

L1FPDC

L1 GPS Filter

Technical Product Data



Features

- Exceptional performance at GPS L1 C/A code frequency.
 - 1.8 dB typical insertion loss.
 - 0.1 dB ripple @ 1575.42 MHz \pm 1.2 MHz
- Wide 30 MHz 3 dB bandwidth ensures compatibility with C/A, P(y)-code, and M-code receivers.
- Excellent Rejection
 - 40 dB typical in stopband

Description

The L1FPDC is a one input, one output RF device that can improve GPS L1 receiver performance by protecting against out-of-band interference. The frequency response of the L1FPDC is centered at the GPS L1 frequency, 1575.42 MHz, with an optimal passband of ± 1.2 MHz and a 3dB passband of ± 15 MHz. This filter is compatible with the L1 GPS C/A, P(Y), and M-code signals. In the normal configuration, this unit passes DC voltage, allowing a GPS receiver on J1 to power an active GPS antenna on the antenna port.

Electrical Specifications, $T_A = 25^{\circ}\text{C}$

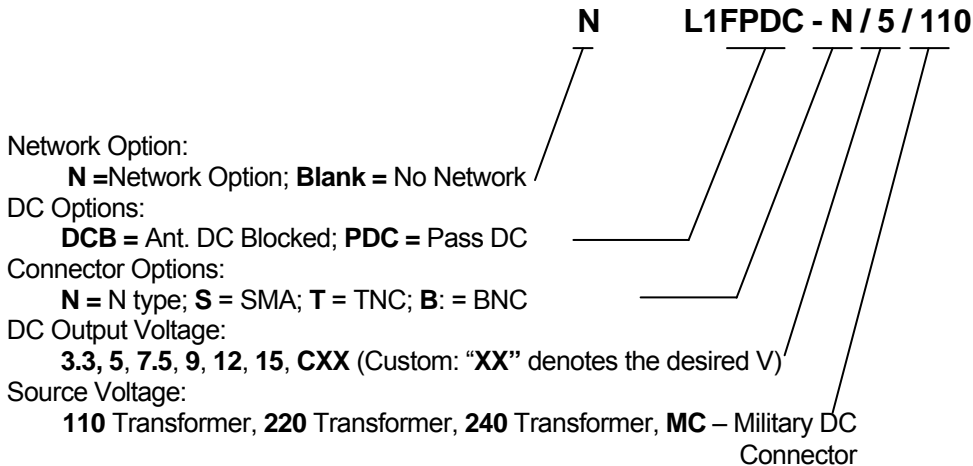
Parameter	Conditions	Min	Typ	Max	Units
Pass Band: L1	Ant - J1	1571.83	1575.4	1576.62	MHz
3dB Bandwidth	Ant, J1	1571.83		1576.62	MHz
System Impedance	All Ports		50		Ω
Insertion Loss	Ant - J1 within passband	-1.5	-3.0	-4.0	dB
Input VSWR	J1 - 50 Ω within passband		1.5:1	2.0:1	-
Output VSWR	Ant - 50 Ω within passband		1.3:1	2.0:1	-
Passband Ripple	Ant - J1 within passband		0.1	1.0	dB
Stopband Rejection	Ant - J1, excludes L1 \pm 30 MHz	25	40		dB

Available Options

Network Power Supply		
Source Voltage Options	VOLTAGE INPUT	STYLE
	110VAC	Transformer (Wall Mount)
	220 VAC	Transformer (Wall Mount)
	240 VAC (United Kingdom)	Transformer (Wall Mount)
Output Voltage Options ⁽¹⁾	Customer Supplied DC 9-32 VDC	Military Style Connector
	DC VOLTAGE OUT	MAX CURRENT OUT FOR CORRESPONDING Vout ⁽²⁾
	5 V	100mA
	7.5V	120mA
	9V	130mA
	12V	160mA
	15V	200mA
Custom	TDB	
Pass/Block DC Options		
Pass DC ⁽¹⁾	All Ports Pass DC	
DC Blocked ⁽¹⁾	Ant is DC blocked, Pass DC J1	
RF Connector Options		
Connector Options	CONNECTOR STYLE	CHARGE
	Type N	NC
	Type SMA	NC
	Type TNC	NC
	Type BNC	NC

(1). With Network Option, any RF port (input or output) can be DC blocked or pass network DC voltage.

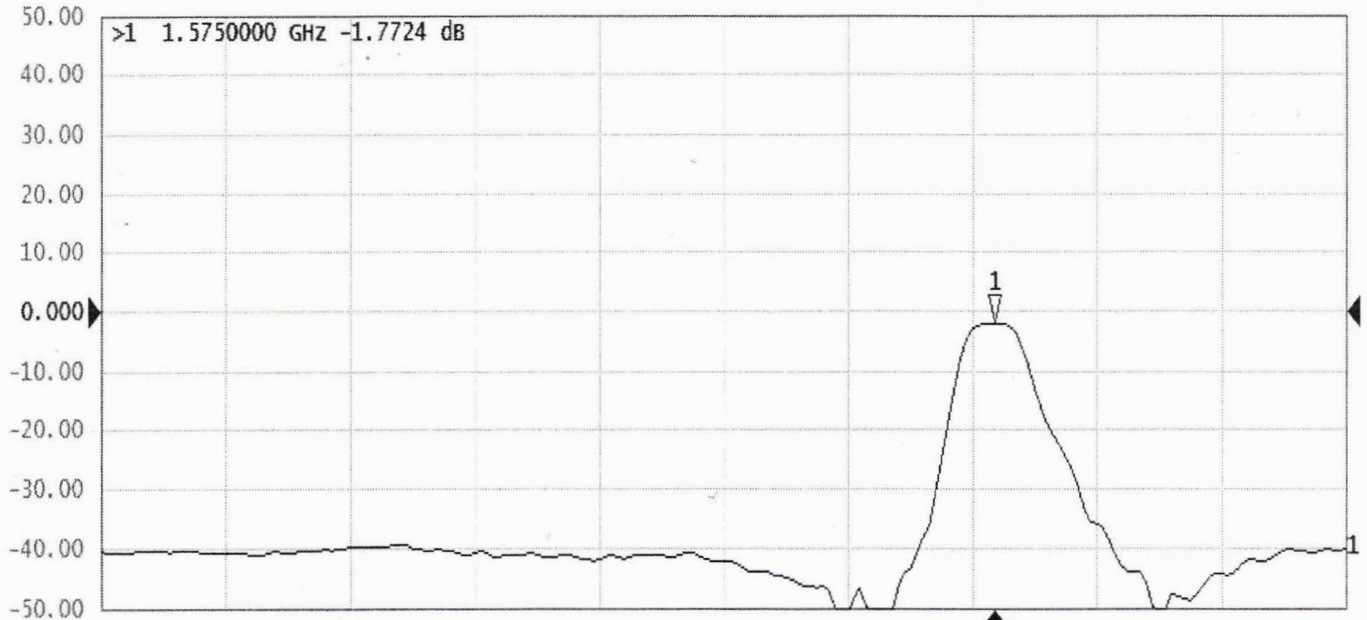
Part Number





Test Data

521 Log Mag 10.00 dB / Ref 0.000 dB [RT Smo]



Start 1 GHz IFBW 500 Hz Stop 1.8 GHz Cor 1

Tr1 S11 SWR 2.000 / Ref -9.000 [Smo]



