

ADVANTECH LNA FEATURES

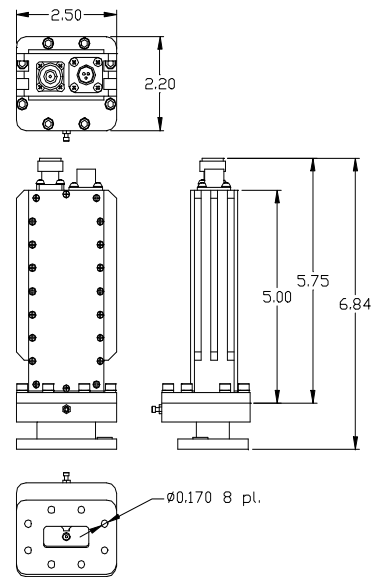
- All standard X-Band frequencies from 7.25 to 7.75 GHz
- GaAs/HEMT Technology
- Over 200,000 Hours MTBF
- Built-in Regulator 11-24 VDC operation
- Built-in Interstage Transmit Reject Filter
- Single or redundant operation
- Pressurizable W/G Input
- Power supply via RF connector or Power Connector
- Built-in alarm circuit
- Extreme operating temperature
- Weatherproof housing
- Three year warranty

OPTIONS

- Input Isolator

ACCESSORIES

- External Transmit Reject Filter



LNA with optional Input Isolator

OVERVIEW

The Advantech's Low Noise Amplifier (LNA) ALNA-X™ is a low noise, highly dynamic range amplifier suitable for use in satellite earth station receiver applications where ultra low noise and high reliability are critical, as well as in other systems operating in the frequency range from 7.25 to 7.75 GHz.

The LNA combines low noise with high linearity and wide band. The built-in Interstage Transmit Reject Filter allows the LNA to operate at the input power of -45 dBm in the TX band of 7.9 – 8.4 GHz.

The X-band LNA is available with Noise Temperature ranging from 50° K to 80° K. With weather proved packaging, the LNA can meet the demands of the installations in severe environmental conditions.

The 1:1 and 1:2 redundant system configurations can be provided. They require special Redundancy Kit.

The Advantech's LNA provides an industry leading MTBF of over 200,000 hours.

LOW NOISE AMPLIFIER

50° to 80° K

ALNA-X[®] series



Technical Specifications

Electrical Characteristics

Frequency range	7.25 – 7.75 GHz
Noise Temperature @ 23° C	60° K to 80° K (with Input Isolator); 50° K to 70° K (without Input Isolator)
Gain	60 dB min (50 dB option)
Gain flatness	2.0 dB p.p. full bandwidth
Gain slope	±0.1 dB per 10 MHz
Gain variation over operating temperature range	2 dB p.p. max
Gain stability @ constant ambient temperature	±0.1dB / hour ±0.2dB / 24 hours
Output power at 1dB of compression	+10 dBm min
Spurious	-55 dBc max
Max input power	0 dBm
Input VSWR	1.25:1 max (with Input Isolator); 2.0:1 max (without Input Isolator)
Output VSWR	1.50:1 max
Operating voltage	11 - 15 VDC (12 VDC nominal) , 15 – 24 VDC option
Current consumption	160 - 190 mA

Mechanical Characteristics

Dimensions (L x W x H)	5.75" x 2.50" x 2.20" (146.0 x 63.5 x 55.9 mm)
Weight	1 lb (450 g) (w/out Input Isolator)
Input waveguide flange	CPR 112 G
Output connector	N Type female (SMA female option)
Power connector	MS3112E8-3P (MS3116F8-4S option)

Environmental Conditions

Operating temperature	-40°C to +55°C -50°C to +60°C (Optional)
Humidity	100%, condensing (2" rain/hour)
Altitude	10,000' AMSL, de-rated 2°C/1,000' from AMSL

To order, please select model number from the following list:

- ALNA-X50™
- ALNA-X60™
- ALNA-X65™
- ALNA-X70™
- ALNA-X75™
- ALNA-X80™

PB-LN200-01 Rev. 0.03 issued 9/22/2005

Advantech AMT reserves the right to change this specification without prior notice



An ISO9001 2000 Company

CANADA

657 Orly Avenue
Dorval, Quebec
Canada H9P 1G1
Tel.: (514) 420-0045
Fax: (514) 420-0073
Email: Sales@AdvantechAMT.com

EUROPE

39Edison Road
St.Ives Huntington, Cambridgeshire
United Kingdom PE27 3LF
Tel.: +44 (1480) 357 600
Fax: +44 (1480) 357 601
Email: Sales.Europe@AdvantechAMT.com

UNITED STATES

1553 W. Todd Dr., Suite 206
Tempe, Arizona
United States 85283-4805
Tel.: +1 (480) 839 4136
Fax: +1 (480) 839 0860
Email: Sales@AdvantechAMT.com