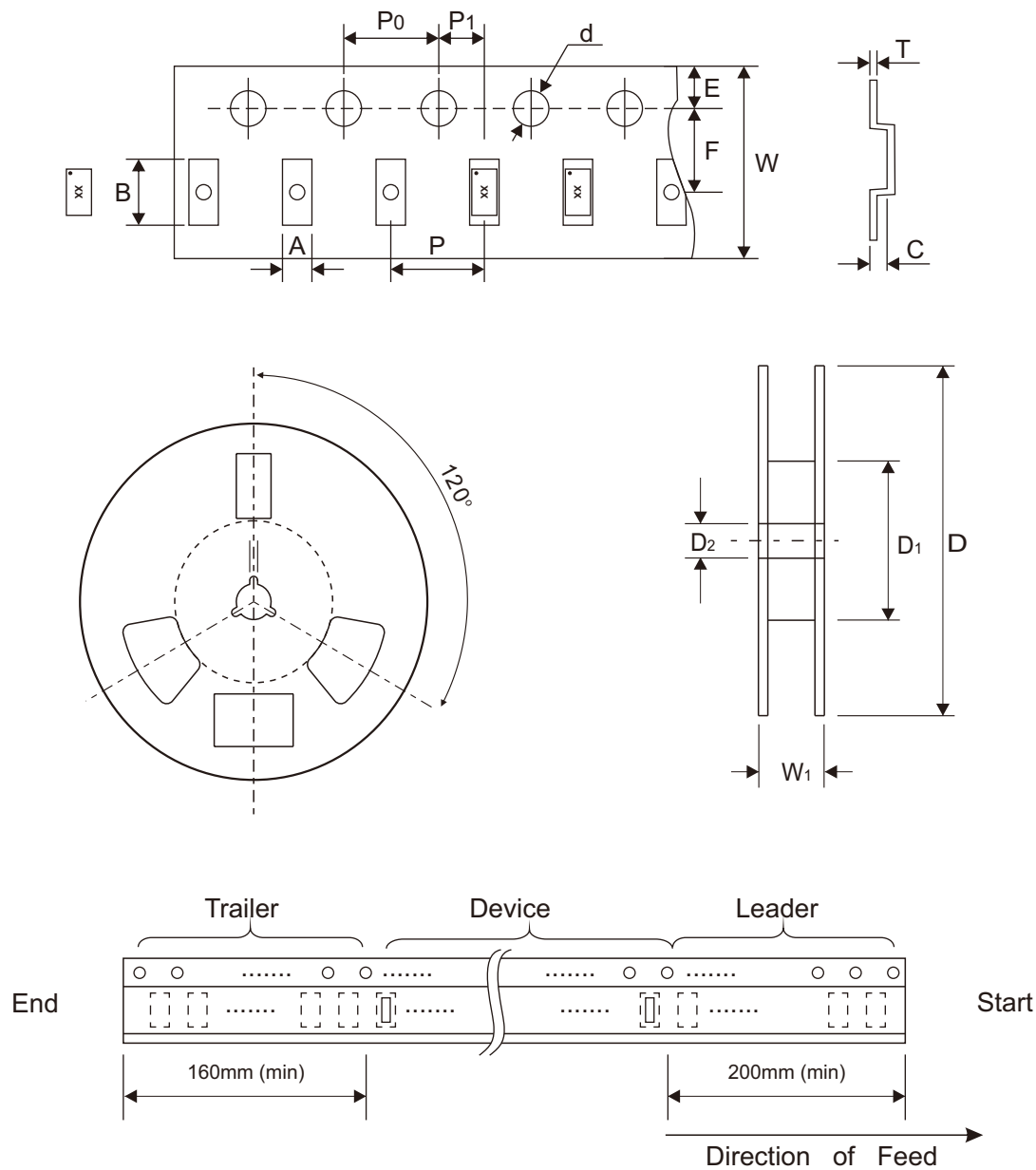


Fig.4 - Insertion loss S21



Reel Taping Specification



DFN2010-8L	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.20 ± 0.10	2.20 ± 0.10	0.60 ± 0.05	1.50 ± 0.10	178.00 ± 1.00	55.00 ± 1.00	13.00 ± 1.00
	(inch)	0.047 ± 0.004	0.087 ± 0.004	0.024 ± 0.002	0.059 ± 0.004	7.008 ± 0.039	2.165 ± 0.039	0.512 ± 0.039

DFN2010-8L	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.23 ± 0.05	8.00 ± 0.10	15.80 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.002	0.315 ± 0.004	0.622 ± 0.039

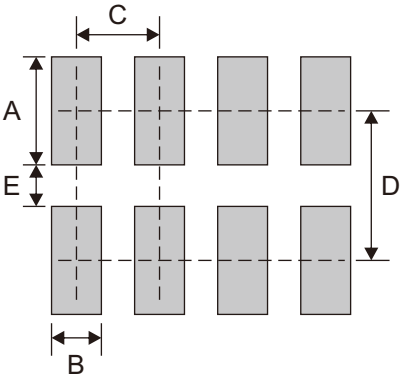
Marking Code

Part Number	Marking Code
CPDVR08C2V5SP-HF	B5



Suggested P.C.B. PAD Layout

SIZE	DFN2010-8L	
	(mm)	(inch)
A	0.65	0.026
B	0.30	0.012
C	0.50	0.020
D	0.90	0.035
E	0.25	0.010



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DFN2010-8L	3,000	7