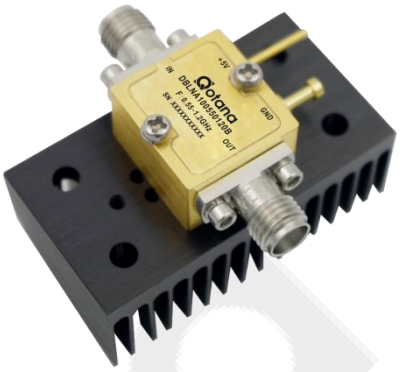
P/N: DBLNA100550120B

QOTANA TECHNOLOGIES Wide Band Low Noise Amplifier 0.55GHz~1.2GHz

Features

- Gain: 16dB Typical
- Noise Figure: 0.5dB Typical
- P1dB Output Power: +20 dB m Typical
- Supply Voltage: +3V @40mA
- +5V @ 90mA
- 50 Ohm Matched Input / Output
- Size: 0.63” x 0.59” x 0.39”



Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics

RF Microwave & VSAT
Test Instrument

Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
	+3V			+5V			
Frequency Range	0.55		1.2	0.55		1.2	GHz
Gain		15		12	16.5		dB
Gain Flatness		±3.0			±3.0	±3.5	dB
Gain Variation Over Temperature(-45 ~ +85)		±0.5			±0.5	±0.8	dB
Noise Figure		0.7			0.8	1.6	dB
Input VSWR		1.5			1.5		
Output VSWR		1.8			1.8		
Output Power for 1 dB Compression (P1dB)		16		16	20		dBm
Saturated Output Power (Psat)		17			21		dBm
Output Third Order Intercept (IP3)		29			37		dBm
Supply Current (Idd)		40			90	115	mA
Isolation S12		-20			-20		dB
Input Max Power(no damage)			+10			+10	dBm

Weight	0.71ounces	Impedance	50 ohms
Input /Output Connector	SMA-Female	Material	Aluminum
Finishing	Standard: Gold 40 micron; Nickel 220 micron thickness	Package Sealing	Epoxy Sealing (Standard)
	Option: Gold 80 micron; Nickel 180 micron thickness		Hermetically Seal (Option with extra charge)

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QOTANA TECHNOLOGIES Wide Band Low Noise Amplifier 0.55GHz~1.2GHz

Absolute Maximum Ratings

Operating Voltage	+6V
RF Input Power (Vcc= +3~5V)	+10dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +5V biasing

Power OFF Procedure

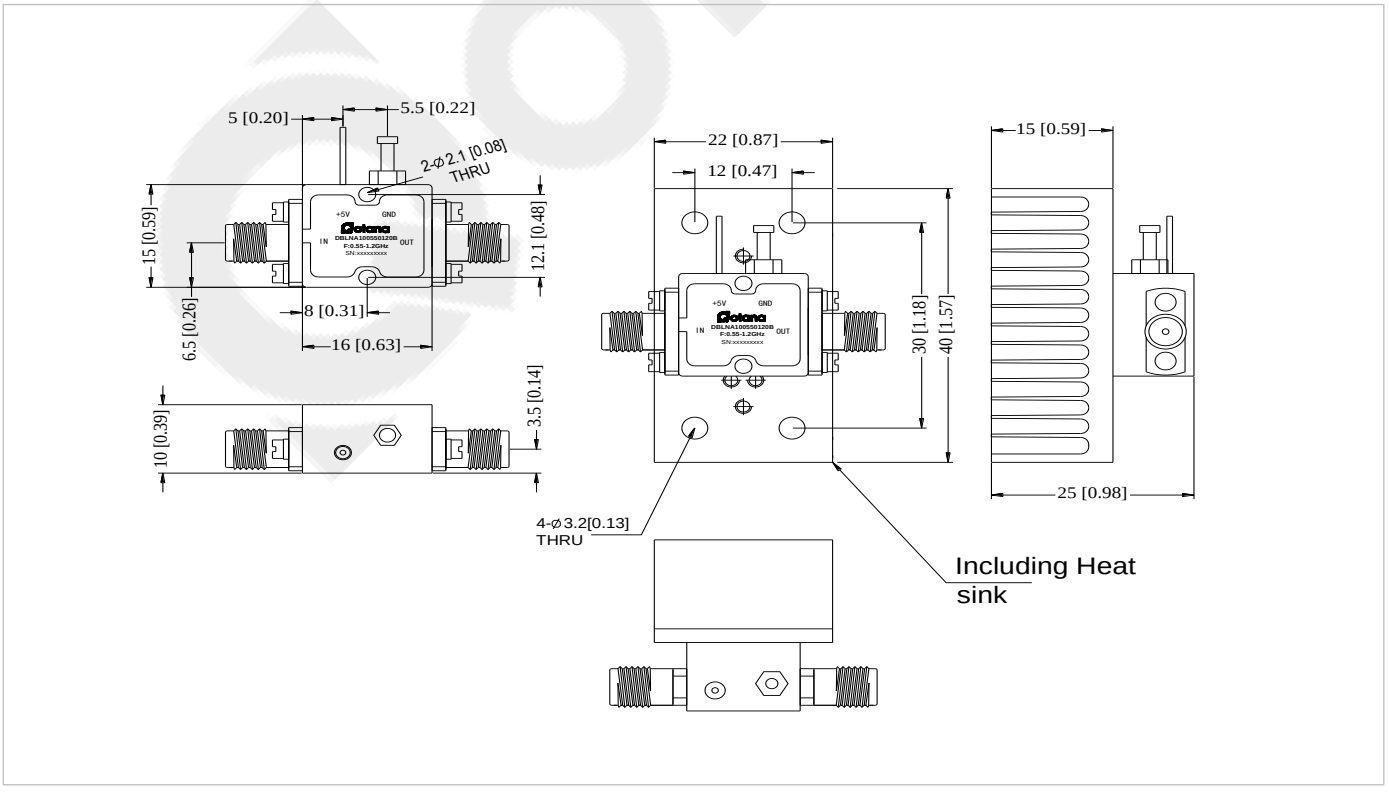
Step 1	Turn off +5V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

Environmental Specifications

Operational Temperature	-45ºC~+85ºC
Storage Temperature	-55ºC~+125ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

Outline Drawing:

All Dimensions in mm (inches) Heat Sink required during operation(Sold Seperately)

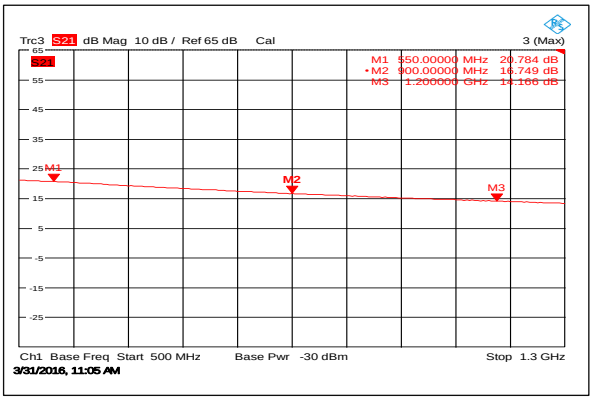


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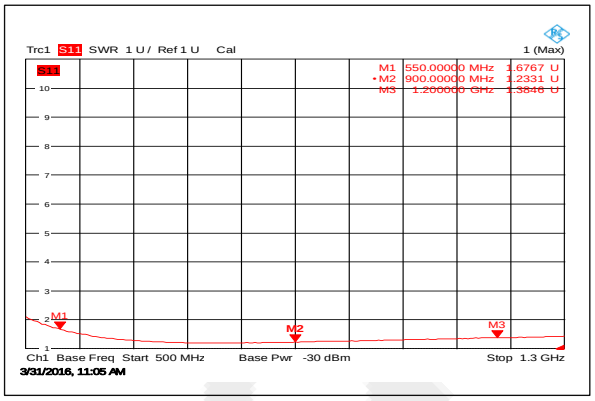
QOTANA TECHNOLOGIES

Wide Band Low Noise Amplifier 0.55GHz~1.2GHz

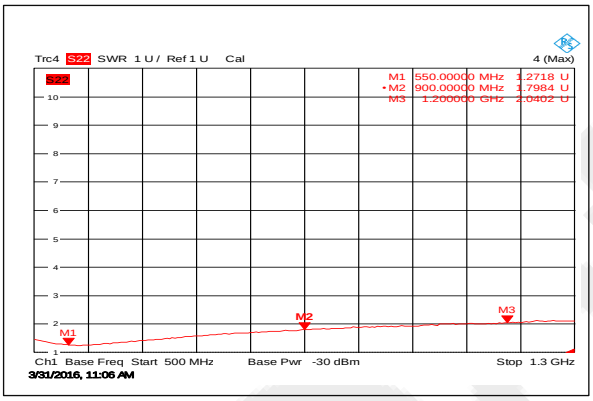
Gain



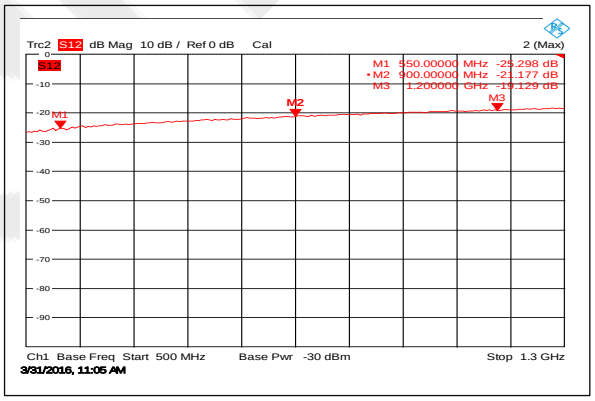
Input VSWR



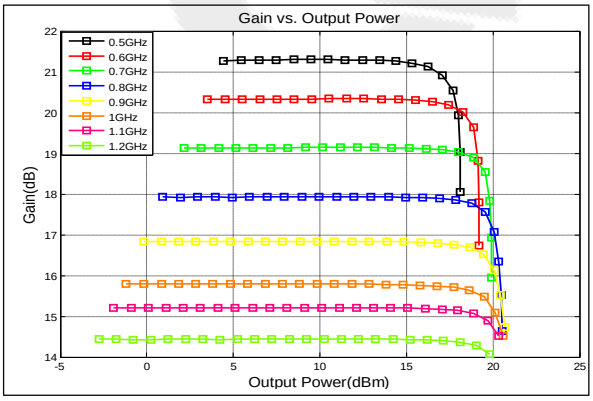
Output VSWR



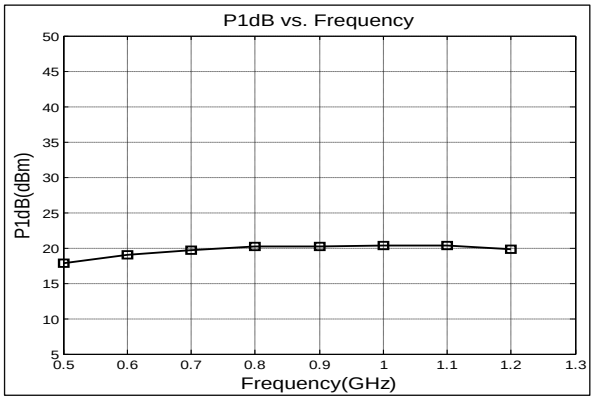
Isolation



Cain vs. output power

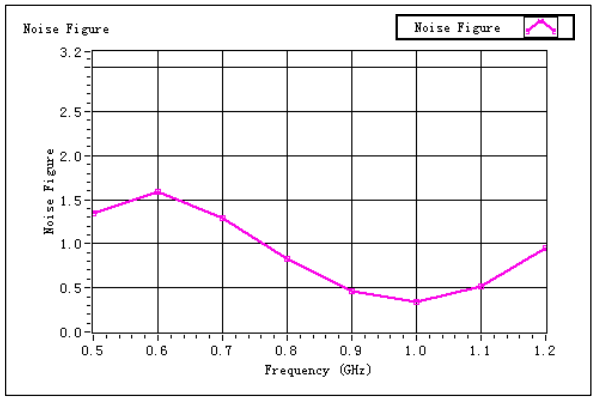


P1dB vs. Frequency

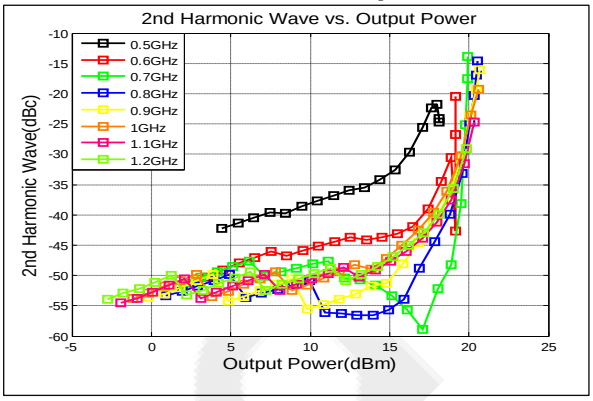


QOTANA TECHNOLOGIES Wide Band Low Noise Amplifier 0.55GHz~1.2GHz

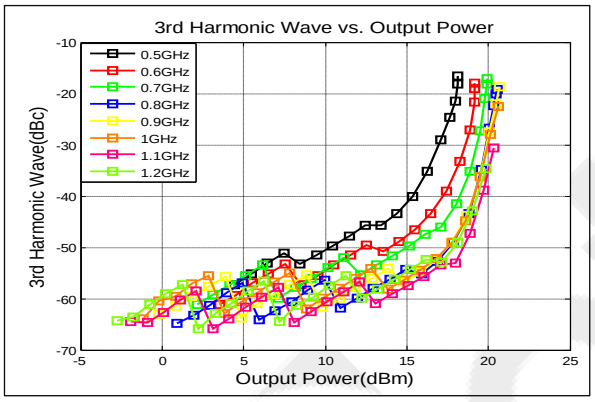
Noise Figure



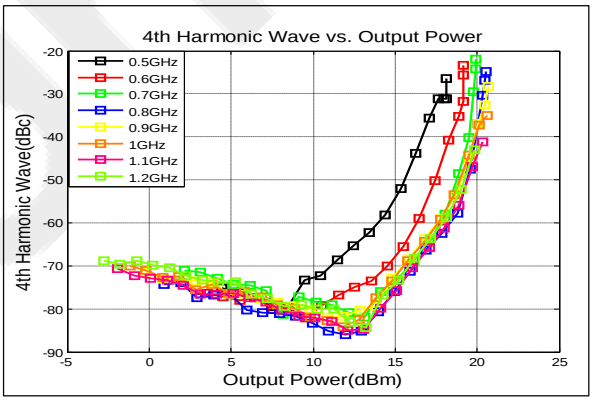
2nd Harmonic wave output Power



3rd Harmonic wave output Power



4th Harmonic wave output Power



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