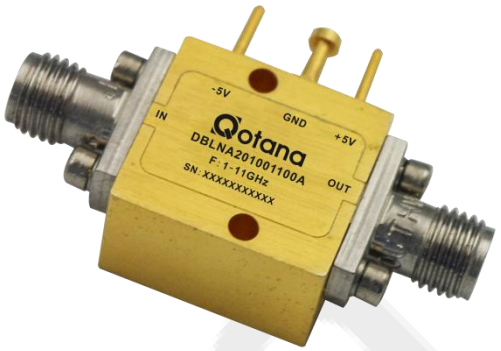
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QOTANA TECHNOLOGIES Ultra Wide Band Low Noise Amplifier 1GHz~11GHz

Features

- Gain: 17dB Typical
- Noise Figure: 1.6dB Typical
- P1dB Output Power: +18dBm Typical
- Supply Voltage: +5V @ 70mA
- 50 Ohm Matched



Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics

RF Microwave & VSAT
Test Instrument

Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	1		6	6		11	GHz
Gain	15	17		14	16		dB
Gain Flatness		±0.5	±1.0		±0.5	±1.0	dB
Gain Variation Over Temperature (-45 to +85)		±1.0			±1.0		dB
Noise Figure		1.6	2.2		2.0	2.5	dB
Input VSWR		1.5	2.0		1.6	2.0	: 1
Output VSWR		1.4	1.8		1.4	1.8	: 1
Output 1dB Compression Point (P1dB)	15	18		14	16		dBm
Saturated Output Power (Psat)		19			17.5		dBm
Output Third Order Intercept (IP3)		29			28		dBm
Supply Current (Vdd=+5V)		70	85		70	85	mA
Isolation S12		-25			-27		dB

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

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Absolute Maximum Ratings

Operating Voltage	+5.5V
RF Input Power (RFIN)	5dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect -5V biasing
Step 4	Connect +5V biasing

Power OFF Procedure

Step 1	Turn off +5V biasing
Step 2	Turn off -5V biasing
Step 3	Remove RF connection
Step 4	Remove Ground.

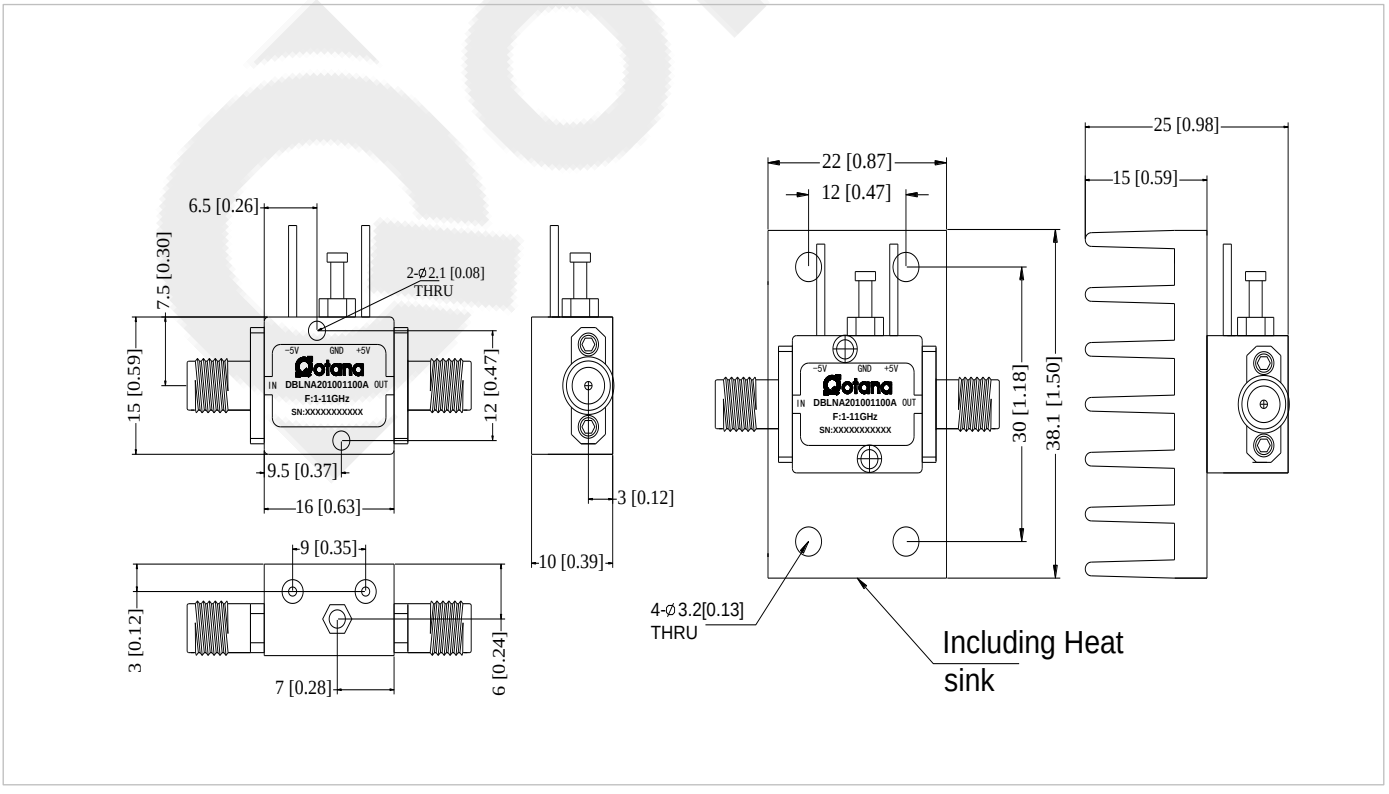
Environmental Specifications

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)

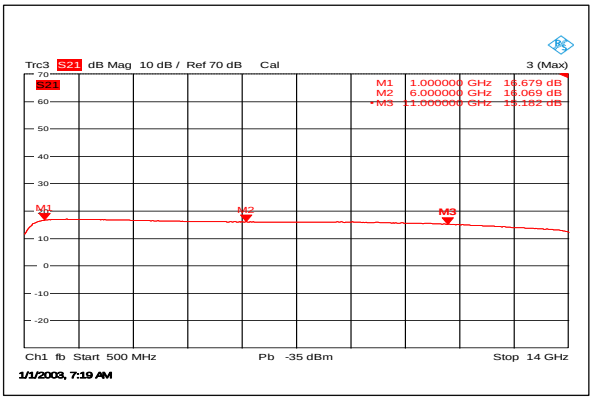
Heat Sink required during operation(Sold Seperately)



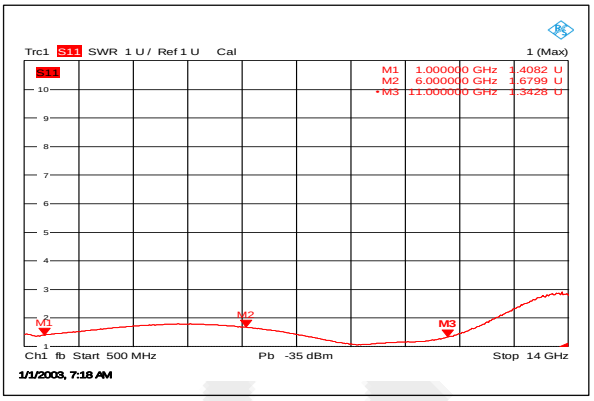
QOTANA TECHNOLOGIES

Ultra Wide Band Low Noise Amplifier 1GHz~11GHz

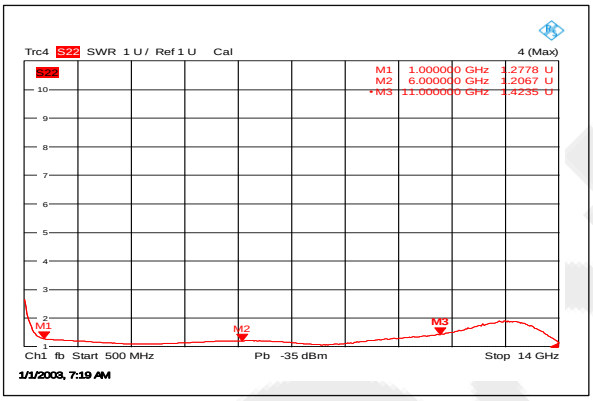
Gain



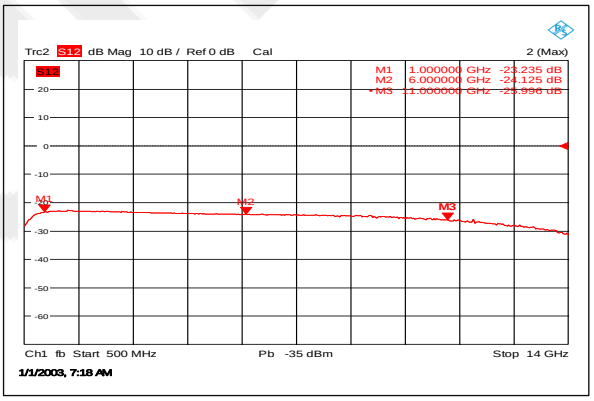
Input VSWR



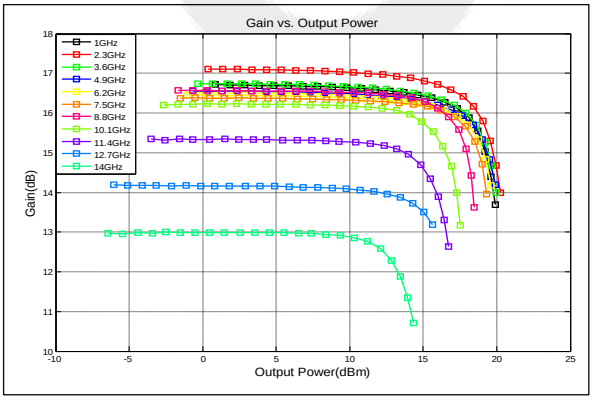
Output VSWR



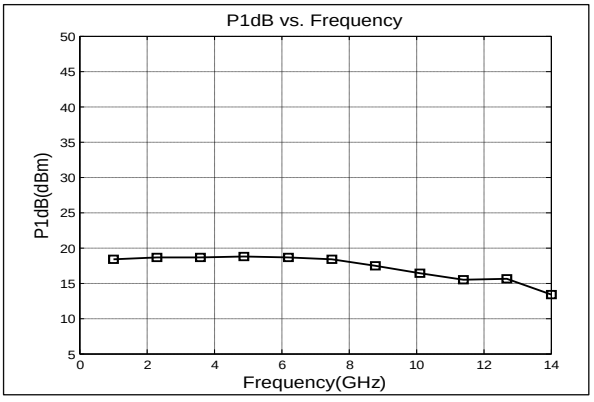
Isolation



Gain vs. Output Power

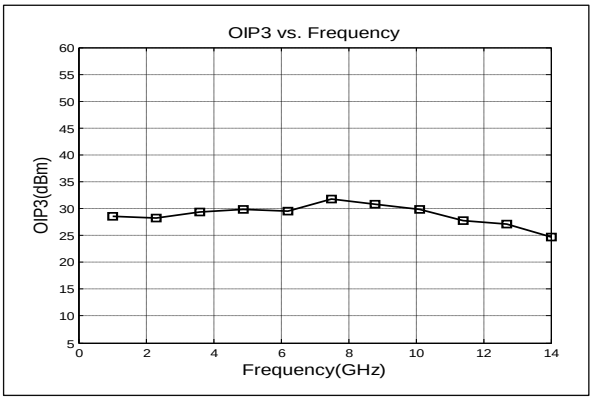


P1dB vs. Frequency

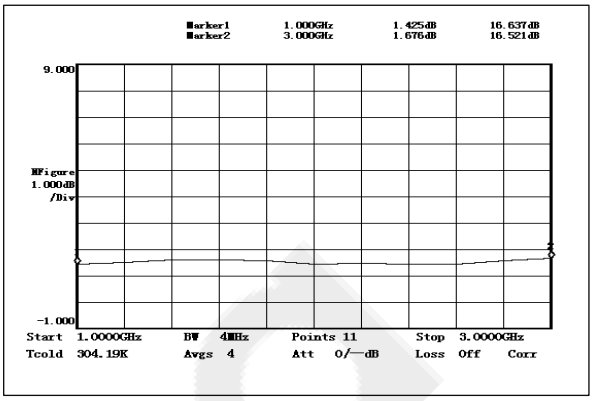


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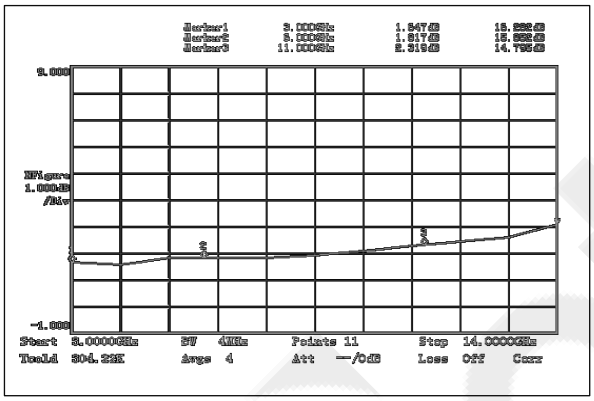
Output Third Order Intercept (IP3)



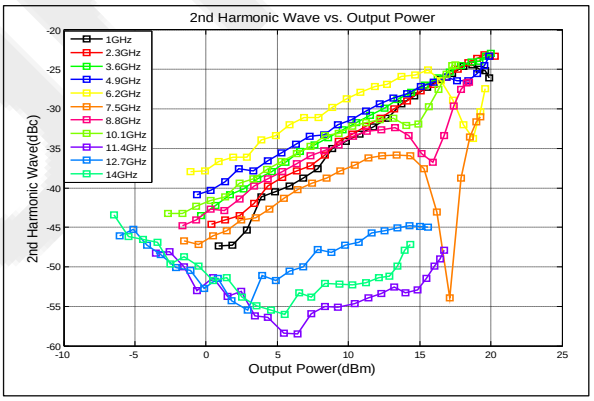
Noise Figure



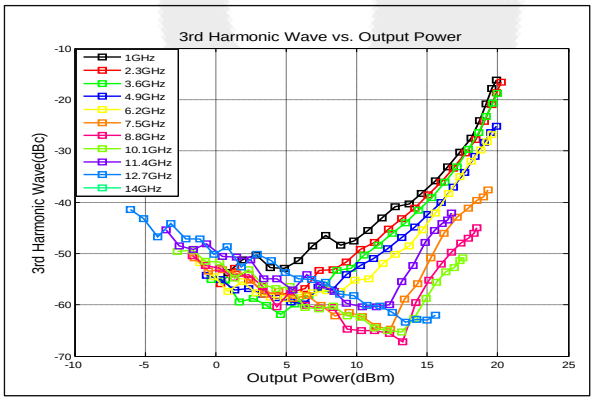
Noise Figure



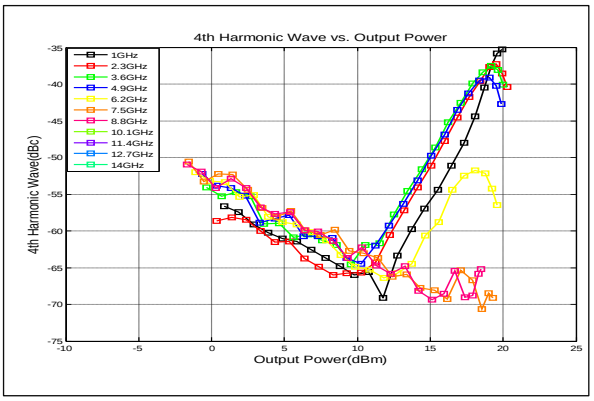
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power



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