

# A11M Amplifier

## Technical Product Data

### Features

- **Excellent Noise Figure**  
F < 1.8dB
- **Excellent Gain**  
G = 30dB
- **Passes GPS, Galileo & GLONASS L1/L2**
- **0dB to 30dB Variable Gain Option Available**
- **IIP3, PidB, RoHS & WEEE Compliant**



### Description

Designed with the thin link margins of satellite navigation systems in mind, the A11M Amplifier is a single stage gain block that covers the GPS, Galileo, and GLONASS frequencies. The device features 30dB of gain and a noise figure of less than 1.8dB. Since the product consumes less than 16mA, it may be powered by the GPS receiver's antenna voltage output.

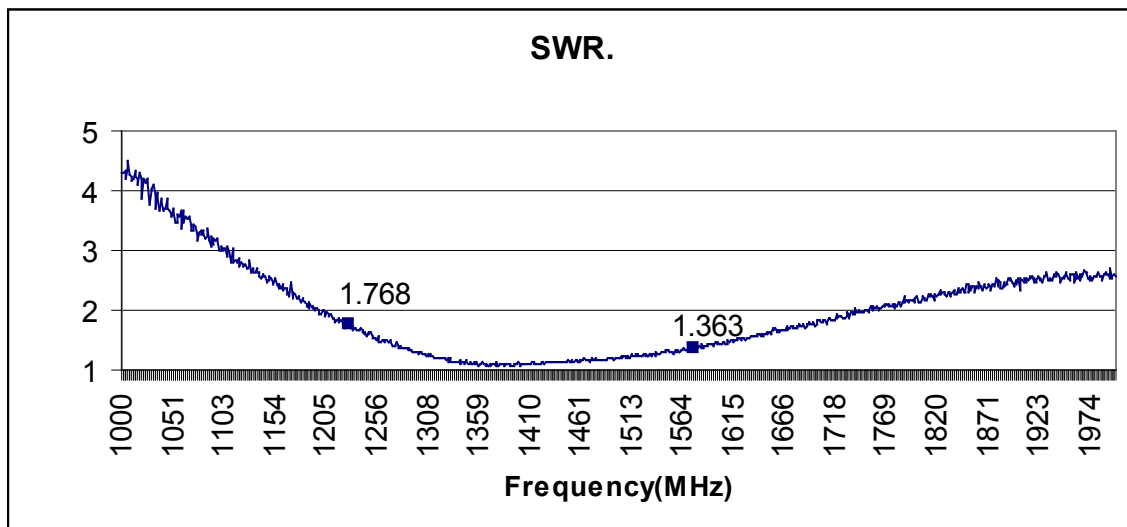
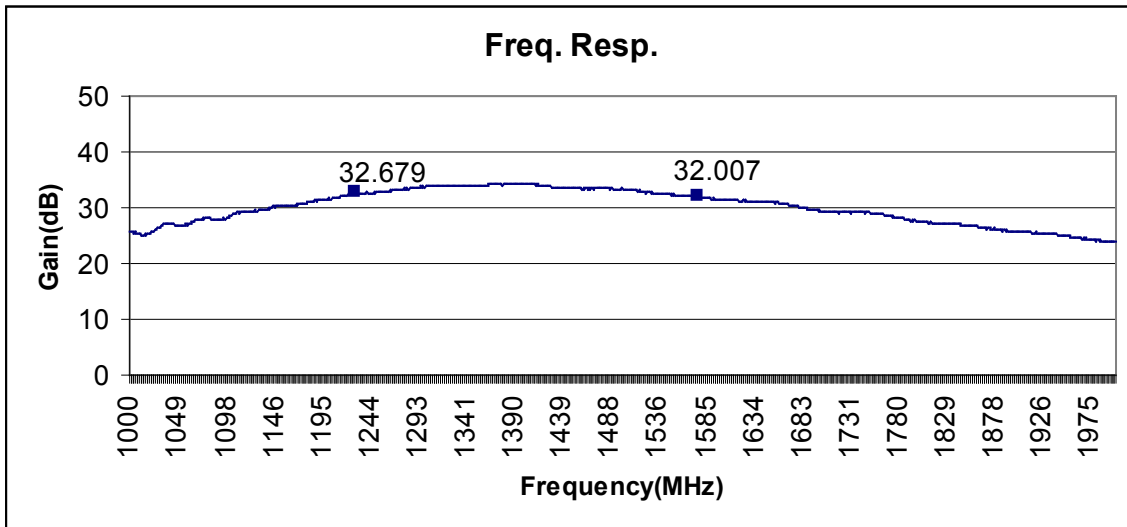
The A11M amplifier comes with many available options to meet your specific needs. Please call, fax, email ([sales@gpssource.com](mailto:sales@gpssource.com)), or visit our website ([www.gpssource.com](http://www.gpssource.com)) for further information on product options & specifications.

### Electrical Specifications, Operating Temperature -40 to 85°C

Parameter	Conditions	Min	Typ	Max	Units
Freq. Range	IN – OUT, IN/OUT-50Ω	1		2	GHz
In/Out Imped.	IN, OUT		50		Ω
Gain	IN – OUT, IN/OUT-50Ω				
1227MHz		30	32	33	dB
1575MHz		30	32	33	
Variable Gain Opt.	IN – OUT, IN/OUT-50Ω				
1227MHz:					dB
Max Gain		28	30	32	
Min Gain:		-4	-3	-1	
1575MHz					
Max Gain		28	30	32	
Min Gain:		-2	0	1	
Input SWR	OUT Port - 50Ω			2.0:1	-
Output SWR	IN Port - 50Ω			2.0:1	-
Noise Figure <sup>(4)</sup>	IN – OUT, IN/OUT-50Ω			1.8	dB
Gain Flatness	L1 – L2 , IN – OUT, IN/OUT-50Ω			2	dB
Group Delay Flatness	$\tau_{d,max} - \tau_{d,min}$ , 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
	Powered	Powered, Mil. Conn. Or Quick Connect Option		Note 3	mA
Max RF Input	Max RF input without damage			10	dBm

**Performance Data:**

**A11 Amplifier**



**Available Options:**

<b>RF Connector Options:</b>		
Connector Options	Connector Type	Limitations
	N (Male & Female)	
	SMA (Male & Female)	
	TNC (Male & Female)	
	SMB (Female)	
	SMC (Female)	
	MCX (Female)	
	BNC (Male & Female)	Performance Not Guaranteed
<b>Housing Options:</b>		
Housings	Housing Type	Limitations
	Standard	None
	Mini, Tiny	Powered Option Not Ava.  Powered Option Not Ava. Connectors Not Available: N, TNC, BNC
<b>Port Options:</b>		
Pass DC <sup>(1)</sup>	IN Port Passes DC	
DC Blocked <sup>(1)</sup>	IN Port Blocks DC	

**Notes:**

1. With Powered Option, any or all RF ports (input or output) can be DC Blocked or can pass the powered DC voltage
2. Maximum combined DC current draw out all ports of the device is a function of the DC input voltage and desired DC output voltage , according to the following:

$$I_{out} \leq 1.4 / (V_{DC IN} - V_{DC OUT}) - 0.007 \quad \text{Amps (or 250mA max)}$$

For powered option with a wall mount transformer (Voltage Input = 110/220/240 VAC),  $V_{DC IN}$  is 9V.

**Part Number:**

**A11M – AXX – P110 / 5 – SF**

Product:  
Standard

Custom Gain Option:  
**AXX** – XX = Desired Gain Level  
**V30** – Variable Gain, 0 to 30dB  
**Blank** – Default Gain, 30dB

Source Voltage:  
**P110** – Transformer,  
**P220** – Transformer,  
**P240** – Transformer,  
**PDC** – DC w/Quick Connects  
**PM** – Military Connector (User supplies DC)

Output Voltage:  
**3.3, 5, 7.5, 9, 12, XX, V** – Denotes Output Voltage  
(XX – custom output voltage, V – variable)

Connector Options:  
**NM** – N, Male  
**NF** – N, Female  
**SM** – SMA, Male  
**SF** – SMA, Female  
**TM** – TNC, Male  
**TF** – TNC, Female  
**BM** – BNC, Male  
**BF** – BNC, Female  
**SB** – SMB Jack, Female  
**SC** – SMC Jack, Female

For help in creating the part number to meet your exact needs, contact us at [Sales@gpssource.com](mailto:Sales@gpssource.com) or visit our website at [www.gpssource.com](http://www.gpssource.com).