

AAP Series Amplifiers

1.3 GHz Amplifier



FreeWave Technologies, Inc. provides amplifiers for government, military, and any qualified industry. 100% of our amplifiers are tested through 5 discreet stages to ensure quality and performance when installed.

The AAP Series of Bilateral Amplifiers are designed to improve the range of 1.3 GHz Spread Spectrum radios by amplifying both the transmitted and received signals right at the antenna, mitigating cable loss in a temperature range from -40°C to $+75^{\circ}\text{C}$.

All radios are designed, manufactured, and tested in Boulder, Colorado.

Key Features

- On the receive direction, the amplifiers incorporate GaAs FET amplification along with SAW and dielectric resonator filtering; this results in a 1.5 dB noise figure and a +1 dBm input intercept point.
- A combination of SAW and low-pass filtering reduces harmonic output to less than -40 dBc.
- On the transmit direction, the amplifiers generate 5 W, making them the ideal solution for extending the range of spread spectrum radios.
- The amplifiers are packaged in sealed, milled, aluminum housing, providing the utmost weather protection.
- Temperature range from -40°C to $+75^{\circ}\text{C}$

Transmitter	
Frequency Range	1.35 to 1.39 GHz
Turn-On Transients	-70 dBc @ fc +/- 230 KHz
Input RF Power	160 mW to 330 mW
Harmonic Output	Less than -40 dBc
Output Power	5 Watts

Receiver	
Intercept Point	+1 dBm referred to input
Noise Figure	1.5 dB maximum
Gain	7 dB minimum

Power Requirements	
Supply Voltage	+10 to +14 VDC
Power Consumption	Peak Transmit: 3 A @ 12 VDC Receive: 60 mA @ 12 VDC

General Information	
Operating Temperature	-40°C to +75°C (-40°F to +167°F)
Enclosure	Milled aluminum with integrated bracket
Dimensions	102 L x 63.5 W x 21.3 H (mm)
Amplifier RF Connectors	To antenna: SMA female To modem: SMA female

Information to Order	
Model Number	Description
AAP-5W	Enclosed