P/N:DBLNA418003100A

QOTANA TECHNOLOGIES

Low Noise Amplifier 18GHz~33GHz

Features

- Gain: 12dB Typical
- Noise Figure: 3.0dB Typical
- P1dB Output Power: +10dBm Typical
- Supply Voltage: +3V @ 65mA
- 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.	Min.	Typ.	Max.	Units
Frequency Range		16~18			18~31			31~33		GHz
Gain		10		10.5	12			10.5		dB
Gain Flatness		±0.5			±0.5			±0.5		dB
Gain Variation Over Temperature (-45 ~ +85)		±1.0			±1.0			±1.0		dB
Noise Figure		2.8			2.8	4.5		4.5		dB
Input VSWR		4			1.8			3.5		: 1
Output VSWR		3			1.6			2.0		: 1
Output 1dB Compression Point (P1dB)		10		8	12	14		11		dBm
Saturated Output Power (Psat)		11			12			12		dBm
Output Third Order Intercept (IP3)		21			19			21		dBm
Isolation S12		-45			-37			-36		dB
Supply Current (Vcc=+3V)		65	85		65	85		65	85	mA

Weight	0.71 ounces	Impedance	50ohms
Input / Output Connectors	2.92mm-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	+5 V
RF Input Power (RFIN)	+8dBm

Biasing Up Procedure

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

Power OFF Procedure

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

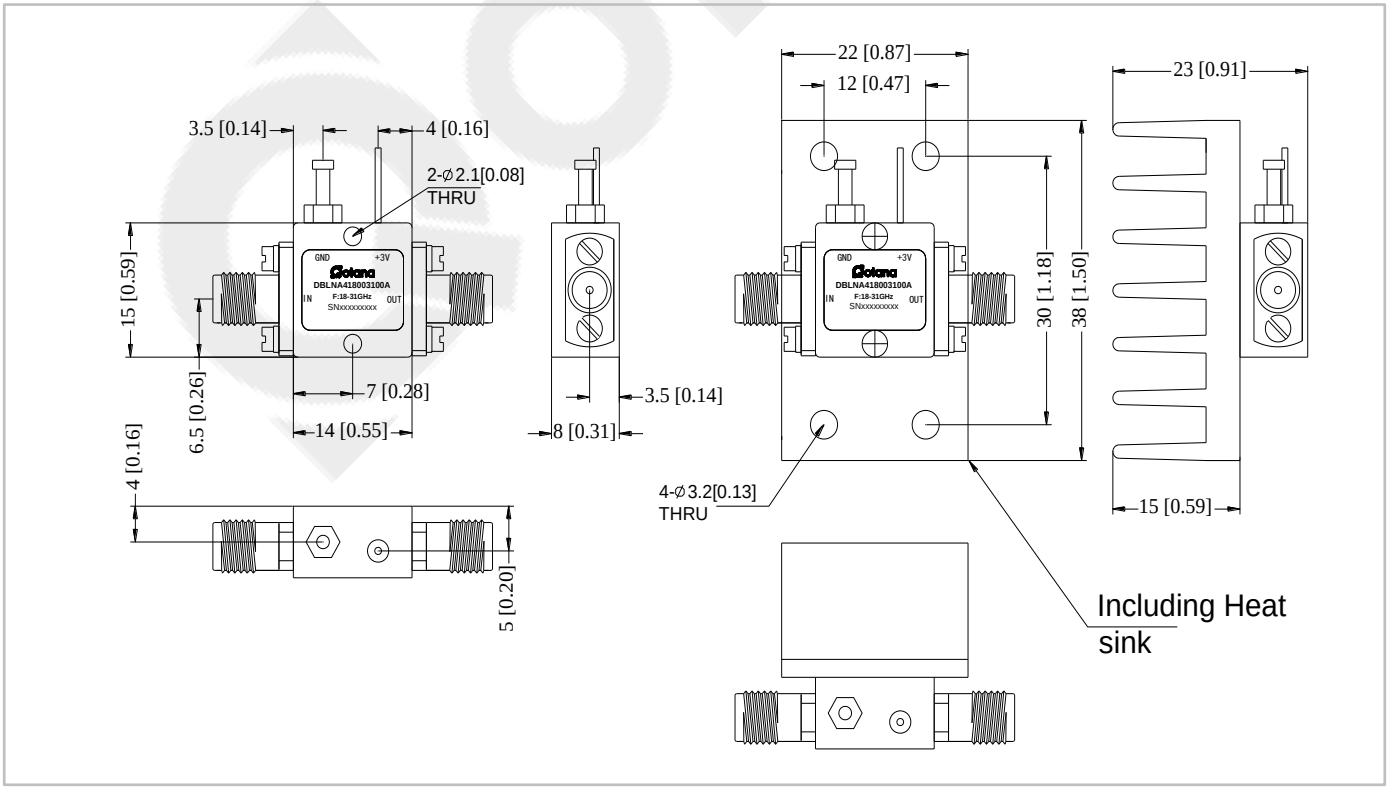
Environmental Specifications

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)

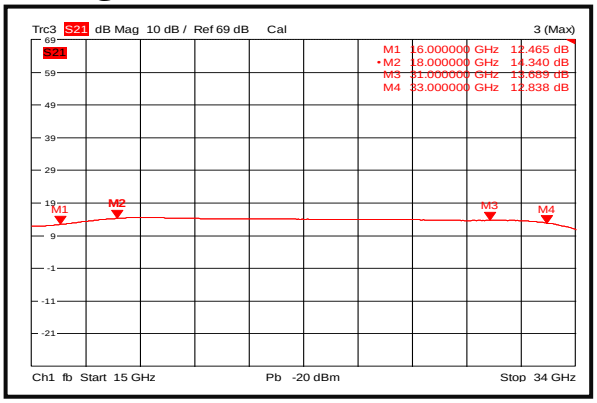


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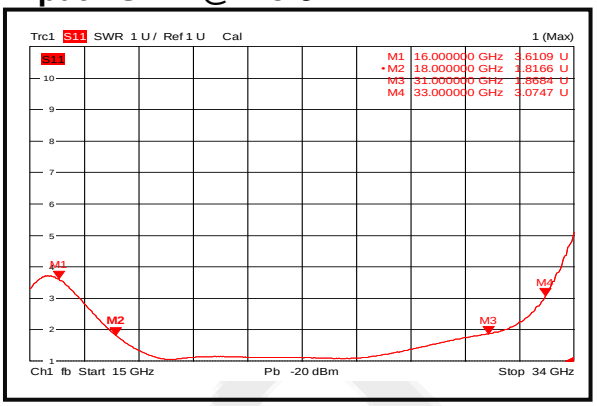
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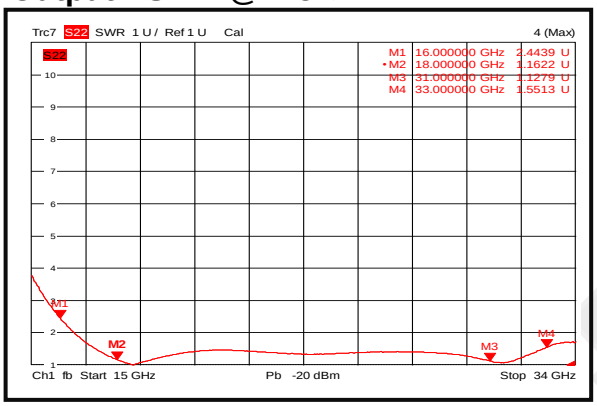
Gain @+25℃



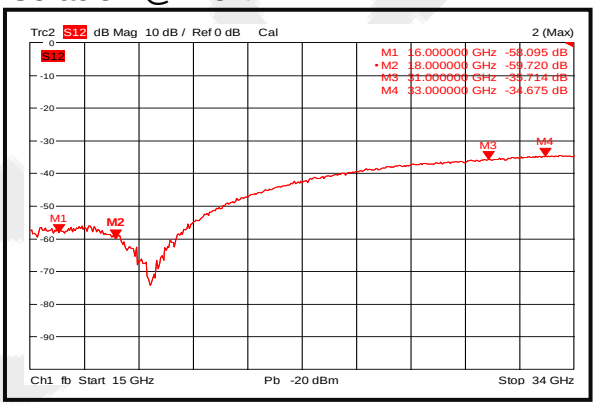
Input VSWR @+25℃



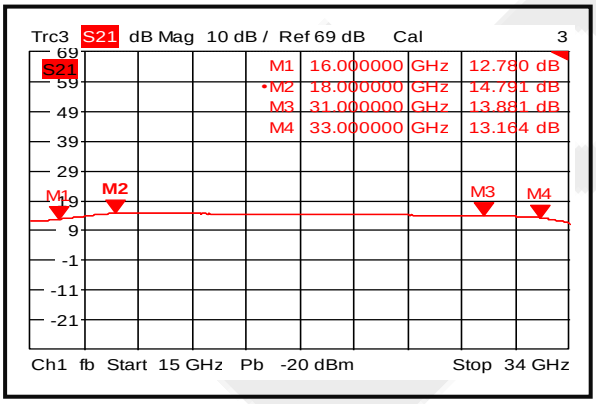
Output VSWR @+25℃



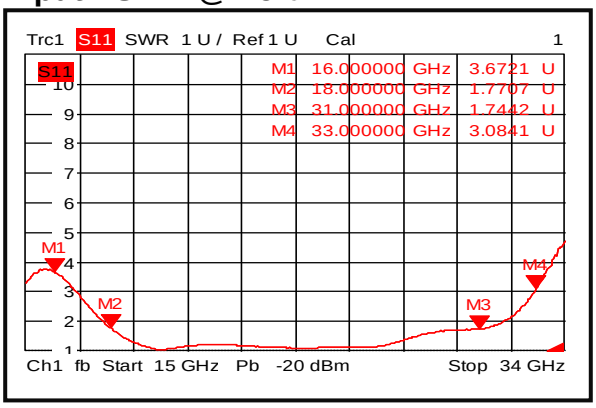
Isolation @+25℃



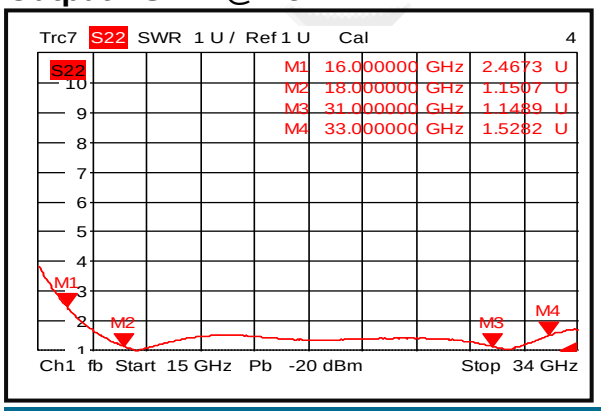
Gain @-45℃



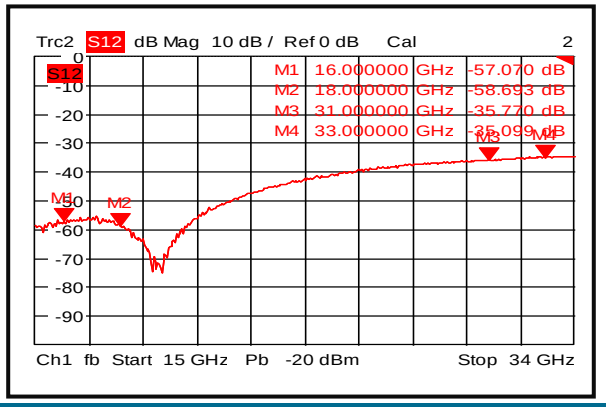
Input VSWR @-45℃



Output VSWR @-45℃



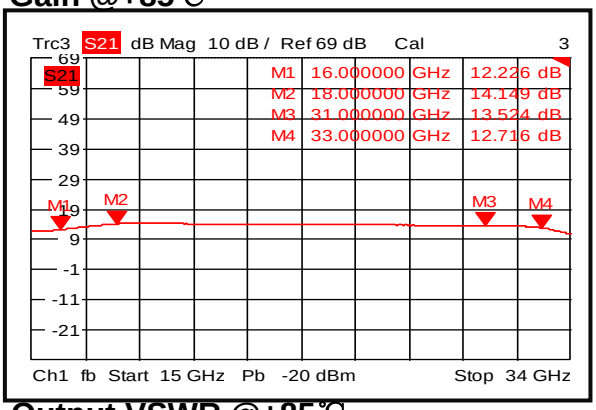
Isolation @-45℃



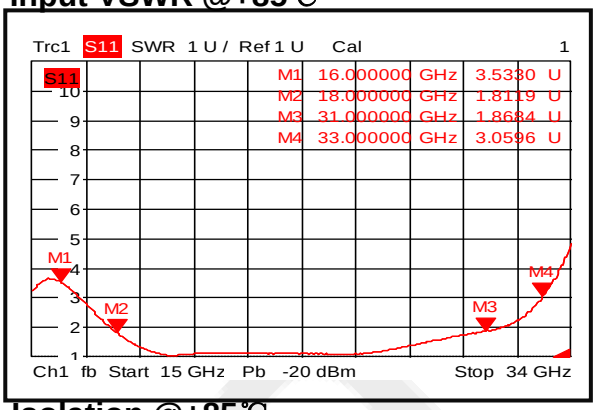
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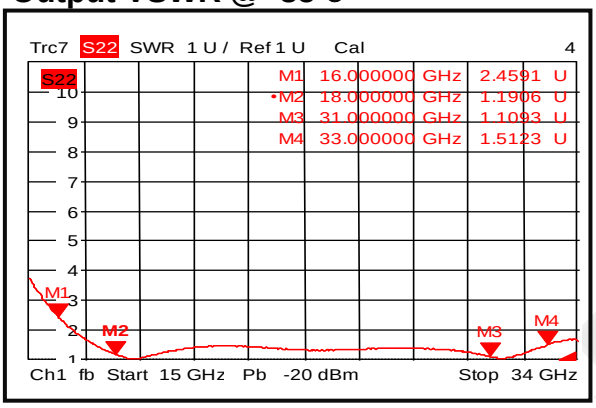
Gain @+85℃



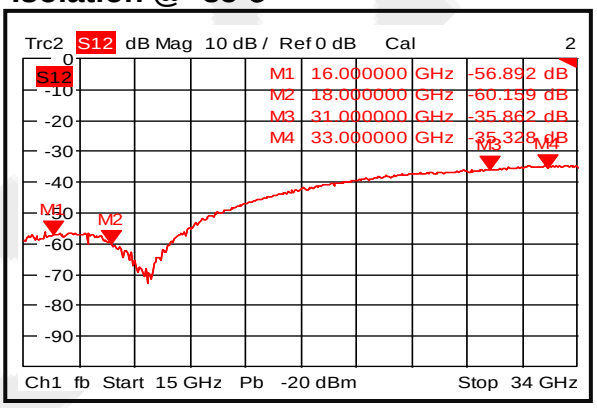
Input VSWR @+85℃



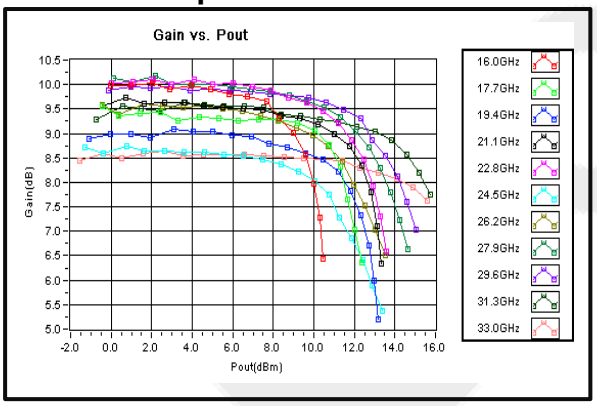
Output VSWR @+85℃



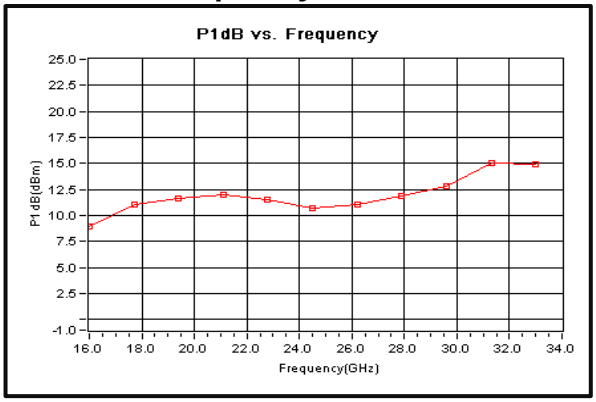
Isolation @+85℃



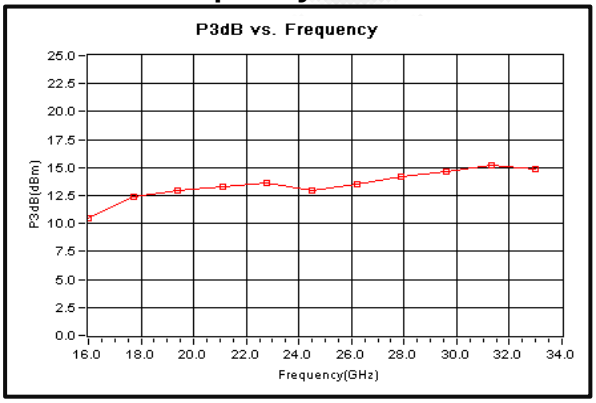
Gain vs. Output Power



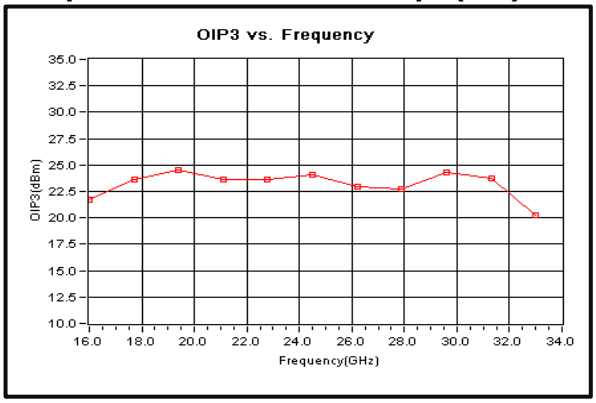
P1dB vs. Frequency



P3dB vs. Frequency



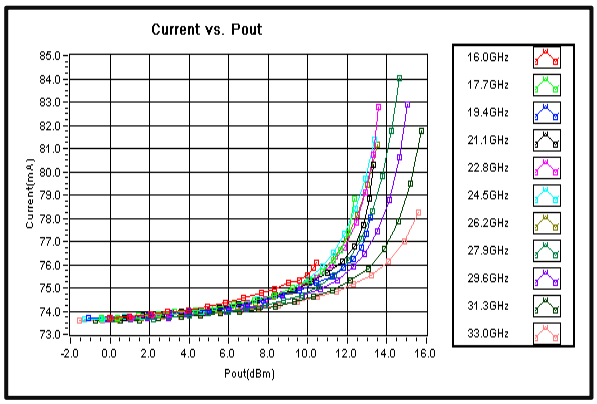
Output Third Order Intercept (IP3)



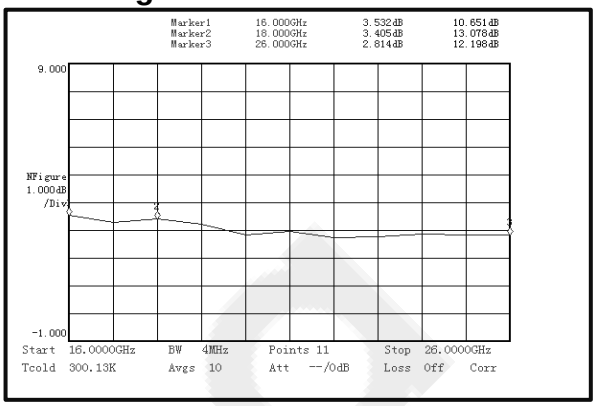
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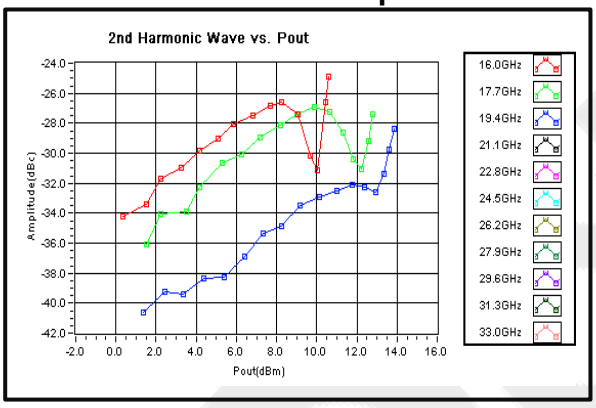
Current



Noise Figure



2nd Harmonic Wave Output Power



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