MIL-HIALDCBS1X2

Military High Isolation Amplified 1X2 GPS Splitter

Technical Product Data

Features

- **Amplifier Gain 6dB typical**
- **Passes all GNSS Frequencies (Entire L-band**
- **Extremely Flat Group Delay**

  Less than 1ns variation
- **Military Qualified 1X2 Splitter**

  MIL STD 810F, MIL STD 704, MIL STD 1275B
- **Excellent Gain Flatness**

  |J1 – J2| < 1.0dB
- **DC Blocked Outputs Feature 200Ω Loads**

  Prevent antenna alarm faults from connected devices
- **Phase Matched Outputs**

  Phase (J1 – J2) < 1.0^{o}
- **Special Configurations Available By Request**
- **Qual Test Summary Certification Available**

Description

The MIL-HIALDCBS1X2 GPS Splitter (GNSS Splitter) is a one input, two output high isolated amplified splitter based on the Wilkinson splitter design. The frequency response covers the entire L-band (all GNSS Frequencies) with excellent gain flatness. All Mil Spec splitters passed rigorous MIL-STD 810F testing detailed in the separate Qual Test Summary Certification. The MIL-HIALDCBS1X2 is standard hermetically sealed, EMI Shielded, Weatherproofed and configured with MIL-STD-704 or MIL-STD 1275B compliant power options. Each DC blocked output is loaded with a 200Ω resistor to simulate the antenna current draw to prevent false antenna alarm faults. Contact GPS Networking Technical Support for any questions regarding standard configurations or special configurations at salestech@gpsnetworking.com or 1-800-463-3063.

Electrical Specifications, $T_A = 25^0C$

Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	Ant – J1, J2 - 50Ω ; Ant – J2, J1 - 50Ω	1.1		1.7	GHz
In/Out Imped.	Ant, J1, J2		50		Ω
Gain		5.0	6.5	8.0	dB
Input SWR	All ports - 50Ω			2.0:1	-
Output SWR	All ports - 50Ω			1.5:1	-
Noise Figure	Ant – J1, J2 - 50Ω ; Ant – J2, J1 - 50Ω		3.5	3.7	dB
Gain Flatness	| L1 – L2 | ; Ant – J1, J2 - 50Ω ; Ant – J2, J1 - 50Ω		0.5	1.5	dB
Amplitude Balance	| J1 – J2 | ; Ant – J1, J2 - 50Ω ; Ant – J2, J1 - 50Ω			0.5	dB
Phase Balance	Phase (J1 – J2) ; Ant – J1, J2 - 50Ω ; Ant – J2, J1 - 50Ω			1.0	deg
Isolation	J1 – J2, Ant - 50Ω	36	40	50	dB
Group delay Flatness	$\tau_{d,max} - \tau_{d,min}$: Ant – J1, J2 - 50Ω ; Ant – J2, J1 - 50Ω			1	ns
Req. DC Input V.	Non-Network Configuration, DC Input on J1	3.6		15	Vdc
Pı dB	Output Power @ 1dB Gain Compression (f = 1.5GHz)		-25		dBm
Current Draw (5v) (1)	Amplifier Current Draw, All ports - 50Ω			15	mA

(1). Current draw on input DC port in the non-networked configuration.

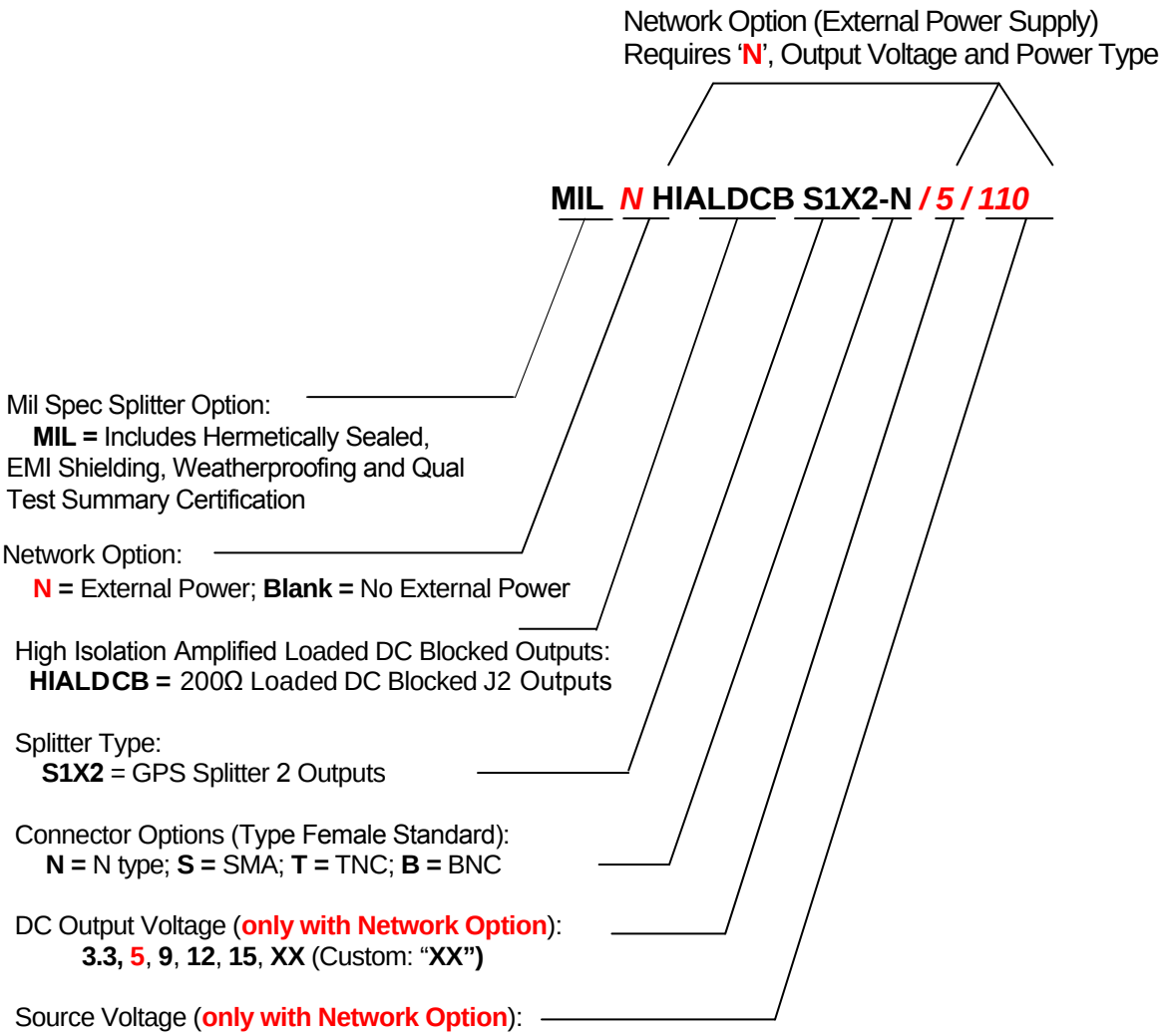
Available Power Options (Networked Option)

External Power Options (Networked Option)		
Source Voltage Options	VOLTAGE INPUT	STYLE
	110VAC	Transformer (Wall Mount)
	220 VAC	Transformer (Wall Mount)
	240 VAC (United Kingdom)	Transformer (Wall Mount)
	Customer Supplied DC 9-32 VDC	Mil DC Connector (includes Mate Std)
Output Voltage Options (1)	DC VOLTAGE OUT	MAX CURRENT OUT FOR CORRESPONDING Vout(2)
	3.3 V	110mA
	5V	130mA
	9V	140mA
	12V	170mA
	15V	210mA
	Custom	TDB
Standard DC Configuration without External Power Option		
	J1/Output 1 Pass DC, J2 Output 2 Block DC, Input Pass DC	
Standard DC Configuration with any External Power Option (AC/DC or Military DC)		
	All DC Blocked Outputs include 200Ω Load Standard	
	Any port can be custom selected to Pass or Block DC	
RF Connector Options		
Connector Options	CONNECTOR STYLE	CHARGE
	Type N-female	NC
	Type SMA-female	NC
	Type TNC-female	NC
	Type BNC-female	NC
	Other	Contact GPS Networking

(1) With Networked Option, any RF port (input or output) can be selected Pass DC or Block DC.

(Contact GPS Networking Technical Support at 719-595-9880 or salestech@gpsnetworking.com for any questions regarding non-standard configurations and corresponding part numbers)

Part Number Configuration



(Military DC Mating Connector is included standard with the MC power option)

When no external power supply option (AC or DC) is selected, Output 1/J1 is Pass DC standard. Whenever an external power supply option is selected, all outputs are DC blocked standard.

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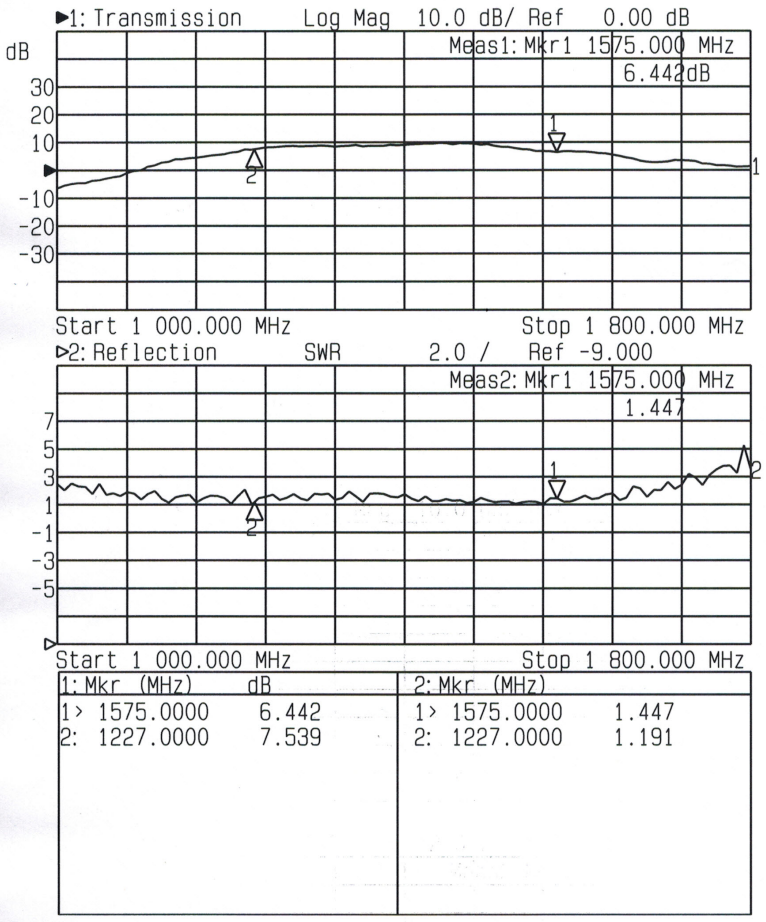
Performance

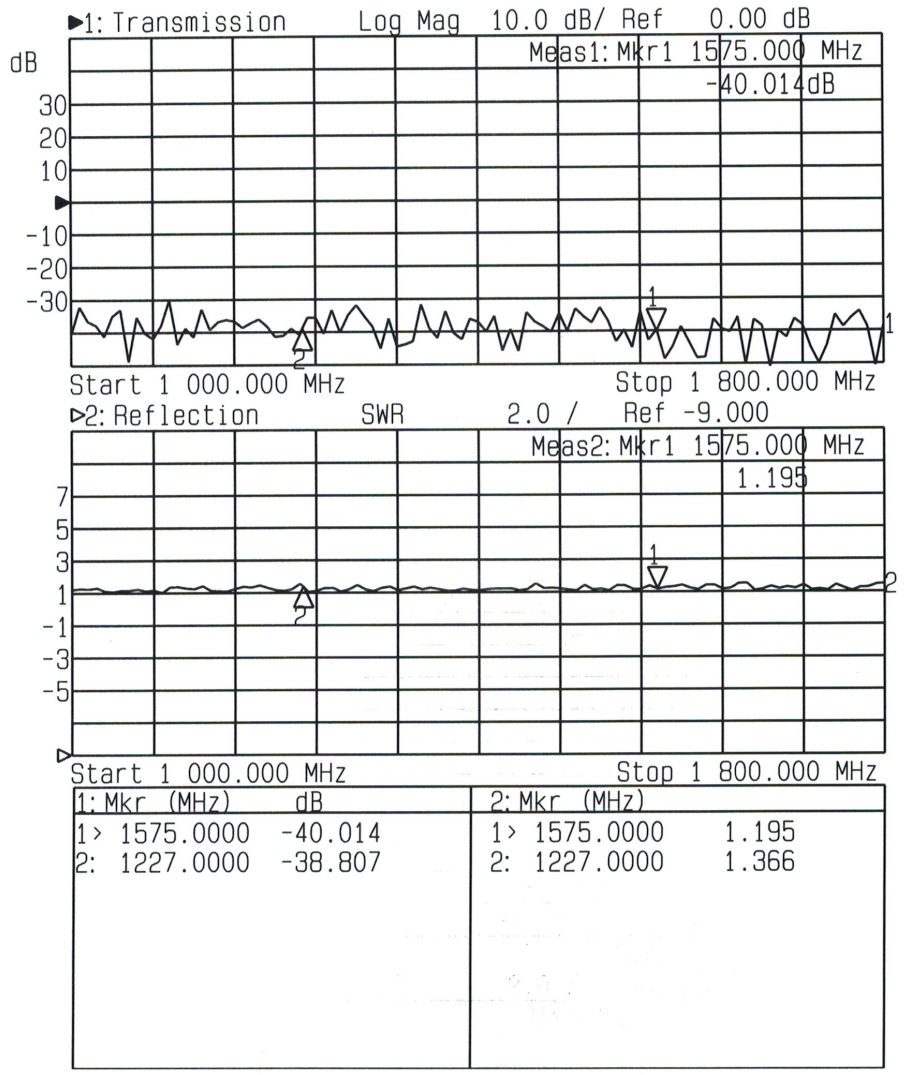
MIL-HIALDCBS1X2 (High Isolation Typical Gain)

Input SWR (Ant. port) and Frequency Response: Ant. To J1, J2, (Typical, Type N connectors)



MIL-HIALDCBS1X2 (High Isolation Option):

Output Isolation (J1-J2) and Output SWR (J1, J2) (Typical, type N connector):



Mechanical

Dimensions: Height: 1.3”

Length (not including connectors) Body: 2.5”
Base Plate: 3.25”

Width (not including connectors): 2.5”

Weight: 12 oz. (344 grams)

Operating Temp. Range: -40° to + 75°C

Finish Housing and Base Plate: ELECTROLESS NICKEL PLATED
MIL-C-26074C CLASS 1, .0001-.0003 MAX
Finish Lid: ANODIZE, TYPE II, CLASS 2, BLACK, per MIL-A-8625