

RMALDCBS1X8

Technical Product Data

Features

Extremely Flat Group Delay

Less that 1ns variation

High Isolation Option

>35dB of isolation between adjacent output ports

• Phase Matched Outputs

Phase $(J1 - J2) < 1.0^{\circ}$

Description

The RMALDCBS1X8 GPS Rack Mount Amplified Splitter is a one input, eight output device. 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 amplifiers and roof antenna. The outputs are DC loaded with 200Ω resistors to simulate the antenna current draw. Product is ideal for timing and testing applications where the GPS carrier signal is required by up to 8 GPS devices simultaneously.

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

Parameter	Conditions	Min	Тур	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	14.5	16.5	dB
Gain High Isolation	Ant – Any Output, Unused Outputs - 50Ω	3.0	4.5	6.5	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 $-$ 50 Ω			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	$\tau_{d.max}$ - $\tau_{d.min}$: Ant – J1, J2 - 50Ω; Ant – J2, J1 - 50Ω			1	ns
Flatness	-u,max -u,min				
Current	Amplifier Current Draw, All ports - 50Ω			15	mA

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						
High Isolation Option	High Isolation, 35dB min. Output Port – to – Output Port					
Pass/Block DC Options						
DC Blocked (1)	Jx (x=18) is DC blocked, Pass DC from 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.

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

Part Number

Network Option:

N = Networked; **Blank** = No Network

Isolation Option:

HI = High Isolation Option;

Amplified, Loaded:

 $A = Amplified; L = 200\Omega load/output$

DC Options:

DCB = DC Blocked; PDC = Pass DC

Connector Options:

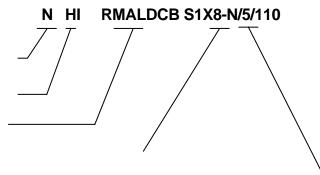
N = N type; S = SMA; T = TNC; B = BNC

DC Output Voltage:

3.3, 5, 7.5, 9, 12, 15, CXX (Custom "**XX**" denotes desired V)

Source Voltage:

110 -Transformer, **220** - Transformer, **240** - Transformer, **MC** - Military Conn. (User supplies DC Voltage)



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

Mechanical

<u>Dimensions</u>: Height: 1.5"

Length: 8.5"

Width: 17.0"

Weight: 12 lbs.

Operating Temp. Range: -40° to + 75°C