

# *MLDCBS1X2*

## *Passive 1X2 GPS Splitter*

### *Technical Product Data*



## Features

- **Amplitude Balance**  
 $|J1 - J2| < 1.0\text{dB}$
- **Extremely Flat Group Delay**  
Less than 1ns variation
- **Low Insertion Loss**
- **Passes all GNSS Frequencies (Entire L-band)**
- **DC Blocked Outputs Feature 200Ω Loads**  
Antenna Simulation DC Load
- **Phase Matched Outputs**  
 $\text{Phase } (J1 - J2) < 1.0^\circ$
- **Smallest GPS Antenna Splitter In The World!**

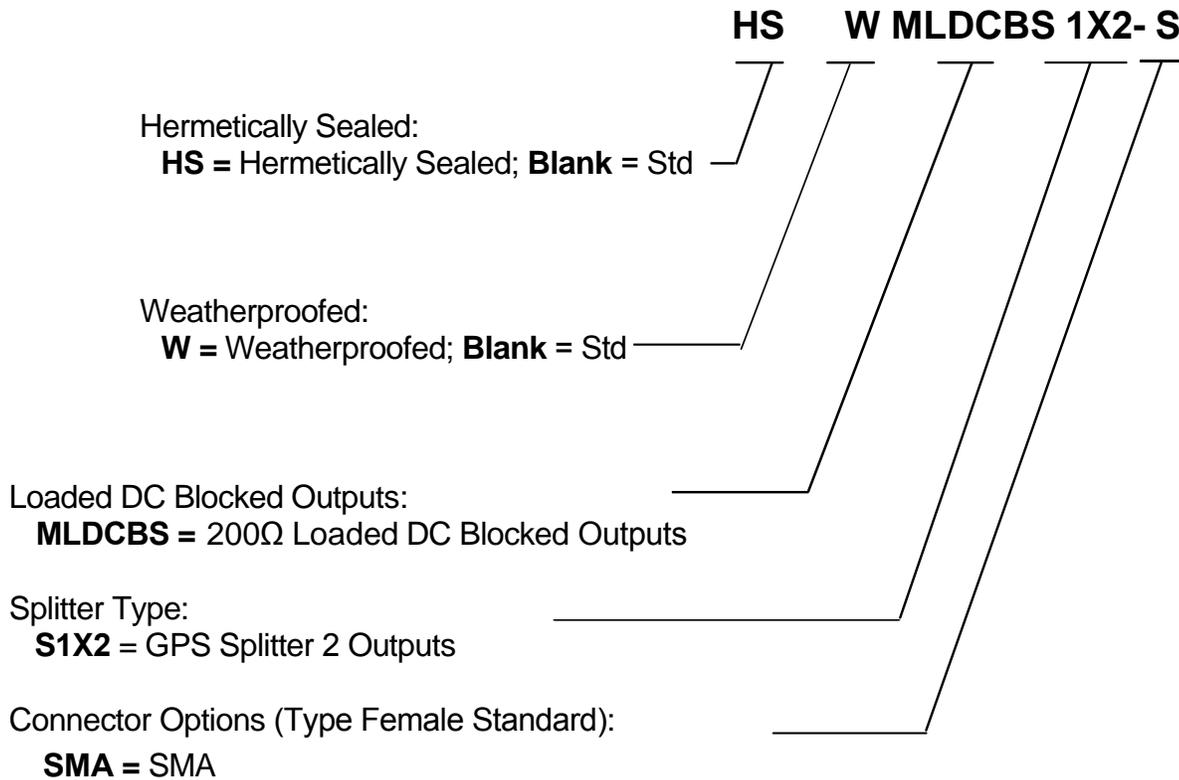
## Description

The MLDCBS1X2 GPS Splitter (GNSS Splitter) is a small, lightweight one input, two output device based on the Wilkinson splitter design. The frequency response covers the entire L-band (all GNSS Frequencies) with excellent gain flatness. In the standard configuration, (J2) passes DC from the connected GPS device through the splitter to the input (antenna port). The other RF output (J1) is DC blocked and loaded with a 200Ω resistor to simulate the antenna current draw to prevent false antenna alarm faults. Available with SMA connectors. Contact GPS Networking Technical Support with any questions at [salestech@gpsnetworking.com](mailto:salestech@gpsnetworking.com) or 1-800-463-3063.

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

Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	Ant – Any Output, Unused Outputs - $50\Omega$	1.1		1.7	GHz
Input/Output Impedance	Ant, J1, J2		50		$\Omega$
Input SWR	All ports - $50\Omega$			2.0:1	-
Output SWR	All ports - $50\Omega$			1.5:1	-
Insertion Loss	Ant – Any Output, Unused Outputs - $50\Omega$	-3	-4	-5	dB
Gain Flatness	$ L1 - L2 $ ; Ant – Any Output, Unused Outputs - $50\Omega$		0.5	1.0	dB
Amplitude Balance	$ J1 - J2 $ ; Ant – Any Output, Unused Outputs - $50\Omega$		0.5		dB
Phase Balance	Phase (J1 – J2); Ant – Any Output, Unused Outputs - $50\Omega$		1.0	2.0	deg
Isolation	Opposite Ports: Ant - $50\Omega$	20			dB
Group delay Flatness	$\tau_{d,max} - \tau_{d,min}$ : Ant – J1 – J2 - $50\Omega$ ; Ant – J2, J1 - $50\Omega$		<1		ns

Part Number Configuration



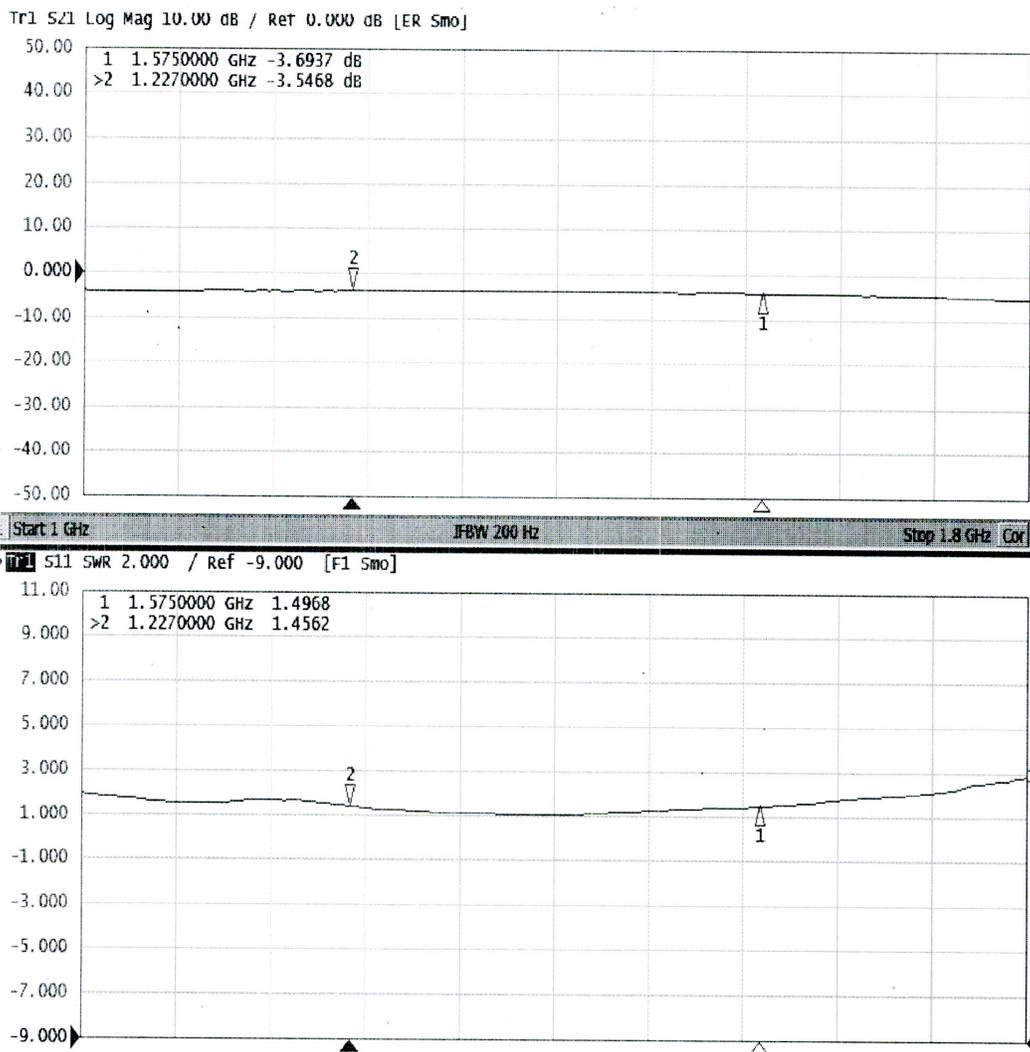
Output 2/J2 is Pass DC standard.

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

# Performance

Typical Frequency Response: Ant. To J1, J2, (Type SMA connectors)

Input SWR: Ant. J1, J2 - 50Ω (Type SMA connectors):



## Mechanical

### Dimensions:

Width with out connectors: .90" or 23 mm  
Length with out connectors: 1.1675" or 29.65 mm  
Depth: .47" or 12mm

Width with connectors: 1.65" or 42 mm  
Length with connectors: 1.54" or 39 mm  
Depth: .47" or 12 mm

Weight: .8oz or 23grams

Operating Temp. Range: -40° to + 75°C

Finish Housing and Finish Lid: ELECTROLESS NICKEL PLATED