P/N:DBLNA100700100A

QOTANA TECHNOLOGIES

Wide Band Low Noise Amplifier 0.7GHz~1GHz

Features

- Gain: 14.5dB Typical
- Noise Figure: 0.7dB Typical
- P1dB Output Power: +20dBm Typical
- Supply Voltage: +5V @ 65mA
- 50 Ohm Matched Input / Output
- Size: 0.63” x 0.75” x 0.39”



Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics

RF Microwave & VSAT
Test Instrument

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.7		0.85	0.85		1	GHz
Gain	12	14		11.5	13.5		dB
Gain Flatness		±0.5	±0.8		±0.6	±1.0	dB
Gain Variation Over Temperature(-45 ~ +85)		±0.5			±0.5		dB
Noise Figure		0.7	1.1		0.7	1.1	dB
Input VSWR		1.4	1.8		1.4	1.8	: 1
Output VSWR		1.6	2.0		1.4	1.8	: 1
Output Power for 1 dB Compression (P1dB)	18	19.5		18	19.5		dBm
Saturated Output Power (Psat)		21.5			21		dBm
Output Third Order Intercept (IP3)		35			36		dBm
Isolation S12		-21			-19		dB
Supply Current (Idd) (Vcc=+5V)		65	90		65	90	mA
Input Max Power(no damage)		+9			+9		dBm

Weight	1.1 ounces	Impedance	50ohms
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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Absolute Maximum Ratings

Operating Voltage	+8V
RF Input Power (RFIN)	+15dB m

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

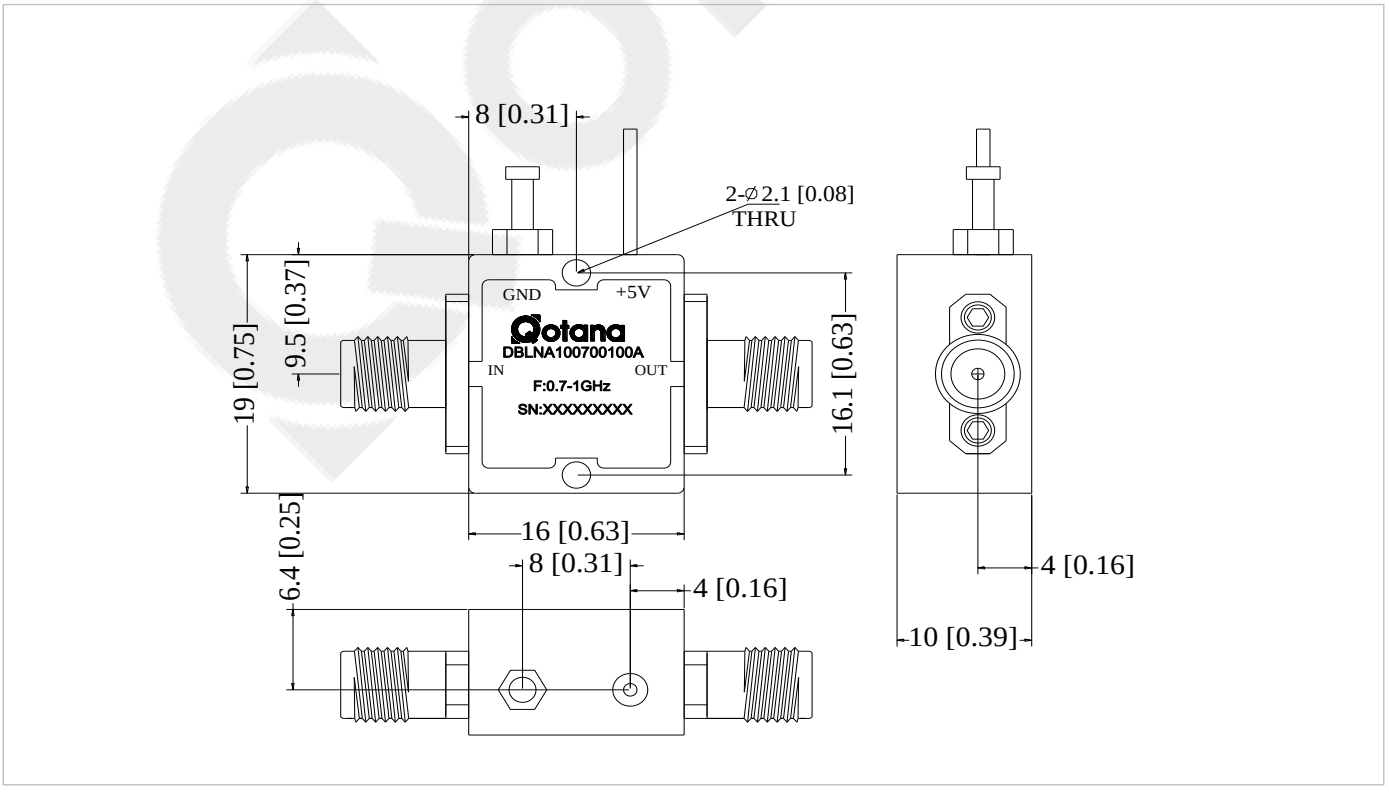
Environmental Specifications

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)

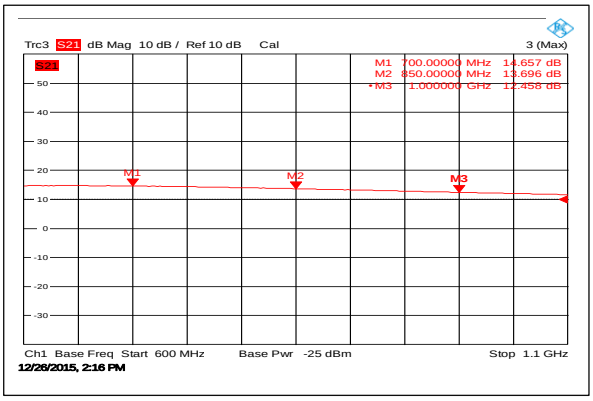
Heat Sink required during operation(Sold Seperately)



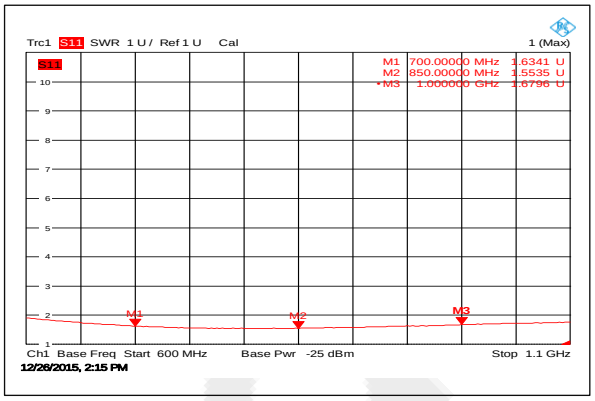
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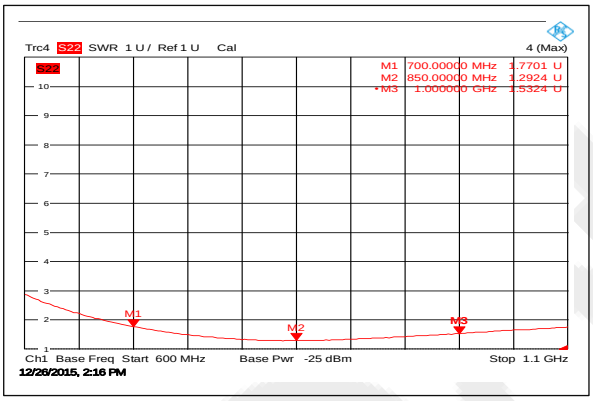
Gain



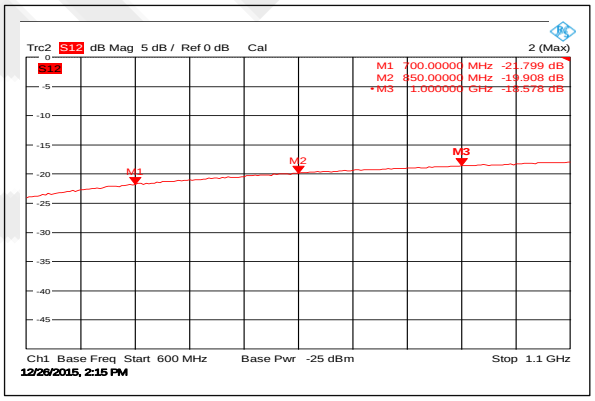
Input VSWR



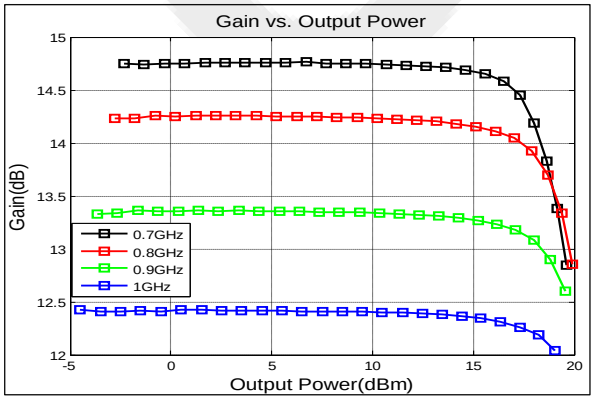
Output VSWR



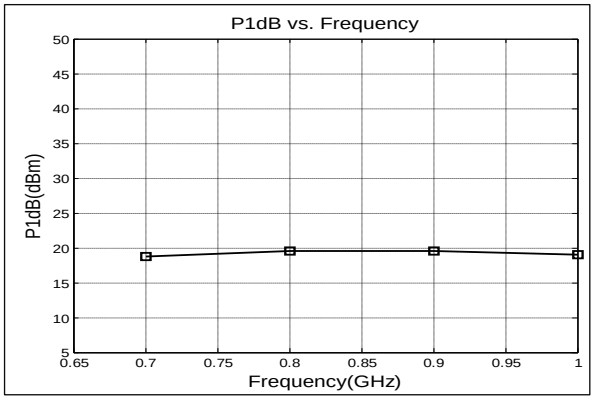
Isolation



Gain vs. Output Power

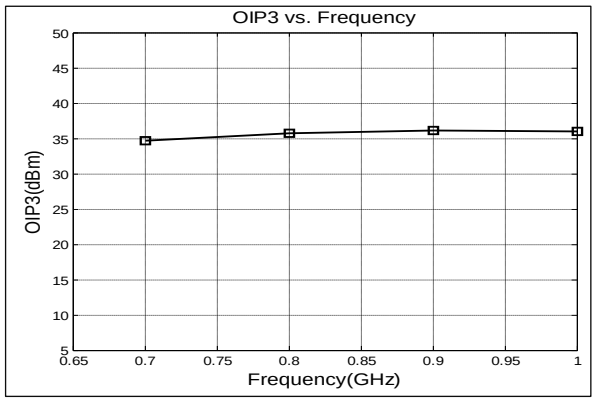


P1dB vs. Frequency

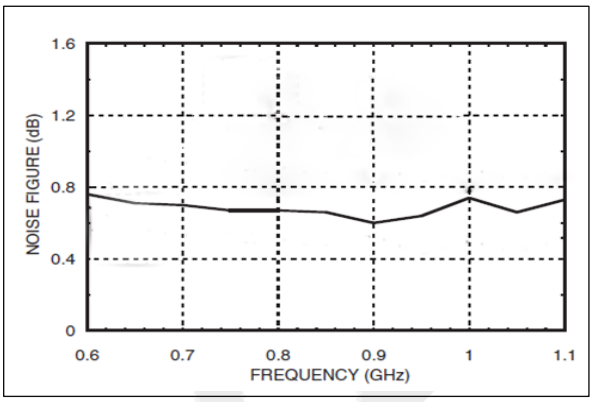


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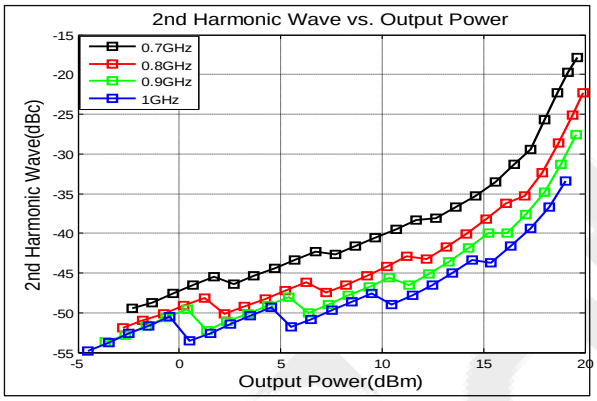
Output Third Order Intercept (IP3)



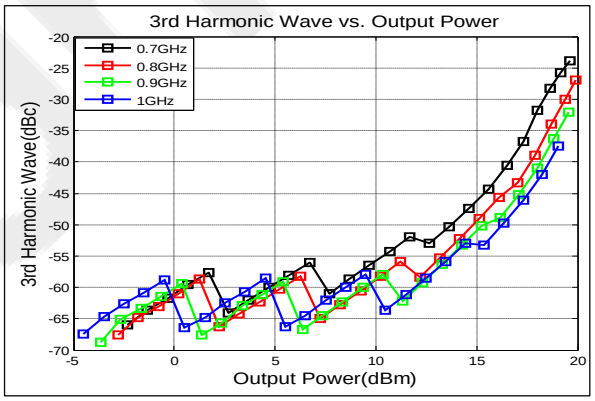
Noise Figure



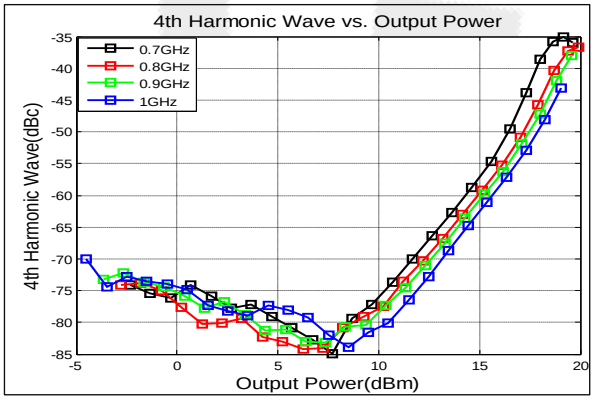
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power



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