C21 Combiner

Technical Product Data

Features

- **Passes GPS, Galileo & GLONASS L1/L2**
- **Excellent Passband Flatness**
  Gain | L1 - L2 | < 0.5 dB

Description

The C21 GPS Combiner is a two-input, one-output GPS device. This product typically finds application where two inputs from active GPS antennas is combined evenly into a single receiving GPS unit. In this scenario, the C21 will pass DC from the RF output to both antenna input ports (J1 & J2) in order to power the active GPS antennas on those ports.

The C21 splitter comes with many available options to meet your specific needs. Please call, fax, email (sales@gpssource.com), or visit our website (www.gpssource.com) for further information on product options, specifications, or to receive an easy to use order sheet.

Electrical Specifications, Operating Temperature -40 to 85^{0}C

Parameter		Conditions	Min	Typ	Max	Units
Freq. Range		In1-Output, In2-50Ω or In2-Output, In1-50Ω	1		2	GHz
In/Out Imped.		Output, In1, In2		50		Ω
Gain		In1 & In2-Output, In1 = In2	1	1.5	2	dB
Input SWR		All Ports 50Ω			2.0:1	-
Output SWR		All Ports 50Ω			2.0:1	-
Gain Flatness		|L1 - L2|, In1-Output, In2-50Ω or In2-Output, In1-50Ω			0.5	dB
Amp. Balance		|In1 – In2|, In1-Output, In2-50Ω or In2-Output, In1-50Ω			0.5	dB
Phase Balance		Phase (In1 – In2), In1-Output, In2-50Ω or In2-Output, In1-50Ω			1.0	Deg
Group Delay Flatness		$\tau_{d,max}$ - $\tau_{d,min}$, In1-Output, In2-50Ω or In2-Output, In1-50Ω			1	ns
Isolation		Adjacent Ports: Ant - 50Ω	16			dB
DC IN	Pass DC	Non-Powered Configuration, DC Input on OUT			16	VDC
	Powered	Powered, Mil. Conn. or Quick Connect Option	3[1]		28[2]	VDC
Ant/Thru Current	Pass DC	Non-Powered Configuration, DC Input on OUT			250	mA
	Powered	Powered, Mil. Conn. or Quick Connect Option			Note 3	mA
Max RF Input		Max RF input without damage			30	dBm

Notes:

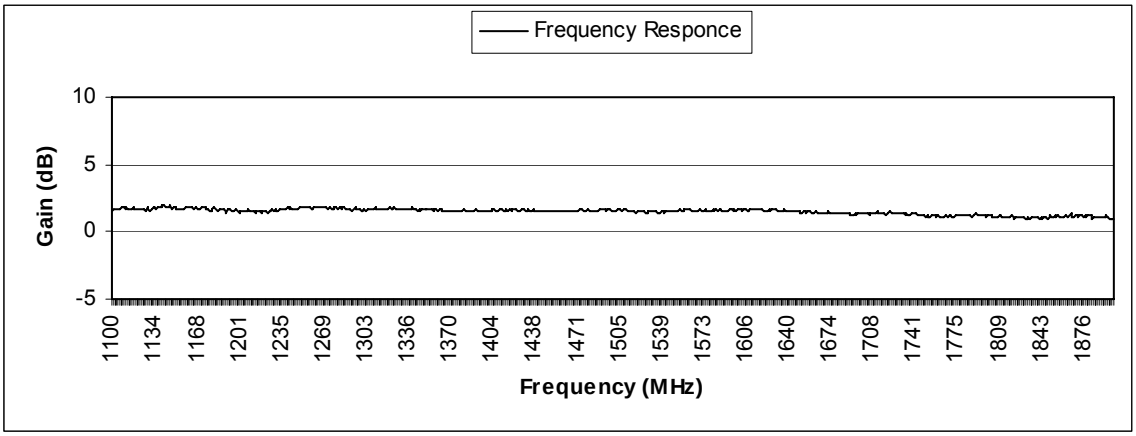
1. DC IN for powered option must be 2V greater than desired DC Voltage Out
2. Maximum DC IN is 35V when 1275B Powered option is included
3. Maximum combined DC current draw out all ports of the device is a function of the DC input voltage and desired DC output voltage , according to the following:

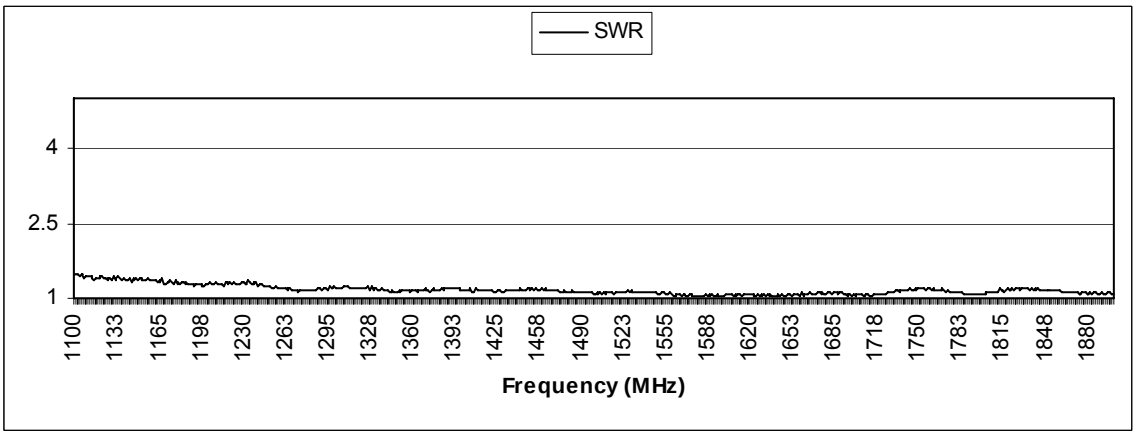
$$Iout \leq 1.4 / (V_{DC\ IN} - V_{DC\ OUT}) \quad Amps$$

For powered option with a wall mount transformer (Voltage Input = 110/220/240 VAC), $V_{DC\ IN}$ is 9V.

Performance Data:

C21 (In1=In2)





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Available Options:

Power Supply Options:		
Source Voltage Options	**Voltage Input**	**Type**
	110 VAC	Wall Mount Transformer
	220 VAC	Wall Mount Transformer
	240 VAC (U.K.)	Wall Mount Transformer
	DC 5-28 VDC	Military Style Connector or w/Quick Connects
Output Voltage Options(1)	**DC Voltage Out(2)**	
	3.3	
	5	
	7.5	
	9	
	12	
	Variable (3-12V)	
	Custom	
RF Connector Options:		
Connector Options	**Connector Type**	**Limitations**
	N (Male & Female)	
	SMA (Male & Female)	
	TNC (Male & Female)	
	SMB (Female)	
	SMC (Female)	
	MCX (Female)	
	BNC (Male & Female)	Performance Not Guaranteed
Housing Options:		
Housings	**Housing Type**	**Limitations**
	Standard	None
	Slimline	Powered Option Not Ava. Connectors Not Available: N, TNC, BNC
Port Options:		
Pass DC(1)	All Ports Pass DC	
DC Blocked(1)	OUT port is DC Blocked, DC is passed to both RF IN ports	

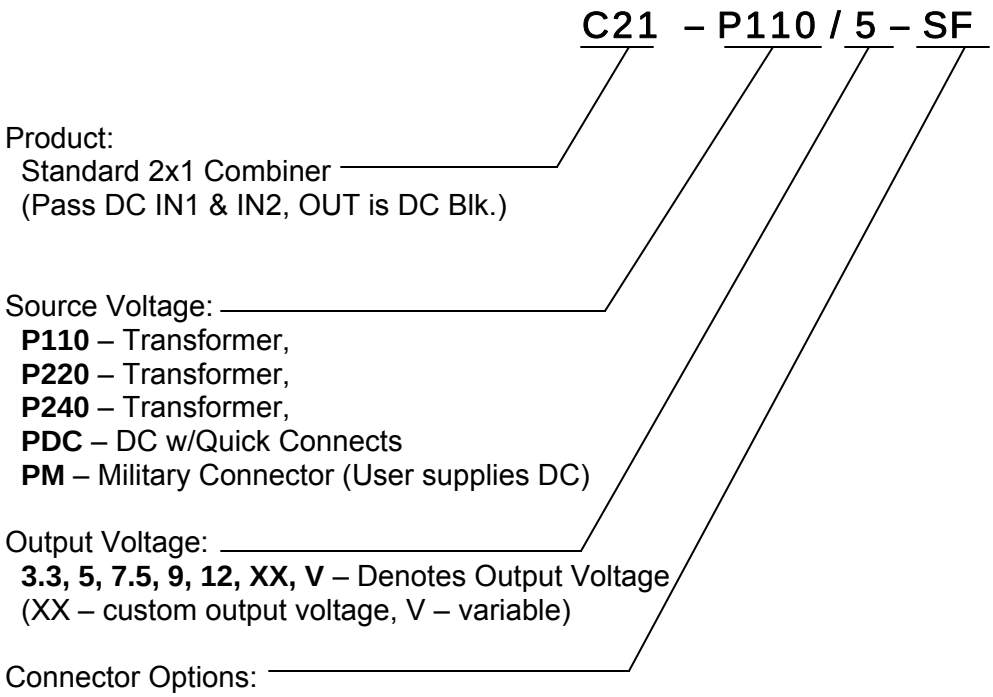
Notes:

1. With Powered Option, any or all RF ports (input or output) can be DC Blocked or can pass the powered DC voltage
2. Maximum combined DC current draw out all ports of the device is a function of the DC input voltage and desired DC output voltage , according to the following:

   $Iout \leq 1.4 / (V_{DC\ IN} - V_{DC\ OUT})$ Amps (or 250mA max)

   For powered option with a wall mount transformer (Voltage Input = 110/220/240 VAC), $V_{DC\ IN}$ is 9V.

Part Number:



Product:
Standard 2x1 Combiner
(Pass DC IN1 & IN2, OUT is DC Blk.)

Source Voltage:
P110 – Transformer,
P220 – Transformer,
P240 – Transformer,
PDC – DC w/Quick Connects
PM – Military Connector (User supplies DC)

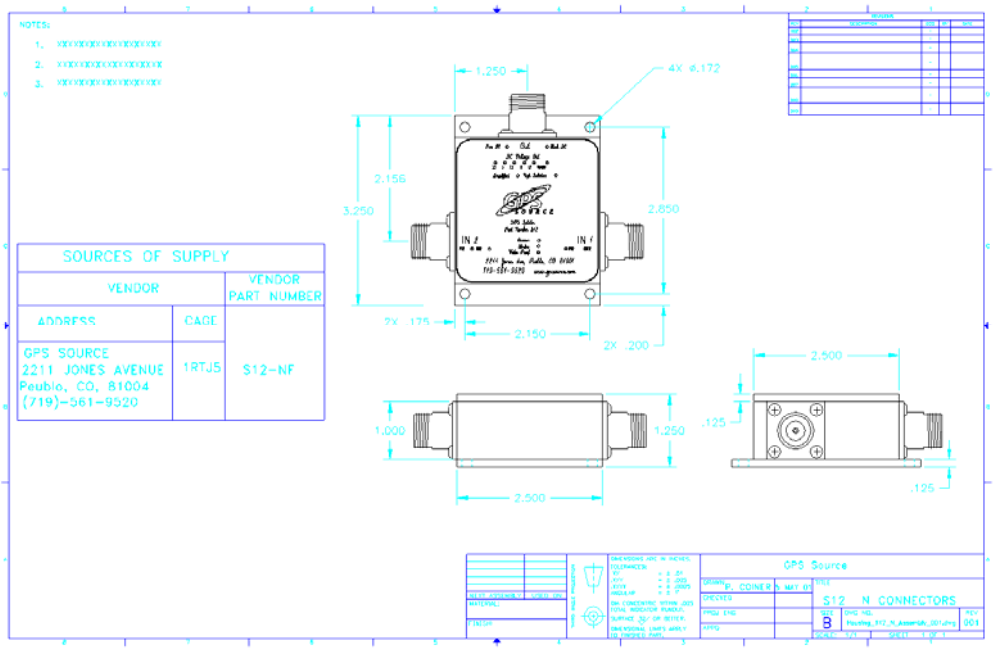
Output Voltage:
3.3, 5, 7.5, 9, 12, XX, V – Denotes Output Voltage
(XX – custom output voltage, V – variable)

Connector Options:
NM – N, Male
NF – N, Female
SM – SMA, Male
SF – SMA, Female
TM – TNC, Male
TF – TNC, Female
BM – BNC, Male
BF – BNC, Female
SB – SMB Jack, Female
SC – SMC Jack, Female
MX – MCX Jack, Female

For help in creating the part number to meet your exact needs, contact us at Sales@gpssource.com or visit our website at www.gpssource.com.

Mechanical:

Standard Housing:



Slimline Housing: