

## NEW - ALNA-Series Ka-Band Low Noise Amplifier

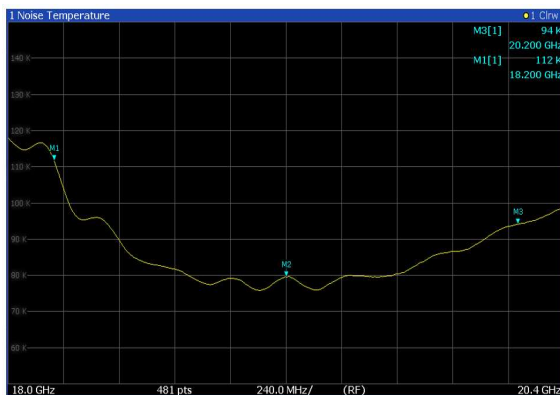
### Overview

The Model ALNA-Ka™ Ka-band LNA from Advantech Wireless Technologies is a low noise, high dynamic-range amplifier designed to receive Ka-band satellite signals in the frequency range of 18.2 – 20.2GHz or 20.2-21.2 GHz., where ultra-low noise, high reliability and high RF-performance are required.

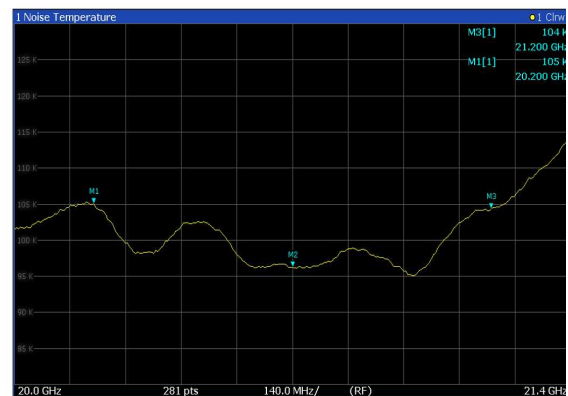
Available with Noise temperatures ranging from 100K to 120K, the ALNA delivers high linearity and wide-band performance packaged in a weather-proof housing that can withstand installations in severe environmental conditions.

### Features

- Ka-Band (18.2 – 20.2GHz or 20.2-21.2 GHz)
- HJ FET Technology
- Over 200,000 Hours MTBF
- Built-in Regulator 11-15V DC (11-24V DC option)
- Single or redundant configurations (with optional redundancy kit)
- W/G Input with pressurization port
- Operates in extreme ambient temperatures
- Input Isolator (option)
- Weatherproof housing

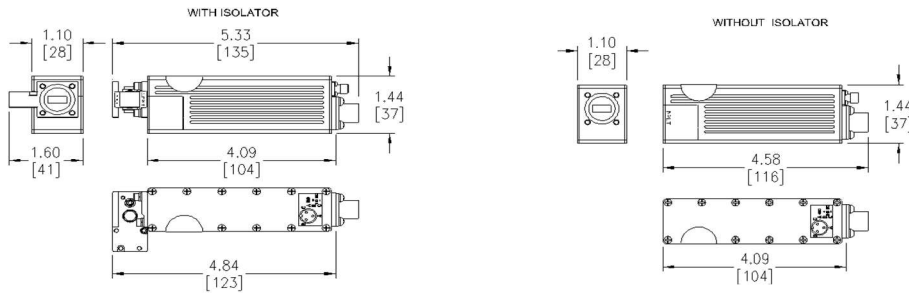


Typical Noise Temperature plot 18.2 – 20.2GHz



Typical Noise Temperature plot 20.2 – 21.2GHz

## Ka-Band Low Noise Amplifier - **NEW**



MS connector Pinout  
for 11-15VDC supply

A- VDC IN  
B- N/C  
C- GND

### Technical Specifications

Electrical Characteristics	ALNA-110Ka	ALNA-105Ka
Frequency range	18.2 -20.2GHz	20.2-21.2 GHz
Noise Temperature @ 23°C (With Input Isolator)	110K	105K
Gain	50 dB Typ.	50 dB Typ.
Gain flatness	2.5 dB p-p full bandwidth 0.6 dB p-p / 120 MHz	2.0 dB p-p full bandwidth 0.6 dB p-p /120 MHz
Gain slope	0.01dB/MHz max	0.01dB/MHz max
Gain variation over operating temperature range	3 dB p.p. max	
Gain stability @ constant ambient temperature	± 0.1dB / hour ± 0.2dB / 24 hours	
Output power at 1dB of compression	+15 dBm min.	
Output IP3	+25dBm min.	
Spurious	-60dBc max.	
Max input power without damage	0 dBm	
Input VSWR	2.5:1 Typical (1.25:1 with Input Isolator)	
Output VSWR	1.5:1	
Operating voltage	11-15V DC (11-24V DC option)	
Current consumption	220 - 250 mA	

### Mechanical Characteristics

Dimensions (L x W x H)	4.58" x 1.44" x 1.1" (116 x 37 x 28 mm) without Input Isolator 5.33" x 1.44" x 1.6" (135 x 37 x 41 mm) with Input Isolator
Weight	0.5 lb (240 gr)
Input waveguide flange	WR42 (UBR-220) Groove mounting holes M3x0.5 thru isolator flange
Output connector	SMA (F)
Power connector	MS3112E8-3P (The mating connector: MS3116F8-3S)

### Environmental Conditions

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

Ref.: PB-ALNA-Ka-24050

#### NORTH AMERICA

**USA**  
info.usa@advantechwireless.com

**CANADA**  
Info.canada@advantechwireless.com

#### EUROPE

**UNITED KINGDOM**  
info.uk@advantechwireless.com

#### SOUTH AMERICA

info.latam@advantechwireless.com

**BRAZIL**  
info.brazil@advantechwireless.com

#### ASIA

info.asia@advantechwireless.com

**INDIA**  
info.india@advantechwireless.com