

X-Band LNA 50° to 70°K

ALNA-X series

Features

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

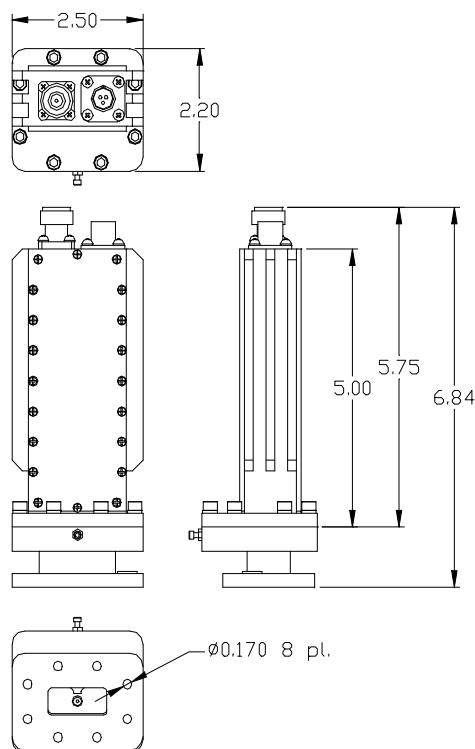
Overview

The Advantech Wireless 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. Advantech also provides LNAs in C, S Ku and Ka bands.

The X-band LNA is available with Noise Temperature ranging from 60° K to 70° K. With weatherproof 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 Wireless LNA provides an industry leading MTBF of over 200,000 hours.



LNA with optional Input

Options

- Input Isolator
- Redundant system with automatic and manual switching.
- Remote monitor and control panel

Accessories

- Input Isolator
- External Transmit Reject Filter

X-Band LNA 50° to 70°K

Technical Specifications

Parameter	LNA Model # ALNA-X	
Input Frequency	GHz	7.25 - 7.75
Output Frequency	MHz	7.25 - 7.75
Noise Temp	@ 23°C *	50°K, 55°K, 60°K, 65°K, 70°K
Gain	Min.	60 dB
Gain flatness (p-p)	Over Full band Over 40 MHz	2.0 dB max 0.5 dB max
Gain variation	@ Const. Temp. over full temp. range	0.25 dB/24 hours 2 dB p-p
Power output	P1dB (min)	+ 10 dBm
Third order intercept	At -65 dBm input	+20 dBm
Group delay/40 MHz	Linear	0.01 ns/MHz
	Parabolic	0.001 ns/MHz ²
	Ripple	1 ns p-p
AM/PM Conversion	At -10 dBm output power	<0.05 °/dB
Phase noise	@ 100 Hz offset	n/a
	@ 1000 Hz offset	n/a
	@ 10 kHz offset	n/a
	@ 100 kHz offset	n/a
	@ 1 MHz offset	n/a
	@ 10 MHz offset	n/a
10 MHz reference (Supplied via IFL cable) Phase noise requirements	@ 100 Hz offset	n/a
	@ 1000 Hz offset	n/a
	@ 10 kHz offset	n/a
Reference input level		n/a
Spurious		n/a
Image rejection		n/a
Input VSWR	Without input isolator	2.5:1
	With input isolator	1.3:1
Output VSWR		2: 1
Input overdrive	No damage	0 dBm
Connectors	Input	CPR 112G
	Output	Type N (f)
Power supply		Via IFL cable or Separate connector
Voltage		11-15V DC (11-24V DC option)
Current		250 mA max
Weight	Without input isolator	0.6 kg
	With input isolator	0.8 kg
Dimensions	L x W x H	280 x 80 x 50 mm
Operating temperature		-40°C to +60°C
Humidity		Up to 100% condensing
Finish		White Epoxy Enamel

*without Transmit Reject Filter

Ordering information

Noise temperature	Models with Input isolator	Models without input isolator
	LNA	LNA
50°K	-	ALNA-50XA
55°K	-	ALNA-55XA
60°K	ALNA-60XA	ALNA-60XA
65°K	ALNA-65XA	-
70°K	ALNA-70XA	-

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