



LDCBS1X2

Technical Product Data

Features

- **Excellent Gain Flatness**
 $|L1 - L2| < 0.5\text{dB}$,
- **Extremely Flat Group Delay**
 Less than 1ns variation
- **Phase Matched Outputs**
 $\text{Phase (J1 - J2)} < 1.0^\circ$

Description

The LDCBS1X2 GPS Splitter is a one input, two output device based on the Wilkinson splitter design. The frequency response covers the GPS L1 & L2 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. The other RF output (J2) is DC loaded with a 200Ω resistor to simulate the antenna current draw.

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

Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	Ant - J1, J2 - 50Ω ; Ant - J2, J1 - 50Ω	1.1		1.7	GHz
Input/Output Impedance ⁽¹⁾	Ant, J1, J2		50		Ω
Input SWR	All ports - 50Ω			1.5:1	-
Output SWR	All ports - 50Ω			1.5:1	-
Insertion Loss	Ant - J1, J2 - 50Ω ; Ant - J2, J1 - 50Ω		-4.0	-4.5	dB
Gain Flatness	$ L1 - L2 $; Ant - J1, J2 - 50Ω ; Ant - J2, J1 - 50Ω			0.5	dB
Amplitude Ballance	$ J1 - J2 $; Ant - J1, J2 - 50Ω ; Ant - J2, J1 - 50Ω			0.5	dB
Phase Ballance	Phase (J1 - J2) ; Ant - J1, J2 - 50Ω ; Ant - J2, J1 - 50Ω			1.0	deg
Isolation	J1 - J2, Ant - 50Ω	19		30	dB
Group delay Flatness	$\tau_{d,max} - \tau_{d,min}$: Ant - J1, J2 - 50Ω ; Ant - J2, J1 - 50Ω			1	ns

(1). Input/Output Impedance = 75Ω for 75Ω connector option.

Available Options

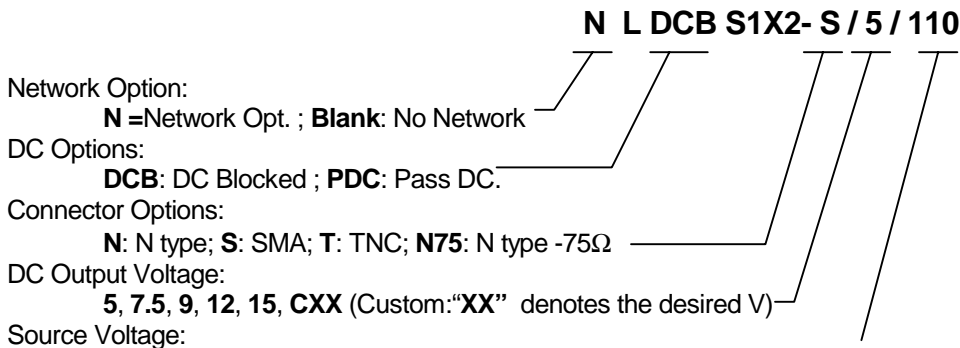
Network Power Supply		
Source Voltage Options	VOLTAGE INPUT	STYLE
	110VAC	Transformer (Wall Mount)
	220 VAC	Transformer (Wall Mount)
	240 VAC (United Kingdom)	Transformer (Wall Mount)
	Customer Supplied DC 8-28 VDC	Military Style Connector
Output Voltage Options ⁽¹⁾	DC VOLTAGE OUT	MAX CURRENT OUT FOR CORRESPONDING Vout ⁽²⁾
	5 V	120mA
	7.5V	140mA
	9V	150mA
	12V	180mA
	15V	220mA
	Custom	TDB
Pass/Block DC Options		
Pass DC ⁽¹⁾	All Ports Pass DC	
DC Blocked ⁽¹⁾	J2 is DC blocked, Pass DC from J1 to ANT.	
RF Connector Options		
Connector Options	CONNECTOR STYLE	CHARGE
	Type N	NC
	Type SMA	NC
	Type TNC	NC
	Type N - 75Ω	Contact Sales Agent

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

(2). T_A = +50°C. Assuming Source of 110V or 220V Wall Mount Transformer. In general, maximum output current can be determined by:

$$I_{out} \leq 2.9 / (V_{sourceDC} - V_{out}) \text{ A}$$

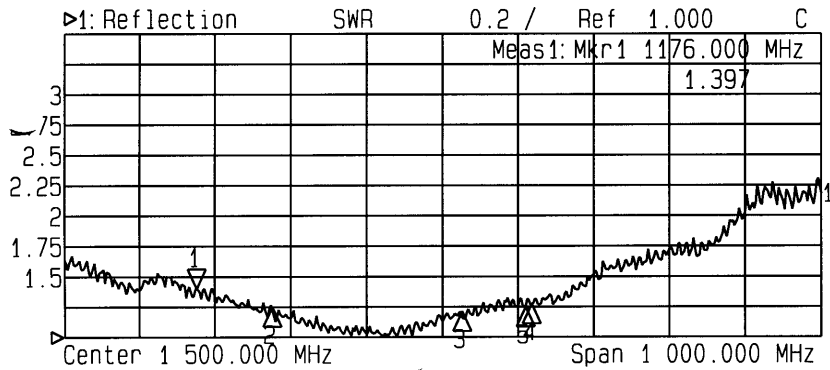
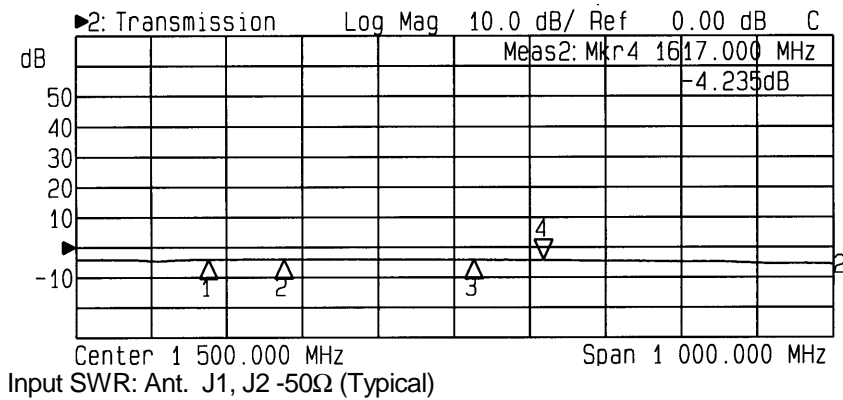
Part Number



110 -Transformer, 220 – Transformer, 240 – Transformer, MC – Military Conn. (User supplies DV Voltage)

Performance

Frequency Response: Ant. To J1, J2 (Typical, type N conn.):



Mechanical

Dimensions: Height: 1.3"
Length (not including connectors) Body: 2.5"
Base Plate: 3.25"
Width (not including connectors): 2.5"

Weight: 10 oz. (286 grams)

Operating Temp. Range: -40° to + 75°C