

S18S SLIMLINE HOUSING

1x8 GPS Splitter

DESCRIPTION

The S18S GPS Splitter is a one-input, eight-output GPS splitter with a thin profile housing. The typical application allows the GPS signal from an active GPS roof antenna to be split evenly between four GPS receivers. The S18S 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 through OUT8) would feature a 200 Ω DC load to simulate an antenna DC current draw for any receiver connected to those ports.

FEATURES

- Passes GPS, Galileo, and GLONASS L1/L2
- Excellent Gain Flatness
- RoHS/WEEE Compliant
- Designed to MIL-STD-810
- Amplified to Preserve Link Margins
- Available Options:
 - L1/L2
 - Waterproof
 - EMI Shielding
 - Hermetically Sealed

OPTIONS

The S18S 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. S18S 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 50W	1.1		1.7	GHz
In/Out Impedance			Ant: OUT1 through OUT8		50		W
Gain ⁽¹⁾	Standard	Amplified	Ant: Any Port, Unused Ports 50W	16	18	19.5	dB
	Custom	Amplified	Custom Gain XXdB (0-17dB)	XX - 2	XX	XX + 2	
	As Specified	Amplified by port	OUT1 (J1) through OUT8(J8) XXdB (0 to 17dB) by port	XX - 2	XX	XX + 2	
Input SWR			All Ports 50W			2:1	—
Output SWR			All Ports 50W			2:1	—
1dB Comp. Pt		Amplified	All Ports 50W		-32		dBm
Input IP ₃		Amplified	All Ports 50W		-24		dBm
Max RF Input		Amplified	Max RF Input Without Damage			0	dBm
Noise Figure		Amplified	Ant: Any Port, Unused Ports 50W			2.2	dB
Gain Flatness			[L1 – L2] Ant: Any Port, Unused Ports 50W		2		dB
Amp. Balance			[OUT1-OUT8] Ant: Any Port, Unused Ports 50W			0.5	dB
Phase Balance			Phase (OUT1-OUT8) Ant: Any Port, Unused Ports 50W			1.0	Degree
Group Delay Flatness			T _{d,max} - T _{d,min} ; Ant: Any Port			<1	ns
Isolation ⁽¹⁾	Standard	Amplified	Adjacent Ports: Ant 50W	13			dB
			Opposite Ports: Ant 50W	18			
	Hi Isolation	Amplified	Adjacent Ports: Ant 50W	28			
			Opposite Ports: Ant 50W	34			
Current			Current Consumption of Device (Excludes Ant. Cur.)			16	mA
Draw Current		Pass DC	Non-Powered Configuration, DC Input on OUT1			250	mA
DC IN	DC Blk		DC Blocked Output Ports include 200W loads standard				VDC
	Pass DC		Non-Powered Configuration, DC Input on OUT1	3		16	

Notes: 1. Decreased custom gain increases port-to-port isolation.

2. Performance Data

2.1 S18S Active — Standard Configuration

Figure 2-1. Active: Gain vs. Frequency

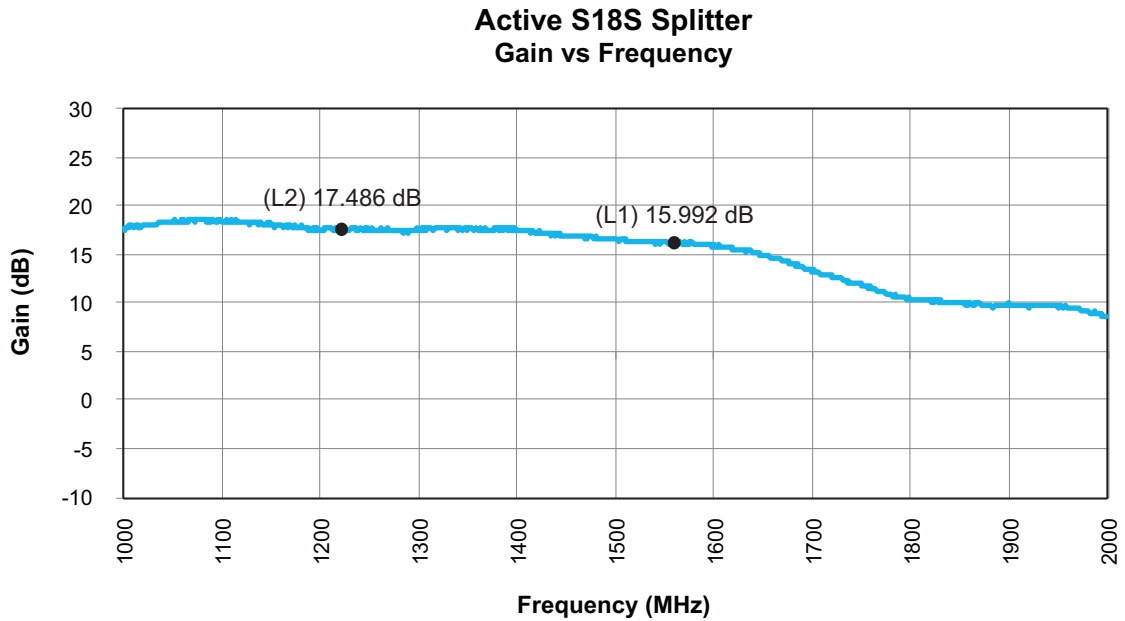
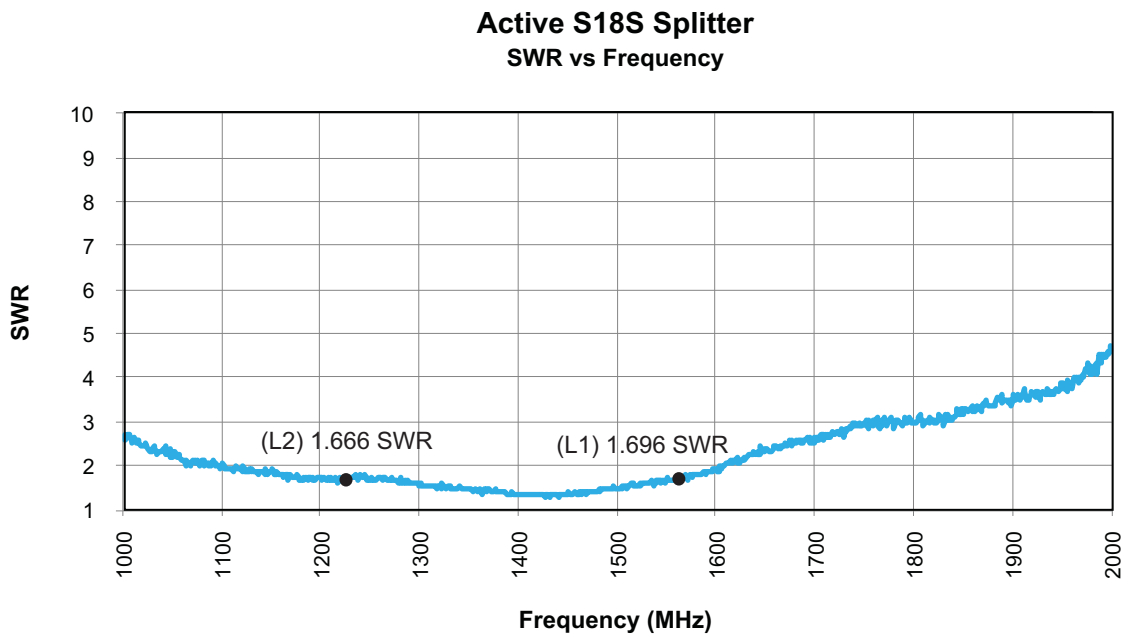


Figure 2-2. Active Input: SWR vs. Frequency



2.2 S18S Active — High Isolation

Figure 2-3. Active: Gain vs. Frequency

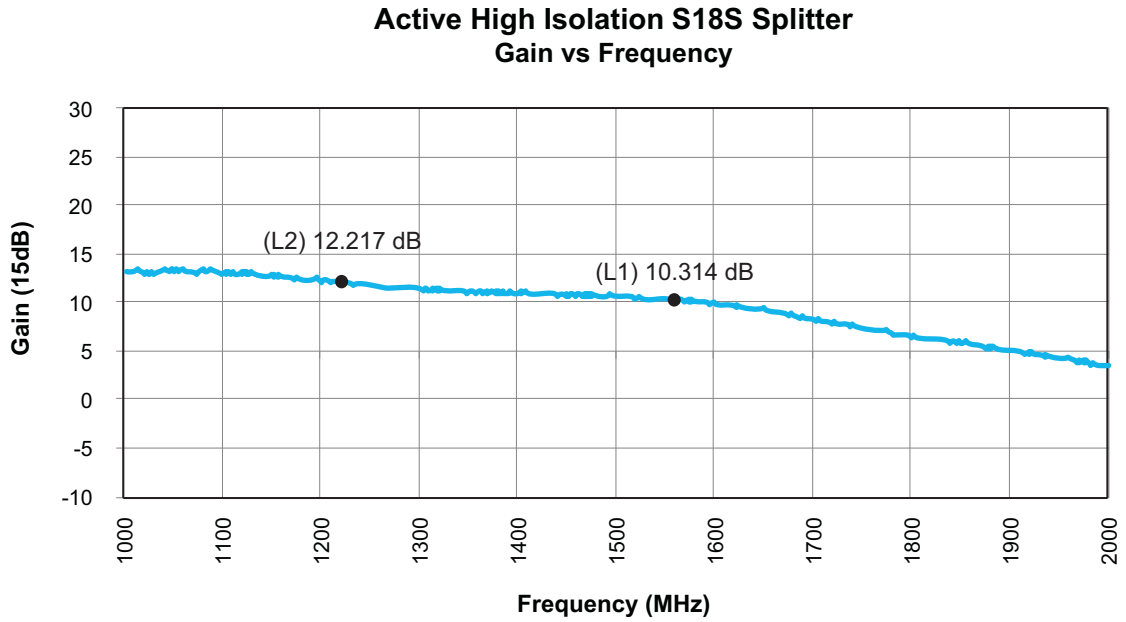
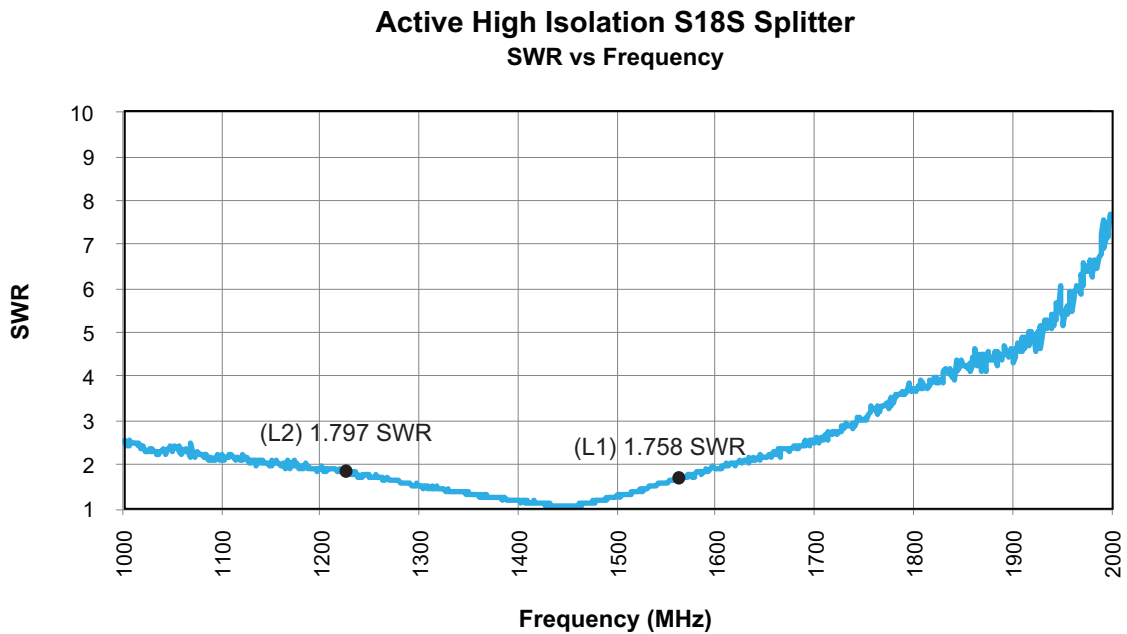


Figure 2-4. Active: SWR vs. Frequency

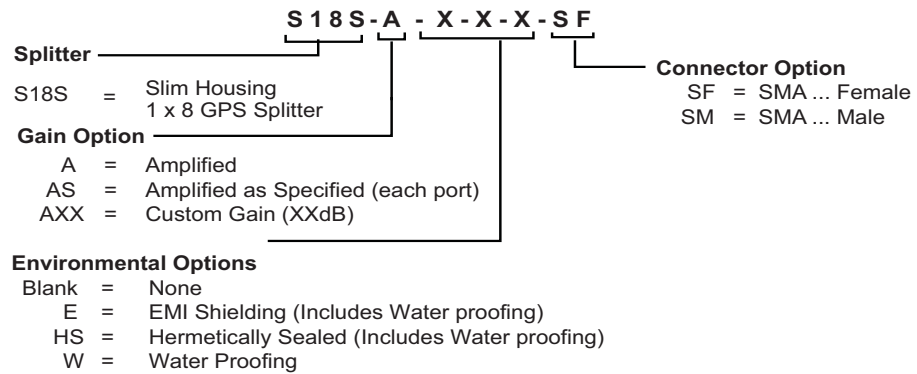


3. Product Options

S18S Available Options

RF Connector		
Connector	Connector Type	Limitations
	SMA (Female/Male)	N/A
Housing		
Housings	Housing Type	Limitations
	Slimline	SMA Only
Port		
Pass DC	All Ports Pass DC	
DC Blocked	Pass DC OUT1, Block DC (OUT2 through OUT8) (Standard)	

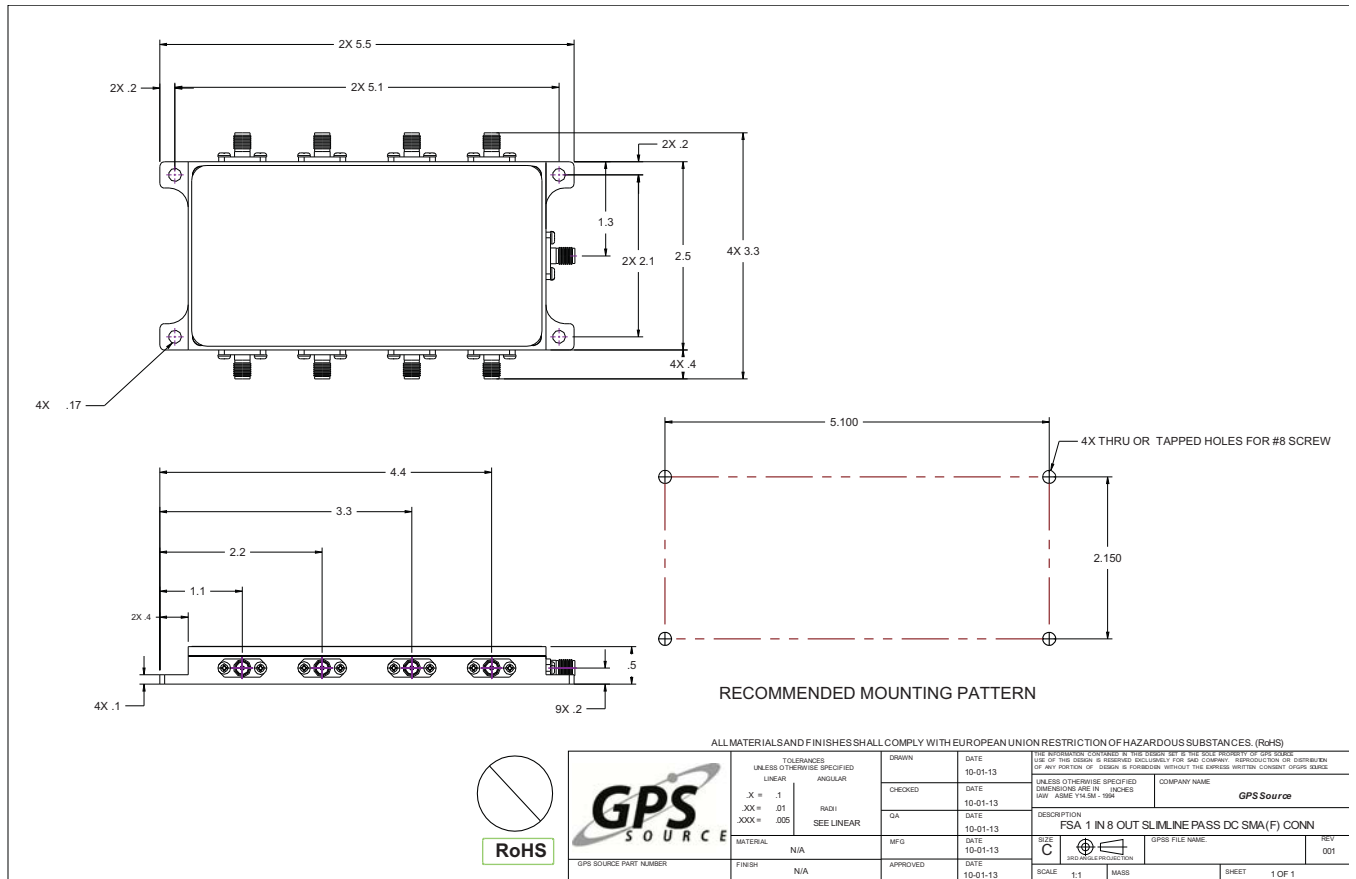
4. Product Code Decoder



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

S18S Slimline Housing — FSA-ADQ-CCX-AGZ



S18S Slimline Housing Data Sheet

059-FSA-ADQ-CCX-AGZ-001

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