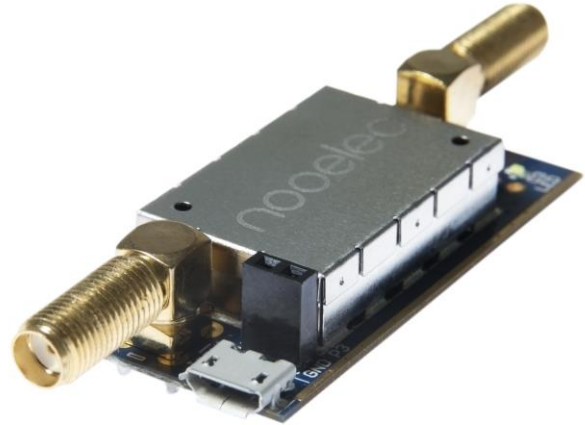


Ordering Information

SKU	Description	UPC
100802	LNA Module - Barebones	0616469146489
100812	LNA Module - with enclosure	0616469146564

Description

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



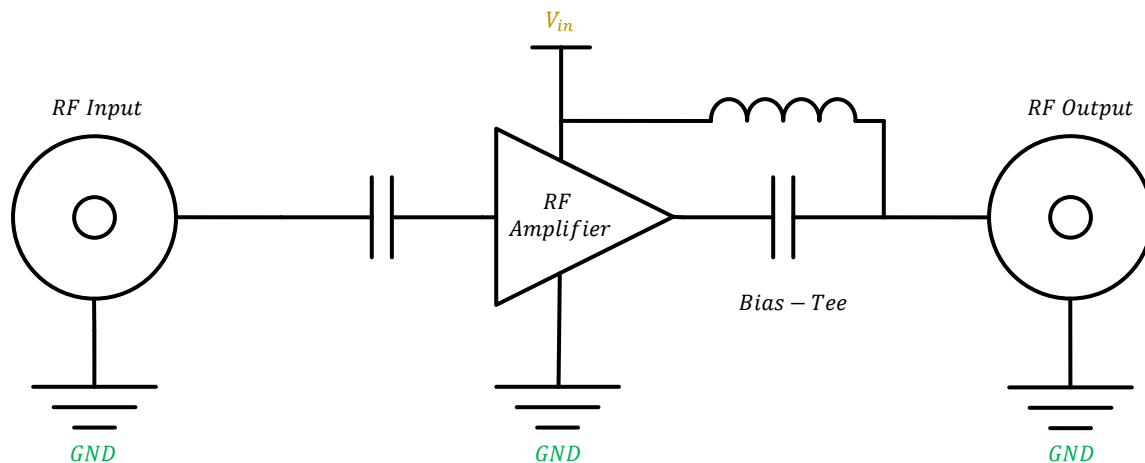
Features

- 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

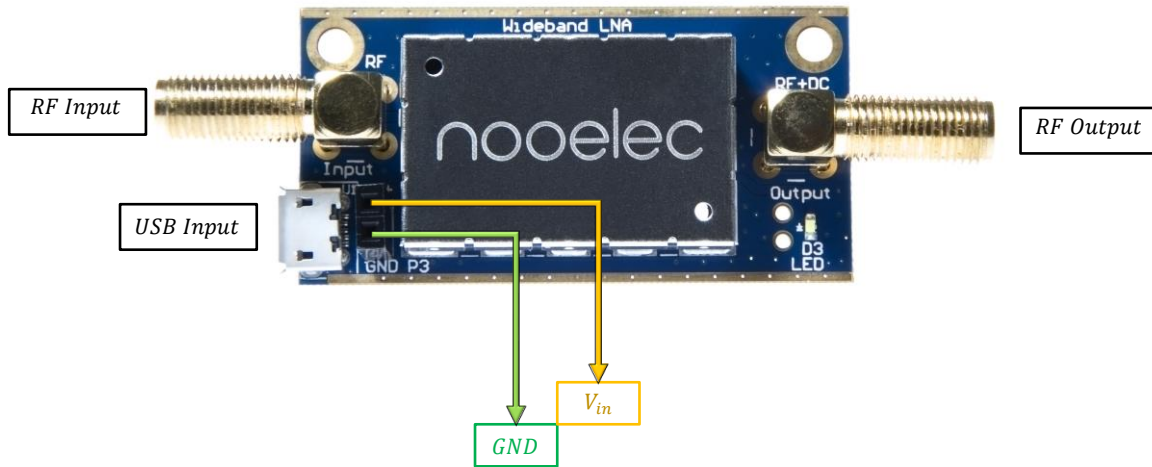
Applications

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

Simplified Schematic



Pin Configuration and Functions



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

* 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

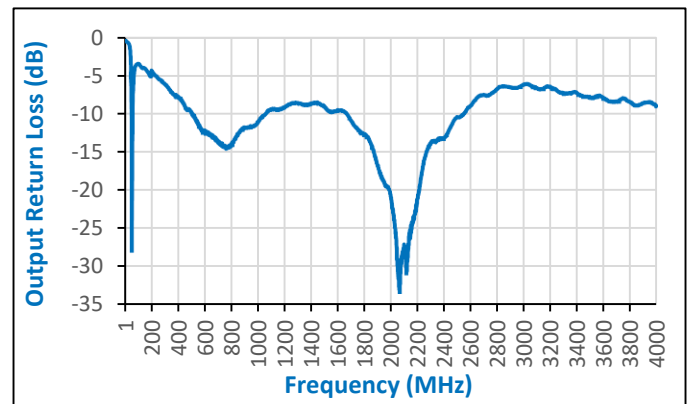
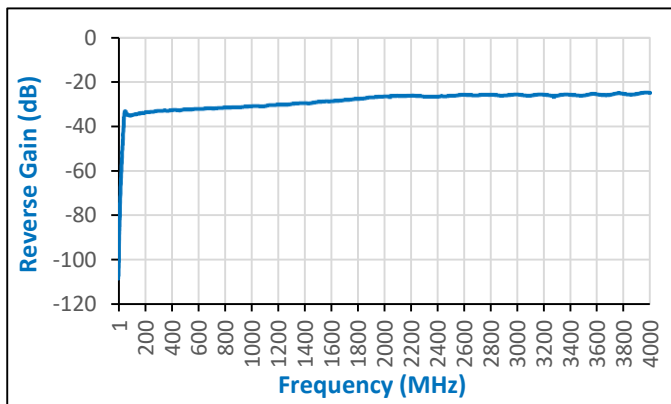
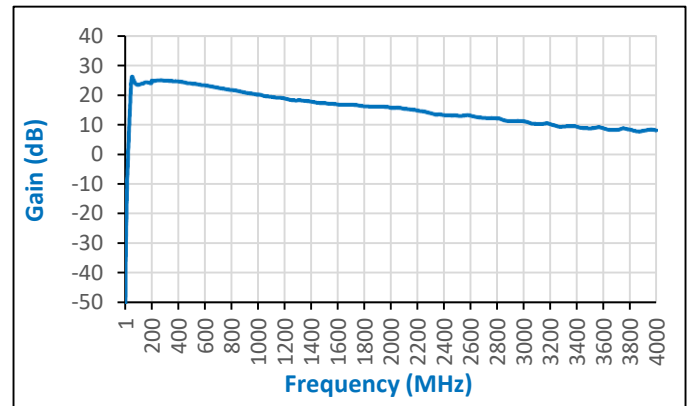
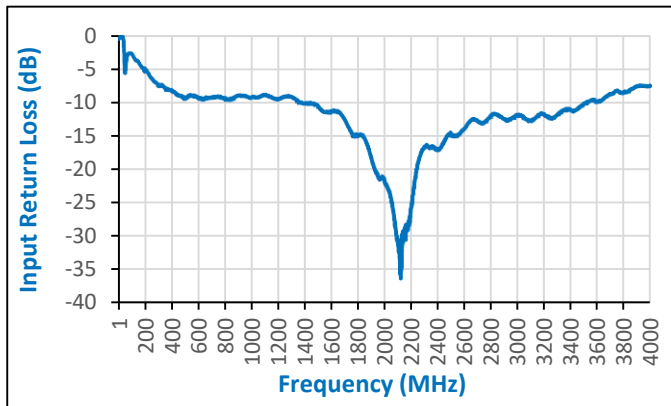
Parameter	Symbol	Min	Typical	Max	Unit
Input Voltage	V_{in}	3.3	5	5.5	Volts
Input Power	P_{in}	-	-	0	dBm

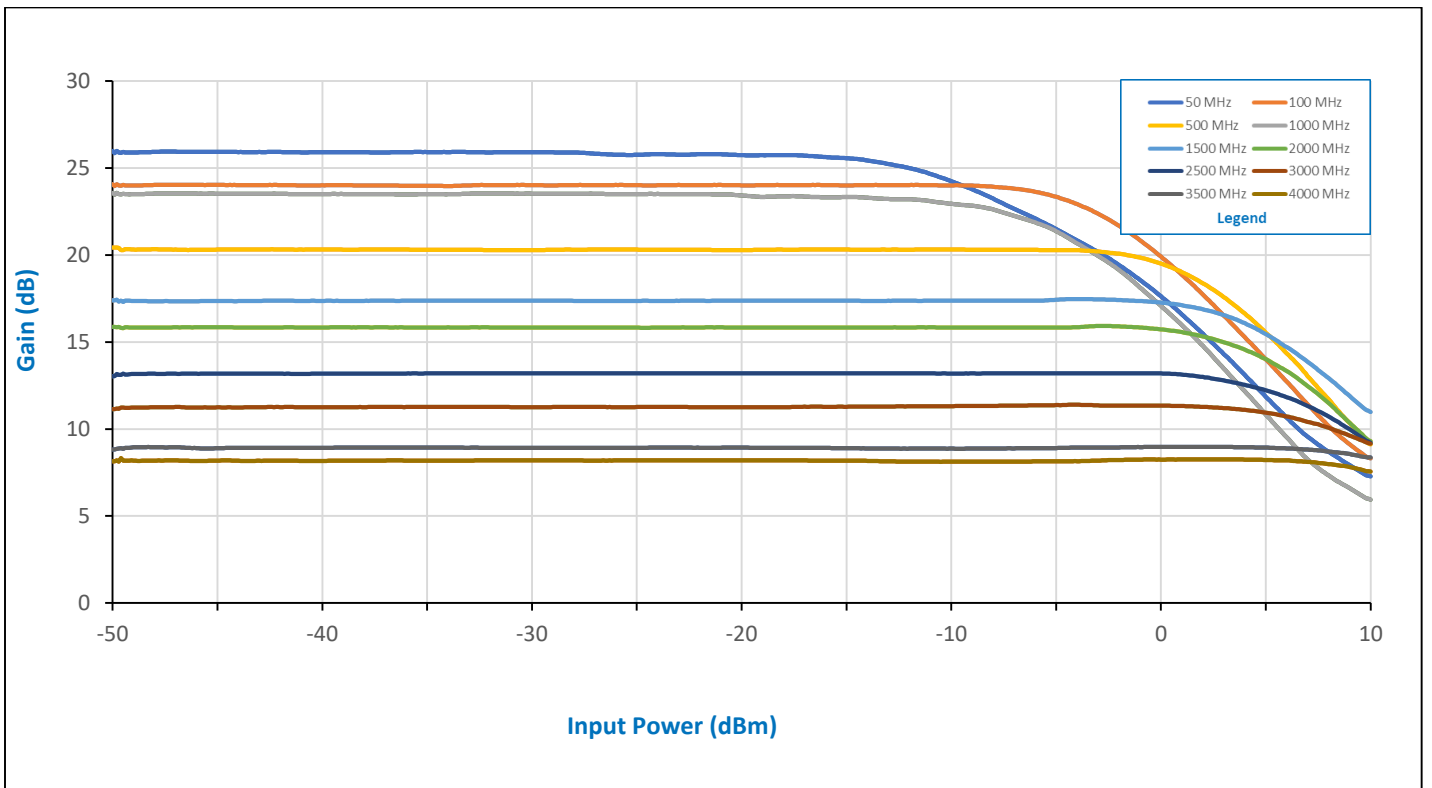
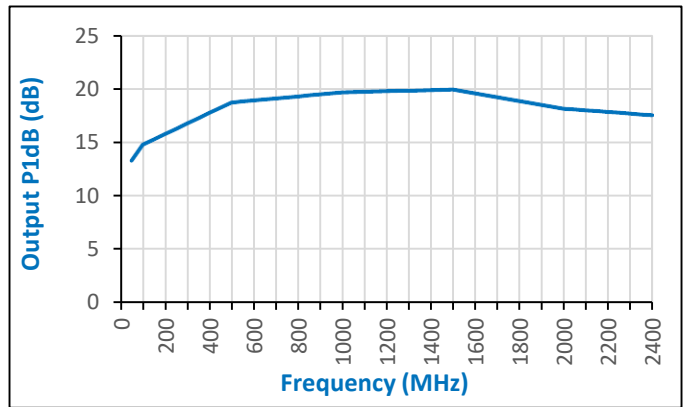
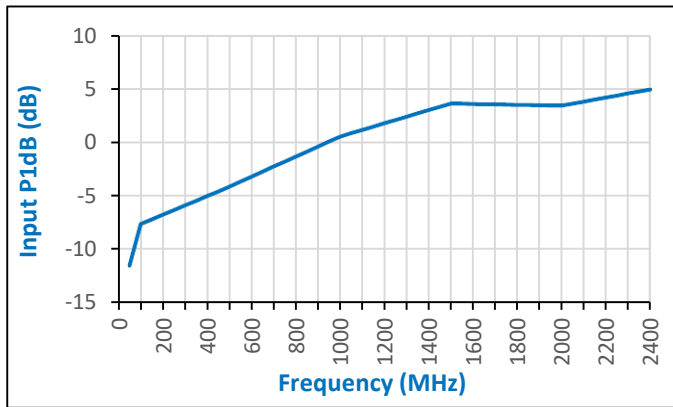
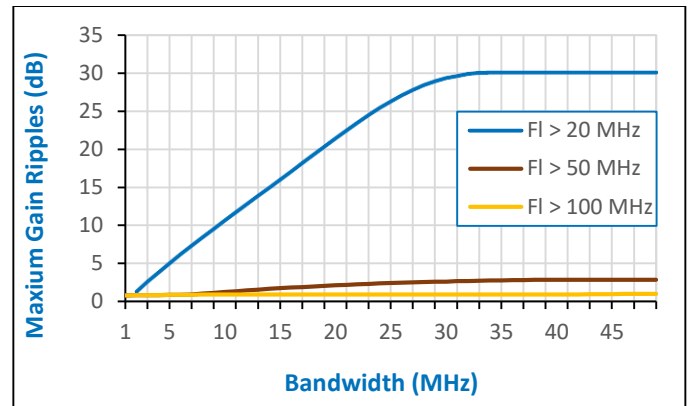
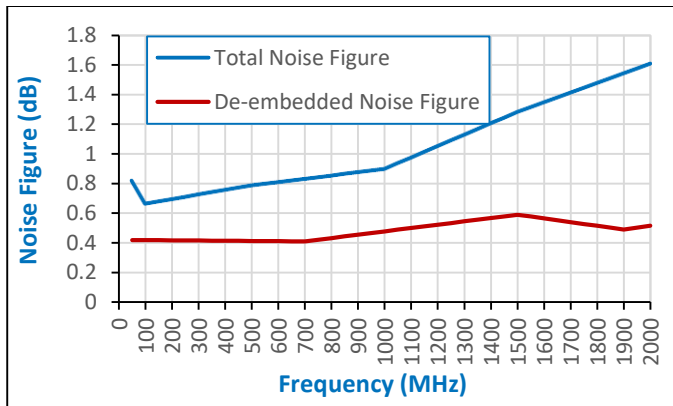
Electrical Specifications

Test Conditions unless otherwise specified: $V_{in} = +5$ 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	-	-	26	dB
Input Return Loss @ 1GHz	S11	-11	-10	-	dB
Output Return Loss @ 1GHz	S22	-12	-11	-	dB
Output P1dB	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)





Physical Specifications

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

Parameter	Value	Unit
Length	75 (2.95)	Millimeter (Inch)
Width	25 (0.98)	Millimeter (Inch)
Height	15 (0.59)	Millimeter (Inch)
Weight	14 (0.03)	Gram (Pound)

Accessories



SMA Cable Connectivity Kit	NESDR SMARtee XTR SDR	SMA Attenuator Kit
SKU: 100770	SKU: 100726	SKU: 100815