

S14S SLIMLINE HOUSING

1x4 GPS Splitter

DESCRIPTION

The S14S GPS Splitter is a one-input, four-output GPS splitter device. The typical application allows the GPS signal from an active GPS roof antenna to be split evenly between four GPS receivers. The S14S can be configured to pass the DC from an RF output (OUT1) to the antenna input port in order to power an active GPS antenna. The DC blocked ports (OUT2, OUT3 and OUT4) feature a 200 Ω DC load to simulate an antenna DC current draw for any receiver connected to those ports.

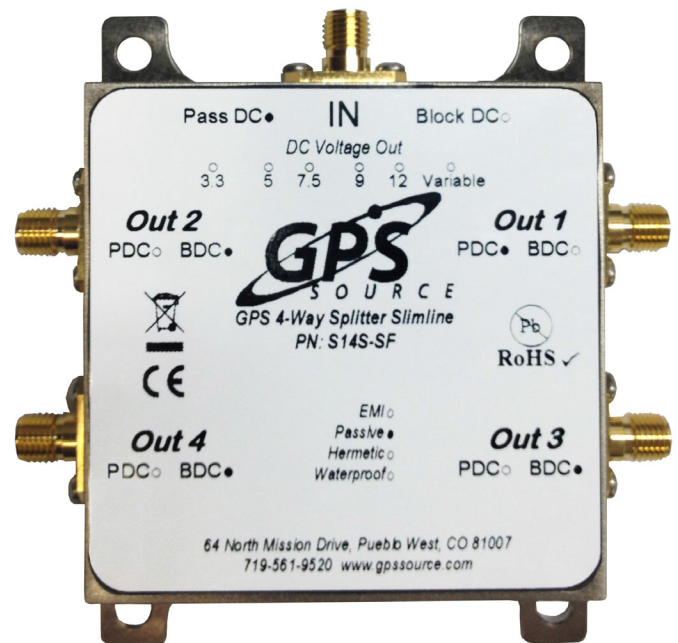
FEATURES

- Passes all GPS and GNSS frequencies
- Excellent Gain Flatness
- Gain | L1 - L2 | < 2 dB
- RoHS, REACH, and WEEE Compliant
- CE Certified

OPTIONS

- Amplified, Passive, or Custom Gain
- Hermetically Sealed, EMI Shielding, and Water Proofed

The S14S GPS Splitter comes with many available options to meet specific needs. Please contact GPS Source via phone, email, or visit the website for further information on product options and specifications.



1. S14S Specifications

1.1 Electrical Specifications

Table 1-1. Operating Temperature -40°C to 85°C

Parameter		Conditions	Min	Typ	Max	Units	
Frequency Range		Ant: Any Port, Unused Ports 50Ω	1.1		1.7	GHz	
In/Out Impedance		Ant: OUT1, OUT2, OUT3, OUT4		50		Ω	
Gain ⁽¹⁾	Standard	Amplified	Ant: Any Port, Unused Ports 50Ω	20	21	22	dB
	Custom	Amplified	Identify (XXdB) (0 - 20dB)	XX - 2	XX	XX + 2	
	As Specified	By Port	OUT1 (J1), OUT2 (J2), OUT3 (J3), OUT4 (J4) XXdB (0 to 20dB) by port	XX - 2	XX	XX + 2	
Loss-Passive ⁽¹⁾		Ant: Any Port, Unused Ports 50Ω	6.5	7.5	8.5	dB	
Input SWR ⁽¹⁾		All Ports 50Ω			2:1	—	
Output SWR ⁽¹⁾		All Ports 50Ω			2:1	—	
1dB Comp. Pt	Amplified	All Ports 50Ω		-32		dBm	
Input IP ₃	Amplified	All Ports 50Ω		-24		dBm	
Noise Figure	Amplified	Ant: Any Port, Unused Ports 50Ω			1.8	dB	
Gain Flatness ⁽¹⁾	Amplified	[L1 – L2] Ant: Any Port, Unused Ports 50Ω			2	dB	
	Passive			0.5	1		
Amp.		[OUT1 – OUT4] Ant: Any Port, Unused Ports 50Ω		0,5	1.0	dB	
Phase Balance		Phase (OUT1 – OUT4 Ant: Any Port, Unused Ports 50Ω)			1	Degree	
Group Delay Flatness		T _{d,max} - T _{d,min} ; Ant: Any Port			1	ns	
Isolation ⁽¹⁾	Standard	Amp/Pass	Adjacent Ports: Ant 50Ω	13		dB	
		Passive	Opposite Ports: Ant 50Ω	21			
	Hi Isolation	Amp/Pass	Adjacent Ports: Ant 50Ω	30			
		Passive	Opposite Ports: Ant 50Ω	40			
Current		Current Consumption of device (excludes Ant. Cur.)			16	mA	
Max RF Input	Amplified	Max RF Input Without Damage			0	dBm	
	Passive				30		

Note: 1. Decreased gain to increase port-to-port isolation.

Table 1-2. Output Options (standard)

Parameter		Conditions	Min	Typ	Max	Units
Inline Voltage (Amplified/ Passive)	Pass DC	Non-Powered Configuration, Pass DC from OUT1 (J1) to Input	3		16	VDC
	Block DC ⁽¹⁾	OUT2 (J2), OUT3 (J3), OUT4 (J4)Block DC standard				

2. Performance Data

2.1 S14S Active — Normal

Figure 2-1. Active: Gain vs. Frequency

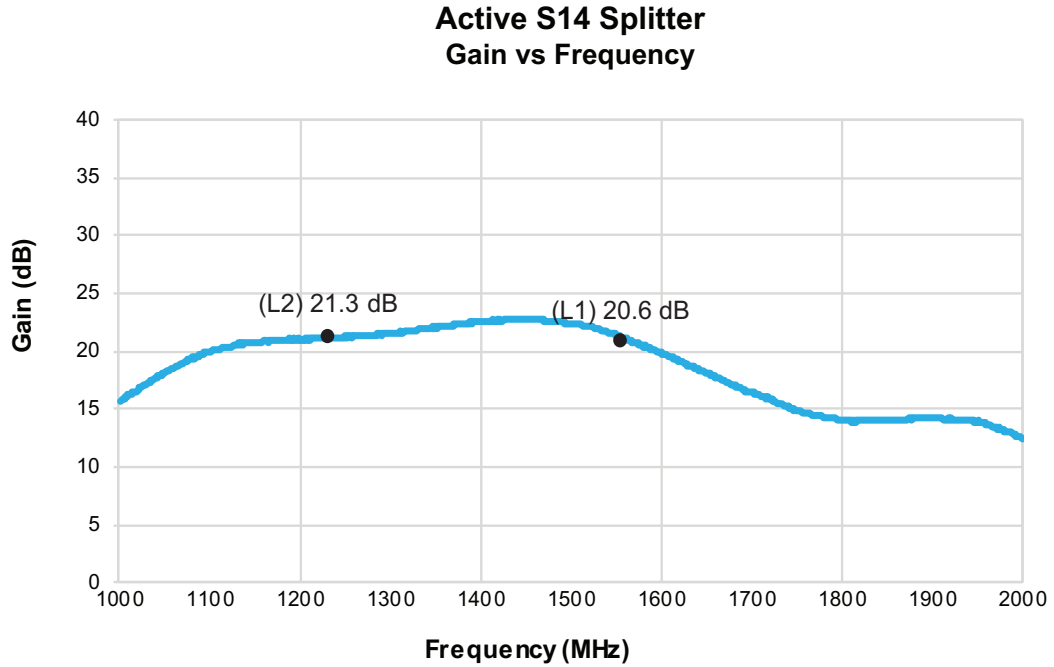
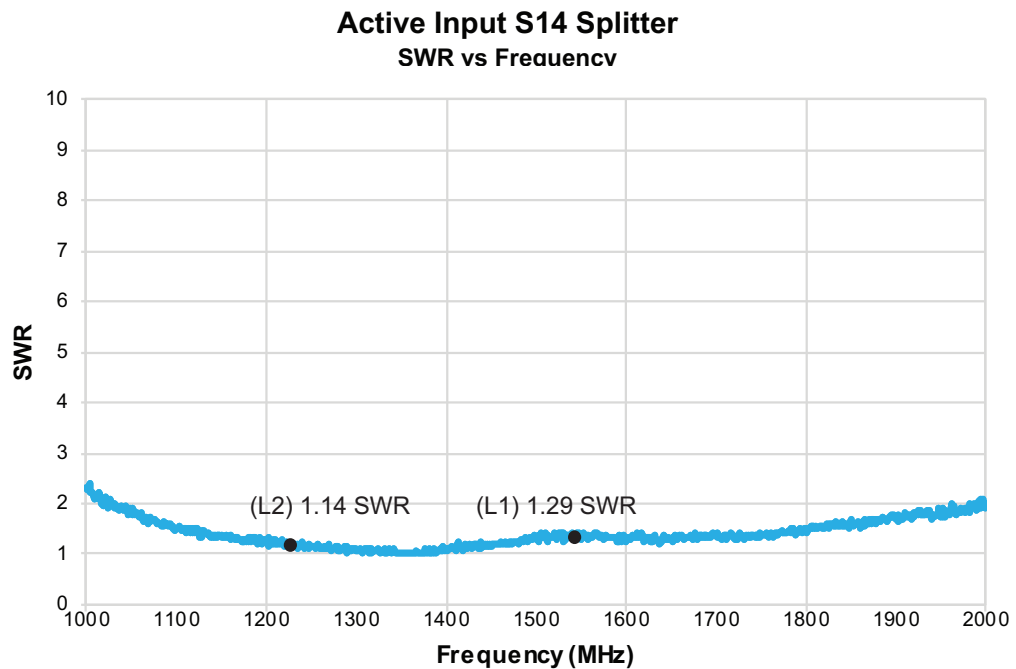


Figure 2-2. Active Input: SWR vs. Frequency



2.2 S14S Passive

Figure 2-3. Amplified 00dB (High Isolation): Gain vs. Frequency

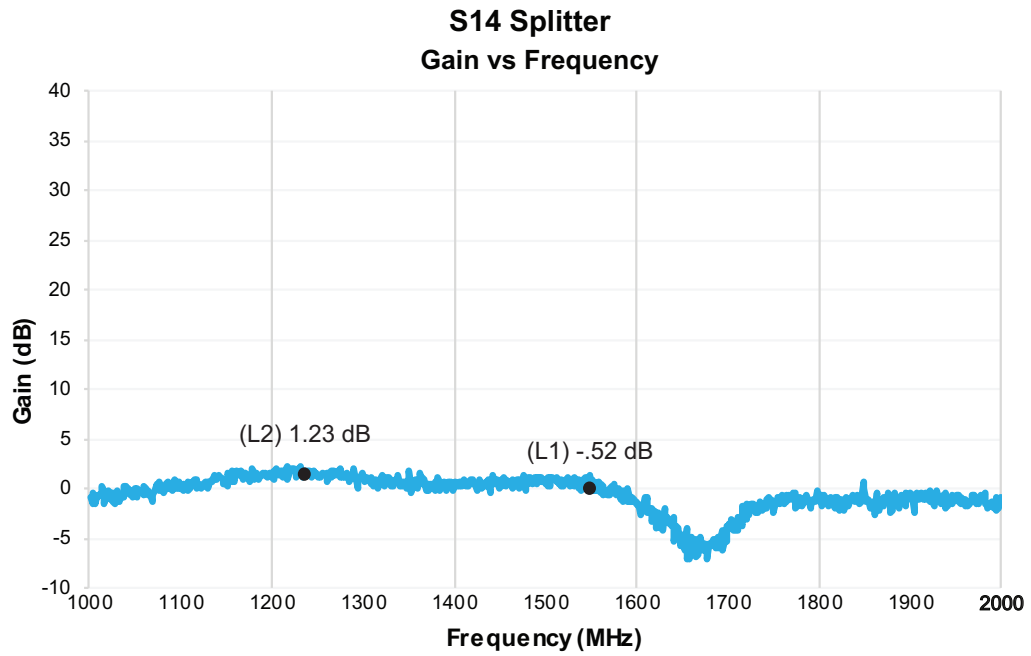
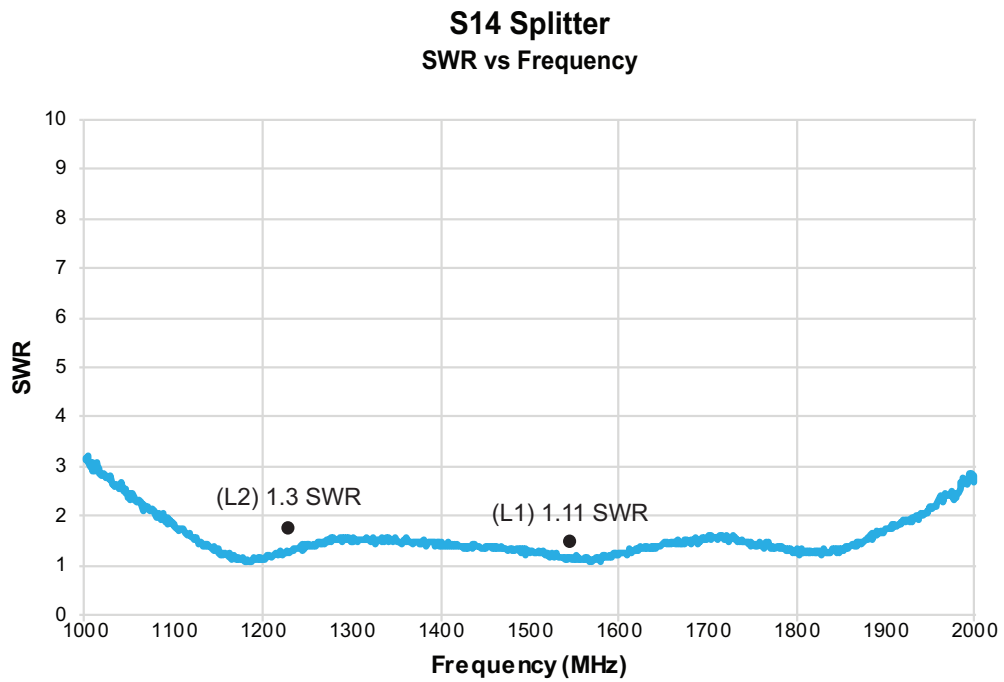


Figure 2-4. Amplified 00dB (High Isolation): SWR vs. Frequency

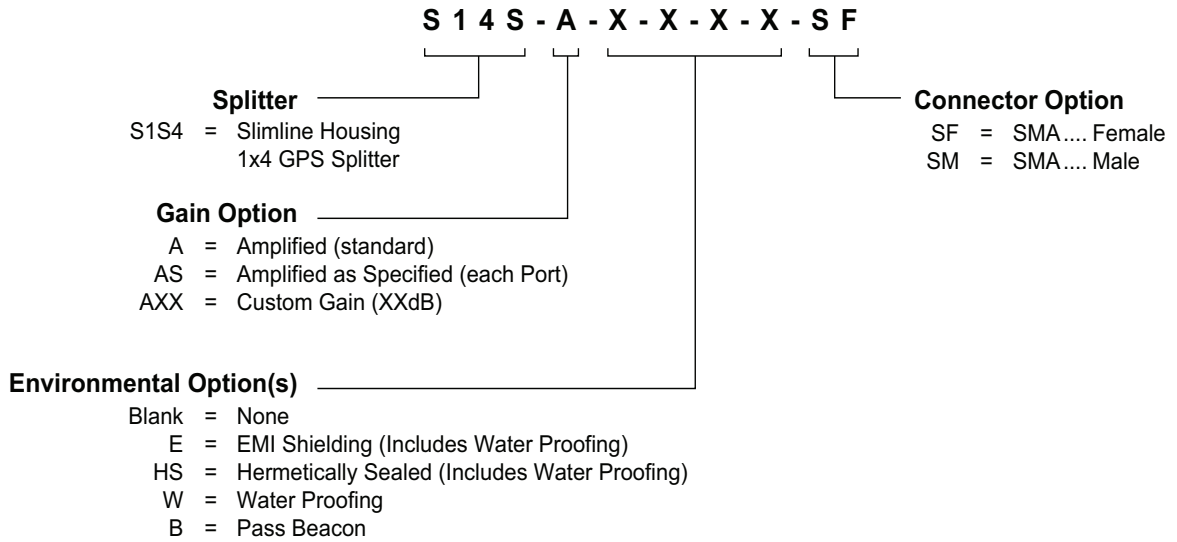


3. Product Options

Table 3-1. S14S Available Options

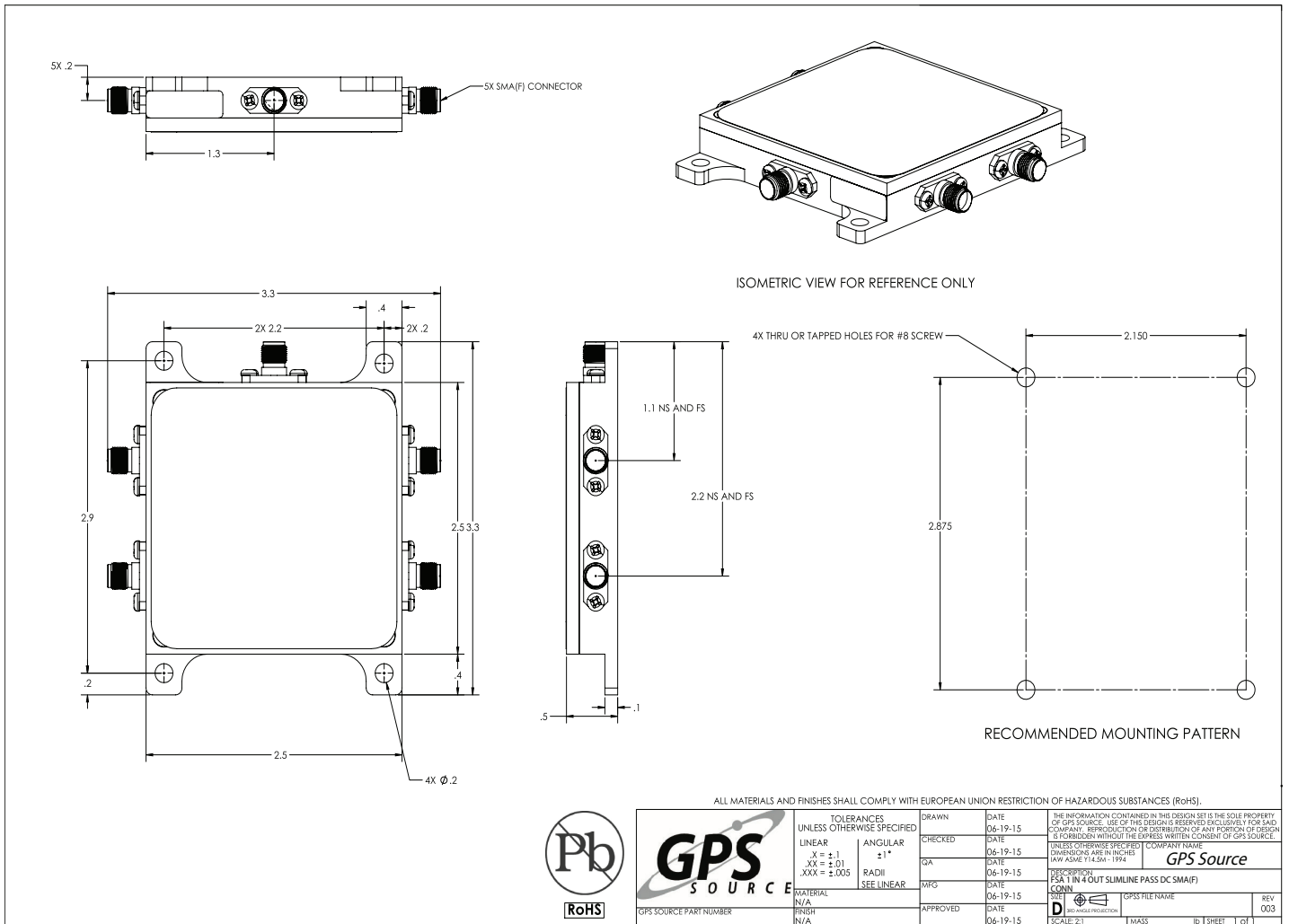
RF Connector		
Connector	Connector Type	Limitations
	SMA (Female/Male)	N/A
Housing		
Housings	Housing Type	Limitations
	Slimline	Powered Option Not Available SMA Only
Gain Options		
Gain	Amplified (-A)	Standard amplification is 21dB
	Custom Gain (-AXX)	Custom gain range is 0 - 20dB
	Amplified as Specified (-AS)	Provide gain for each port
	Passive	

4. Product Code Decoder



Note: To have product/part codes customized to meet exact needs, contact GPS Source at GPSS-Sales@gd-ms.com or visit the website at www.gpssource.com.

5. Mechanical Drawing S14S Slimline Housing — FSA-AAQ-CCX-AGZ



S14S Slimline Housing Data Sheet

059-FSA-AAQ-CCX-AGZ-002

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