Filtered
Low Noise Amplifier

SPECTRUM MICROWAVE

P/N: 310-025105-012

For GPS Applications

1227 MHz/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 pair of diplexed 3-pole ceramic filters select only the desired GPS signals 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
- Double-diplexed preamp filters
- Lightweight aluminum housing
- Dual band (L1 and L2) performance
- Coaxial and external bias options
- Environmental sealing available
- Application specific packages available
- Suitable for new L2-C signals
- L5 configurations available upon request

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Typical Performance Specifications

Frequency	1575.42 MHz (L1) 1227.60 MHz (L2)
Bandwidth	30 MHz min.
Noise figure	2.0 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	Coaxial Bias
DC Power	16-32 VDC
Temperature Range	-40˚C to +71˚C

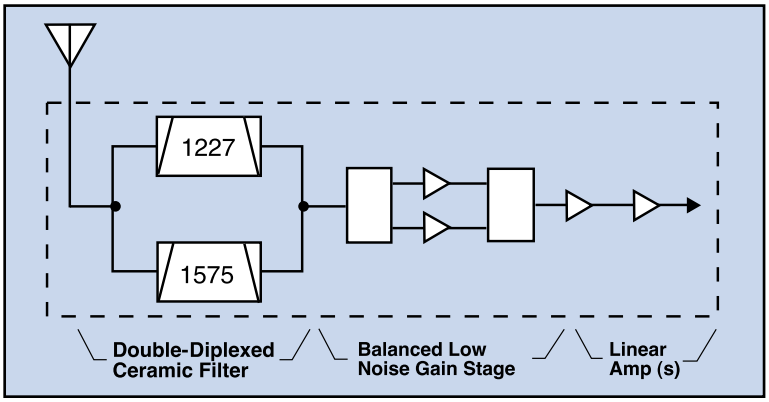
All specifications above measured at 25˚C

Dimensions and Connections

- Antenna port J1
- Receiver port J2
- SMA type female connectors
- 2.20"ø x 0.080"H excluding connectors

Chassis is machined aluminum with a nickel plate finish.

Block Diagram



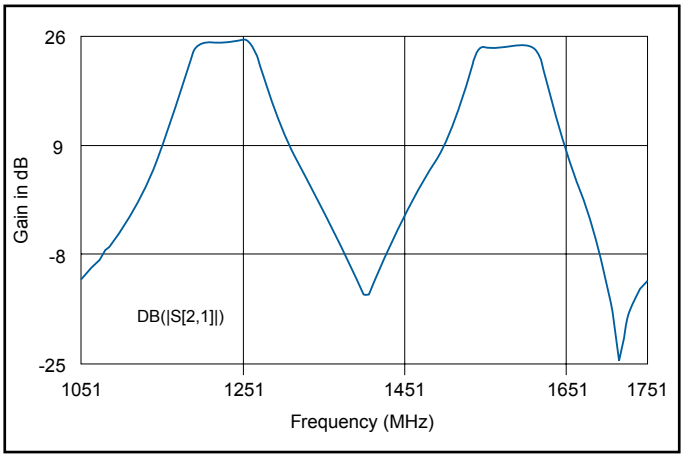
ISO 9001 CERTIFIED

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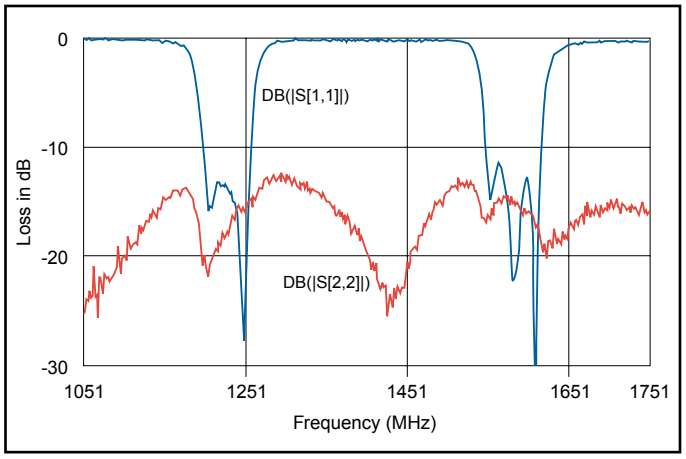
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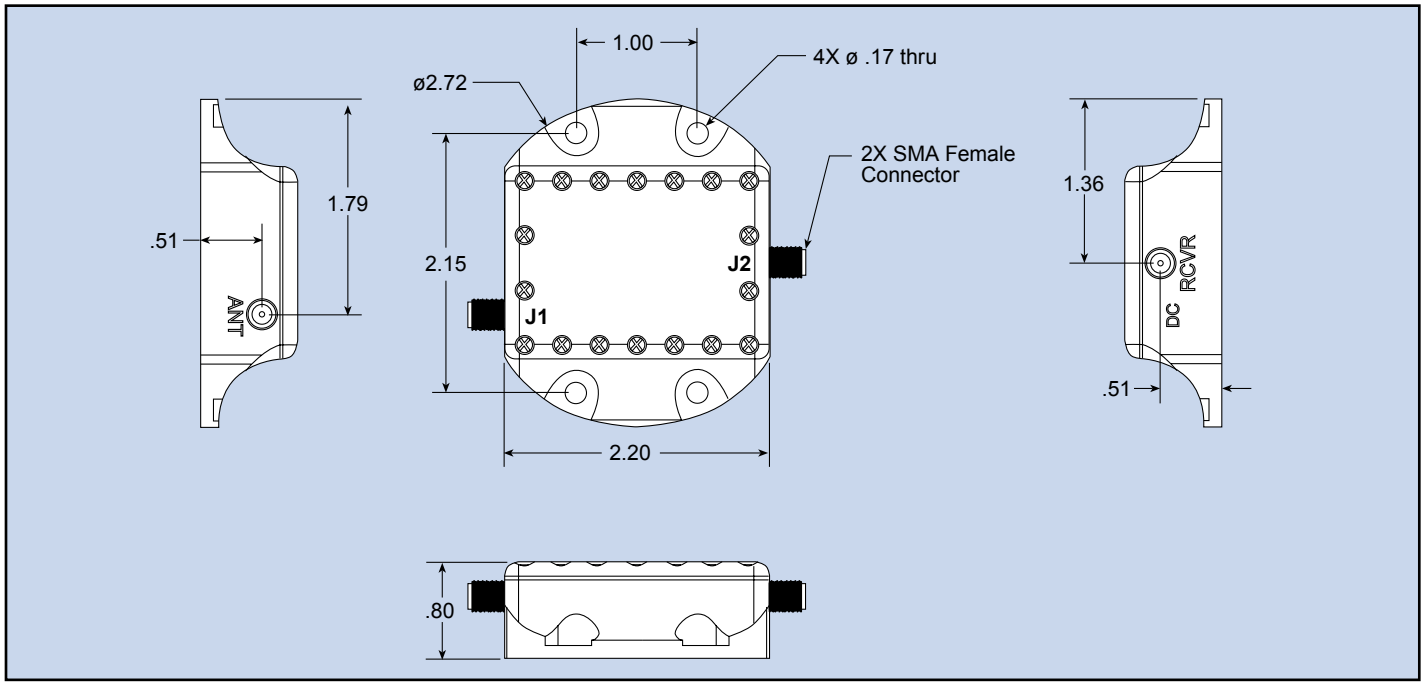
Amplifier Gain



Return Loss



Dimensions (inches)



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