NuWaves Engineering

Trusted RF Solutions.™

NuPower Xtender™ 12B04A-02 L-Band Bidirectional Amplifier

17 Watt CW
2.5 Watts Linear, 5% EVM @ 34 dBm
1.0 GHz - 2.0 GHz

P/N: NW-BA-12B04A-02

The NuPower Xtender™ Model NW-BA-12B04A-02 is a small, lightweight, and power-efficient bidirectional amplifier ideal for extending the communication range of half-duplex L-band transceivers running constant-envelope or near-constant-envelope waveforms. The bidirectional amplifier generates 17 Watts of RF power from 1000 to 2000 MHz in transmit mode and the integrated low-noise amplifier provides a minimum of 13 dB of gain in receive mode.

Based on the latest gallium nitride (GaN) technology, the Xtender offers greater than 30% power efficiency at most frequencies and its compact size makes it ideal for integration into space-constrained platforms. Accepting a +5 dBm RF input, the Xtender provides 35 dB of gain. The Xtender also features over-voltage and reverse-voltage protection and operates over a wide temperature range of -30 to +60 °C.

Extend your operational communication range with NuPower™ amplifiers from NuWaves Engineering.

Features

- 17 Watts RF Output Power
- 1.0 to 2.0 GHz
- Bidirectional Operation
- 35 dB of Transmit Gain
- 13 dB Gain LNA
- Fast T/R Mode Switching with Auto-Sensing or Manual T/R Line
- Small Form Factor
- High Efficiency GaN Technology
- Over-Voltage & Reverse-Voltage Protection

Applications

- Unmanned Aircraft Systems (UAS) - Group 2 and Group 3
- Unmanned Ground Vehicles (UGV)
- RF Communication Systems
- Software Defined Radios

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NuPower Xtender™ 12B04A-02 BDA

Specifications

Operational

Frequency Range	1.0 GHz to 2.0 GHz
RF Output Power	17 W (typ) 13 W (min)
Transmit Gain	35 dB (typ)
2nd Harmonic	≤-13 dBc
T/R Mode	Automatic Sensing or Manual T/R Line
T/R Switch TIme	1.5 µS (max)
Receive RF Gain	13 dB (min)
Receive Noise Figure	3.5 dB (typ)
Nominal Input Drive Level	+5 dBm
Maximum Input Drive Level (no damage)	+10 dBm
Supply Voltage	+11 to +32 VDC
Transmit Current Consumption	2.2 A @ +28 VDC (typ)
Receive Current Consumption	100 mA @ +28 VDC (typ)
RF Connectors	SMA (female)
Interface Connector	9-pin Micro-D (socket)

Mechanical

Size	3.00" x 2.00" x 1.16" (L x W x H)
Weight	5.8 oz.

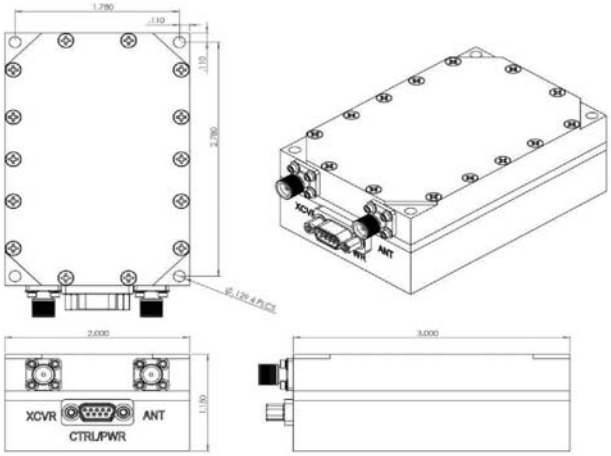
Environmental

Operating Temperature	-30 to +60 °C
Storage Temperature	-40 to +85 °C

Export

Classification	ITAR Controlled

Mechanical Outline



Contact NuWaves

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