HIALDCBS1X4-S

Technical Product Data

Features

- **Hi Isolation Gain of 0dB**

- **Extremely Flat Group Delay**
  Less that 1ns variation
- **Phase Matched Outputs**
  Phase (J1 – J2) < 1.0°

Description

The HIALDCBS1X4 GPS Amplified Splitter is a one input, four output device with a 0dB gain block. The frequency response covers the GPS L1 & L2, Galileo and GLONASS bands with excellent gain flatness. In the normal configuration, one of the splitter RF outputs (J1) passes DC from the connected GPS receiver through the splitter to the antenna, allowing the GPS receiver to power both the antenna and the splitter's amplifier. The other RF outputs (J2, J3 and J4) are DC loaded with a 200Ω resistor to simulate the antenna current draw and prevent false antenna fault detection from connected receivers.

Electrical Specifications, $T_A = 25^0C$

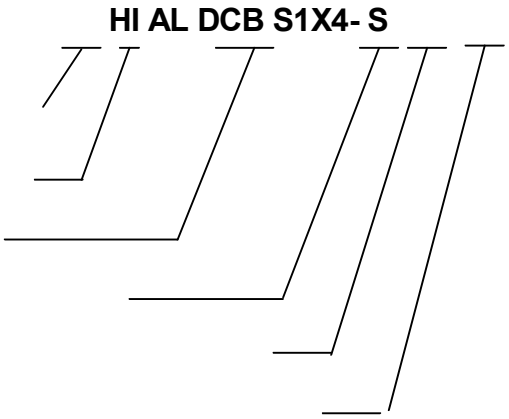
Parameter	Conditions	Min	Typ.	Max	Units
Freq. Range	Ant – Any Output, Unused Outputs - 50Ω	1.1		1.7	GHz
In/Out Imped.	Ant, J1, J2, J3, J4		50		Ω
Gain	Normal Configuration, Ant–Any Output, Unused Outputs- 50Ω	-1.0	0.0	1.0	dB
Input SWR	All ports - 50Ω			2.0:1	-
Output SWR	Normal Configuration , All ports - 50Ω			1.8:1	-
Noise Figure	Normal Config., Ant – Any Output, Unused Outputs - 50Ω		4.4	4.7	dB
Gain Flatness	| L1 – L2 | ; Ant – Any Output, Unused Outputs - 50Ω		0.3	1	dB
Amplitude Balance	| J1 – J2 | ; Ant – Any Output, Unused Outputs - 50Ω			0.5	dB
Phase Balance	Phase (J1 – J2) ; Ant – Any Output, Unused Outputs - 50Ω			1.0	deg
Isolation	Normal Config., Adjacent Ports, Ant - 50Ω (see plots)	36	37	40	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
P_1 dB	Output Power @ 1dB Gain Compression (f = 1.5GHz)		-2.0		dBm
Current (1)	Amplifier Current Draw, All ports - 50Ω			15	mA

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

Available Options

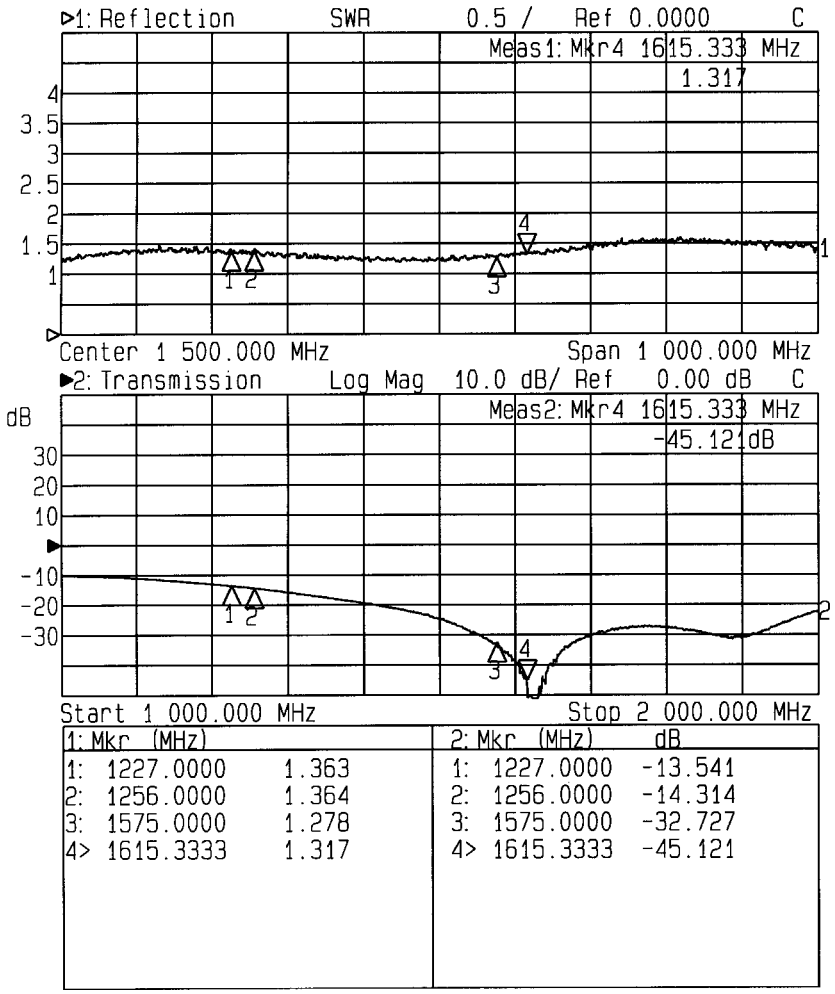
Output Port Isolation Options		
Isolation Options	High Isolation, 42dB min. Output Port – to – Output Port	
Pass/Block DC Options		
DC Blocked	J2, J3, J4 are DC blocked, Pass DC from J1 to ANT.	
RF Connector Options		
Connector Options	CONNECTOR STYLE	CHARGE
	Type SMA	**NC**
	Type N	NC
	Type TNC	NC
	Type BNC	NC

Part Number



Network Option:
Blank: No Network
Isolation Option:
HI =Hi Isolation Option
DC Options:
DCB = DC Blocked;
Connector Options:
S = SMA;
DC Output Voltage:
Passes Receivers voltage
Network Option:
Blank: No Network

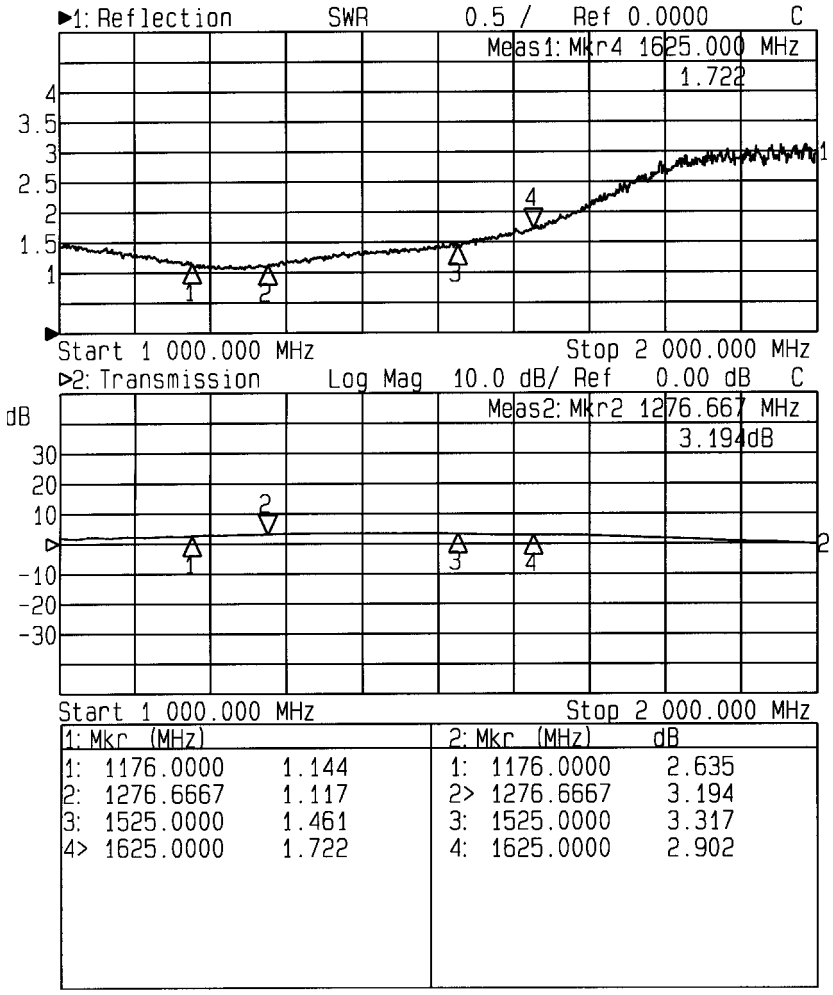
HIALDCBS1X4 (Hi Isolation Option):



Output SWR (J1, J2, J3, J4) and Adjacent Output Isolation (J1-J3, J2-J4) (Typical, type N connector):

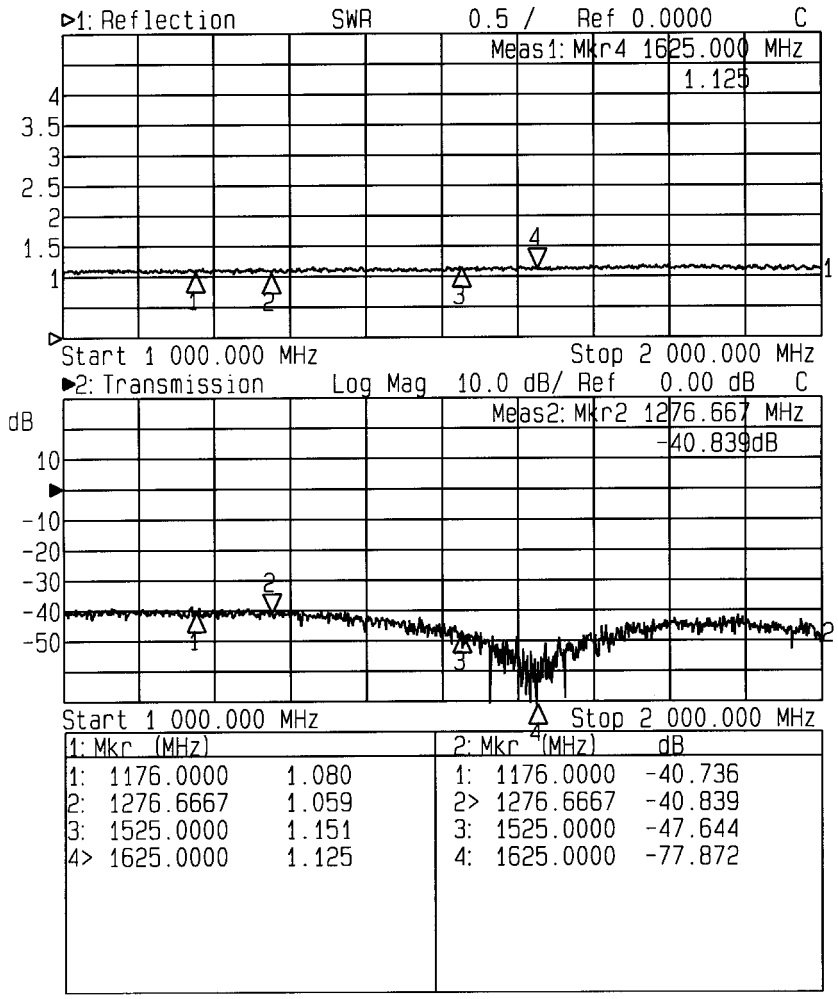
HIALDCBS1X4 (Hi Isolation Option):

Input SWR (Ant. Port) and Frequency Response: Ant. To J1, J2, J3, J4



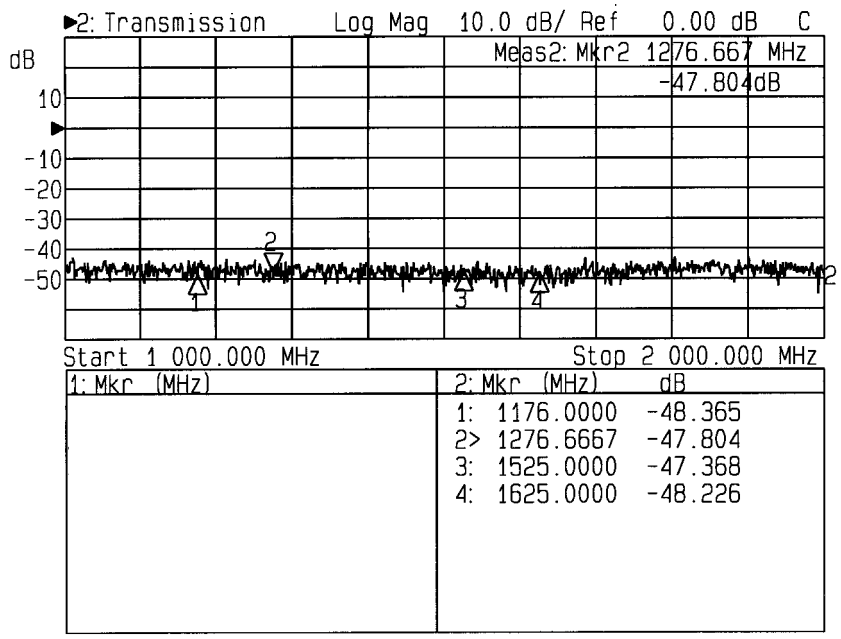
HIALDCBS1X4 (Hi Isolation Option) (continued):

Output SWR (J1, J2, J3, J4) and Adjacent Output Isolation (J1-J3, J2-J4) (Typical, type N connector):



ALDCBS1X4 (Hi Isolation Option) (continued):

Opposite Output Isolation (J1-J2, J3-J4) (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. (340 grams)

Operating Temp. Range: -40° to + 75°C