

Ordering Information

SKU	Description	UPC
100825	HF Upconverter	0616469146663

Description

A lightweight RF (MF, HF) converter for software defined radio devices like our NESDR series and the HackRF. Also works as a panadapter for most radios! It will function in both transmit and receive modes if available on your SDR.



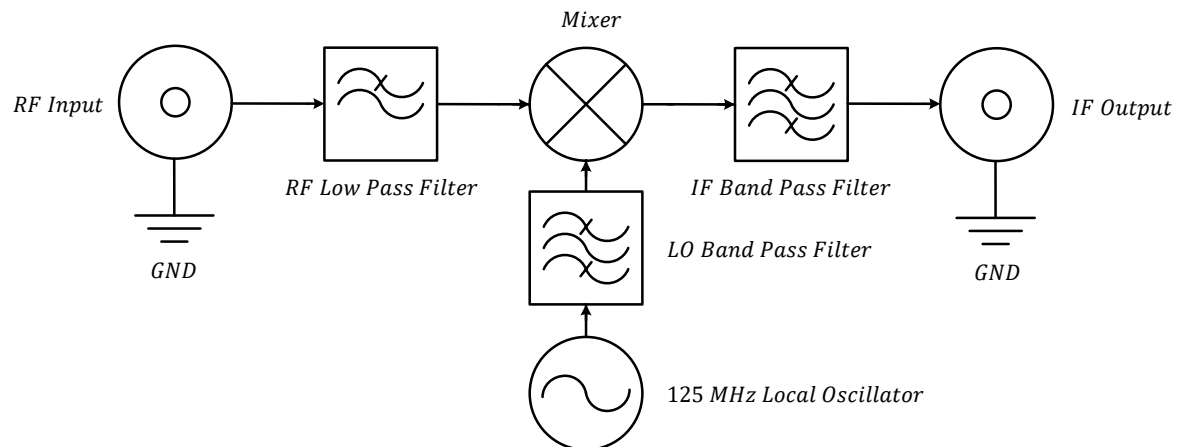
Features

- 50Ω RF mixer block
- +4V-5.5V single supply
- 65mA Current Draw
- Internal RF, IF and LO filters
- 125MHz LO frequency
- Lightweight and portable
- Supports Bias-Tee

Applications

- Software defined radio
- LF, MF and HF reception
- Upconversion and frequency mixing

Simplified Schematic



Pin Configuration and Functions



* The Ham It Up Nano allows for 3 different power options (USB, Pin Header and Bias-Tee). At any given time not more than one option should be used.

Recommended Operating Conditions

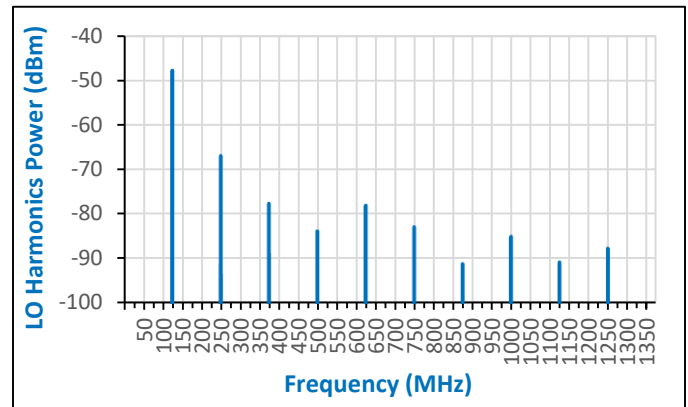
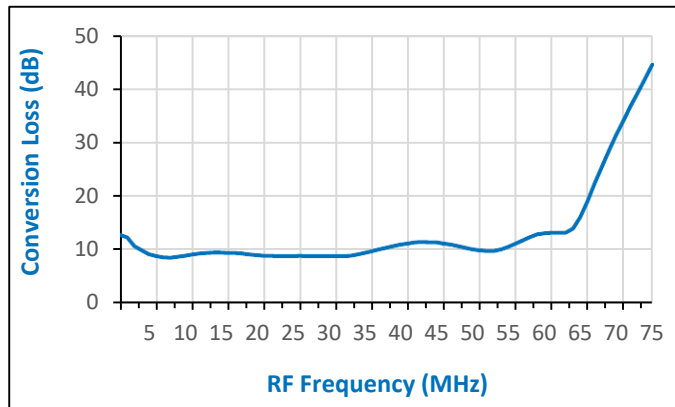
Parameter	Symbol	Min	Typical	Max	Unit
Input Voltage	V_{in}	4.0	5.0	5.5	Volts
Input Power	P_{in}	-	-	1	dBm

Electrical Specifications

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

Parameter	Symbol	Min	Typical	Max	Unit
Frequency Range	$f_L - f_H$	0.1	-	65	MHz
Conversion Loss	CL	8.5	10	15	dB
LO Power	P_{LO}	-48	-45	-43	dBm
LO Frequency	f_{LO}	124.9998	125.0000	125.0001	MHz
LO Stability	-	-	1	-	PPM
Input Return Loss	S11	-	-	-10	dB
Output Return Loss	S22	-	-	-10	dB
Supply Current in	I_{supply}	60	65	70	mA

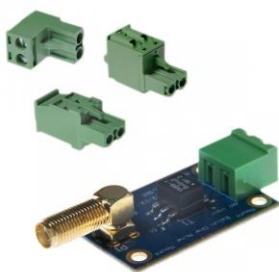
Upconvert: Electrical Characteristics Plots



Physical Specifications

Parameter	Value	Unit
Length	80 (3.15)	Millimeter (Inch)
Width	30 (1.18)	Millimeter (Inch)
Height	20 (0.79)	Millimeter (Inch)
Weight	45 (0.10)	Gram (Pound)

Accessories



Balun One Nine v2 Barebones	NESDR SMArTee v2 SDR	Male SMA to Male SMA pigtail cable
SKU: 100814	SKU: 100777	SKU: 100570