



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.

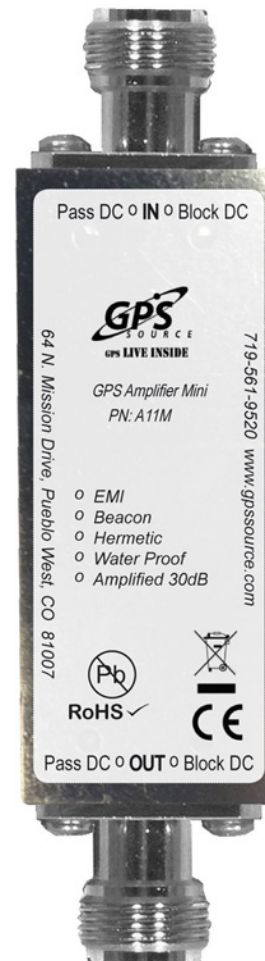
The A11M is an inline device designed to strengthen the signal and reach of the entire L-band.

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	
Frequency Range	IN – OUT, IN/OUT 50Ω		1		2	GHz	
In/Out Impedance	IN, OUT			50		Ω	
Gain	IN – OUT, IN/OUT 50Ω	1575MHz	28	30	32	dB	
		1227MHz	30	32	33		
Variable Gain (0 - 30dB)	IN – OUT, IN/OUT 50Ω	1575MHz	Max	28	30	32	dB
			Min	-2	0	1	
		1227MHz	Max	28	30	32	
			Min	-4	-3	-1	
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	
DC IN	Pass DC	Non-Powered Configuration, DC Input on OUT port	3		16	VDC	
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

A11M

Figure 2-1. Gain vs Frequency

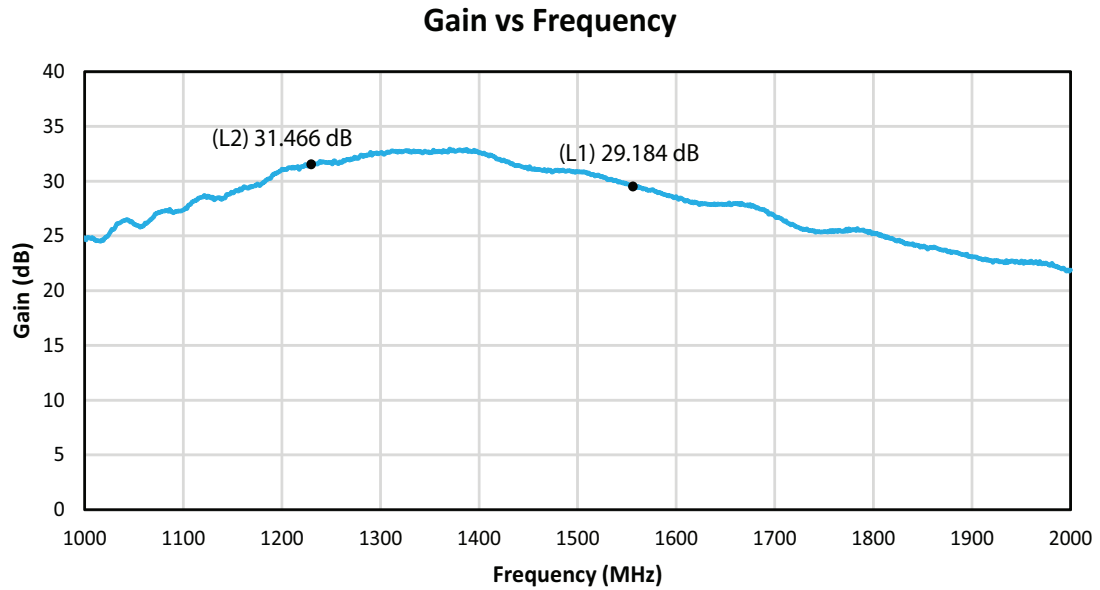
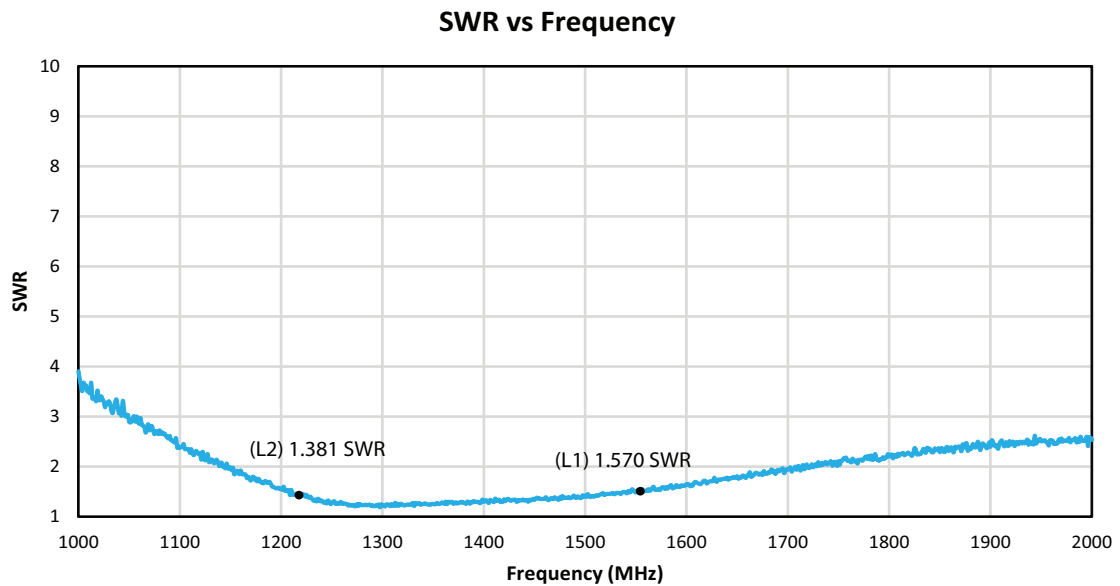


Figure 2-2. SWR vs Frequency



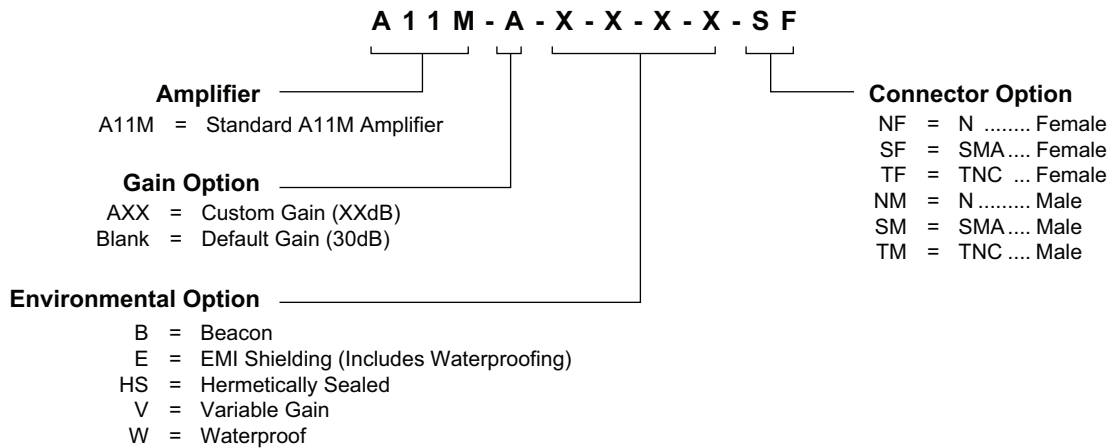
3 Product Options

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 ⁽²⁾		
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.

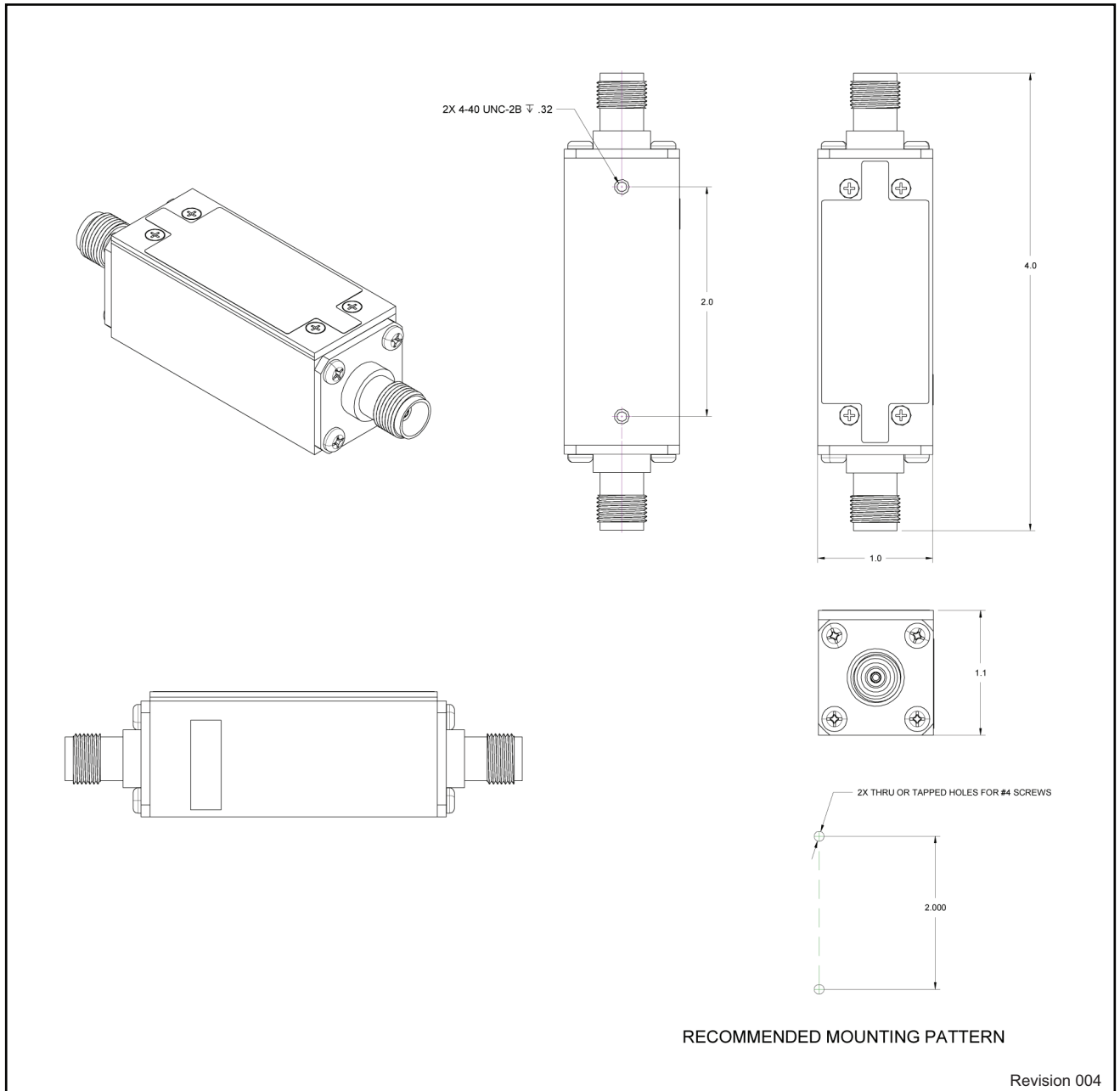
4 Product Code Decoder



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

5 Mechanical Drawing

A11M Mini Amplifier — FAM-AAM-AAX-AGZ



GPS Source Part No. FAM-AAM-AAX-AGZ	Finish N/A	Size C	Mass	Tolerances	
Description A11M Mini Amplifier	Material N/A	3 rd 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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