MIL-NLDCBS1X3

Technical Product Data

Features

- **Excellent Gain Flatness**
  |L1 – L2| < 0.5dB
- **Extremely Flat Group Delay**
  Less that 1ns variation
- **Phase Matched Outputs**
  Phase (J1 – J2) < 1.0°

Description

The MIL-NLDCBS1X3 GPS Splitter is a one input, three output device. The frequency response covers GPS L1, L2, L5, Galileo, and GLONASS bands with excellent gain flatness. The unit is completely MIL Qualified. It will accept any DC voltage from 8-32 VDC which is regulated down to 5VDC to power the GPS Antenna. The 5 VDC is sent to the antenna via the center conductor on the antenna port. The RF outputs (J2, J3, and J4) are DC Blocked with a 200Ω load to simulate antenna current draw. J2 and J3 ports are TNC connectors and the J4 port is a type N Connector

Electrical Specifications, $T_A = 25^0C$

Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	Ant – Any Output, Unused Outputs - 50Ω	1.1		1.7	GHz
Input/Output Impedance	Ant, J1, J2, J3		50		Ω
Input SWR	All ports - 50Ω			2.0:1	-
Output SWR	All ports - 50Ω			2.0:1	-
Insertion Loss	Ant – J2 or J3 - 50Ω Ant –J4 - 50Ω	-7.0 -8.5	-7.6 -9.2	-8.2 -9.9	dB dB
Gain Flatness	| L1 – L2 | ; Ant – Any Output, Unused Outputs - 50Ω			0.5	dB
Amplitude Balance	| J2 – J3 | ; Ant – Any Output, Unused Outputs - 50Ω			0.5	dB
Phase Balance	Phase (J2 – J3) ; Ant – Any Output, Unused Outputs - 50Ω			1.0	deg
Isolation	Adjacent Ports: Ant - 50Ω Opposite Ports: Ant - 50Ω	15 22			dB
Group delay Flatness	$\tau_{d,max} - \tau_{d,min}$: Ant – J2, Ant—J3; Ant – J4, J2, J3, J4 - 50Ω			1	ns

Network Power Supply

Source Voltage Options	VOLTAGE INPUT	STYLE
	Customer Supplied DC 8-32 VDC	Military Style Connector
	Pin Configuration A B C	A— (+) positive B—Housing Ground C—Common Ground
	5 V	120mA

Part Number

MIL N L DCB S1X3

MIL - Military Spec Qualified ----------

N - Networked – External Power supply input -------

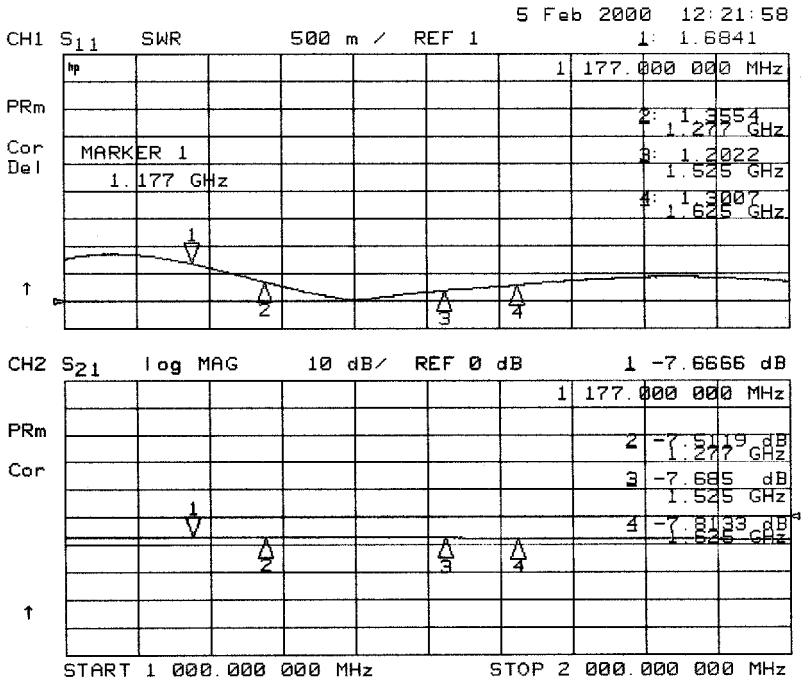
L – Loaded – DC antenna Load on DC Blocked Ports-----

DCB – DC Blocked ----------

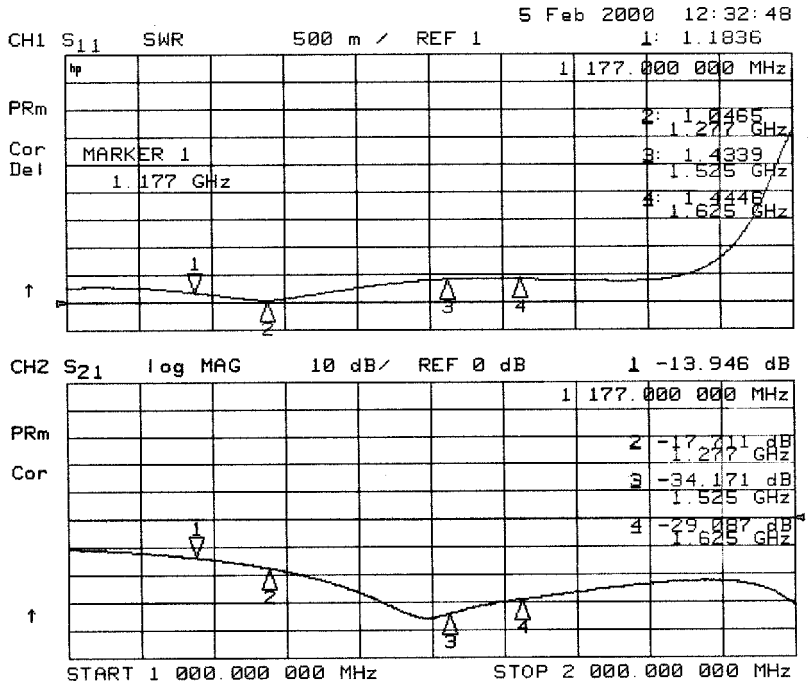
S1X3 – Splitter one input three outputs ----------

Performance

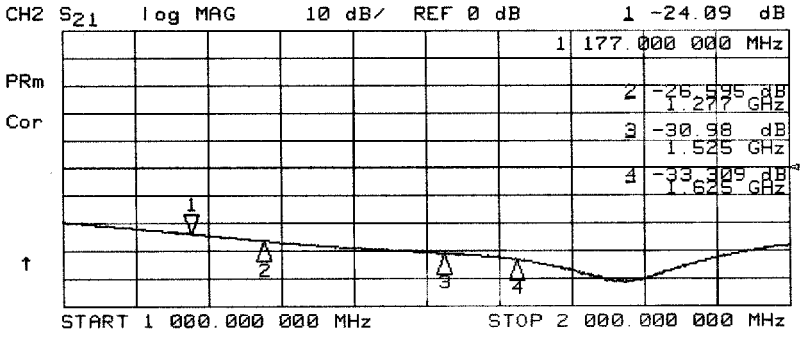
Input SWR: Ant. J2, J3, J4 -50Ω and Freq. Response: Ant. To J2, J3, J4



Output SWR: Any output, all other ports - 50Ω, and Adjacent Port Isolation:



Opposite Port Isolation:



Mechanical

Dimensions:	Height: 1.25”	
	Length (not including connectors)	Body: 2.25” Base Plate: 3.00”
	Width (not including connectors):	2.25”
Weight:	9.8 oz. (272 grams)	

Mil Qualifying Standards:

EMI:

MIL-STD 461/462 (EMI)	CE01, CE04, CS01, CS02, CS06, RE02, RS02, RS03 @ 200 Volts/Meter from 14Khz to 40Ghz

ENVIRONMENTAL:

MIL-STD 810D (Environmental)	Vibration(514.3, Proc. 1) Category 6 (helicopters) Rain(506.2 Proc. 1) Humidity(507.2, Proc 2, cycle 4) Fungus(508.3, Proc. 1) Salt/Fog(509.2) Explosive Atmosphere(511.2, Proc 1) Bench Handling Shock(516.3 Proc 6) Temp/Altitude(520.0 Proc 3) Acceleration(513.3, level = 6G's) Gunfire Vibration(519.3)