

**A11T****GPS LIVE INSIDE****Tiny Amplifier****DESCRIPTION**

The A11T Tiny Amplifier is a single stage gain block which covers the GPS, Galileo, and GLONASS frequencies designed with the thin link margins of satellite navigation systems in mind.

The A11T features 30.0dB of gain, and a noise figure of less than 1.8dB. Since the A11T consumes less than 16mA, it is easily powered by any GPS receiver's antenna voltage output.

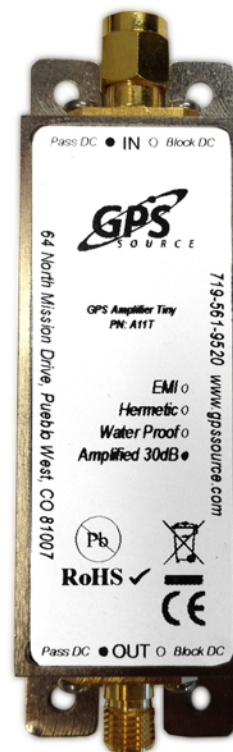
The A11T is an inline device designed to strengthen the signal and reach of the entire L-band.

**FEATURES**

- Excellent Noise Figure:  $F < 1.8\text{dB}$
- Excellent Gain:  $G = 30\text{dB}$
- Passes GPS L1/L2/L5, Galileo, GLONASS, and Compass
- IIP3, PidB, RoHS, and WEEE Compliant

**OPTIONS**

The A11T Tiny Amplifier can be custom configured. Please contact GPS Source for further information on product options and specifications.

**A11T Tiny Amplifier Data Sheet**

059-FAM-AAT-CCX-AGZ-004  
04/25/2016  
[www.gpssource.com](http://www.gpssource.com)

AS9100C:2009 and ISO 9001:2008 Compliant Company

# 1 A11T Electrical Specifications

Table 1-1. Electrical Specifications

Operating Temperature -40°C to 85°C

Parameter	Conditions	Min	Typ	Max	Units	
Frequency Range	IN – OUT, IN/OUT 50Ω	1		2	GHz	
In/Out Impedance	IN, OUT		50		Ω	
Gain	IN – OUT, IN/OUT 50Ω	1227MHz	30	32	33	dB
		1575MHz	28	30	32	
Input SWR	OUT Port 50Ω			2:1	—	
Output SWR	IN Port 50Ω			2:1	—	
Noise Figure	IN – OUT, IN/OUT 50Ω			1.8	dB	
Gain Flatness	[L1 – L2] IN – OUT, IN/OUT 50Ω			4	dB	
Group Delay Flatness	$T_{d,max} - T_{d,min}$ , IN – OUT			1	ns	
Reverse Isolation	OUT – IN	30			dB	
Device Current	Current Consumption of Device (excludes Ant. Cur.)			16	mA	
Ant/Thru Current	Pass DC Non-Powered Configuration, DC Input on OUT port			250	mA	
Max RF Input	Max RF Input Without Damage			10	dBm	

## 2 Performance Data

### 2.1 A11T

Figure 2-1. Gain vs Frequency

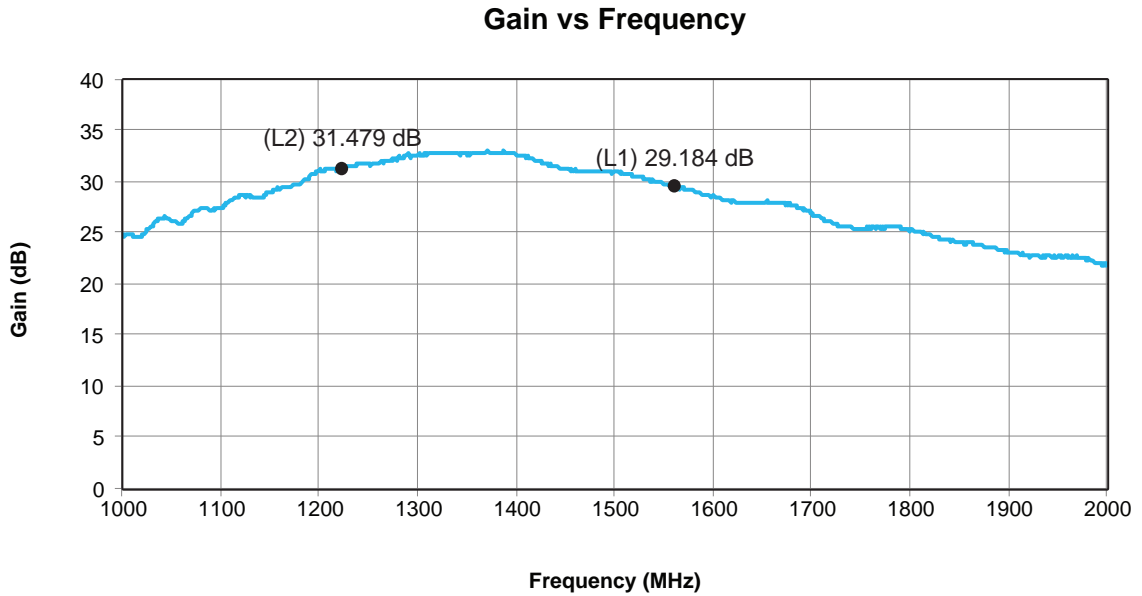
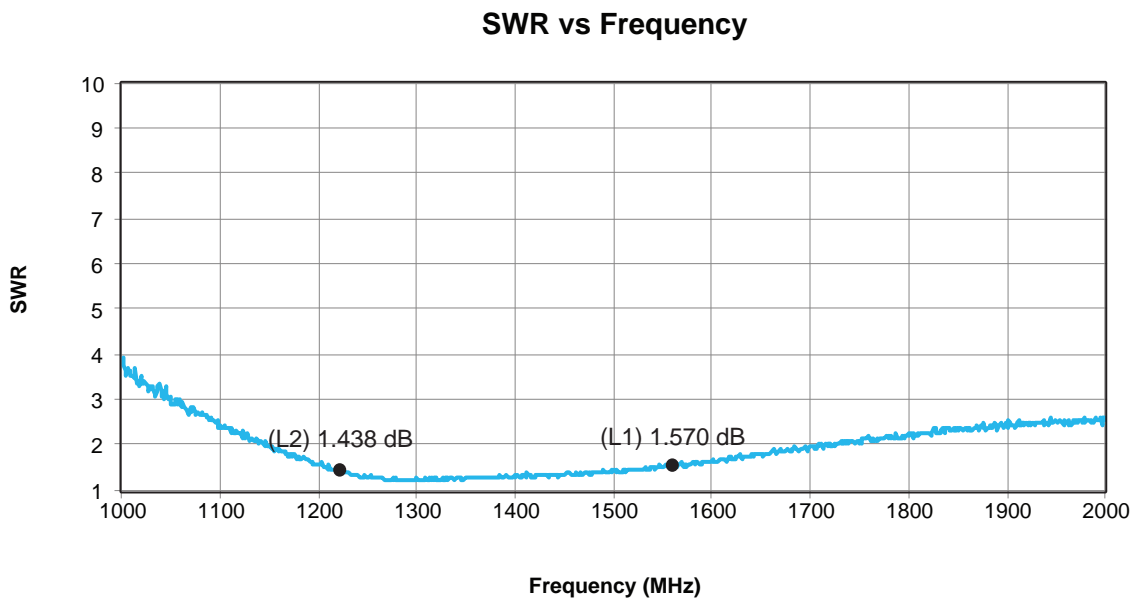


Figure 2-2. SWR vs Frequency



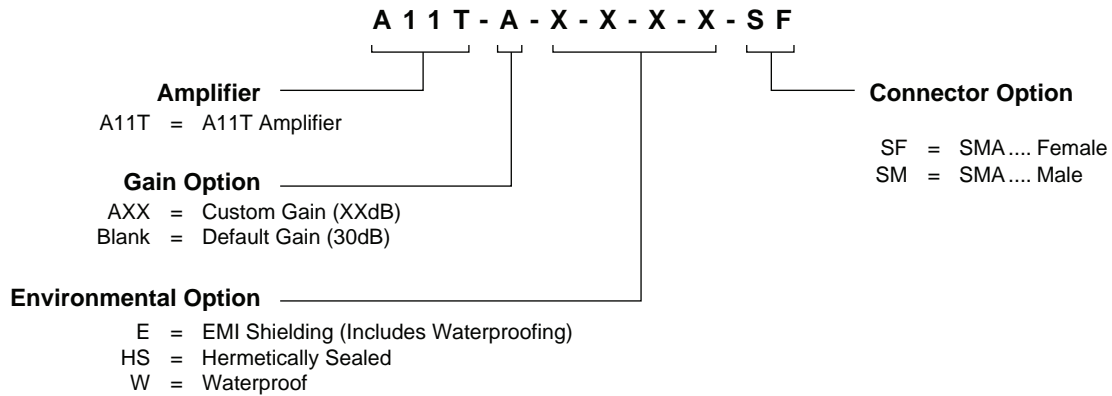
### 3 Product Options

Table 3-1. A11T Available Options

RF Connector		
Connector	Connector Type	Limitations
	SMA (Female/Male)	N/A
Housing		
Housing	Housing Type	Limitations
	Tiny	Powered Option Not Available
Port <sup>(2)</sup>		
Configuration	Standard	Pass DC Input and Output
	Special	Block DC Input or Block DC Output (Cannot Block Both)

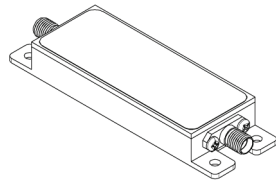
Note: 1. Powered Option: any or all RF ports (input or output) can be DC Blocked or can pass the powered DC voltage.

### 4 Product Code Decoder

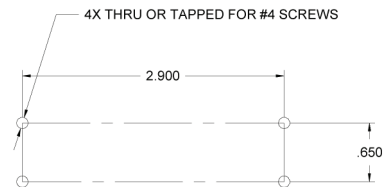
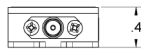
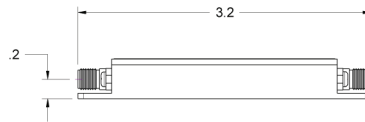
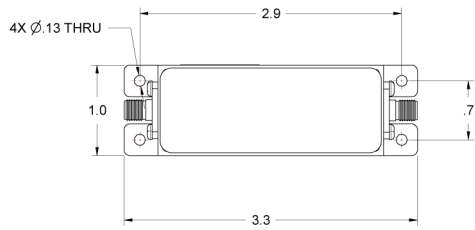


# 5 Mechanical Drawing

## A11T Tiny Amplifier — FAM-AAT-CCX-AGZ



ISOMETRIC VIEW  
FOR REFERENCE ONLY



RECOMMENDED MOUNTING PATTERN

Revision 002

GPS Source Part No. <b>FAM-AAT-CCX-AGZ</b>	Finish <b>N/A</b>	Size <b>C</b>	Mass <b>TBD</b>	Tolerances	
Description <b>A11T Standard Tiny Amplifier</b>	Material <b>N/A</b>	3 <sup>rd</sup> Angle Projection 		Linear	Angular

All materials and finishes shall comply with European Union RoHS and are lead free. Dimensions are in inches unless otherwise specified.



**GPS LIVE INSIDE**

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AS9100C:2009 and ISO 9001:2008 Compliant Company



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