



GPS LIVE INSIDE

A11M

## Mini Amplifier

### DESCRIPTION

The A11M Mini 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 A11M features 30.0dB of gain, and a noise figure of less than 1.8dB. Since the A11M consumes less than 16mA, it is easily powered by any GPS receiver's antenna voltage output.

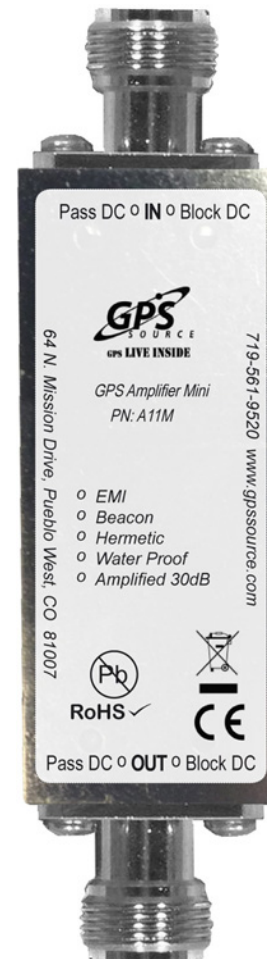
The A11M is an inline device designed to strengthen the signal and reach of the entire L-band.

### FEATURES

- Excellent Noise Figure:  $F < 1.8\text{dB}$
- Excellent Gain:  $G = 30\text{dB}$
- Passes L1/L2/L5 GPS, Galileo, GLONASS, and Compass
- RoHS and WEEE Compliant
- Variable Gain Option: 0dB to 30dB

### OPTIONS

The A11M Mini Amplifier can be custom configured. Please contact GPS Source for further information on product options and specifications.



### A11M Mini Amplifier Data Sheet

059-FAM-AAM-AAX-AGZ-004  
03/10/2016  
www.gpssource.com

# 1 A11M Electrical Specifications

**Table 1-1. Electrical Specifications**

Operating Temperature -40°C to 85°C

Parameter	Conditions	Min	Typ	Max	Units		
<b>Frequency Range</b>	IN – OUT, IN/OUT 50Ω	1		2	GHz		
<b>In/Out Impedance</b>	IN, OUT		50		Ω		
<b>Gain</b>	IN – OUT, IN/OUT 50Ω	1575MHz		28	30	32	dB
		1227MHz		30	32	33	
<b>Variable Gain (0 - 30dB)</b>	IN – OUT, IN/OUT 50Ω	1575MHz	Max	28	30	32	dB
			Min	-2	0	1	
		1227MHz	Max	28	30	32	
			Min	-4	-3	-1	
<b>Input SWR</b>	OUT Port 50Ω			2:1	—		
<b>Output SWR</b>	IN Port 50Ω			2:1	—		
<b>Noise Figure</b>	IN – OUT, IN/OUT 50Ω			1.8	dB		
<b>Gain Flatness</b>	[L1 – L2] IN – OUT, IN/OUT 50Ω			4	dB		
<b>Group Delay Flatness</b>	$T_{d,max} - T_{d,min}$ , IN – OUT			1	ns		
<b>Reverse Isolation</b>	OUT – IN	30			dB		
<b>DC IN</b>	Pass DC	Non-Powered Configuration, DC Input on OUT port	3		16	VDC	
<b>Device Current</b>		Current Consumption of Device (excludes Ant. Cur.)			16	mA	
<b>Ant/Thru Current</b>	Pass DC	Non-Powered Configuration, DC Input on OUT port			250	mA	
<b>Max RF Input</b>		Max RF Input Without Damage			10	dBm	

## 2 Performance Data

### A11M

Figure 2-1. Gain vs Frequency

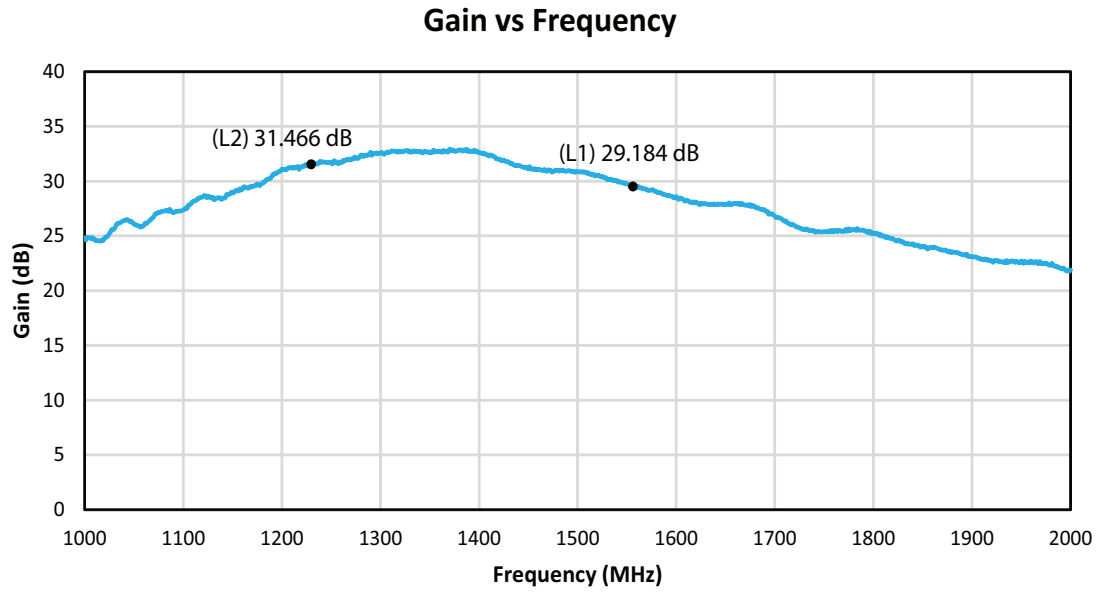
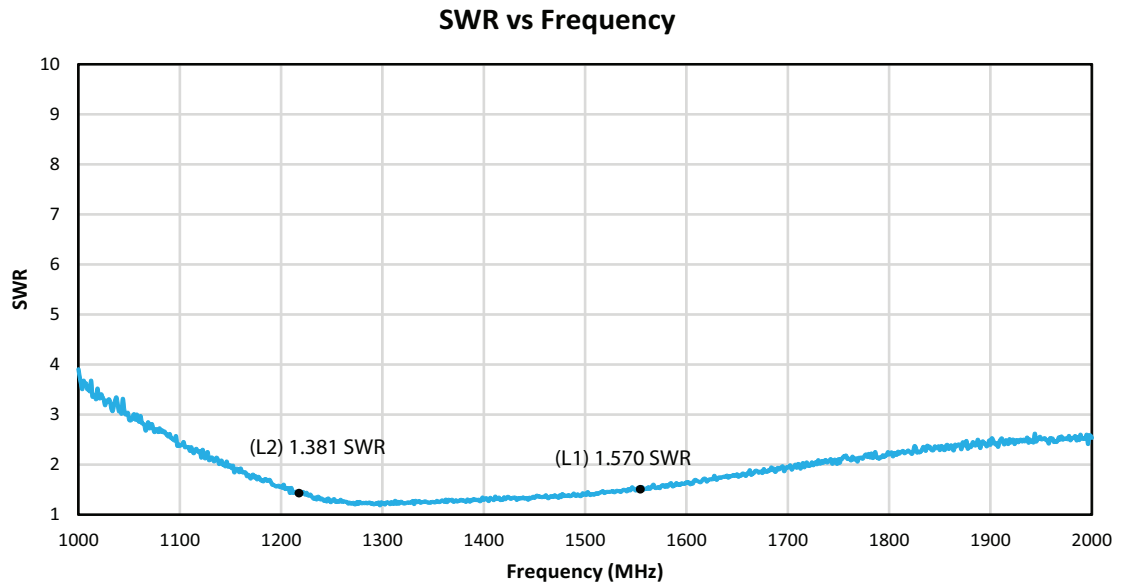


Figure 2-2. SWR vs Frequency



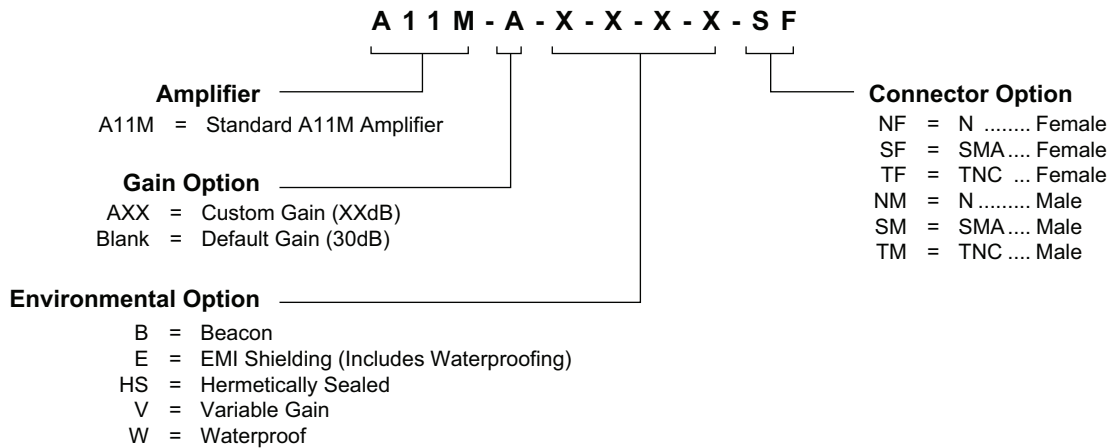
### 3 Product Options

Table 3-1. A11M Available Options

RF Connector		
Connector	Connector Type	Limitations
	N (Female/Male)	N/A
	SMA (Female/Male)	N/A
	TNC (Female/Male)	N/A
Housing		
Housing	Housing Type	Limitations
	Mini	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.

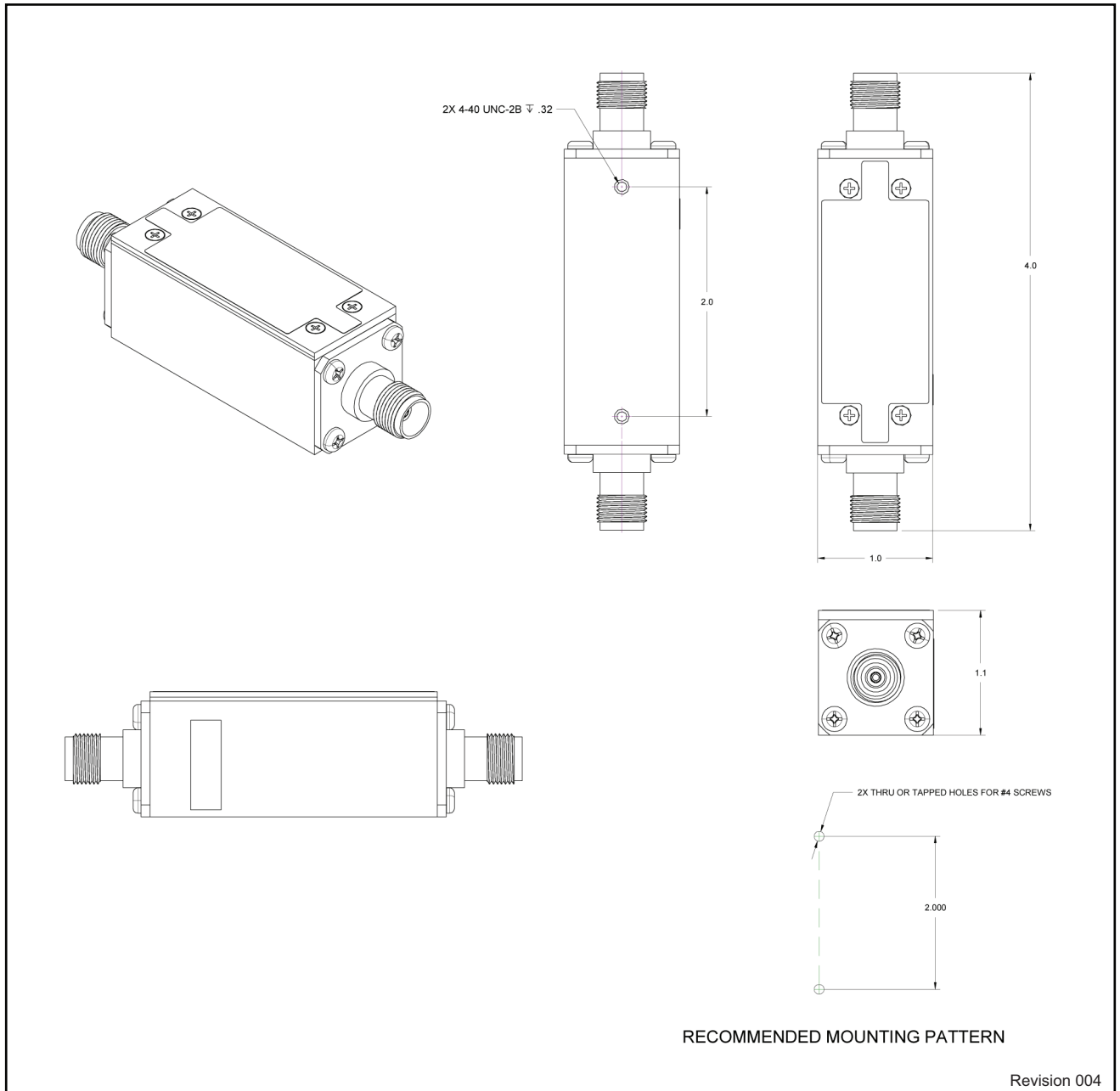
### 4 Product Code Decoder



Note: 1. To have product/part codes customized to meet exact needs, contact GPS Source at [techsales@gpssource.com](mailto:techsales@gpssource.com) or visit the website at [www.gpssource.com](http://www.gpssource.com).

# 5 Mechanical Drawing

## A11M Mini Amplifier — FAM-AAM-AAX-AGZ



GPS Source Part No. <b>FAM-AAM-AAX-AGZ</b>	Finish <b>N/A</b>	Size <b>C</b>	Mass	Tolerances	
Description <b>A11M Mini 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.					



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AS9100C:2009 and ISO 9001:2008 Compliant Company



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