

# Filtered Low Noise Amplifier

## SPECTRUM MICROWAVE

P/N: 310-024105-021

### For GPS Applications

1575 MHz

This series of Low Noise Amplifiers provides a filtered, low-noise gain solution ideal for applications where higher reliability is critical. These filtered low noise amplifiers are designed to reduce out-of-band interference while achieving high dynamic range.

A 3-pole ceramic filter selects only the desired GPS positioning signal while the low-noise gain stage maintains the receiving system's sensitivity.

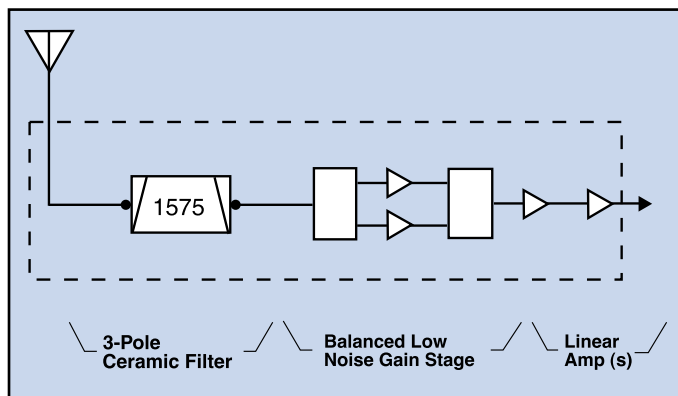
The LNA rejects undesired signals by at least 40 dB at 1050, 1410, and 1710 MHz. See the graphs on Page 2 for return loss, rejections, and gain of a typical unit.

The preamplifier is powered by DC voltage applied to the center conductor of the output connector. Optionally, the unit can be powered through an external DC bias connector.

### Features and Benefits

- Noise figure 1.6 dB typical
- Filtered preamp filters
- Lightweight aluminum housing
- Single band (L1) performance
- Coaxial and external bias options
- Environmental sealing available
- Application specific packages available
- L5 configurations available upon request

### Block Diagram



ISO 9001  
CERTIFIED

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### Typical Performance Specifications

- Frequency . . . . . 1575.42 MHz (L1)
  - Bandwidth . . . . . 30 MHz min.
  - Noise figure . . . . . 2.5 dB max.
  - VSWR . . . . . 1.5:1 max.
  - Gain . . . . . 26 dB +/-2.0 dB
  - Gain Flatness . . . . . +/-0.5 dB
  - Rejection . . . . . 40 dB @ 1050, 1410, 1710 MHz
  - Bias . . . . . Ext Bias, MR01
  - DC Power . . . . . 5-16 VDC
  - Temperature Range . . . . . -40°C to +71°C
- All specifications above measured at 25°

### Dimensions and Connections

- Antenna port J1
  - Receiver port J2
  - External bias J3
  - SMA type female connectors
  - 2.20"ø x 0.080"H excluding connectors
  - Optional Bias cable is available to simplify testing and evaluation (P/N: A020-0560)
- Chassis is machined aluminum with a nickel plate finish.

### Noise Figures

GPS Band	Freq (MHz)	NF (dB)
L1	1565	1.60
	1575	1.60
	1585	1.60

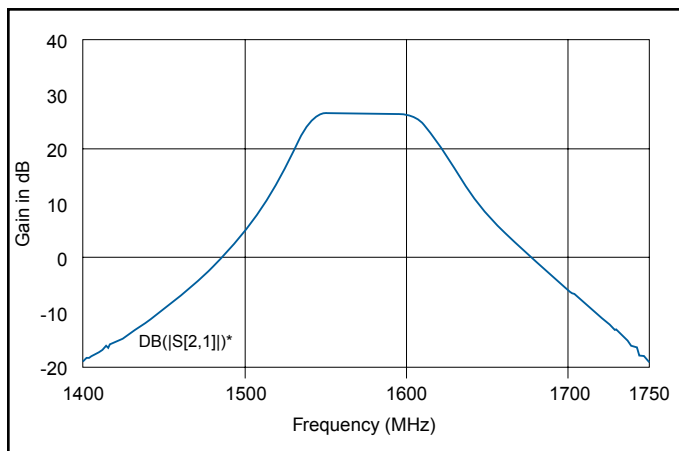
S-Parameters for this model are available on our website. LNA parameters include noise data.



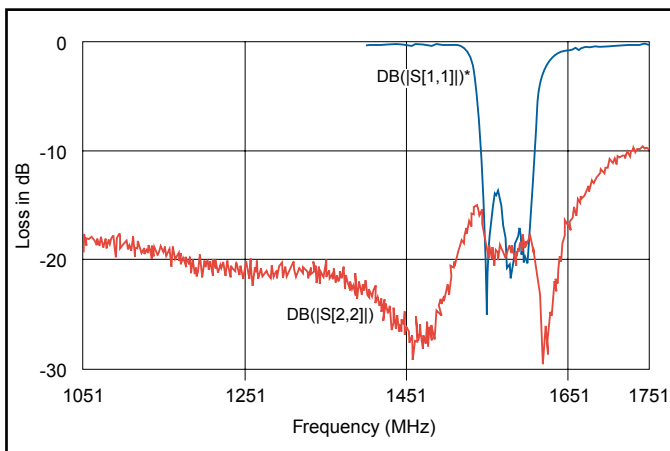
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1575 MHz

## Amplifier Gain



## Return Loss



## Dimensions (inches)

