

Ordering Information

SKU	Description	UPC
100845	LNA Module	628693723046

Description

Nooelec LaNA WB is a very high performance, wideband LNA module meticulously engineered for versatile software-defined radio applications.



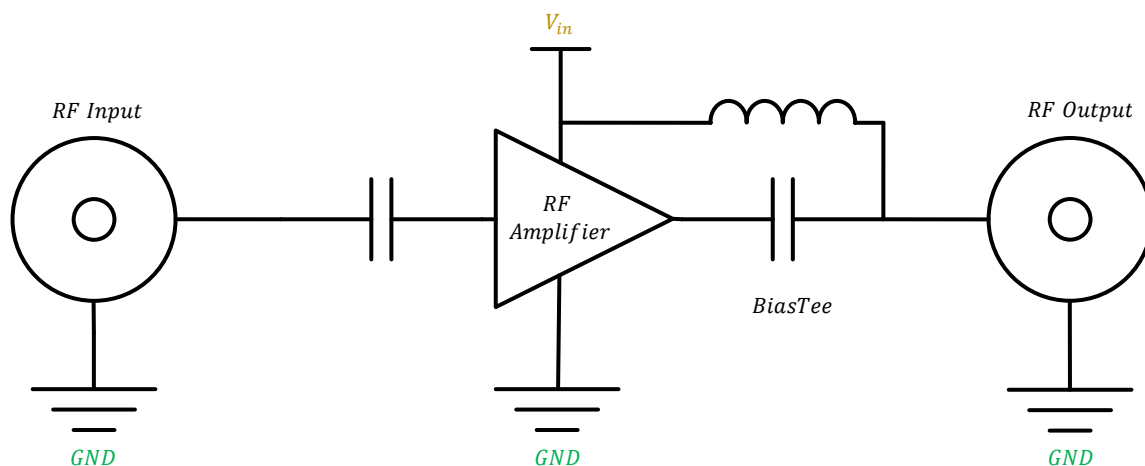
Features

- High linearity
- +19dB of RF gain at 1000MHz
- 1.5dB noise figure at 1000MHz
- 50Ω low noise gain block
- +3.3V-5V single supply
- 55mA nominal Current Draw

Applications

- General purpose amplification
- Software defined radio
- Wideband reception
- Noise-sensitive applications
- Test and measurement
- Radar systems

Simplified Schematic



Pin Configuration and Functions



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

* LaNA WB allows for 3 different power options (USB, BiasTee, and pin header). Only 1 power option should be used at any given time

Recommended Operating Conditions

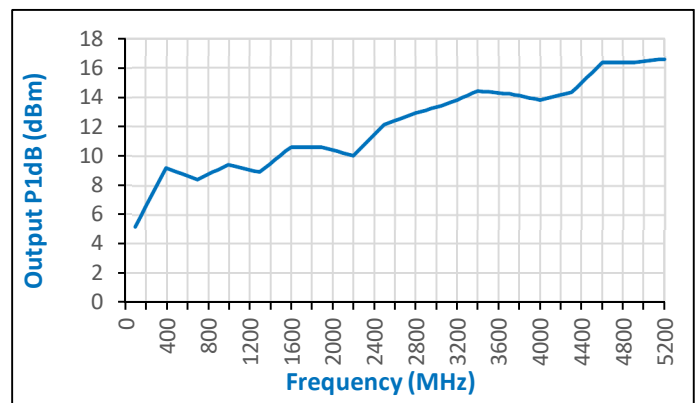
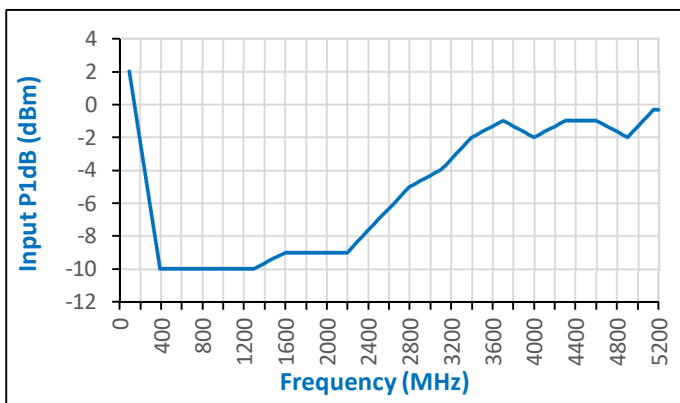
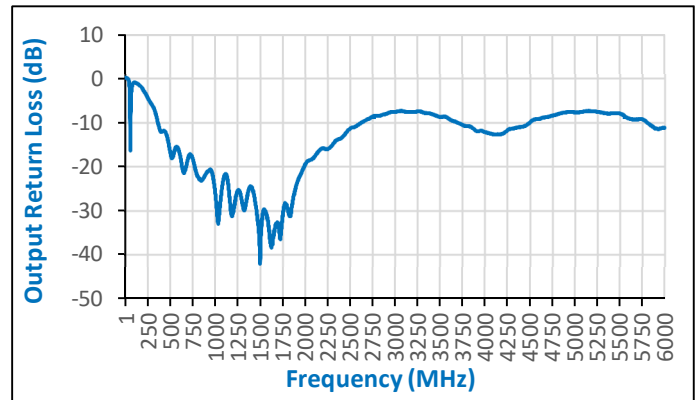
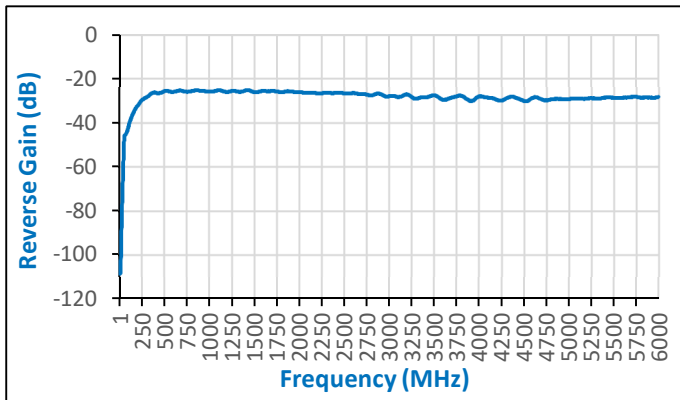
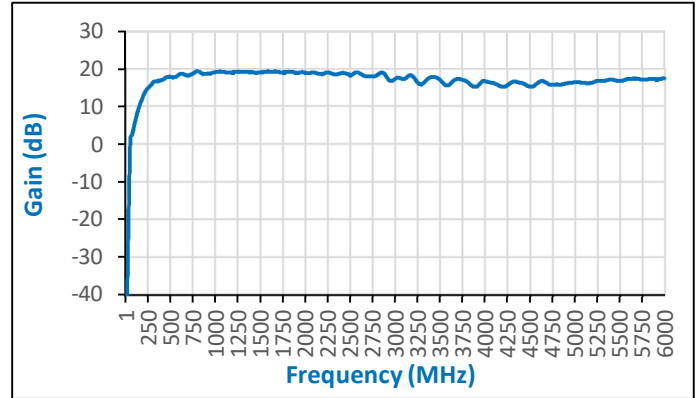
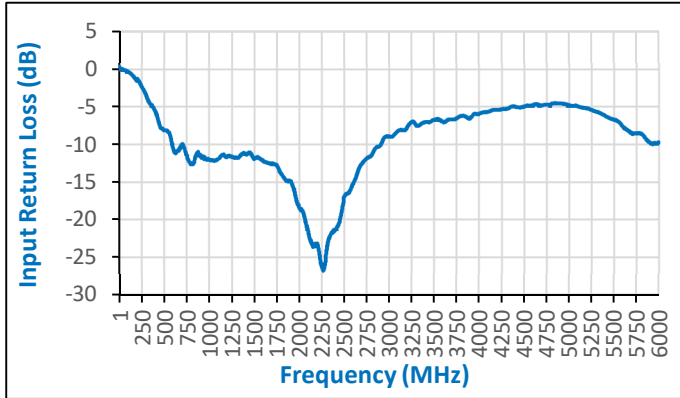
Parameter	Symbol	Min	Typical	Max	Unit
Input Voltage	V_{in}	3.3	5	5.5	Volts
Input Power	P_{in}	-	-	0	dBm

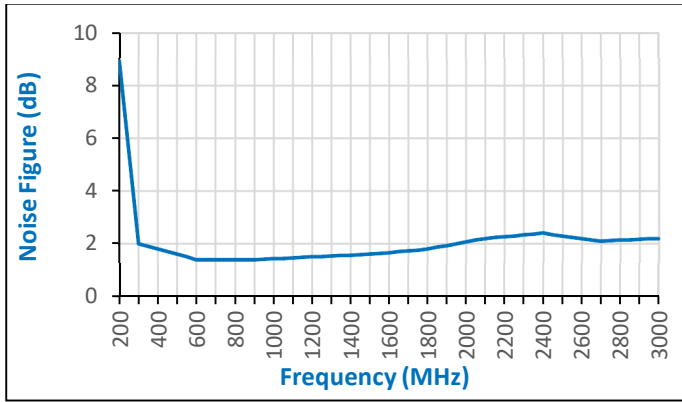
Electrical Specifications

Test Conditions unless otherwise specified: $V_{in} = +5$ Vdc, 50 Ohm system.

Parameter	Symbol	Min	Typical	Max	Unit
Frequency Range	$f_L - f_H$	300	-	8000	MHz
Center Frequency	f_o	-	4150	-	MHz
Gain	S21	-	18	19	dB
Input Return Loss	S11	-26	-12	-	dB
Output Return Loss	S22	-41	-12	-	dB
Output P1dB	OP1dB	5	12	17	dBm
Total Noise Figure	NF	1.4	1.6	2.4	dB
Noise Temperature	T_n	110	149	214	K
Supply Current	I_{supply}	35	50	65	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	60 (2.36)	Millimeter (Inch)
Width	38 (1.50)	Millimeter (Inch)
Height	25 (0.98)	Millimeter (Inch)
Weight	38 (0.08)	Gram (Pound)

Accessories



Ham It Down 3GHz Downconverter	NESDR SMARtee SDR	SMA Attenuator Kit
SKU: 100846	SKU: 100777	SKU: 100815