

C21 Combiner

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.

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Electrical Specifications, Operating Temperature -40 to 85°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
Insertion Loss		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		$T_{d,max} - T_{d,min}$, 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 Tinned Leads	3 ⁽¹⁾		28 ⁽²⁾	VDC
Ant/Thru Current	Pass DC	Non-Powered Configuration, DC Input on OUT			250	mA
	Powered	Powered, Mil. Conn. or Tinned Leads			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:

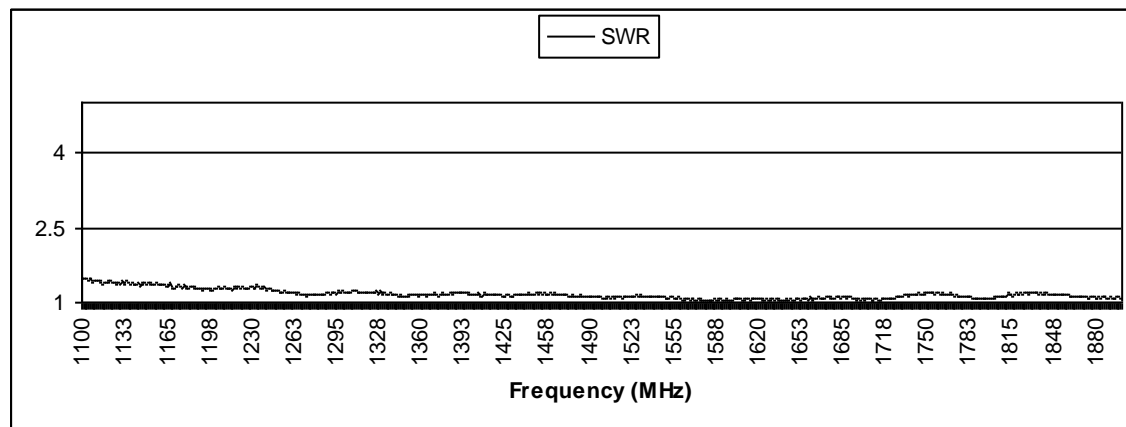
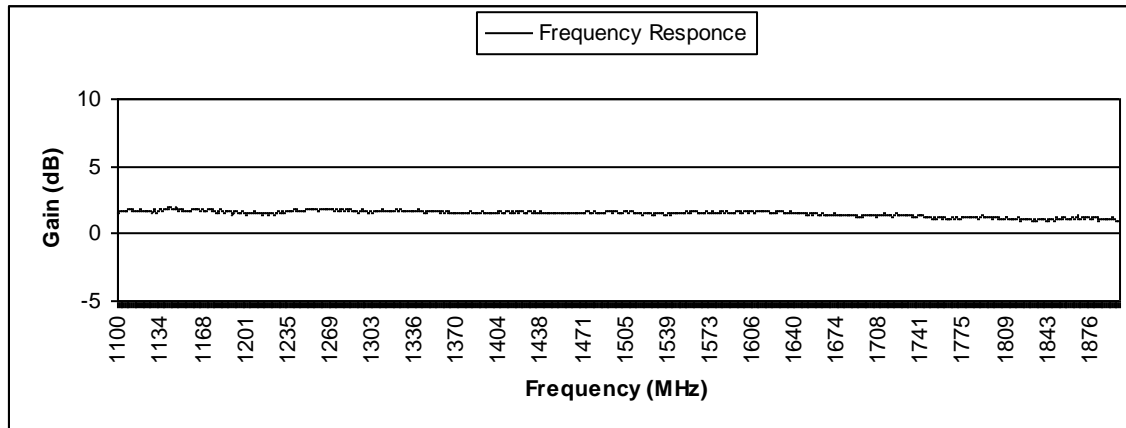
$$I_{out} \leq 1.4 / (V_{DC\ IN} - V_{DC\ OUT}) \quad \text{Amps}$$

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

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Performance Data

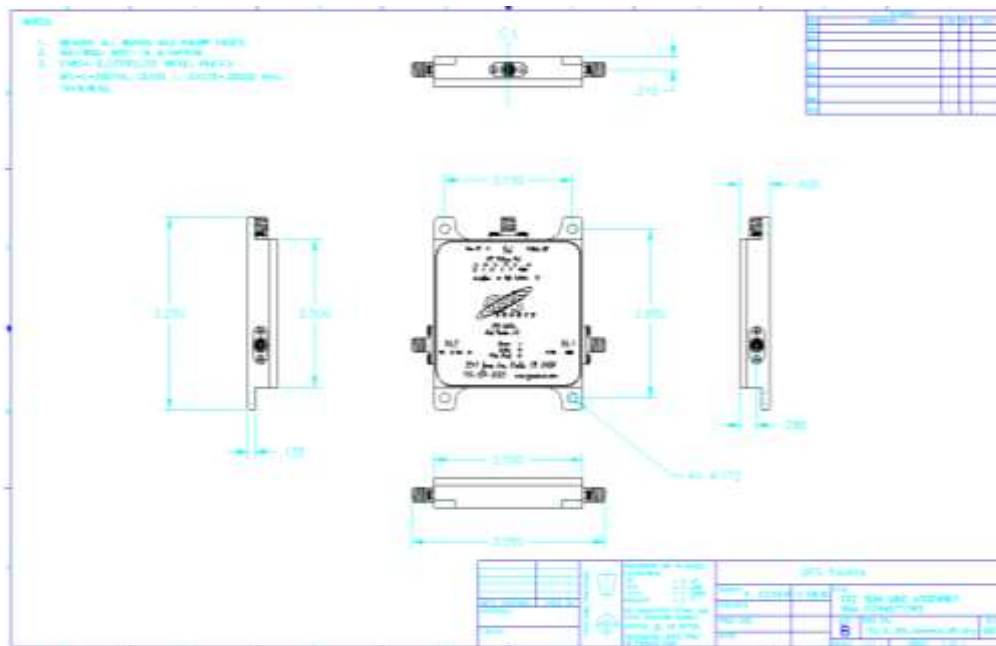
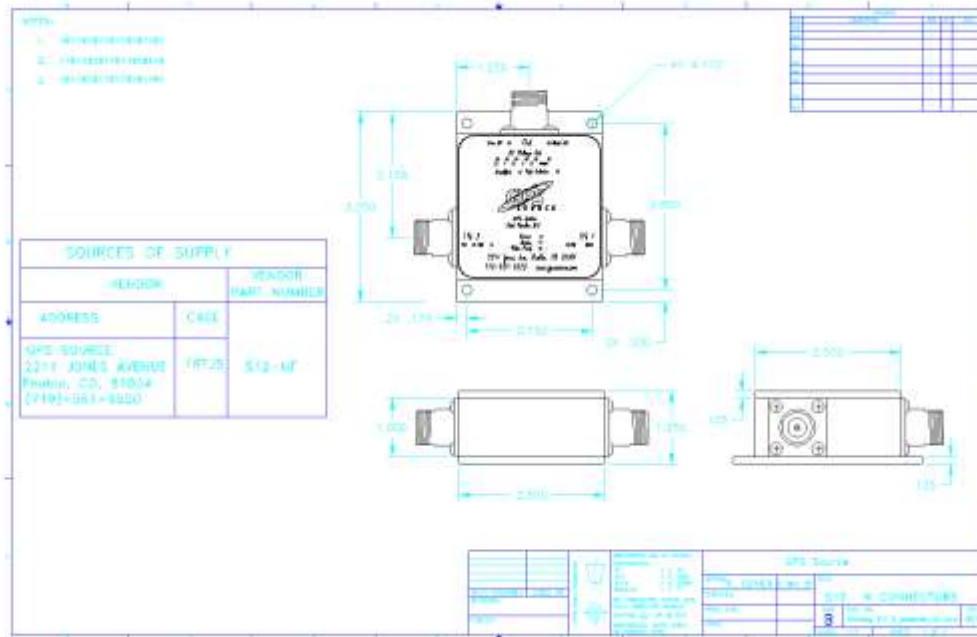
C21 (In1=In2)



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Mechanical:

Standard Housing:



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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 Tinned Leads
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)	
Housing Options:		
Housings	Housing Type	Limitations
	Standard	None
	Slimline	Powered Option Not Ava. SMA Connector ONLY
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:

$$I_{out} \leq 1.4 / (V_{DC\ IN} - V_{DC\ OUT}) \quad \text{Amps (or 250mA max)}$$

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

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Part Number

C21 – X-X-X-X – P110 / 5 – SF

Product:

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

Environmental Option(s):

X = (Any or All of Following):

E - EMI Shielding (includes waterproofing)

HS - Hermetically Sealed

W - Waterproof

Source Voltage:

P110 – Transformer

P220 – Transformer

P240 – Transformer

PDC – DC w/Quick Connects

PM – Military Connector (User supplies DC)

PM38999 - Military Connector (User supplies DC)

PMS-1275 – Military Connector (User supplies DC & 1275B Compliant)

PMS-704 – Military Connector (User supplies DC
& 704F Compliant)

PMS38999-1275 - Military 38999 Connector
& 1275B Compliant

PMS38999-704 – Military 38999 Connector
& 704F Compliant

Blank – No External Power

Output Voltage:

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

Connector Options:

NF – N, Female

NM – N, Male

SF – SMA, Female

SM – SMA, Male

TF – TNC, Female

TM – TNC, Male

BF – BNC, Female

BM – BNC, Male

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.