

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 GPS L1/L2/L5 and GNSS frequencies
- RoHS and WEEE Compliant
- Variable Gain Option: -2dB to 30dB

Options

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



A11M

1. A11M Electrical Specifications

Operating Temperature -40°C to 85°C

Parameter		Conditions		Min	Type	Max	Units
Frequency Range		IN – OUT, IN/OUT 50 Ω		1.1		1.7	GHz
In/Out Imped.		IN, OUT			50		Ω
Gain (Standard)		IN – OUT, IN/OUT 50 Ω		28	30	32	dB
Gain (Custom) - AXX (1-29 dB)				XX-2	XX	XX+2	
Variable Gain (-2 to 30dB)		IN – OUT, IN/OUT 50 Ω	1575 MHz	Max	28	30	dB
				Min	-2	0	
Input SWR		OUT Port 50 Ω				2:1	-
Output SWR		IN Port 50 Ω				2:1	-
Noise Figure		Antenna Any Port, Unused Ports 50Ω				1.8	dB
Gain Flatness		[L1 – L2] I Antenna Any Port, Unused Ports 50Ω				4	dB
Group Delay Flatness		Td,max – Td,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

2.1 A11M

Figure 2-1.

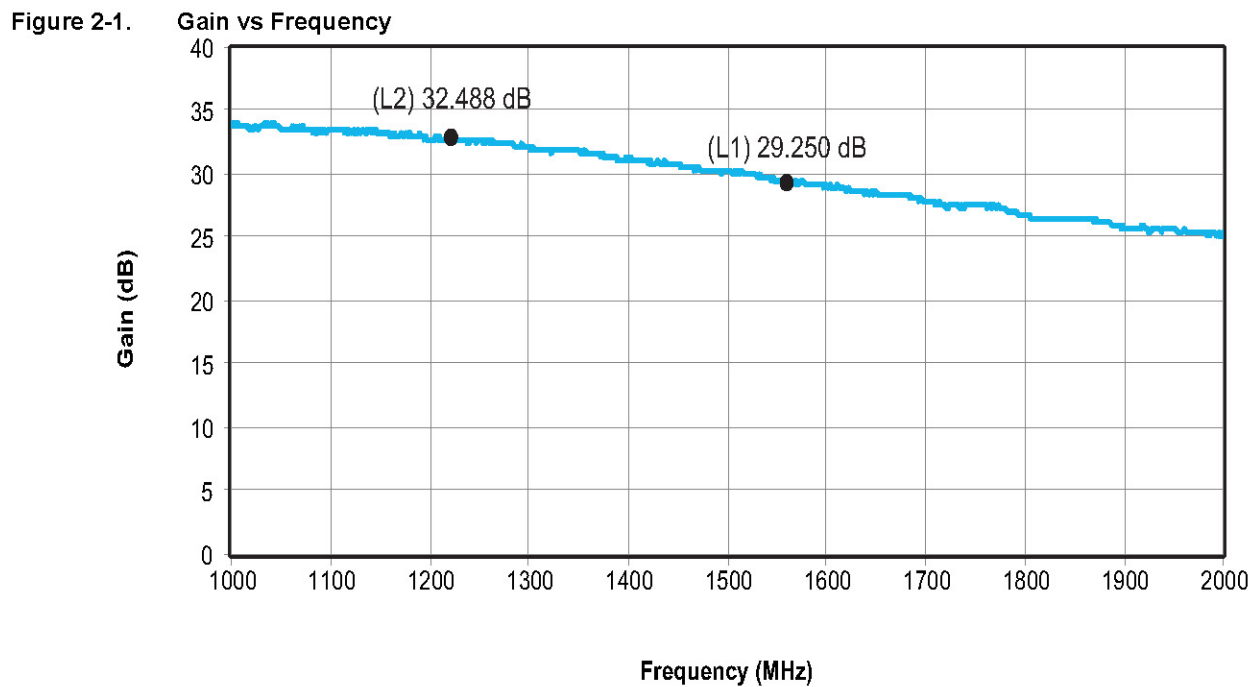
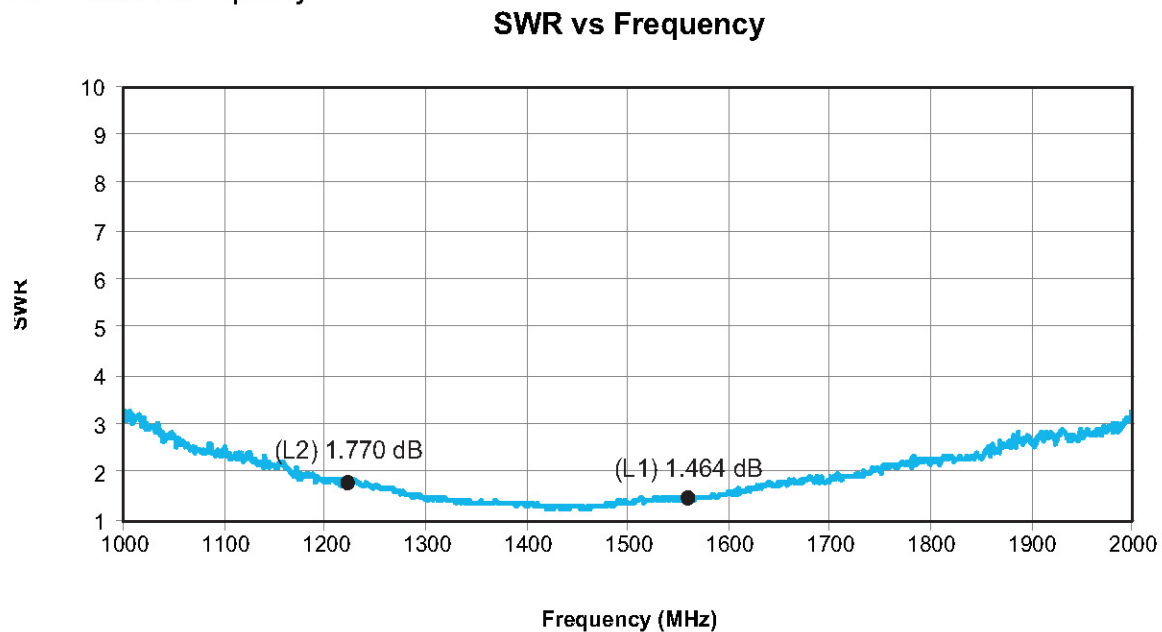


Figure 2-2. SWR vs Frequency



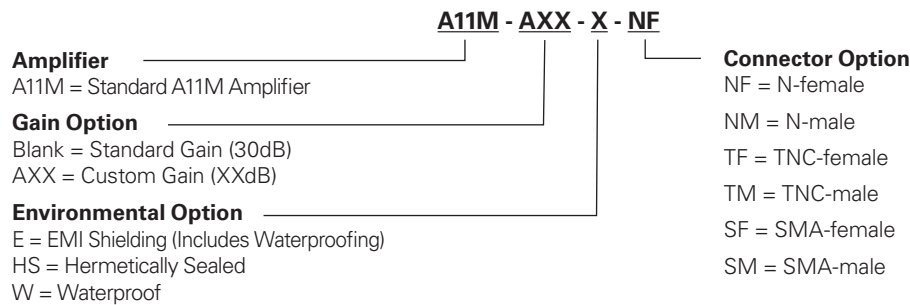
3. Product Options

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 ⁽¹⁾		
Configuration		
	Standard	Pass DC Input and Output
	Special	Block DC Input and Pass DC Output
Amplification		
Gain		
	Standard	30dB
	Custom	1-29dB

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 GPSS-Sales@gd-ms.com or visit the website at www.gpssource.com