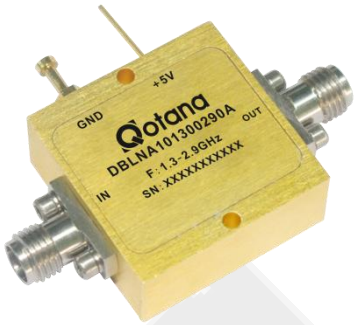
P/N:DBLNA101300290A

QOTANA TECHNOLOGIES

Low Noise Amplifier 1.3GHz~2.9GHz

Features

- Gain: 30 dB Typical
- Noise Figure: 1.0dB Typical
- P1dB Output Power: +25dBm Typical
- Supply Voltage: +5V @ 150mA
- 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	1.3		2.2	2.2		2.9	GHz
Gain	28	34		24	26		dB
Gain Flatness		±2	±2.5		±1.5	±2.0	dB
Gain Variation Over Temperature(-45 ~ +85)		±0.5			±0.5		dB
Noise Figure		1.0	1.5		1.2	1.8	dB
Input VSWR		1.5	2.0		1.8	2.2	: 1
Output VSWR		1.8	2.0		1.8	2.2	: 1
Output Power for 1 dB Compression (P1dB)	22	25		23	25		dBm
Saturated Output Power (Psat)		26			26		dBm
Output Third Order Intercept (IP3)		36			39		dBm
Supply Current (Idd) (Vdd= 5V)		150	200		150	200	mA
Isolation S12		-50			-45		dB

Weight	1.76 ounces	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)

QOTANA TECHNOLOGIES

Low Noise Amplifier 1.3GHz~2.9GHz

Absolute Maximum Ratings

Operating Voltage	+6V
RF Input Power(+5V)	+25dBm

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

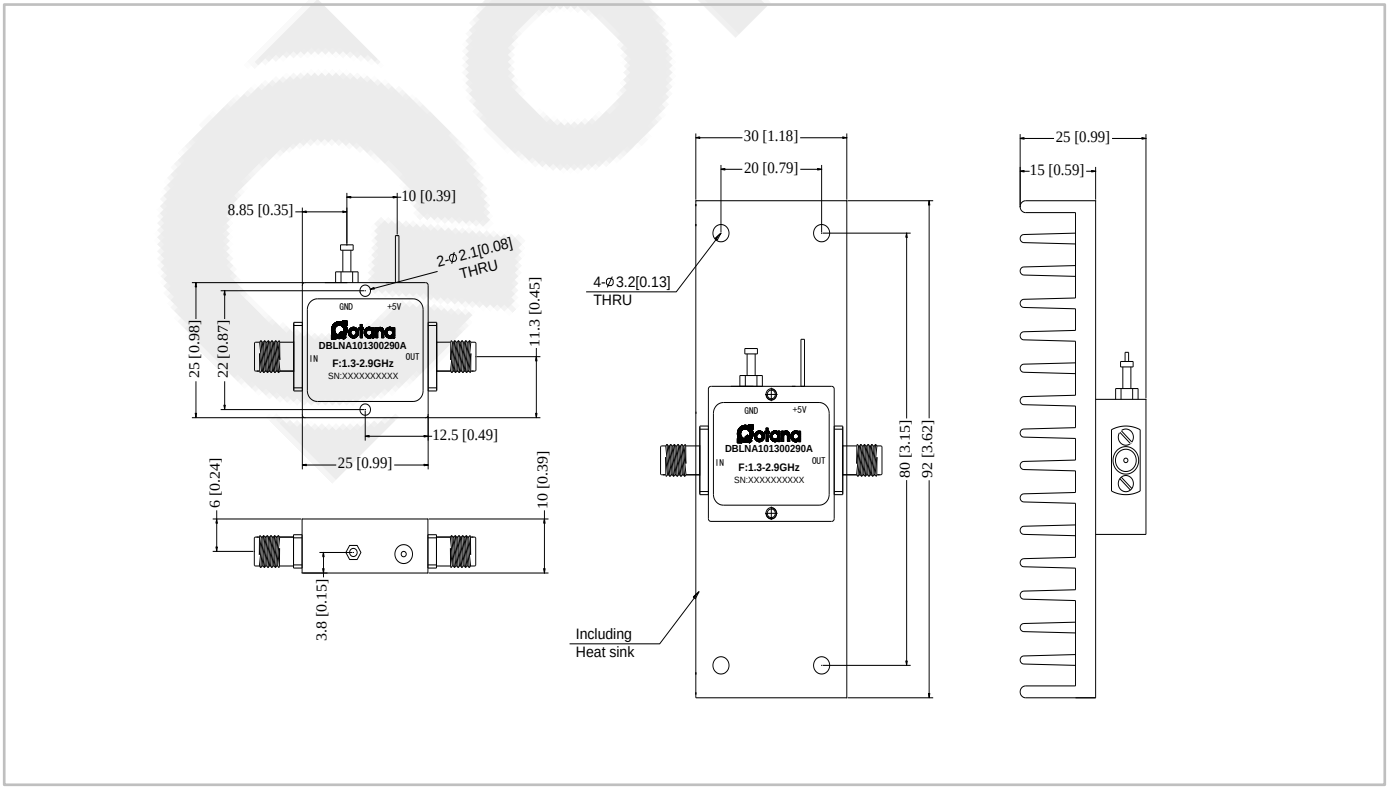
Environmental Specifications

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)

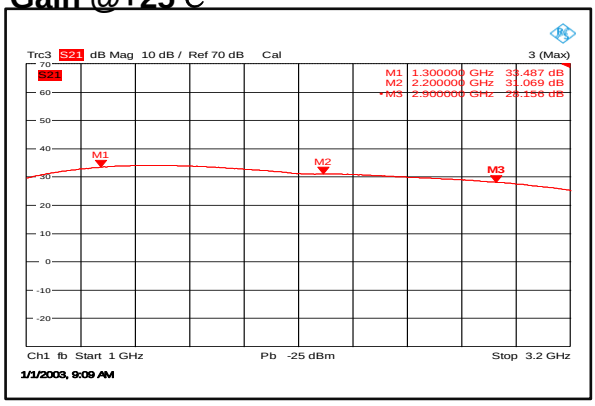
Heat Sink required during operation(Sold Seperately)



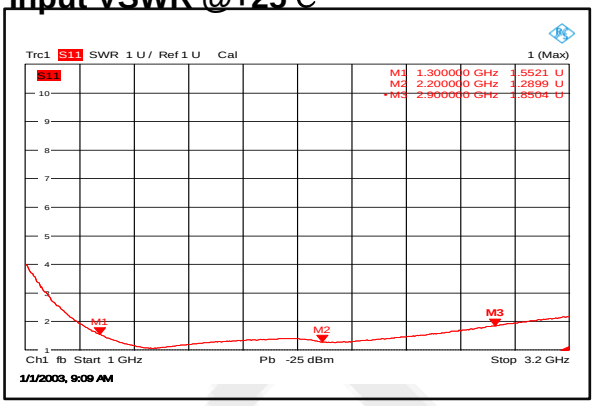
QOTANA TECHNOLOGIES

Low Noise Amplifier 1.3GHz~2.9GHz

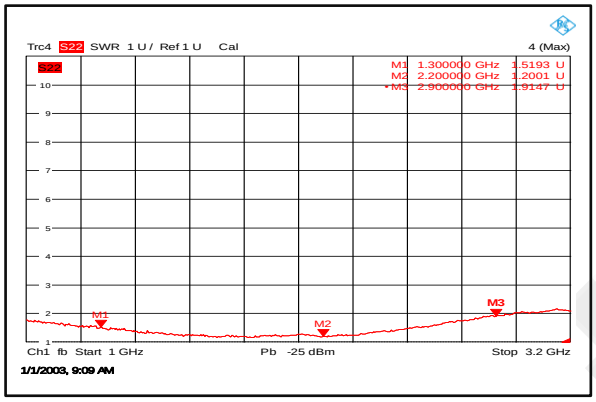
Gain @+25℃



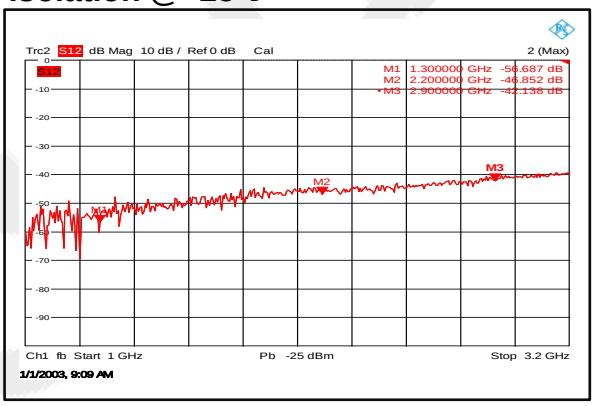
Input VSWR @+25℃



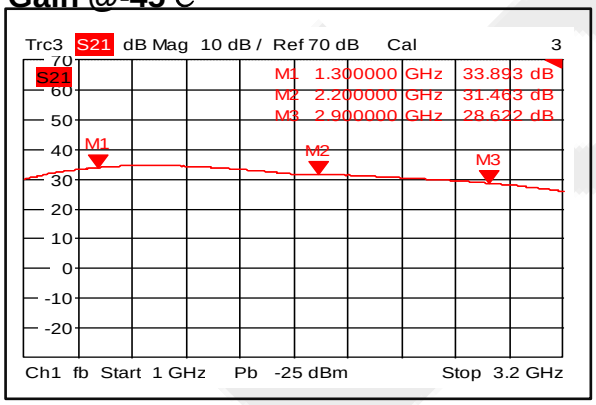
Output VSWR @+25℃



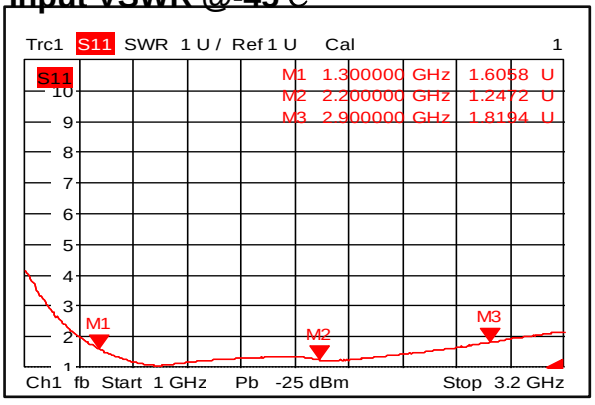
Isolation @+25℃



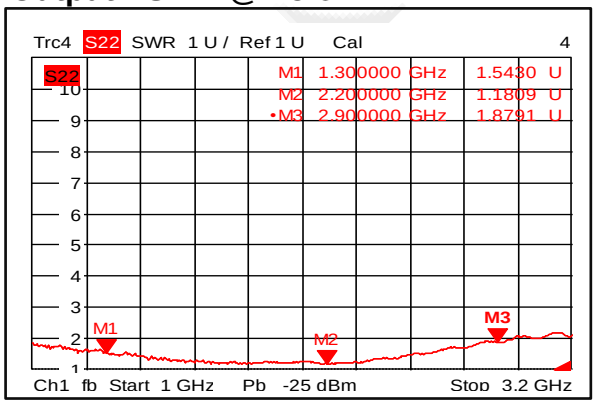
Gain @-45℃



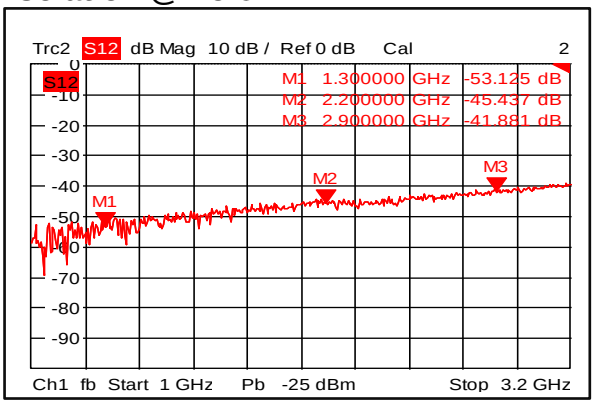
Input VSWR @-45℃



Output VSWR @-45℃



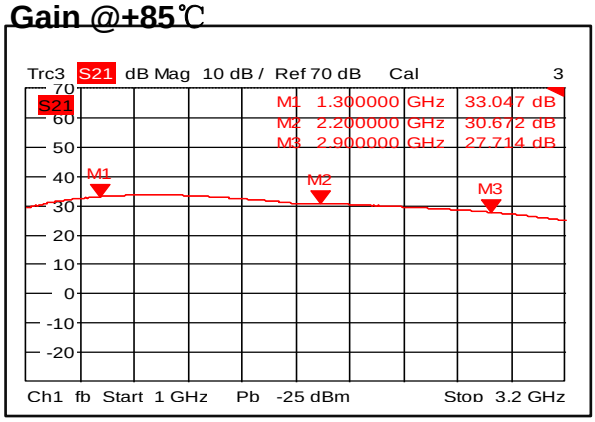
Isolation @-45℃



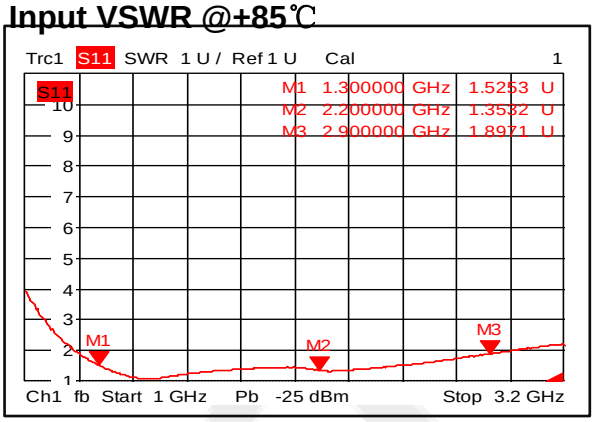
QOTANA TECHNOLOGIES

Low Noise Amplifier 1.3GHz~2.9GHz

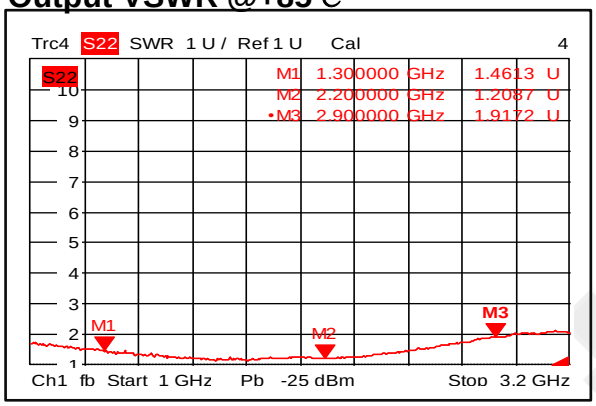
Gain @+85℃



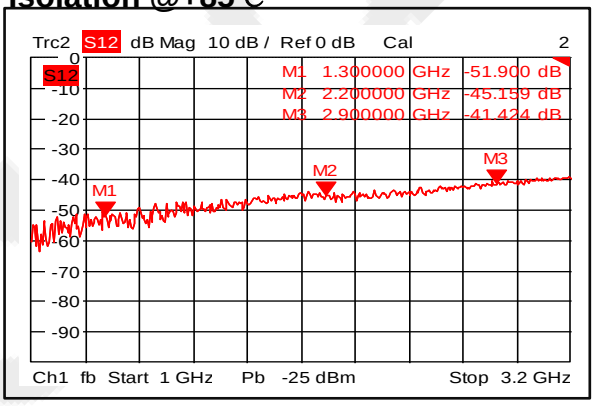
Input VSWR @+85℃



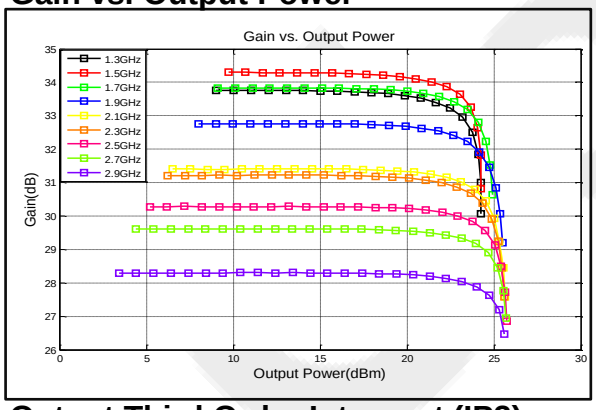
Output VSWR @+85℃



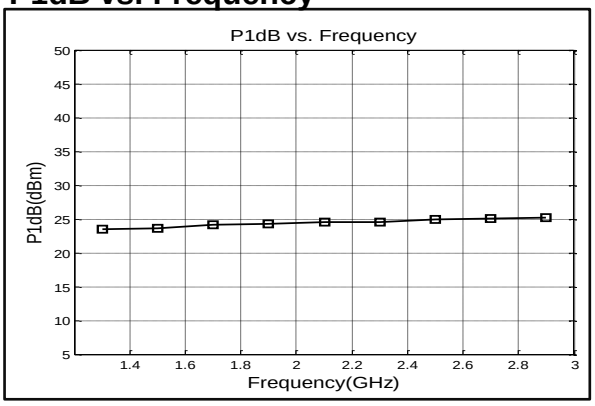
Isolation @+85℃



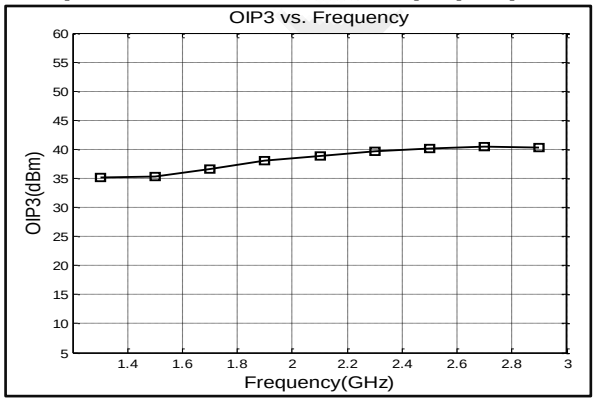
Gain vs. Output Power



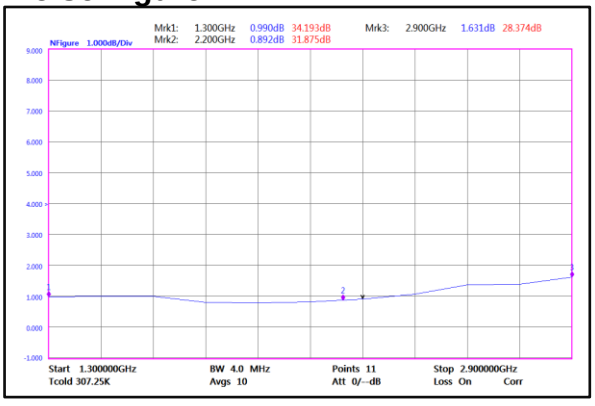
P1dB vs. Frequency



Output Third Order Intercept (IP3)



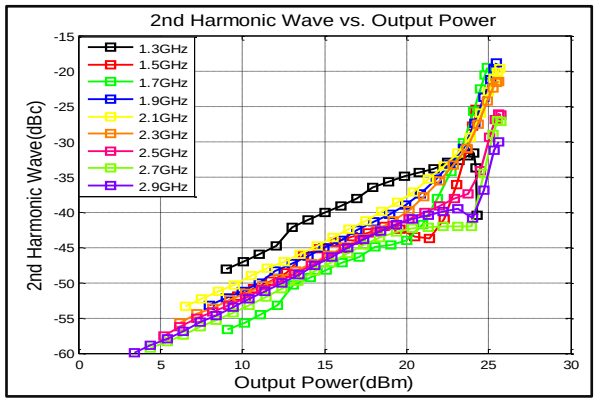
Noise Figure



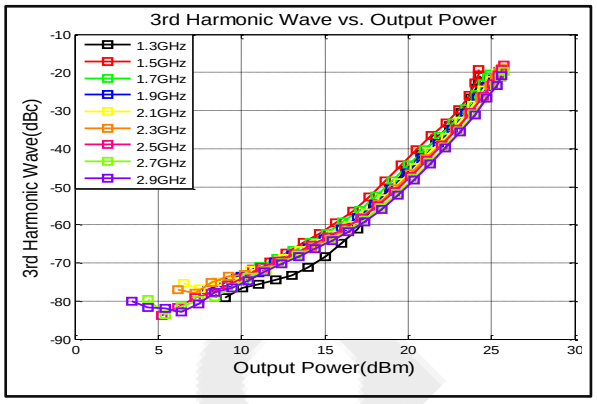
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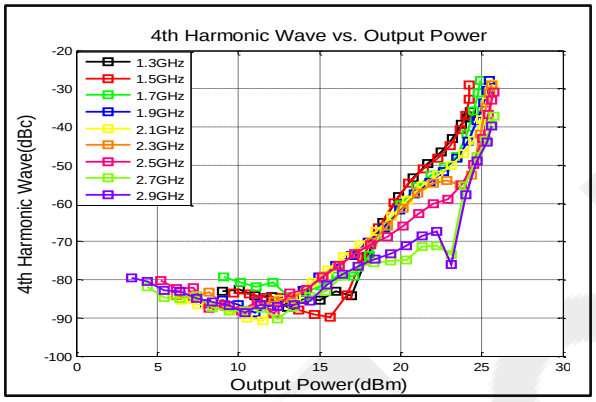
2nd Harmonic Wave output Power



3rd Harmonic Wave output Power



4th Harmonic Wave output Power



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