P/N:DBLNA216001730A

QOTANA TECHNOLOGIES

Wide Band Low Noise Amplifier 16GHz~17.3GHz

Features

- Gain: 32dB typical
- Noise Figure: 1.8dB typical
- High P1dB: +19.5dBm typical
- Supply Voltage: +12V @ 200mA
- 50 Ohm Matched



RoHS COMPLIANT

ESD

Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics

RF Microwave & VSAT
Test Instrument

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	16		17.3	6		18	GHz
Gain	30	32		29	31		dB
Gain Flatness		±0.25	±0.5		±1.0		dB
Gain Variation Over Temperature (-45 ~ +85℃)		±0.8			±0.8		dB
Noise Figure		1.8	2.0		1.8	2.5	dB
Input VSWR		1.6	2.0		1.8		: 1
Output VSWR		1.4	1.8		1.8		: 1
Output 1dB Compression Point (P1dB)	17.5	19.5		17	19		dBm
Saturated Output Power (Psat)		20.5			21		dBm
Output Third Order Intercept (IP3)		23			23		dBm
Supply Current (Vcc=+12V)		200	230		200	230	mA
Isolation S12		-70			-70		dB

Weight	0.71ounces	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)	-10dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
step3	Connect +12V biasing

Power OFF Procedure

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

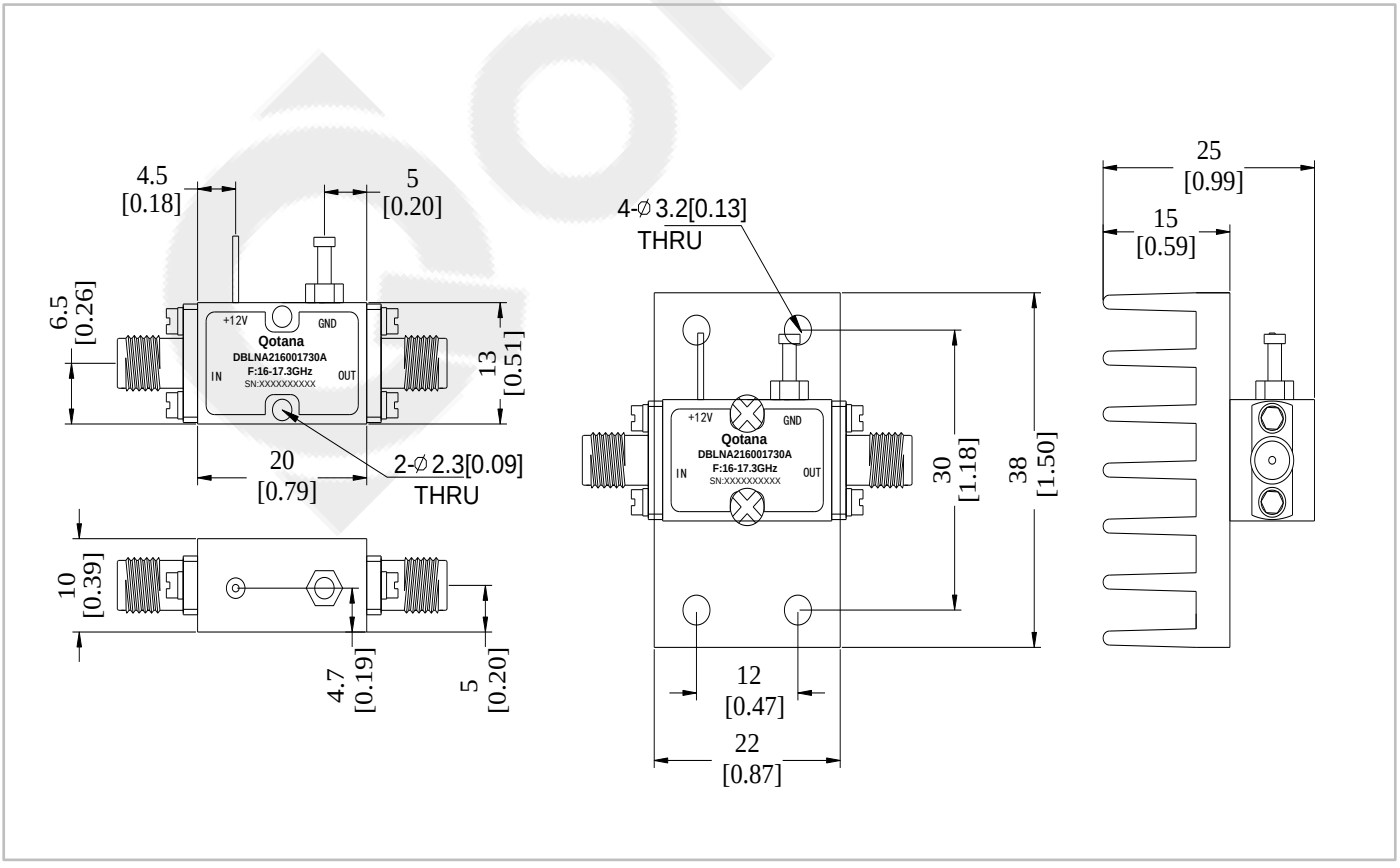
Environmental Specifications

Operational Temperature	-45ºC~+85ºC
Storage Temperature	-55ºC~+125ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
(Optional)	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment)
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:

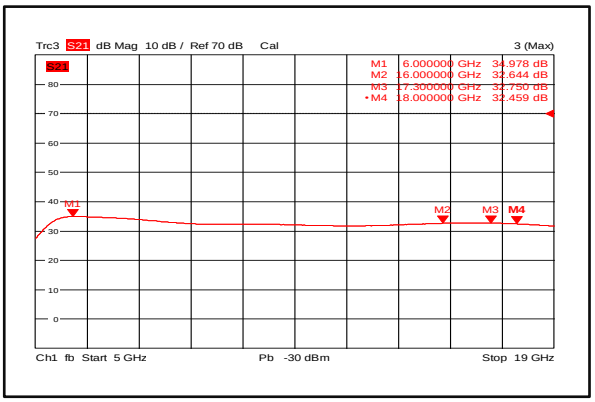
All Dimensions in mm（inches）

Heat Sink required during operation (Sold Seperately)

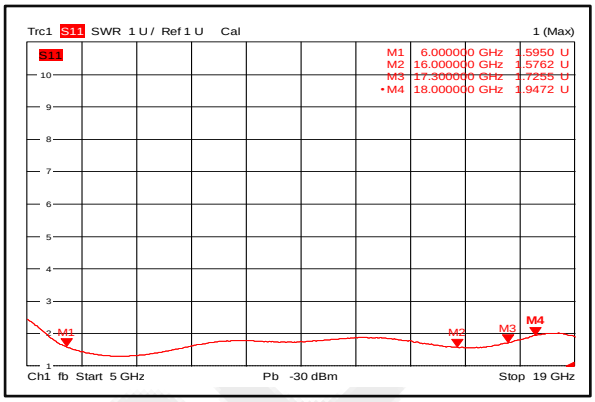


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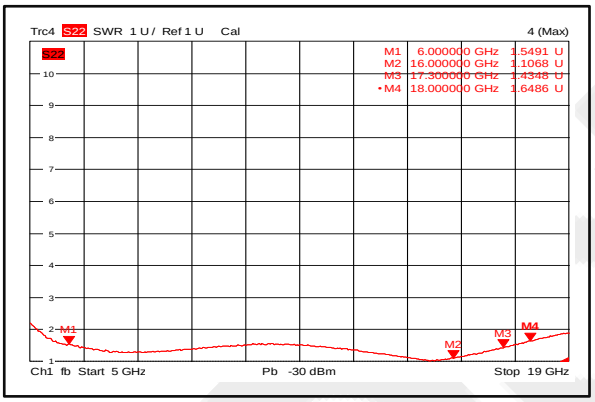
Gain



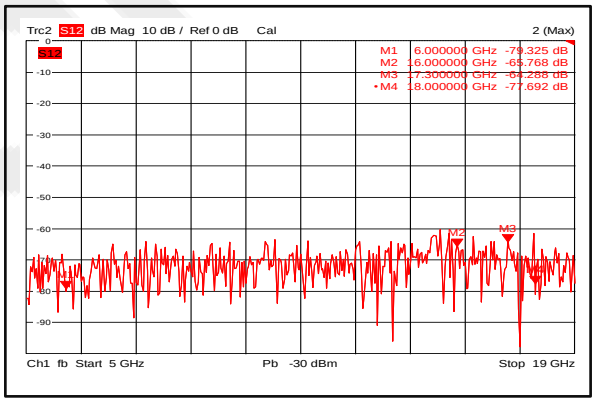
Input VSWR



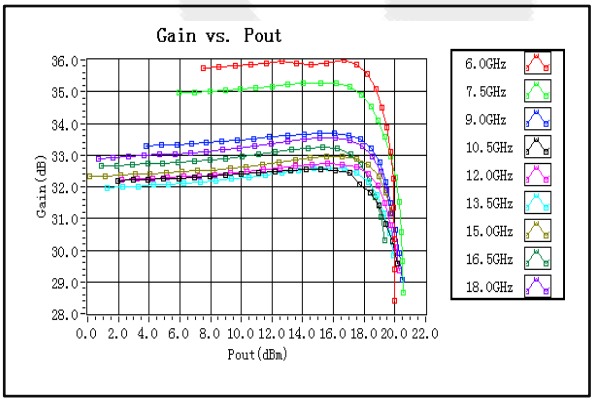
Output VSWR



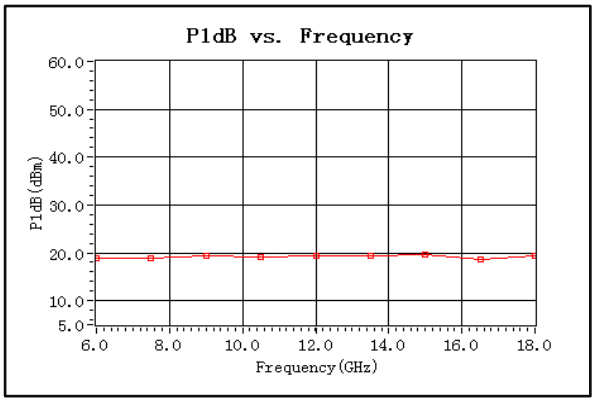
Isolation



Gain vs. Output Power

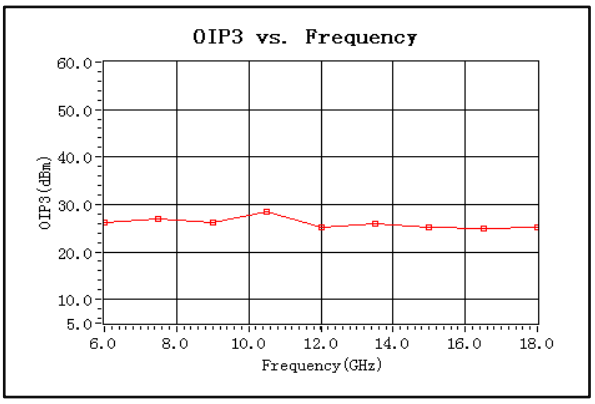


P1dB vs. Frequency

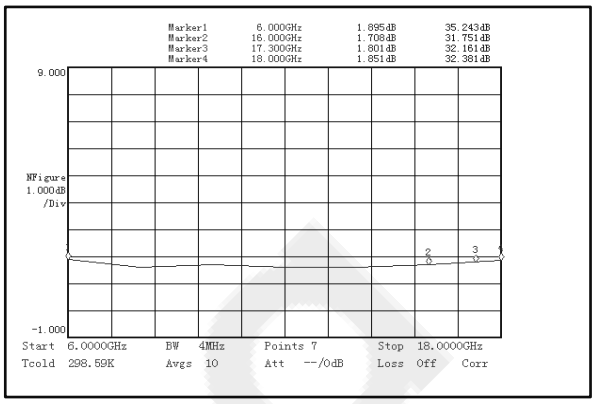


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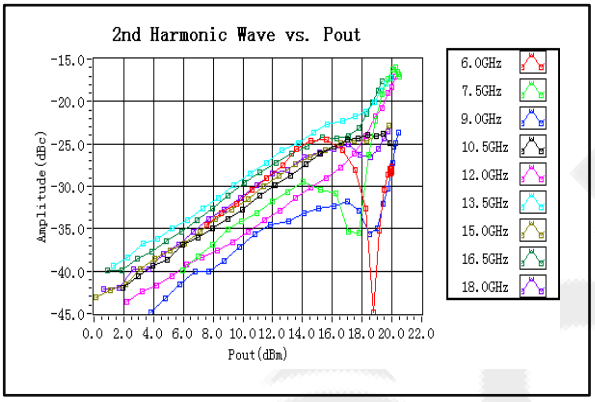
Output Third order Intercept (IP3)



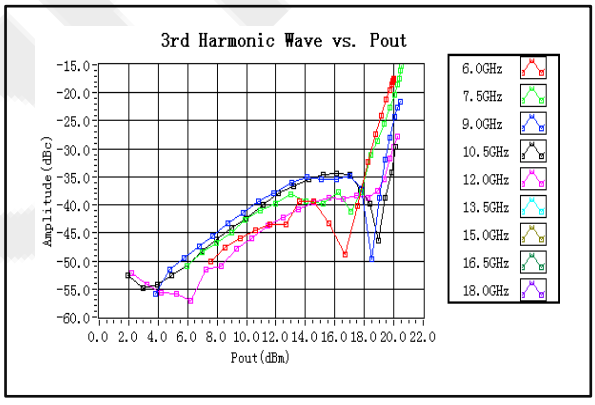
Noise Figure



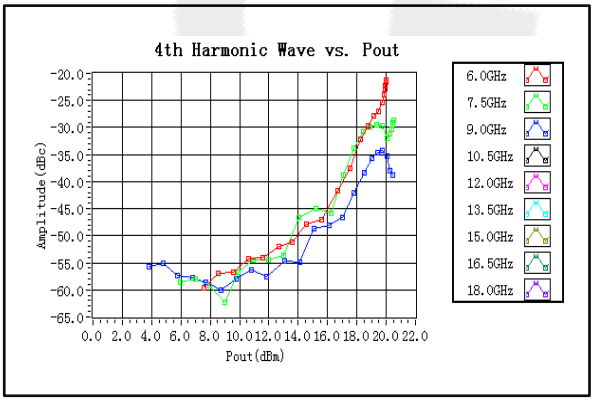
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power



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