DATASHEET

AMP24-500 Amplifier

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The RadioLinx 500mW 2.4 GHz RF Amplifier (AMP24-500) is Automatic Gain Control (AGC) compensated for constant power output bi-directional amplification. This provides constant maximum output power at the antenna over a wide RF input range. An antenna amplifier significantly improves the link reliability and operating range by low noise amplification in receive mode, and spectrally clean power amplification in transmit mode. This amplifier has unique internal filtering and AGC in both the Tx and Rx paths. This combination provides exceptional performance in high traffic areas.

The bi-directional amplifier may be needed if an application requires long lengths of coaxial cable to reach the antenna. The amplifier is designed to put maximum power right at the antenna and boost the received signal primarily to overcome cable loss and improve overall receiver signal quality. Only the AMP24-500 amplifier has been specifically FCC approved for use with RadioLinx radios.

Features and Benefits

- Automatic Gain Controlled (AGC)
- Power Output: 500mW 802.11 b/g
- Receive Gain: +20dB (0 to +23dB capable)
- High Q 3 Pole Band Pass Filter
- Low 2.5dB RX Noise Figure
- Machined Aluminum Housing
- Internal Lightning Protection
- 2 Year Product Warranty

Installation Guidelines

1. Each AMP24-500 amplifier is equipped with internal ¼ wave technology lightning protection
2. The AMP24-500 amplification device is a RadioLinx subassembly and its use has been FCC approved for use in an RF system. The AMP24-500 kit has been pre-designed to meet FCC approval and use under the following guidelines:
   - The bi-directional amplifier has been designed to operate with a cable loss between the radio and amplifier of 6.5 dB to 20 dB. Within this range, the output of the amplifier will always be ½ W regardless of the input level
   - The amplifier may not be used with less than 6.5 dB cable loss
   - Use of the amplifier outside of these guidelines will result in violation of 47 CFR Part 15 FCC Rules, under which the equipment has been authorized
   - With more than 20 dB of coaxial cable loss, the amplifier will not turn on
   - Maximum antenna transmit gain allowed for use with the AMP24-500 amplifier is 15 dBi for point-to-point paths and 9 dBi for point-to-multipoint paths

Specifications

Frequency Coverage	2.442 GHz +/-50 MHz
Supply Voltage	+12 to 15 VDC
Receive	
Gain	20 dB +/- 2dB
'g' Modulation Data Rate	54Mbs
Noise Figure	2.5 dB
Linear Operation	Pin < -9dBm
Supply Current	<150mA
Tx to Rx Switching	2 µSec Typ.
Transmit:	
AGC Gain	Automatically adjusts to specified Power Output
Max Rated Power Output	1W (+30) dBm
'g' Modulation Data Rates	1W yields 36 to 48Mbs 0.5W yields 54Mbs
P1dBm	+32.5dBm
RF Input Power for Turn-On	>1 dBm
Harmonic Rejection	>75dBc @ 2fo >56dBc @ 3fo 1W Power Output
Supply Current	<800 mA Max @ 1W Power Output
Rx to Tx Switching	2 µSec Typ.
Maximum Ratings	Pin (Radio port) + 30 dBm Pin (Antenna port) + 27 dBm
System Filtering	An internal 3-pole filter in both Rx and Tx paths provides superior cosite performance achieving maximum dynamic range and low harmonic distortion
Operating Temperature Range	-40°F to +158°F -40°C to +70°C
RF Connector Size	2.88 in. x 3.00 in. x1.01 in. (Not including N type female connectors)
Weight	< 11 oz.
Chassis	Machined aluminum with chemical film per MIL C5541 Class 1A
Indicator LED	Green LED - Rx mode, Red LED - Tx mode.
Lightning Suppression	¼ wavelength short

Additional Products

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Ordering Information

To order this product, please use the following:

AMP24-500 AMP24-500 Amplifier

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft distributors near you, go to http://www.prosoft-technology.com

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Europe
europe@prosoft-technology.com,
fax to +33 (0) 5.61.78.40.52

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