

## **Ordering Information**

SKU	Description	UPC
100812	LNA Module	0616469146564

## **Description**

Nooelec LaNA is a very high performance, wideband LNA module designed for general purpose SDR applications.



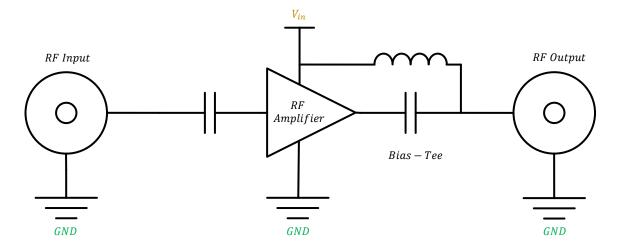
### **Features**

- High linearity
- +20dB of RF gain at 1000MHz
- 0.9dB noise figure at 1000MHz
- 50Ω low noise gain block
- +3.3V-5V single supply
- 85mA Current Draw

## **Applications**

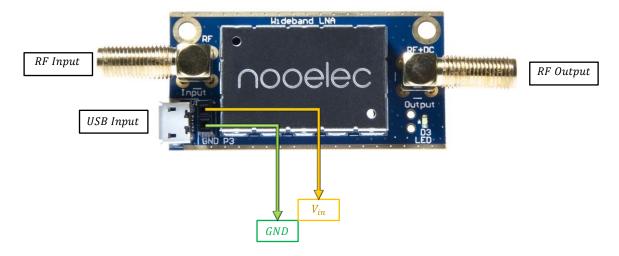
- General purpose amplification
- Software defined radio
- Wideband reception
- Noise-sensitive applications

# **Simplified Schematic**





# **Pin Configuration and Functions**



Pin	Function	Туре	Description
$V_{in}$	Voltage Input	Input	Volts input pin to power the device*
GND	Common Ground	-	RF and DC reference voltage

<sup>\*</sup> LaNA allows for 3 different power options (USB, bias tee, and pin header). Only 1 power option should be used at any given time

# **Recommended Operating Conditions**

Parameter	Symbol	Min	Typical	Max	Unit
Input Voltage	$V_{in}$	3.3	5	5.5	Volts
Input Power	$P_{in}$	-	-	0	dBm

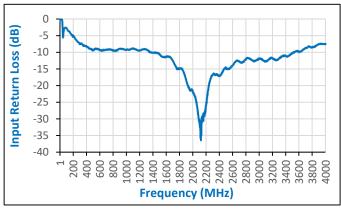


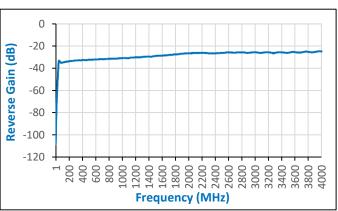
# **Electrical Specifications**

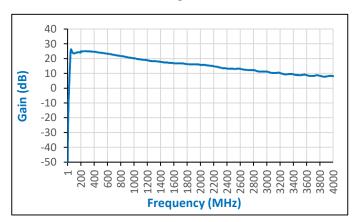
Test Conditions unless otherwise specified: Vin = +5 Vdc, 50 Ohm system.

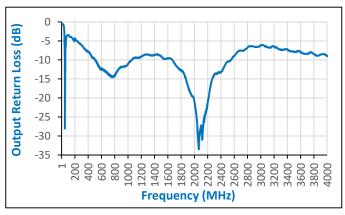
Parameter	Symbol	Min	Typical	Max	Unit
Frequency Range	$f_L - f_H$	20	-	4000	MHz
Center Frequency	$f_o$	-	1990	-	MHz
Gain	S21	ı	-	26	dB
Input Return Loss @ 1GHz	S11	-11	-10	ı	dB
Output Return Loss @ 1GHz	S22	-12	-11	-	dB
Output PldB	OP1dB	13	18	20	dBm
Total Noise Figure @ 1 GHz	NF	0.8	0.9	1	dB
Noise Temperature	$T_n$	59	67	75	K
Supply Current	$I_{supply}$	70	85	100	mA

# **Electrical Characteristics Plots (1 MHz to 4000 MHz)**



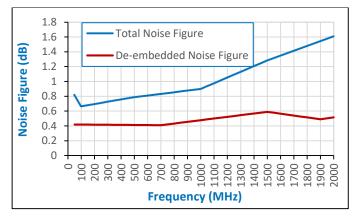


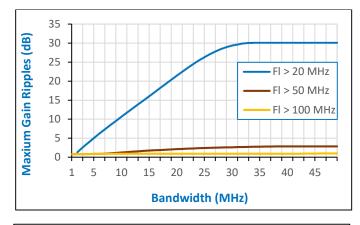


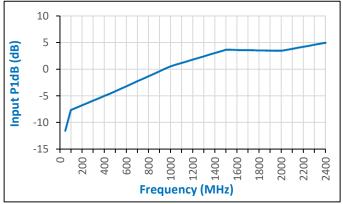


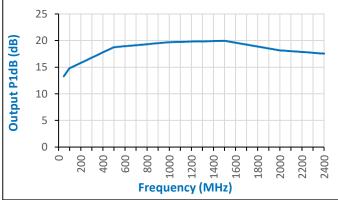


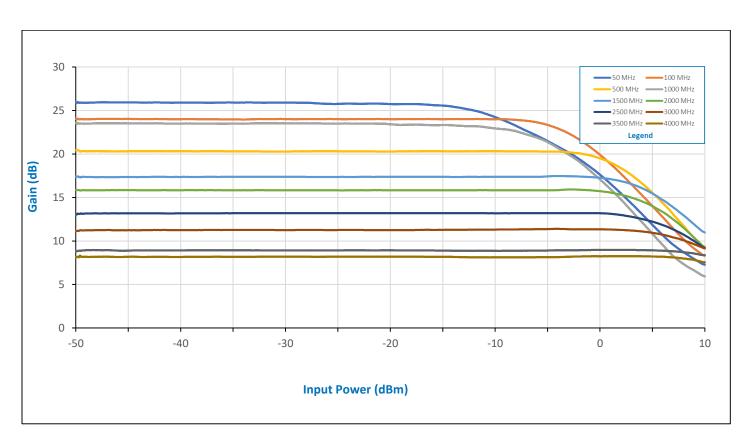
# Wideband Low Noise Amplifier (LNA)













# **Physical Specifications**

The physical specifications were measured with the device in an enclosure.

Parameter	Value	Unit
Length	80 (3.15)	Millimeter (Inch)
Width	30 (1.18)	Millimeter (Inch)
Height	20 (0.79)	Millimeter (Inch)
Weight	52 (0.11)	Gram (Pound)

## **Accessories**



SMA Cable Connectivity Kit	NESDR SMArTee XTR SDR	SMA Attenuator Kit
<b>SKU</b> : 100770	<b>SKU</b> : 100726	<b>SKU</b> : 100815