



RMALDCBS1X32

Technical Product Data

Features

- **Extremely Flat Group Delay**
Less than 1ns variation
- **High Isolation Option**
>35dB of isolation between adjacent output ports
- **Phase Matched Outputs**
Phase (J1 – J2) < 1.0°

Description

The ALDCBS1X32 GPS Rack Mount Amplified Splitter is a one input, thirty-two output device with – 2dB max signal loss. The frequency response covers the GPS L1 & L2 bands with excellent gain flatness. In the normal configuration, the splitter is powered by a transformer that supplies power to the splitter's amplifier and roof antenna. The outputs are DC loaded with a 200Ω resistor to simulate the antenna current draw. This product is ideally suited for timing and testing applications where the GPS carrier signal is required by up to 32 GPS devices simultaneously.

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

| 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, J5, J6, J7, J8 | | 50 | | Ω |
| Gain | Ant – Any Output, Unused Outputs, - 50Ω | 13.0 | 14.5 | 16.5 | dB |
| Gain-High Isolation | Ant – Any Output, Unused Outputs - 50Ω | -2.0 | 0.0 | 2.0 | dB |
| Input SWR | All ports - 50Ω | | | 2.0:1 | - |
| Output SWR | All ports - 50Ω | | | 1.3:1 | - |
| Noise Figure | Normal Config., Ant – Any Output, Unused Outputs - 50Ω | | 3.8 | 4.3 | dB |
| Gain Flatness | L1 – L2 ; Ant – Any Output, Unused Outputs - 50Ω | | 0.5 | 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 | Hi Isolation Config, Adjacent Ports, Ant - 50Ω (see plots) | 35 | | | dB |
| Group delay Flatness | $\tau_{d,max} - \tau_{d,min}$: Ant – J1, J2 - 50Ω ; Ant – J2, J1 - 50Ω | | | 1 | ns |
| Current | Amplifier Current Draw @ 50Ω | | | 15 | mA |

Available Options

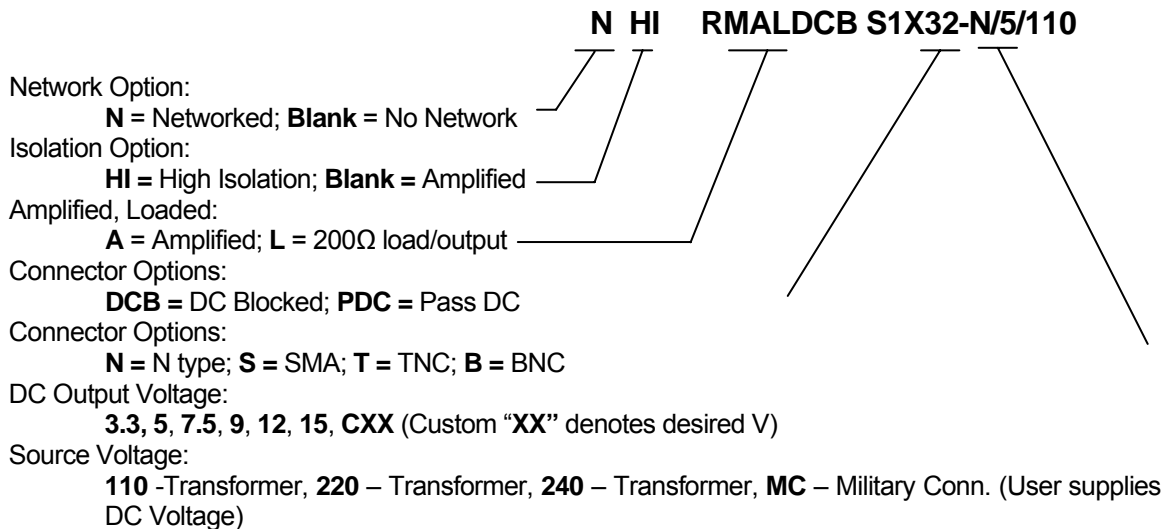
| Network Power Supply | | |
|---------------------------------------|--|---|
| Source Voltage Options | VOLTAGE INPUT | STYLE |
| | 110VAC | Transformer (Wall Mount) |
| | 220 VAC | Transformer (Wall Mount) |
| | 240 VAC (United Kingdom) | Transformer (Wall Mount) |
| | Customer Supplied DC 9-32 VDC | Military Style Connector |
| Output Voltage Options ⁽¹⁾ | DC VOLTAGE OUT | MAX CURRENT OUT FOR CORRESPONDING Vout ⁽²⁾ |
| | 5 V | 110mA |
| | 7.5V | 130mA |
| | 9V | 140mA |
| | 12V | 170mA |
| | 15V | 210mA |
| | Custom | TDB |
| Output Port Isolation Options | | |
| Isolation Options | High Isolation, 35dB min. Output Port – to – Output Port | |
| Pass/Block DC Options | | |
| DC Blocked ⁽¹⁾ | Jx (x=1...32) is DC blocked, Pass DC to ANT. | |
| RF Connector Options | | |
| Connector Options | CONNECTOR STYLE | CHARGE |
| | Type N, TNC, SMA, and BNC | NC |

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

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

$$I_{out} \leq 2.9 / (V_{source\ DC} - V_{out})\ A$$

Part Number



Mechanical

Dimensions: Height: 5.4"
 Length: 18.0"
 Width: 17.0"

Weight: 16 lbs.

Operating Temp. Range: -40° to + 75°C