P/N:DBLNA100830084A

QOTANA TECHNOLOGIES

Narrow Band Low Noise Amplifier 825MHz-835MHz

Features

- Gain: 41dB Typical
- Noise Figure: 1.0 Typical
- P1dB Output Power: +22dBm Typical
- Supply Voltage: +12VDC
- 50 Ohm Matched Input / Output



Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics

RF Microwave & VSAT
Test Instrument

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	825		835	800		900	MHz
Gain	40	41		39	41		dB
Gain Flatness		±0.2	±0.5		±0.5	±1.0	dB
Gain Variation Over Temperature(-45 ~ +85)			±1.0			±1.0	dB
Noise Figure		0.9	1.2		1.0	1.35	dB
Input VSWR		1.5	1.8		1.5	1.8	:1
Output VSWR		1.5	1.8		1.5	1.8	:1
Output 1dB Compression Point (P1dB)	21	22		20	22		dBm
Saturated Output Power (Psat)		24			24		dBm
Output Third Order Intercept (IP3)		34			34		dBm
Supply Current (Idd) (Vd=+12V)		230	260		230	260	mA
Isolation S12		-50			-50		dB

Weight	1.06 ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finish	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	+12V±10%
RF Input Power	-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

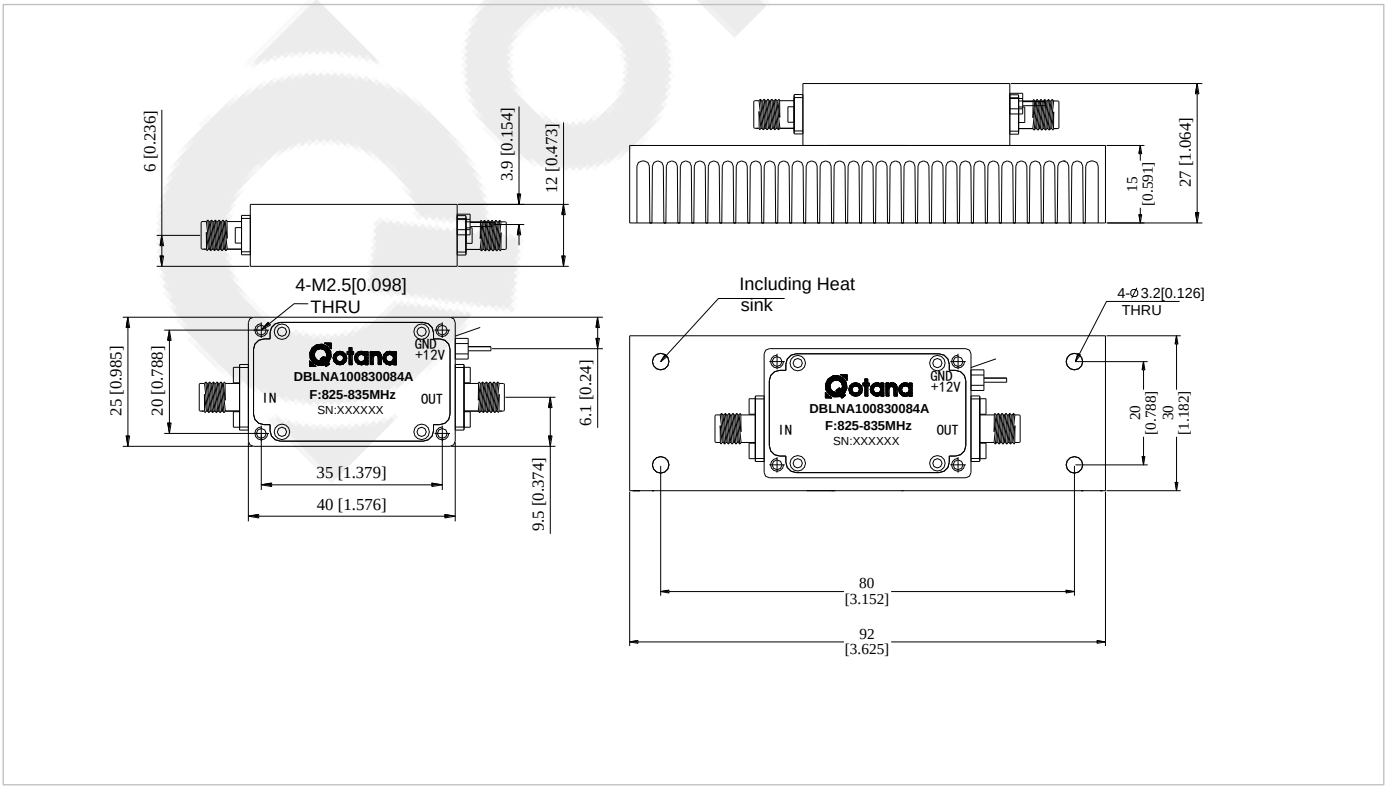
Environmental Specifications

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)

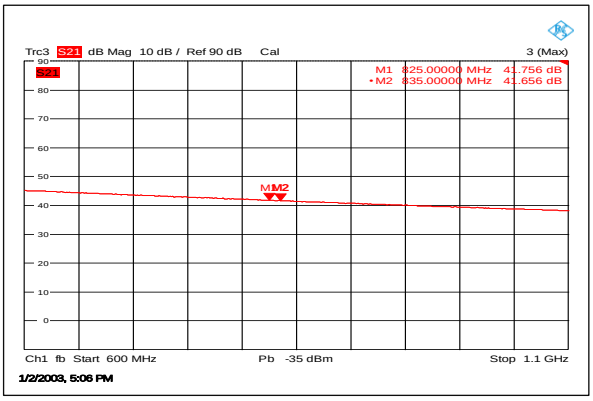
Heat Sink required during operation(Sold Seperately)



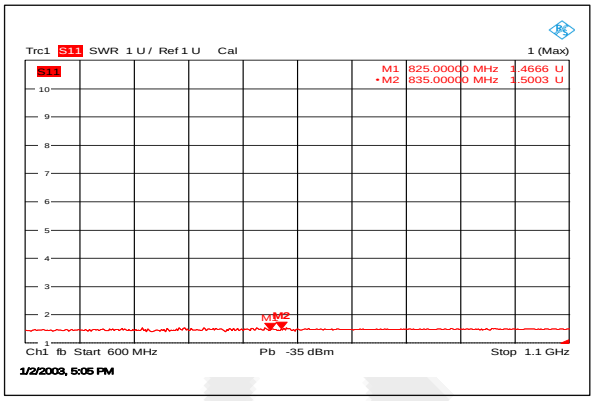
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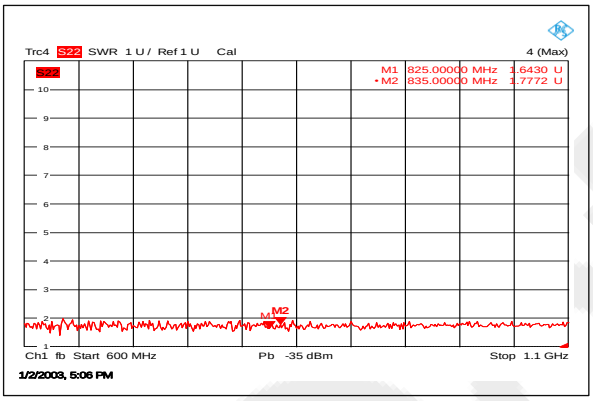
Gain



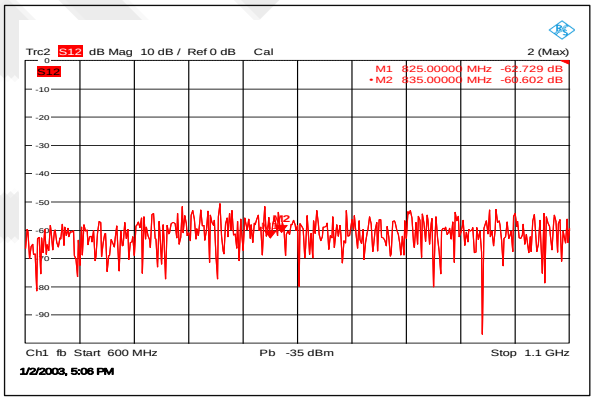
Input VSWR



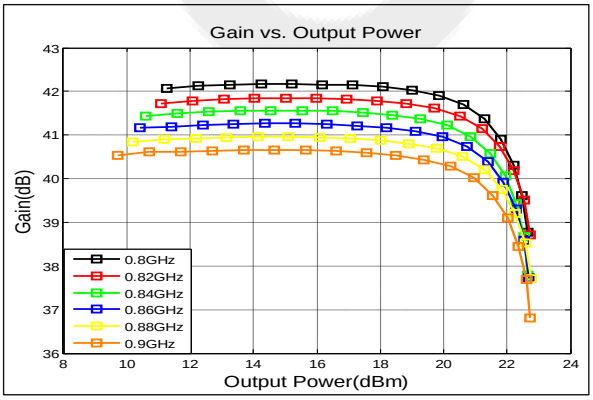
Output VSWR



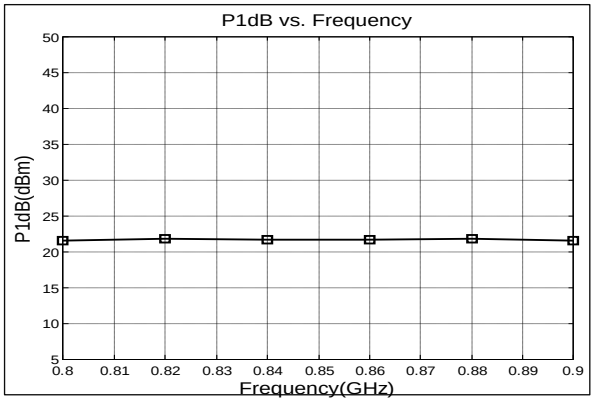
Isolation



Gain vs. Output Power



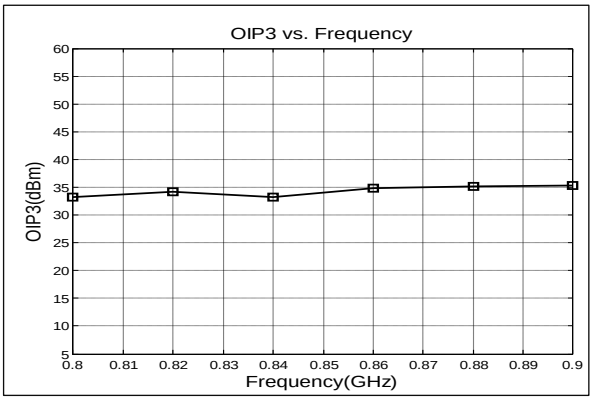
P1dB vs. Frequency



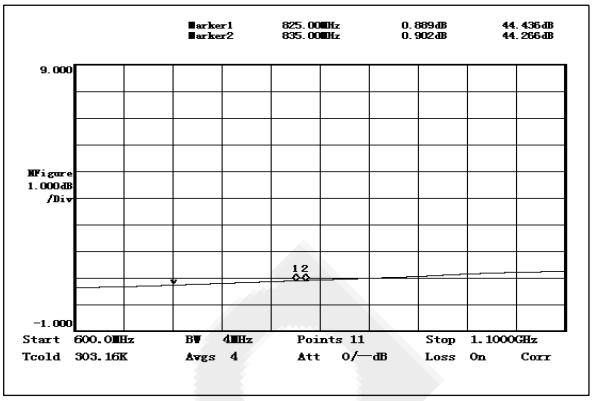
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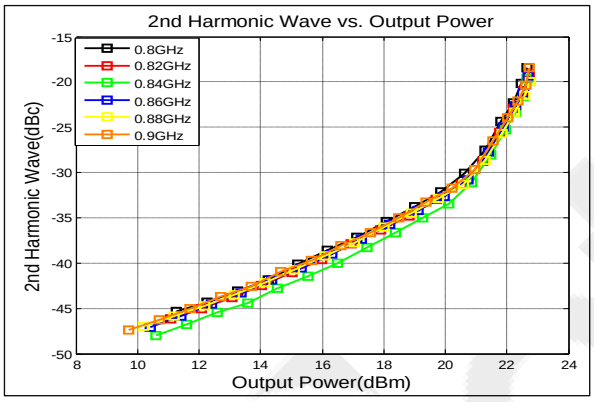
Output Third Order Intercept (IP3)



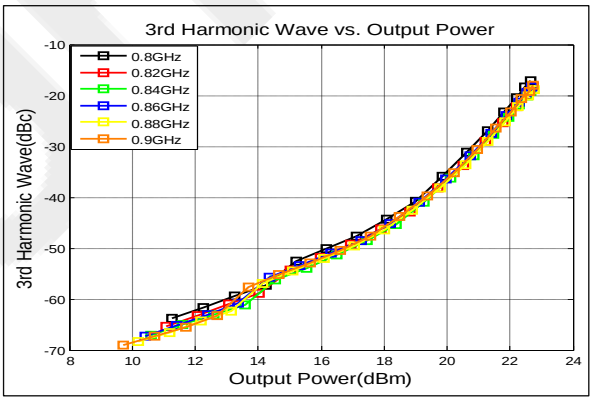
Noise Figure



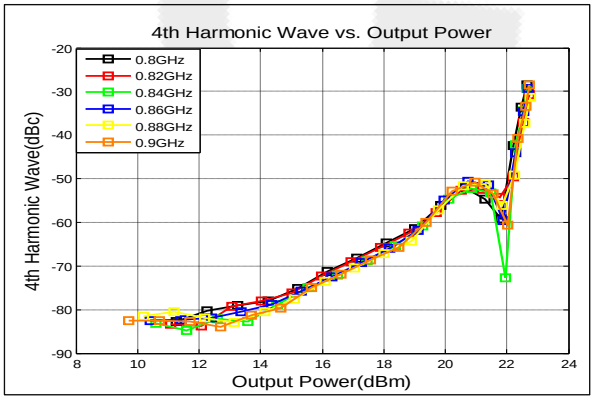
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power



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