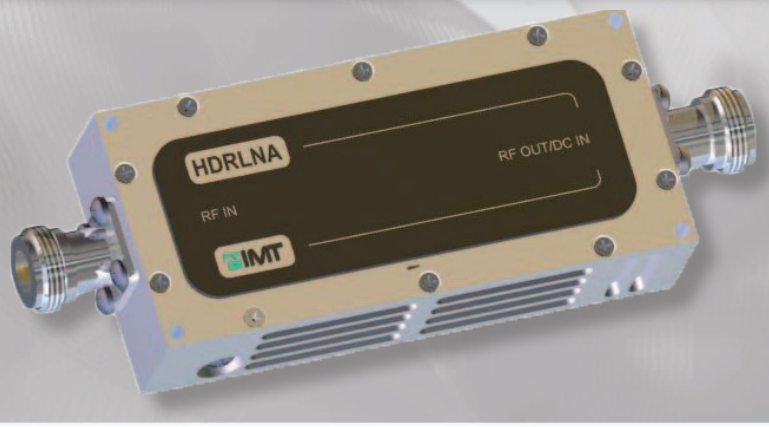
HDRLNA

High Dynamic Range Low Noise Amplifier



Features

- High dynamic range
- Internal bias-T for remote powering
- Internal band filtering to eliminate unwanted signals
- Power indicator
- Weatherized enclosure

Accessories

- External PSU to power LNA
- Pole mounting kit

Applications

- Civil, UAS, 3D, Robotic, and ISR systems

The High Dynamic Range Low Noise Amplifier is a ruggedized self contained low noise amplifier. The LNA is a 24 dB gain HDRLNA with internal band filtering. It has an extremely low noise figure enabling users to integrate the LNA into their system without degradation to the receive signal.

The HDRLNA is ideal to use at the front end of any receiver to extend the range of the system or overcome cable loss due to long cable runs to receive antenna systems. The HDRLNA can be ordered to suit any frequency need the customer might have.

The HDRLNA's internal bias tee, wide DC input voltage, range and low current draw make the unit easy to insert into any receiver system. It has a weatherized light weight chassis which enables the unit to be placed indoor or outdoor.

The LNA uses standard N-type connectors, and requires no special adaptors.

HDRLNA

High Dynamic Range LNA

RF:

Base Model Number	Frequency (GHz)	DC Power (W)
22HDRLNA	2.000 - 2.500	3.7
23HDRLNA	2.200 - 2.400	3.7
47HDRLNA	4.400 - 5.000	5.6

Gain:
G24: 24dB
Frequency Response: ±.1dB/MHz across band
Noise Figure:
1.5 – 3.0 GHz Bands: <2.30dB
3.0 – 7.1 GHz Bands: <3.50dB
P1db Output: minimum +17dBm
IP3 Output: minimum +25dBm
Input Impedance: 50Ω
Output Impedance: 50Ω
VSWR: <1.5:1

Power Requirements:

Input Range: DC: +9 to +30 DVC
Power Consumption: See table

Environmental:

Temperature Range:
Full Specification: -15° to +65°C base plate
Storage: -40° to +80°C
Humidity: 0 to 95% non-condensing
Altitude:
Operating: 20,000 ft (6,000 m)
Storage: 50,000 ft (15,000 m)

Physical Characteristics:

Size: .850 H" x 1.875" W x 4.125" D
2.159 x 4.7625 x 10.4775 cm
Weight: Contact Factory

Connectors:

Input: "N" Female
Output: "N" Female

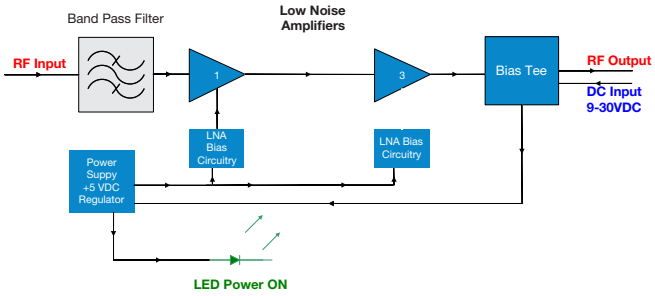


Figure 1: HDRLNA Block Diagram

Ordering Information:

Base Model Number	Frequency (GHz)
22HDRLNA	2.000 - 2.500
23HDRLNA	2.200 - 2.400
47HDRLNA	4.400 - 5.000

Option Code:

Gain Option	Gain	G24	24 dB

Create part number by concatenating options. (Example: 23HDRLNA-G28)

Accessory Codes:

Category	Accessory Ordering Code	Description
Inserter	HDRLNA-ACC-I	Bias-T
Pwr Supply	HDRLNA-ACC-S	24VDCWeather Proof PS
Mounting	HDRLNA-ACC-M	Pole Mounting Kit
Documents	HDRLNA-ACC-MAN	HDRLNA Documentation

IMT reserves the right to make changes to specifications of products described in this datasheet at any time without notice and without obligation to notify. Versions of this device may not have been approved by the Federal Communications Commission. These versions are not offered for sale or lease until approval of the FCC has been obtained. 402M_06_12

Integrated Microwave Technologies, LLC
200 International Drive, Mt. Olive, NJ 07828 USA
T. +1.908.852.3700 F. +1.908.813.0399 www.imt-government.com