P/N:DBLNA235004500A

QOTANA TECHNOLOGIES

Wide Band Low Noise Amplifier 35GHz~45GHz

Features

- Gain: 16dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +6dBm Typical
- Supply Voltage: +4 V @ 87mA
- 50 Ohm Matched Input / Output
- Size: 0.63” x 0.59” x 0.31”



Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics

RF Microwave & VSAT
Test Instrument

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	35		40	40		45	GHz
Gain	15	16		10	14		dB
Gain Flatness		±1.5			±2.0		dB
Gain Variation Over Temperature(-45 ~ +85)		±1.5			±1.5		dB
Noise Figure		2.5	3.5		3.0	3.8	dB
Input VSWR		1.6			1.5		: 1
Output VSWR		1.5			1.5		: 1
Output 1dB Compression Point (P1dB)	3	5		4	6		dBm
Saturated Output Power (Psat)		7			9		dBm
Output Third Order Intercept (IP3)		15			18		dBm
Supply Current (Idd) (Vcc=+4V)		87	100		87	100	mA
Isolation S12		-50			-45		dB

Weight	0.35 ounces	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 Sealed (Option with extra charge)

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Absolute Maximum Ratings

Operating Voltage	+5.5V
RF Input Power (Vcc= +4V)	-5dBm

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +4V biasing

Power OFF Procedure

Step 1	Turn off +4V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

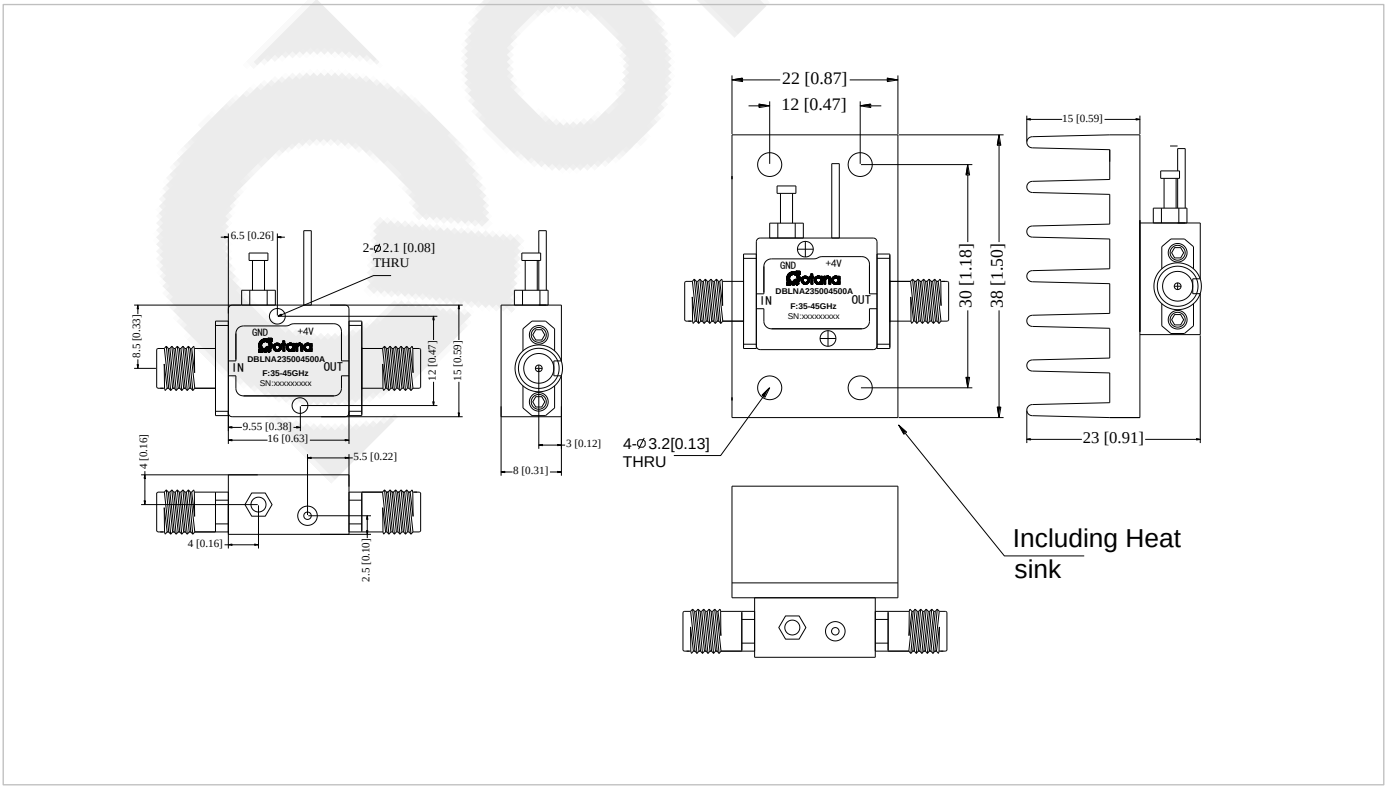
Environmental Specifications

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)

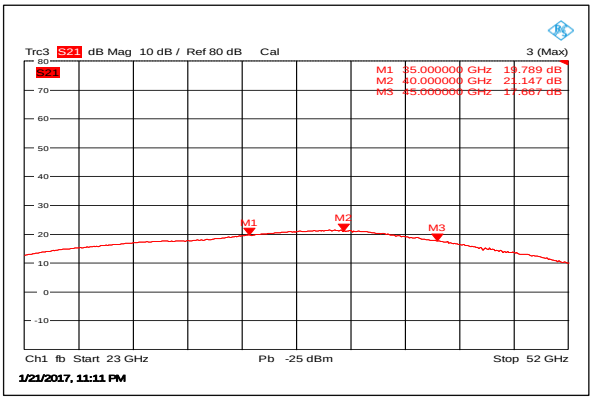
Heat Sink required during operation(Sold Seperately)



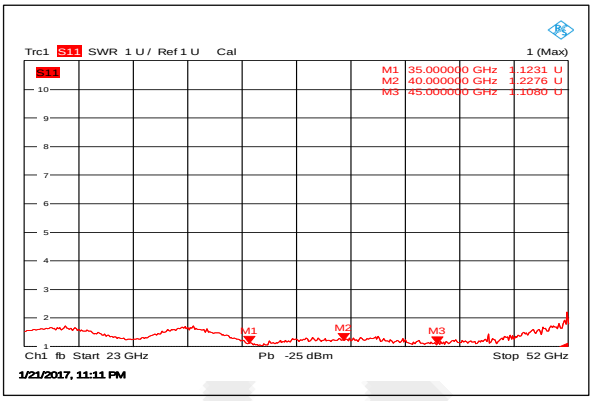
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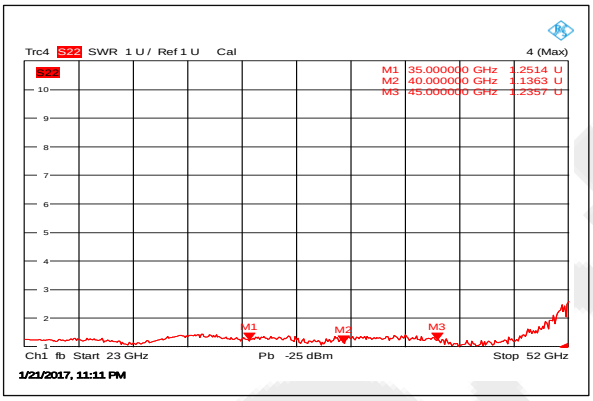
Gain



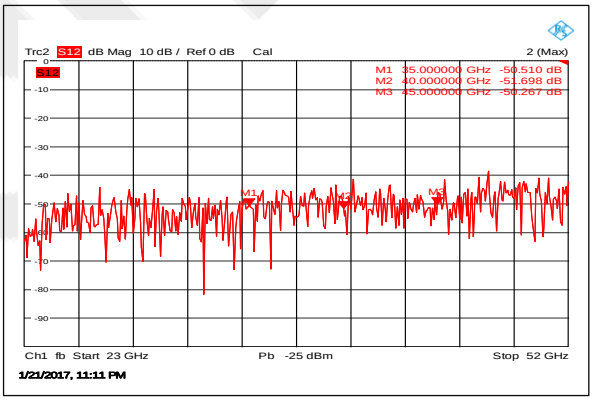
Input VSWR



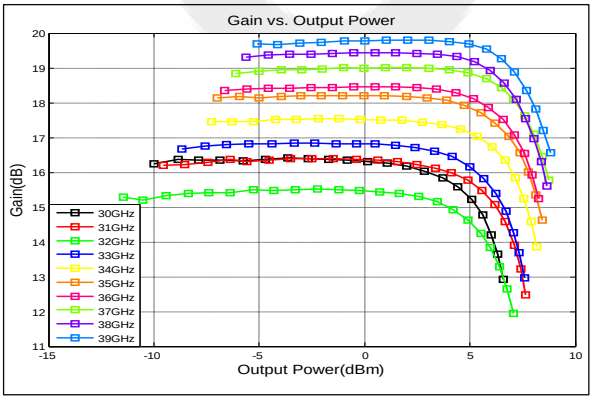
Output VSWR



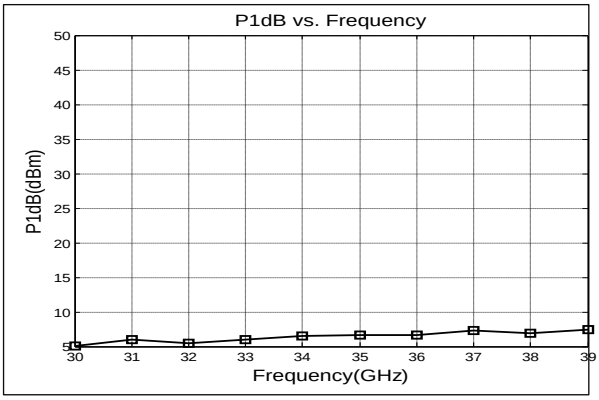
Isolation



Gain vs. Output Power

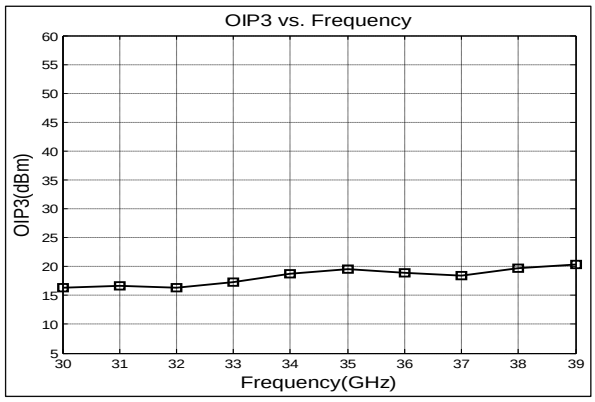


P1dB vs. Frequency

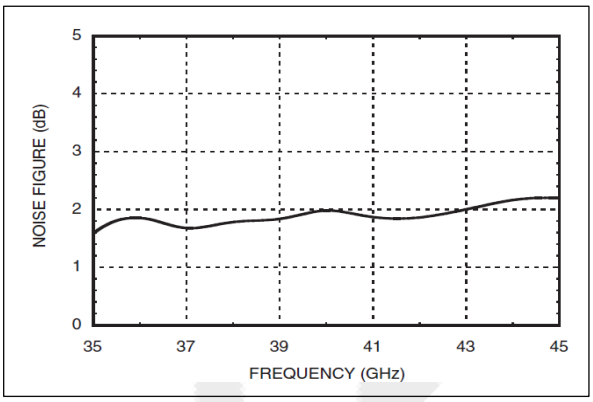


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Output Third Order Intercept (IP3)



Noise Figure



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