P/N:DBLNA401001800A

QOTANA TECHNOLOGIES Ultra Wide Band Low Noise Amplifier 1GHz~18GHz

Features

- Gain: 29dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +18dBm Typical
- Supply Voltage: +12V @ 130mA
- 50 Ohm Matched



Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics

RF Microwave & VSAT
Test Instrument

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	1		10	10		18	GHz
Gain	26	29		25	27		dB
Gain Flatness		±1.0	±1.5		±1.0	±1.5	dB
Gain Variation Over Temperature (-45ºC~+85ºC)		±0.8			±1.0		dB
Noise Figure		2.5	3.0		2.5	3.2	dB
Input VSWR		1.6	2.0		1.6	2.0	: 1
Output VSWR		1.8	2.0		1.8	2.0	: 1
Output 1dB Compression Point (P1dB)	15	18		14	17		dBm
Saturated Output Power (Psat)		20			19		dBm
Output Third Order Intercept (IP3)		28			27		dBm
Supply Current (Idd) (VCC=+12V)		130	150		130	150	mA
Isolation S12		-65			-60		dB

Weight	3.17ounces	Impedance	50ohms
Input /Output Connectors	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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Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power (RFIN)	5dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing

Power OFF Procedure

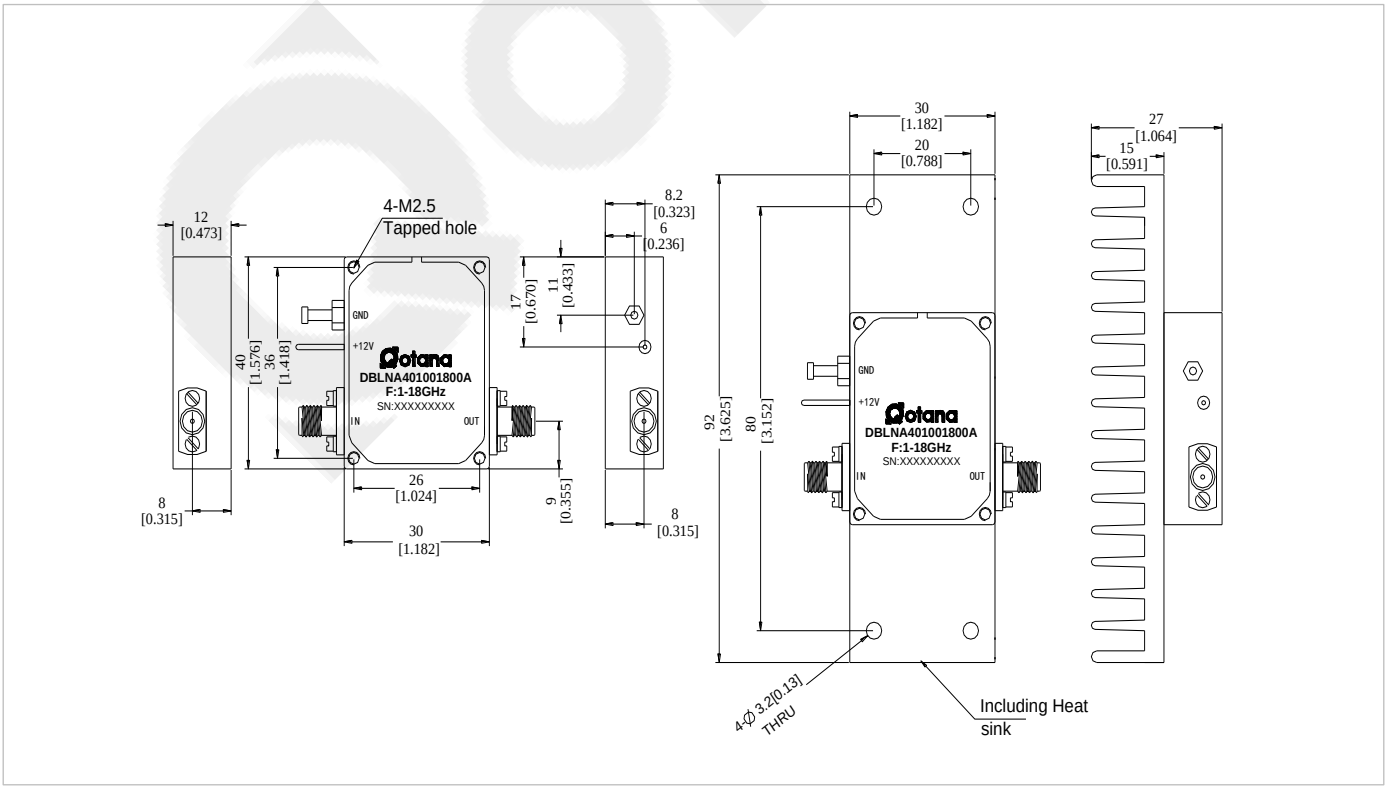
Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

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:

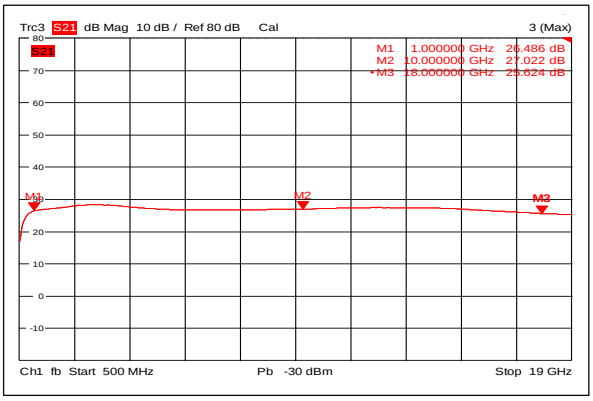
All Dimensions in mm (inches) Heat Sink required during operation(Sold Seperately)



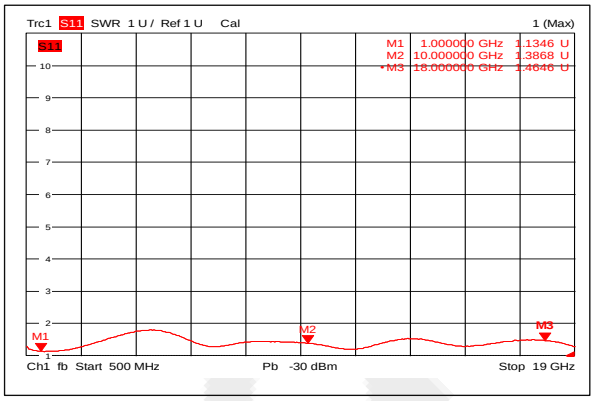
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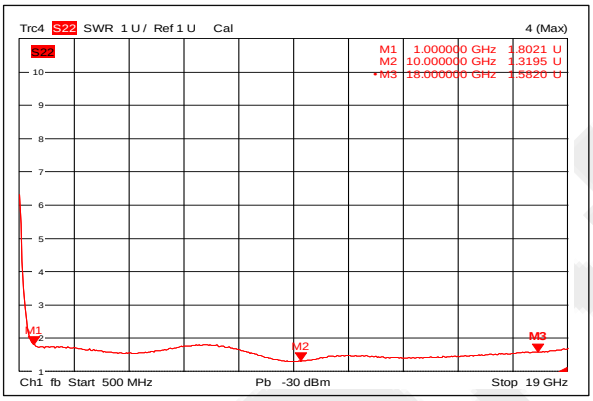
Gain



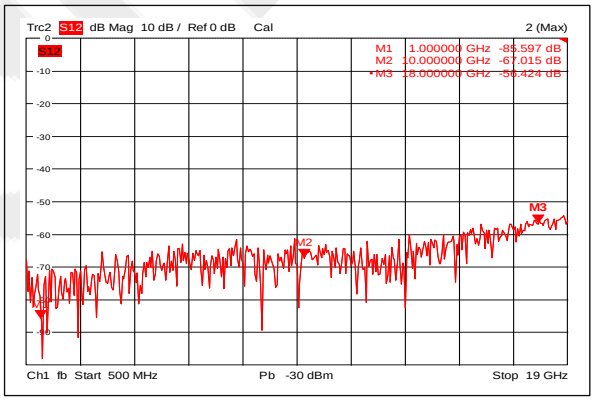
Input VSWR



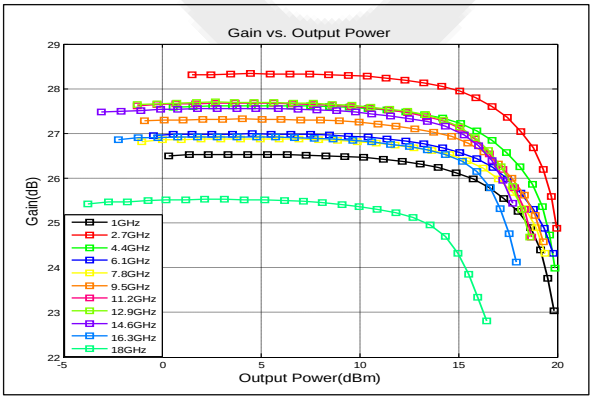
Output VSWR



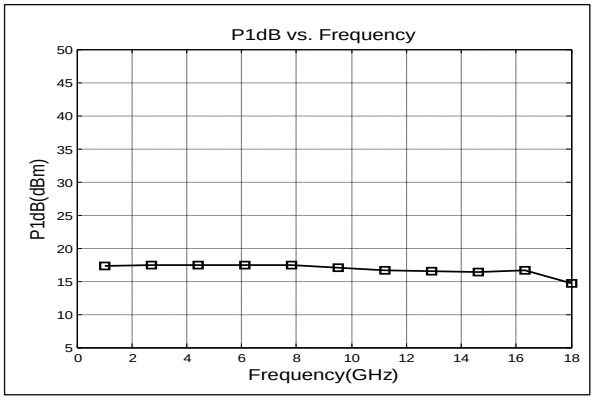
Isolation



Gain vs. Output Power

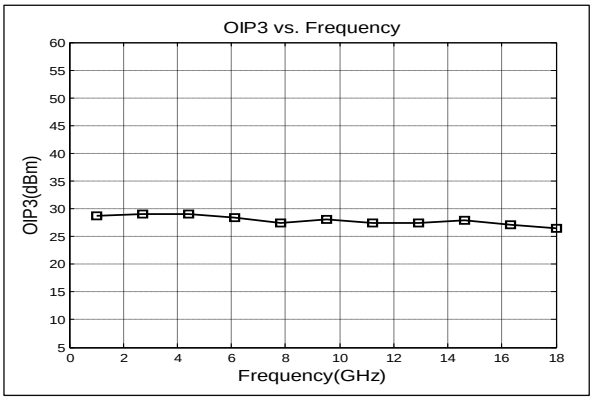


P1dB vs. Frequency

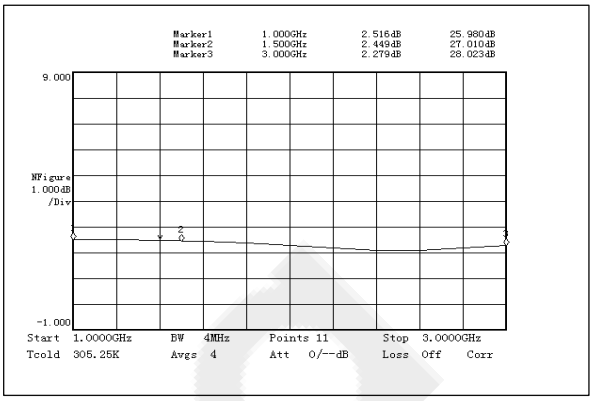


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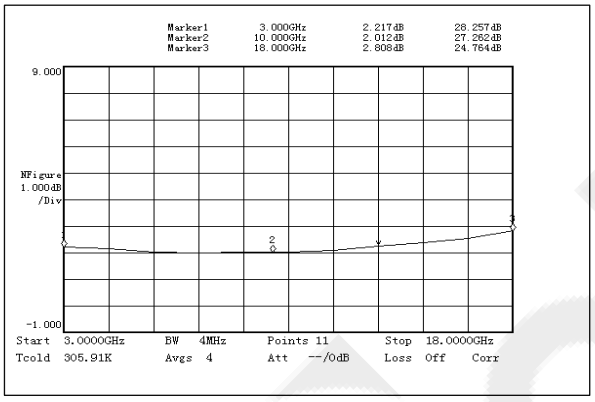
Output Third Order Intercept (IP3)



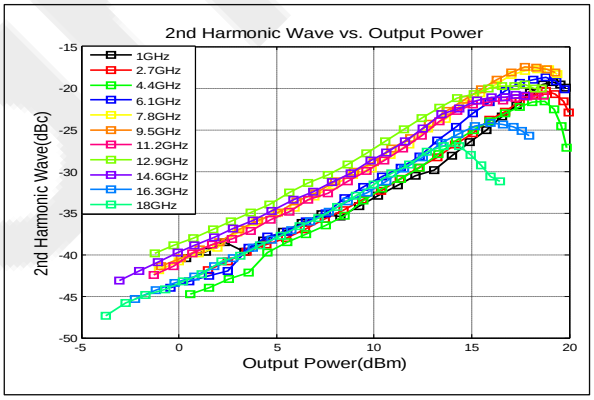
Noise Figure(1-3GHz)



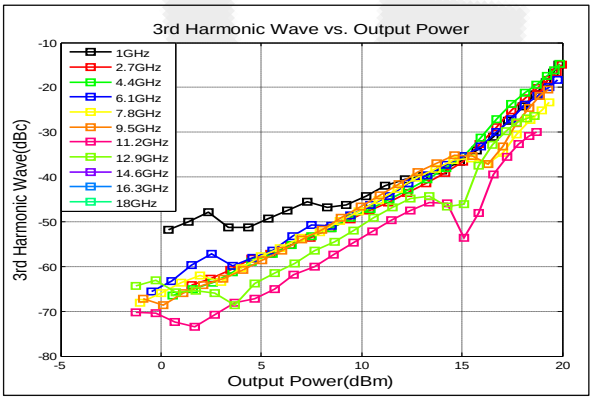
Noise Figure(3-18GHz)



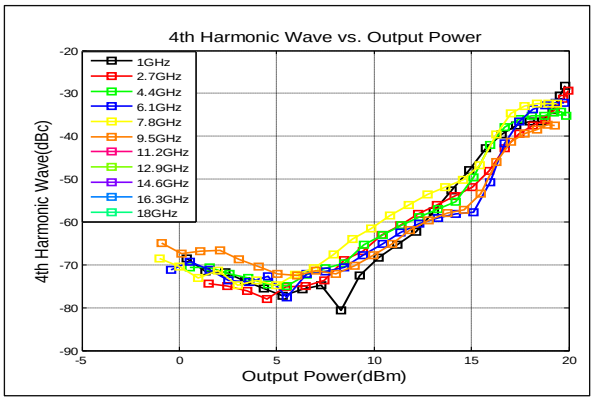
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power



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