

S18 GPS 1 x 8 Splitter

Features

- Amplified to Preserve Link Margins
- Passes GPS, Galileo & GLONASS L1/L2
- Excellent Gain Flatness
- RoHS/WEEE Compliant
- Designed to Mil. Std. 810



Description

The S18 GPS Splitter is a one-input, eight-output GPS device. This product typically finds application where an input from an active GPS roof antenna is split evenly between eight receiving GPS units. In this scenario, the S18 can be configured to pass DC from any RF output to the antenna input port in order to power an active GPS antenna on that port. All DC blocked outputs would feature a 200 Ohm DC load to simulate an antenna DC current draw for any receiver connected to those ports.

The S18 splitter comes with many available options to meet your specific needs. Please call, fax, email (<u>sales@gpssource.com</u>), or visit our website (<u>www.gpssource.com</u>) for further information on product options and specifications.

		ons, Operating Temperature -40 to 85 C	Min	Tum	May	l In ito
Parameter			Min	Тур	Max	Units
Freq. Range		Ant – Any Port, Unused Ports - 50 Ω	1.1		1.7	GHz
In/Out Imped.		Ant, J1, J2, J3, J4, J5, J6, J7, J8		50		Ω
Gain ⁽⁴⁾⁽⁵⁾		Ant – Any Port, Unused Ports - 50 Ω	10.5	40	40.5	
-Amplified (Norm)			16.5	18	19.5	
-Amplified (Cust Gain)		As Specified, XdB	X-1	Х	X+1	
Input SWR ⁽⁵⁾		All Ports 50Ω			2.0:1	-
Output SWR ⁽⁵⁾		All Ports 50Ω			2.0:1	-
1dB Comp. Pt. (Ampl.)		All Ports 50Ω		-32		dBm
Input IP ₃ (Ampl.)		All Ports 50Ω		-24		dBm
Max RF Input -Amplified		Max RF input without damage			0	dBm
Noise Figure-Amplified		Ant – Any Port, Unused Ports - 50 Ω			2.2	dB
Gain Flatness ⁽⁵⁾		L1 - L2 , Ant – Any Port, Unused Ports - 50 Ω		2		dB
Amp. Balance		J1 - J2 , Ant – Any Port, Unused Ports - 50 Ω			0.5	dB
Phase Balance		Phase (J1 - J2), Ant – Any Port, Unused Ports - 50 Ω			1.0	deg
Group Delay Flatness		T _{d,max} - T _{d,min} , Ant – Any Port			<1	ns
Isolation ⁽⁴)					
-Amplified (Norm) -Amplified (Hi Iso.)		Adjacent Ports: Ant - 50Ω	13			dB
		Opposite Ports: Ant - 50Ω	18			dB
		Adjacent Ports: Ant - 50Ω	28			dB
		Opposite Ports: Ant - 50Ω	34			dB
AC IN	110	Wall Mount Transformer ⁽²⁾		110		VAC
AC IN	220/240	Wall Mount Transformer (Various Intl. plug types available) ⁽²⁾		230		VAC
DC IN	DC Blk	Any DC Blocked Port with a 200 Ω Load			14	VDC
	Pass DC -Amplified	Non-Powered Configuration, Inline DC Voltage on J1 Output	3		16	VDC
	Powered	Powered, Mil. Conn. or Quick Connect Option	3(1)		28	VDC
Device Current		Current Consumption of device, excludes Ant. Cur.			16	mA
Ant/Thru	Pass DC	Non-Powered Configuration, DC Input on J1			250	mA
Current	Powered	Powered, Mil. Conn. or Quick Connect Option	1	1	Note 2	mA

Electrical Specifications. Operating Temperature -40 to 85°C

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:

 $lout \le 1.4 / (V_{DC IN} - V_{DC OUT}) - 0.016$ Amps For powered option with a wall mount transformer (Voltage Input = 110/220/240 VAC), V_{DC IN} is 9V.

- 4. Choose Custom Gain Option to increase port-to-port isolation
- 5. Performance guaranteed for N(F) connectors.

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64 N. Mission Drive Pueblo, CO 81007 Tel: 719.561.9520 fax: 719.565.0890 Email: techsales@gpssource.com Author: Preetha Sayuj Department: R&D

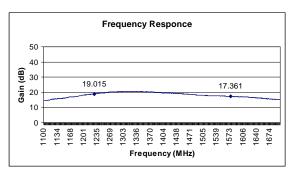
Description: S18 1x8 Splitter Data Sheet Doc. No.: 1560-TS-GPS-1X8-Splitter-03 Date: 03/22/2013

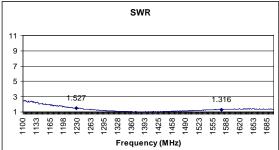
AS9100C:2009 & ISO 9001:2008 Compliant Company

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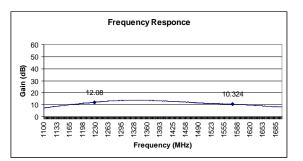
Performance Data:

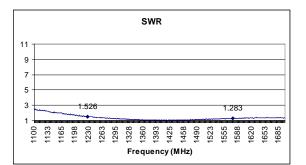
S18 Active – Normal





S18 Active - Hi Isolation





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Description: S18 1x8 Splitter Data Sheet Doc. No.: 1560-TS-GPS-1X8-Splitter-03 Date: 03/22/2013 y www.gpssource.com Available Options:

Voltage Input	Туре					
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					
DC Voltage Out ⁽²⁾						
3.3						
Custom						
RF Connector Options:						
	Limitations					
N (Male & Female)						
SMA (Male & Female)						
TNC (Male & Female)						
	·					
Housing Type	Limitations					
Standard	None					
Slimline	Powered Option Not Ava.					
	Connectors Not Available:					
	N, TNC, BNC					
All Ports Pass DC						
J2 – J8 are DC Blocked & 200Ω Loaded, DC is passed J1 to ANT						
	110 VAC 220 VAC 240 VAC (U.K.) DC 5-28 VDC DC Voltage Out ⁽²⁾ 3.3 5 7.5 9 12 Variable (3-12V) Custom Connector Type N (Male & Female) SMA SMA Housing Type Standard Slimline					

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:

lout ≤ 1.4 / (V_{DC IN} - V_{DC OUT}) - 0.016 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:

	S18 – A – X – P110 / 5 – NF
Product:	$\overline{}$
Standard 1x8 Splitter	
(Pass DC J1-Ant, J2 – J8 DC Blk.)	
(1 233 D 0 0 1 - 7.10, 02 - 00 D 0 D 0.1, 1)	
Gain Option:	
A – Amplified	
AXX – Custom Gain, XXdB	
Additional Options:	/
B - Beacon	
E – EMI Shielding	
HS – Hermetically Sealed (includes waterproof)	
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 Compli	ant)
PMS-704 – Military Connector (User supplies DC	,
& 704F Compliant	
PMS38999-1275 - Military 38999 Connector	
& 1275B Compliant	
PMS38999-704 – Military 38999 Connector	
& 704F Compliant	
Blank – Pass DC Ant (J1), Block DC- J2 thru J8	
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	

For help in creating the part number to meet your exact needs, contact <u>TechSales@gpssource.com</u> or visit our website at <u>www.gpssource.com</u>.



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