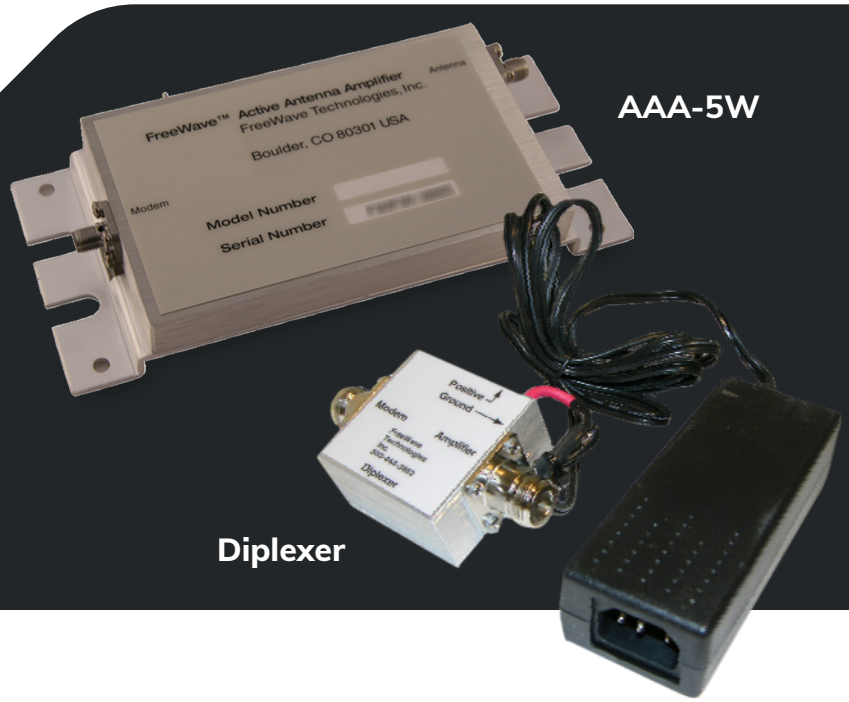
FREEWAVE

AAA Series Amplifiers

902 to 928 MHz



FreeWave Technologies 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 AAA Series of Bilateral Amplifiers is designed to improve range of 902 to 928 MHz Spread Spectrum radios by amplifying both the transmitted and received signals right at the antenna, mitigating cable loss, and at a temperature range from -40°C to +75°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 +5 dBm input intercept point along with 40 dB of cellular and pager band rejection. A combination of SAW and lowpass filtering reduces harmonic output to less than -70 dBc.
- On the transmit direction, the amplifiers generate 1 W or 5 W, making them the ideal solution for extending the range of spread spectrum radios.
- The amplifiers are powered through the antenna cable, simplifying the installation process.
- The amplifiers are packaged in sealed, milled, aluminum housing, providing the utmost weather protection.
- The amplifiers operate in a temperature range from -40°C to +75°C.

Transmitter

Frequency Range	902 to 928 MHz
Turn-On Transients	-70 dBc @ fc +/- 230 KHz, higher for lower turn-on times
Input RF Power	50 mW Min; 330 mW Max
Harmonic Output	2ND -40 dBc, 3RD and higher -70 dBc
Output Power	**AAA-1W:** 1 Watt **AAA-5W:** 5 Watt

Receive

Intercept Point	+5 dBm referred to input
Noise Figure	1.5 dB Max
Gain	14 dB Min, higher gain optional

Power Requirements

Supply Voltage	10 to 14 VDC
Power Consumption	**AAA-1W:** 0.35 A Max @ 12 VDC **AAA-5W:** 2.0 A Max @ 12 VDC

General Information

Enclosure	Milled Aluminum with Integrated Bracket
Dimensions	102 L x 63.5 W x 21.3 H (mm) 4.0 L x 2.5 W x 0.84 H (in)
Amplifier RF Connectors	**To Diplexer:** SMA Female **To Modem:** SMA Female
Diplexer RF Connectors	**To Amplifier:** Type-N Female **To Antenna:** Type-N Female
Temperature	-40°C to +75°C (-40°F to +167°F)

Information to Order

Model Number	Description
AAA-1W	Enclosed, 1 Watt, 900 MHz, Diplexer
AAA-1W-5D	Enclosed, 1 Watt, 900 MHz, DC Power
AAA-5W	Enclosed, 5 Watt, 900 MHz, Diplexer
AAA-5W-DC	Enclosed, 5 Watt, 900 MHz, DC Power
AAA-5W-N	Enclosed, 5 Watt, 900 MHz, N Type
AAA-5W-OP	Enclosed, 5 Watt, 900 MHz, Output Power Controls Switch
AAH-5W	Enclosed, 5 Watt, 900 MHz, HT Plus Series

Also Available By Special Order

- 220 Vac Power Supply
- Directly Powered Amplifier (no diplexer)
- Directly Powered Amplifier (no diplexer) with on/off control
- Faster turn-on/turn-off: 1µs
- 50 ms time-out disabled (for continuous transmissions)

FREEWAVE

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