Amplifiers

902-928 MHz or 1.3 GHz

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Overview:

FreeWave Technologies provides amplifiers for Government, Military, and any qualified industry. 100% of our amplifiers are tested through 5 discreet stages to assure quality and performance when installed. AAA Series of Bilateral Amplifiers are designed to improve range of 902-928 MHz Spread Spectrum radios by amplifying both the transmitted and received signals right at the antenna, mitigating cable loss, and a temperature range from –40°C to +75°C.

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.
- Temperature range from –40 °C to +75 °C.

AAA-5W 900 GHz shown; Also available
AAA-1W 900 GHz & AAP-5W 1.3 GHz

Diplexer

Amplifiers

Technical Specifications

Frequency		
Range	902-928 MHz	1.35-1.39 GHz
Turn on Transients	*-70 dBc @ fc +/- 230 KHz, higher for lower turn-on times*	
Input RF Power	50 mW Min; 330 mW Max	100 mW to 300 mW
Harmonic Output	2nd –40 dBc, 3rd and higher –70 dBc	
Outout Power	AAA-1 Watt AAA-5 Watts	AAP-5 Watts
Receive		
Intercept Point	+5 dBm referred to input	
Noise Figure	1.5 dB Max	
Gain	14 dB min, higher gain optional	
Power Supply		
Supply Voltage	10-14 VDC	
Power Consumption	AAA-1W: 0.35 A Max @ 12 VDC AAA-5W: 2.0 A Max @ 12 VDC	AAP-5W: 2 A @ 12 VDC
General Information		
Enclosure	Milled Aluminum with Integrated Bracket.	
Dimensions	63.5mm W x 102mm L x 21.3mm H (2.5in. W x 4.0in. L x 0.84in H)	
RF Connectors	To Amplifier: SMA Female To Diplexer: Type-N Female	
Temperature	-40° C to +75° C	
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 Radios Require Professional Installation. Specifications may change at any time without notice.

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