

# S-Band LNA 45° to 70° K

ALNA-S series







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1.062

## Features

- S-Band frequency from 2.025 to 2.400 GHz (see table on the next page)
- GaAs/HEMT Technology
- Over 200,000 Hours MTBF
- Built-in Regulator 11-24 VDC operation
- Built-in Interstage Transmit Reject Filter
- Built-in Alarm Circuit
- Single or redundant operation
- Power supply via RF connector or Power Connector
- Extreme operating temperature
- Weatherproof housing
- Three year warranty

### **Overview**

The Advantech Wireless Low Noise Amplifier (LNA) ALNA- $S^{TM}$  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 LNA's in C, X Ku and Ka bands.

The S-band LNA is available with Noise Temperature ranging from 50° 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.

### **Options**

• Input Isolator

## Accesories

• External Transmit Reject Filter



S-Band LNA 45° to 70° K

| Technical Specifications   |  |                 |                 |
|----------------------------|--|-----------------|-----------------|
| Electrical Characteristics |  |                 |                 |
| Frequency range            | Band 1   | 2025 - 2120 MHz | Model # ALNA-S1 |
|                            | Band 2   | 2100 - 2250 MHz | Model # ALNA-S2 |
|                            | Band 3   | 2200 - 2400 MHz | Model # ALNA-S3 |
|                            | Band 4   | 2200 - 2300 MHz | Model # ALNA-S4 |
| Noise Temperature @ 23°    | 45°K to 70°K   |                 |                 |
| Gain                       | 50 dB min  |                 |                 |
| Gain flatness              | ±0.5 dB .over full band                                      |                 |                 |
| Gain slope                 | ±0.25 dB per 10 MHz  |                 |                 |
| Gain variation             | 2 dB p.p. max over operating temperature range or 0.04 dB/°C |                 |                 |
| Gain stability             | 0.25dB / 24 hours@ constant ambient temperature              |                 |                 |
| Output power (P1dB)        | +10 dBm min  |                 |                 |
| Spurious                   | -65 dBc max  |                 |                 |
| Input VSWR                 | 1.25:1 max   |                 |                 |
| Output VSWR                | 1.30:1 max   |                 |                 |
| Operating voltage          | 15 VDC nominal (11 - 24 VDC option)                          |                 |                 |
| Current consumption        | 120 - 150 mA   |                 |                 |
| Mechanical Characteristics |  |                 |                 |
| Dimensions (L x W x H)     | 6" x 2.5" x 1" (150 x 63 x 25 mm)                            |                 |                 |
| Weight                     | 0.8 lb (350 g)   |                 |                 |
| Input connector            | SMA Female (or TBD)  |                 |                 |
| Output connector           | SMA Female (or TBD)  |                 |                 |
| 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-S1
- ALNA-S2
- ALNA-S3
- ALNA-S4

Then add suffix:

- 45 for 45°K
- 50 for 50°K
- 60 for 60°K
- 70 for 70°K

Ref.: PB-ALNA-S-45-70-18318

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