



S12T TINY GPS SPLITTER

1x2 Tiny GPS Splitter

DESCRIPTION

The S12T Tiny GPS Splitter is a one-input, two-output GPS splitter device in which input from an active GPS antenna is split evenly between two receiving GPS units. Ideal for platforms requiring very small, lightweight, and/or low-power equipment (i.e. Unmanned Aerial Vehicle, UAV). The S12T can be configured to pass DC from an RF output (J1) to the antenna input port in order to power an active GPS antenna on that port. The second RF output features a 200Ω DC load to simulate an antenna DC current draw for any receiver connected.

FEATURES

- Passes GPS L1/L2, and GNSS frequencies
- Ideal for UAV Applications
- Small, Lightweight, and Low-power (SWaP)
- Small Package: 1.875in x 1.750in x 0.438 in. (47.0mm x 44.5mm x 11.0mm)
- RoHS, REACH, WEEE Compliant
- CE Certified

OPTIONS

- Designed to MIL-STD-810
- Amplified, Passive, or Custom Gain
- Hermetically Sealed, EMI Shielding, and Waterproofing

The S12T Tiny 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. S12T Specifications

1.1 Electrical Specifications

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

Parameter			Conditions	Min	Typ	Max	Units
Frequency Range			Ant: J1, J2 50Ω or J2, J1 50Ω	1.1		1.7	GHz
In/Out Impedance			Ant: J1, J2		50		Ω
Gain ⁽¹⁾⁽²⁾	Standard	Amplified	Ant: J1, J2 50Ω or J2, J1 50Ω	7	8	10	dB
	Custom	Amplified	As Specified (0 to 7dB)	XX - 1	XX	XX + 1	
Loss-Passive ⁽²⁾			Ant: J1, J2 50Ω or J2, J1 50Ω	4	4.5	5	dB
Input SWR ⁽²⁾			All Ports 50Ω			2:1	—
Output SWR ⁽²⁾			All Ports 50Ω			2:1	—
Input P1dB		Amplified	Ant: Any Port, Unused Ports 50Ω, Gain = 8dB	-20			dBm
Input IP ₃		Amplified	Ant: Any Port, Unused Ports 50Ω, Gain = 8dB Tone spacing = 1MHz	-10			dBm
Noise Figure		Amplified	Ant: J1, J2 50Ω or J2, J1 50Ω			2	dB
Gain Flatness ⁽²⁾	Amplified		[L1 – L2] Ant: J1, J2 50Ω or J2, J1 50Ω			2.5	dB
	Passive					1	
Amplifier Balance			[J1 – J2] Ant: J1, J2 50Ω or J2, J1 50Ω		0.5	1.0	dB
Phase Balance			Phase (J1 – J2) Ant: J1, J2 50Ω or J2, J1 50Ω			1	Degree
Group Delay Flatness			T _{d,max} - T _{d,min} ; J1 (Ant)			1	ns
Isolation ⁽¹⁾	Standard	Amp/Pass	Adjacent Ports: Ant 50Ω	16			dB
	High	Amplified		30			
Device Voltage		Amplified	Any Port	3		12	VDC
		Passive	Any Port	3		12	
Current (Amplified)			Current Consumption of device (excludes Ant. Cur.)			7	mA
Draw Current		Pass DC	Non-Powered Configuration, DC Input on J1			250	mA
Max RF Input	Amplified		Max RF Input Without Damage			0	dBm
	Passive					30	

- Notes: 1. Decreased gain increases port to port isolation.
2. Performance guaranteed for SMA(F) connectors.

2. Performance Data

2.1 S12T Active

Figure 2-1. Active: Gain vs. Frequency

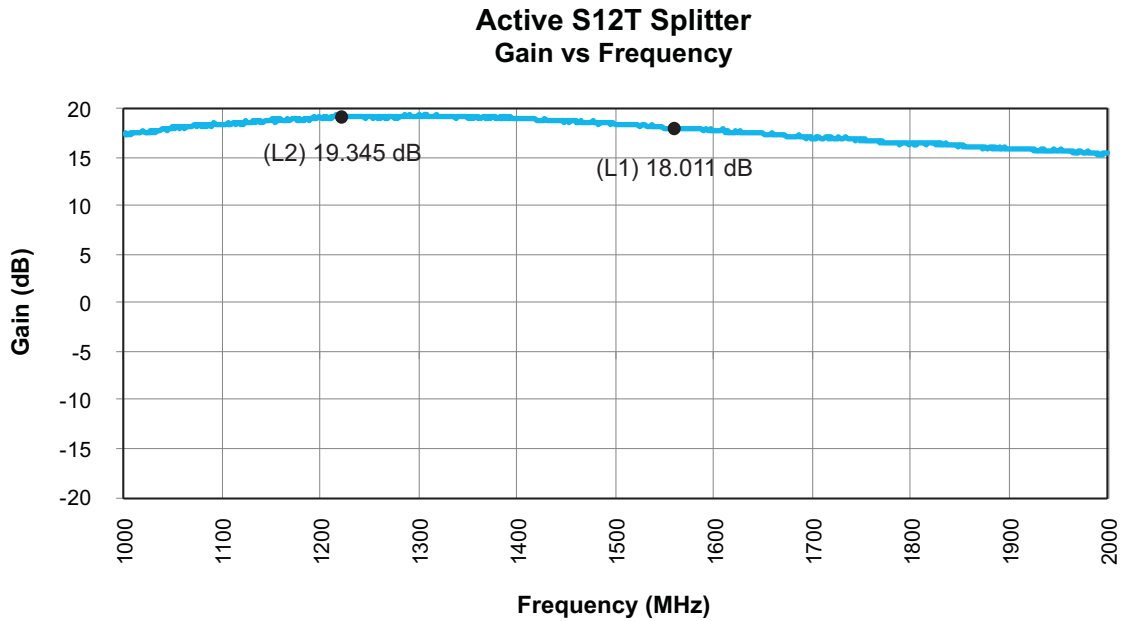
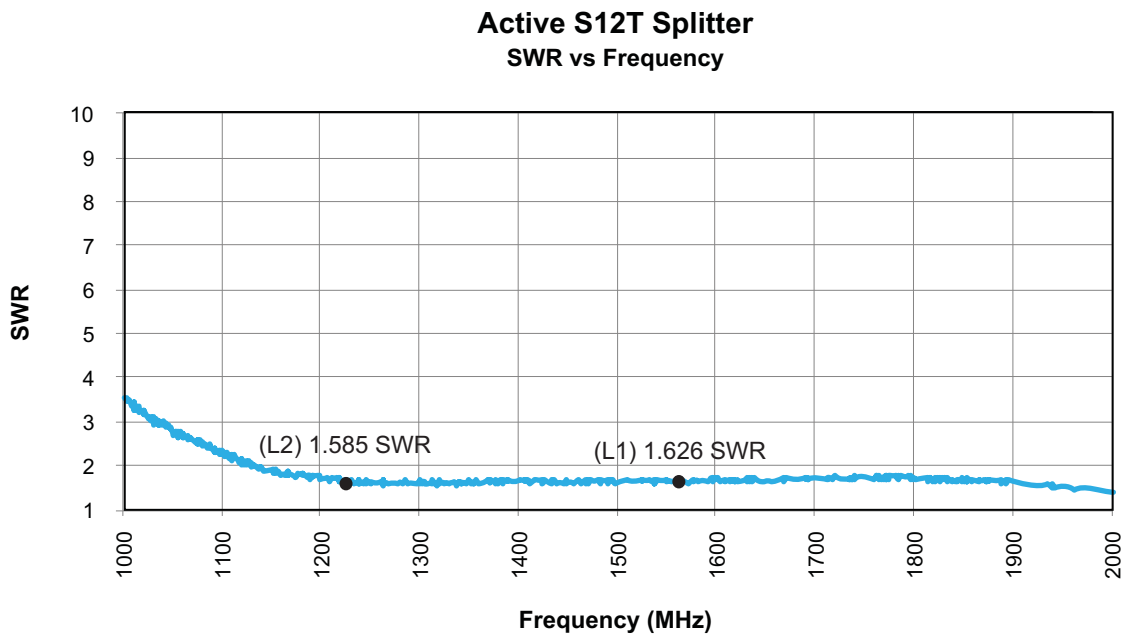


Figure 2-2. Active: SWR vs. Frequency

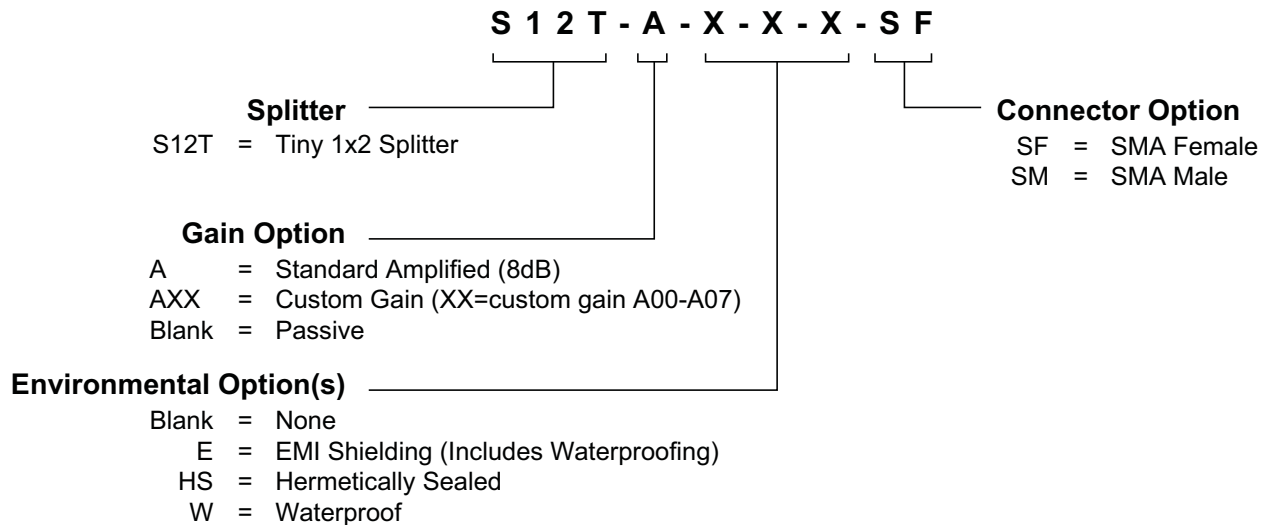


3. Product Options

Table 3-1. S12T Available Options

RF Connector		
Connector	Connector Type	Limitations
	SMA (Female/Male)	N/A
Housings	Housing Type	Limitations
	Standard	None
Output Options (Standard)		
Pass DC	DC is passed Output 1 (J1) to antenna	
DC Blocked	Output 2 (J2) is DC Blocked with 200Ω Load	

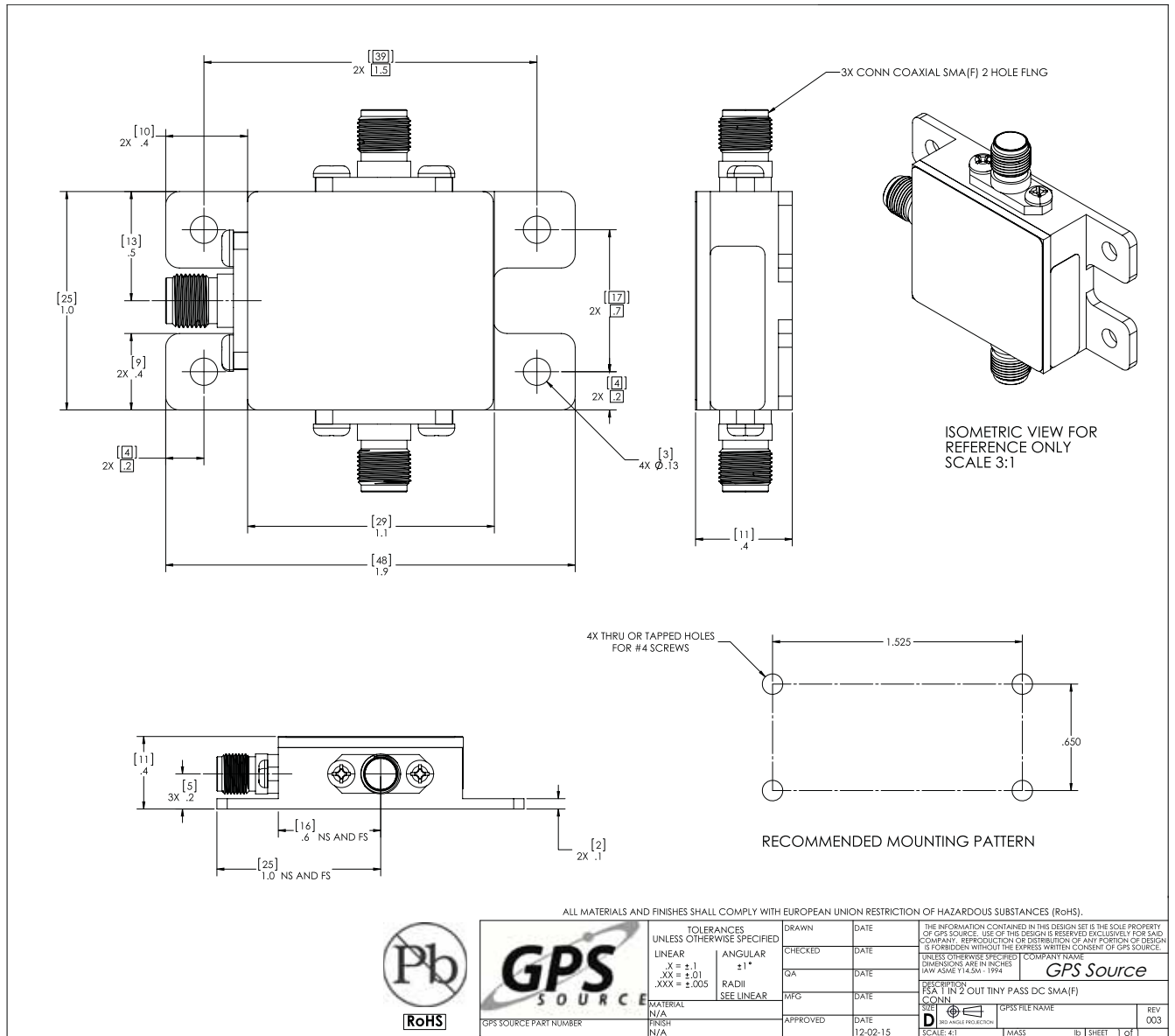
4. Product Code Decoder



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

5. Mechanical Drawing

S12T Tiny GPS Splitter — FSA-AAT-CCX-AGZ





S12T Tiny GPS Splitter Data Sheet

059-FSA-AAT-CCX-AGZ-002

Page 6 of 6, 01/2019

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