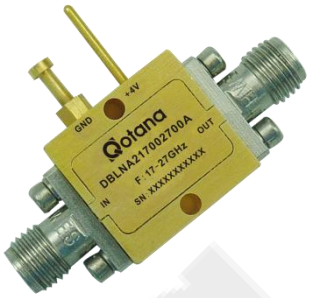
P/N:DBLNA217002700A

QOTANA TECHNOLOGIES

Low Noise Amplifier 17GHz~27GHz

Features

- Gain: 24dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +12dBm Typical
- Supply Voltage: +4V @ 75mA
- 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.	Units
Frequency Range	17		20	20		27	GHz
Gain	20	24		22	25		dB
Gain Flatness		±1.5			±1.0		dB
Gain Variation Over Temperature (-45ºC~+85ºC)		±1.0			±1.0		dB
Noise Figure		2.5	3.0		2.8	3.3	dB
Input VSWR		1.3	1.8		1.6	2.0	: 1
Output VSWR		1.6	2.0		1.8	2.5	: 1
Output 1dB Compression Point (P1dB)	9	11		10	12		dBm
Saturated Output Power (Psat)		13			14		dBm
Output Third Order Intercept (IP3)		18			20		dBm
Supply Current (Idd) (Vcc=+4V)		75	100		75	100	mA
Isolation S12		-40			-35		dB

Weight	0.35 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)

QOTANA TECHNOLOGIES

Low Noise Amplifier 17GHz~27GHz

Absolute Maximum Ratings

Operating Voltage	+5.5V
RF Input Power (RFIN)	-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

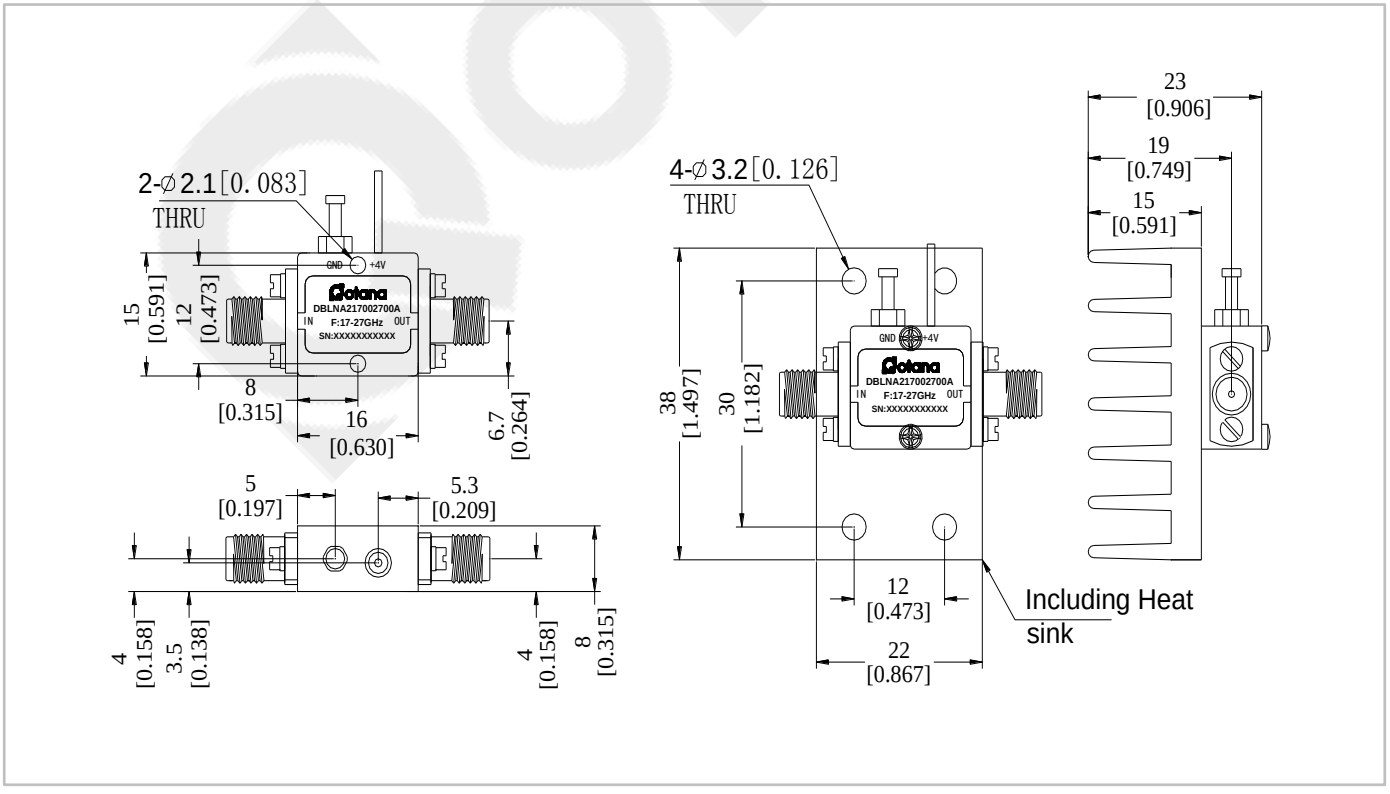
Environmental Specifications

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)

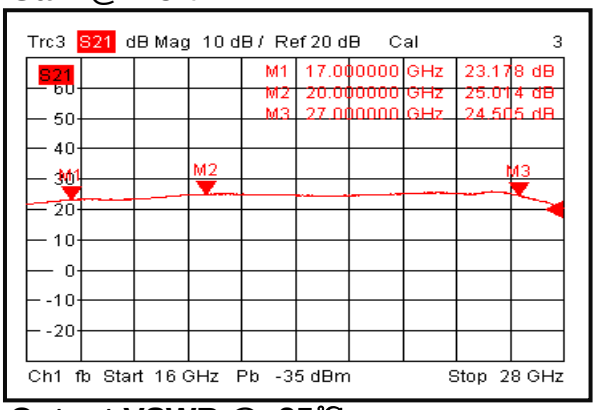
Heat Sink required during operation(Sold Seperately)



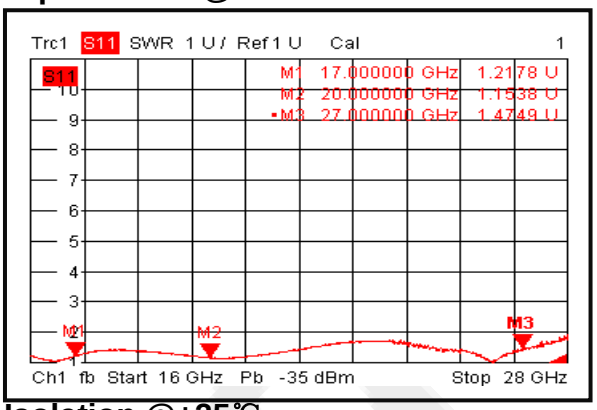
QOTANA TECHNOLOGIES

Low Noise Amplifier 17GHz~27GHz

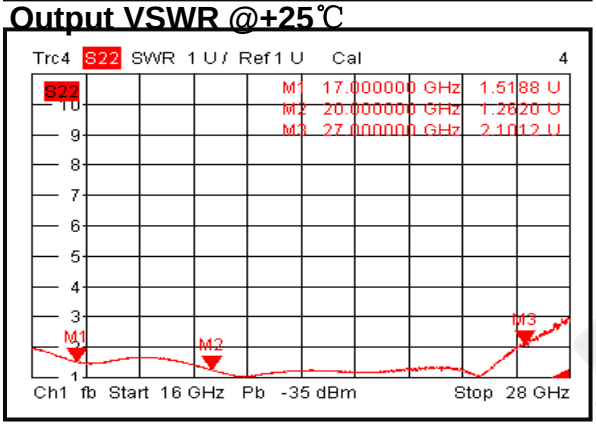
Gain @+25℃



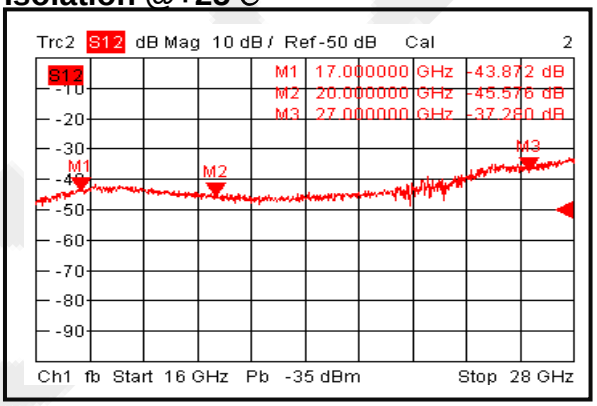
Input VSWR @+25℃



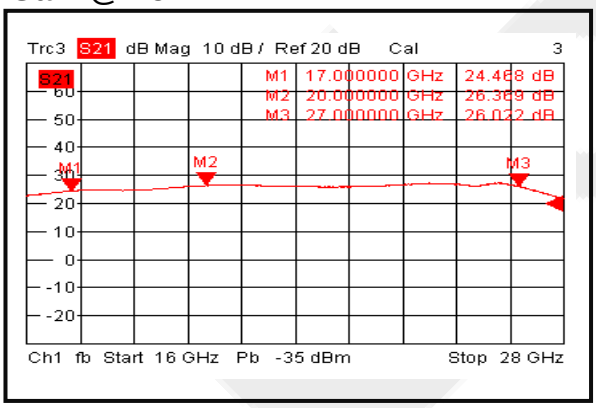
Output VSWR @+25℃



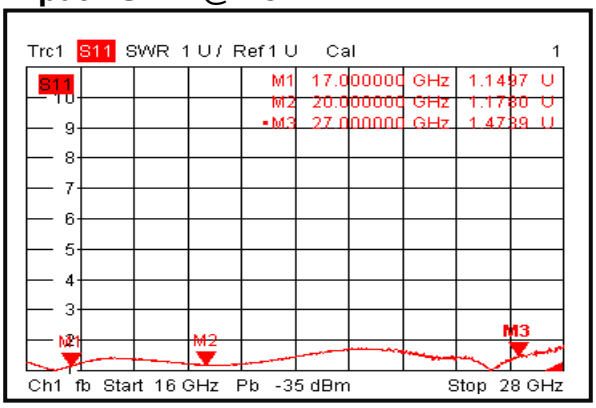
Isolation @+25℃



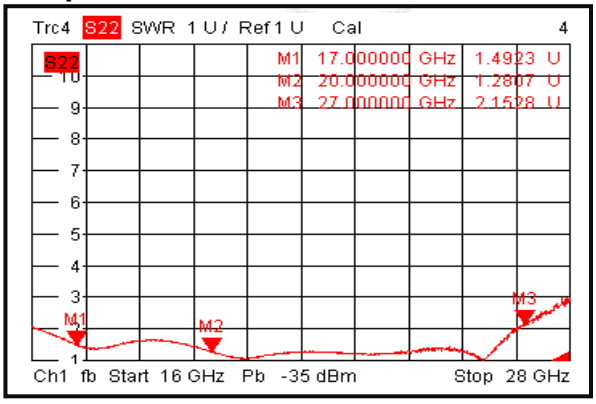
Gain @-45℃



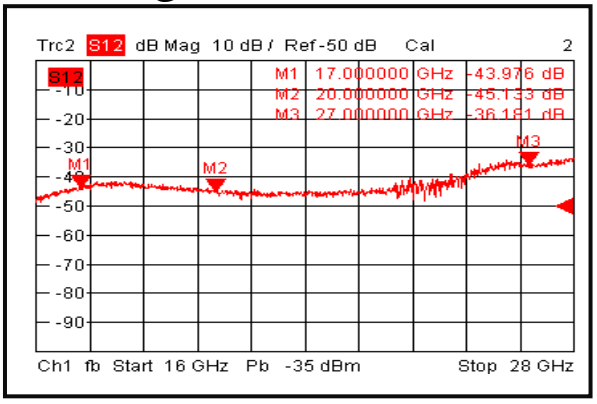
Input VSWR @-45℃



Output VSWR @-45℃



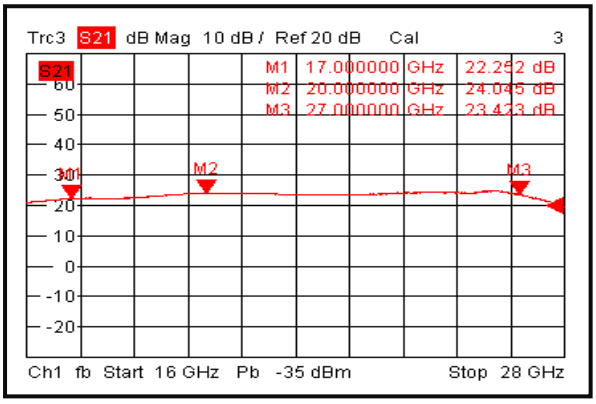
Isolation @-45℃



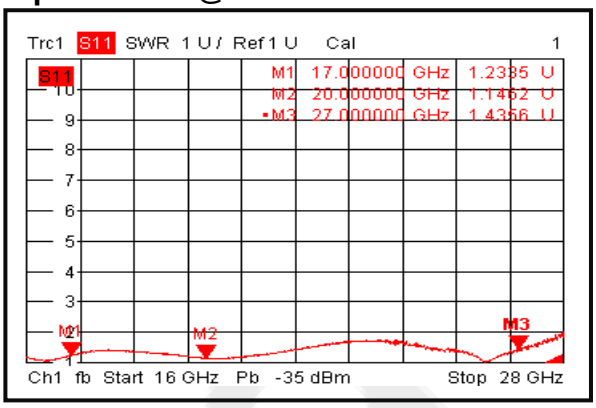
QOTANA TECHNOLOGIES

Low Noise Amplifier 17GHz~27GHz

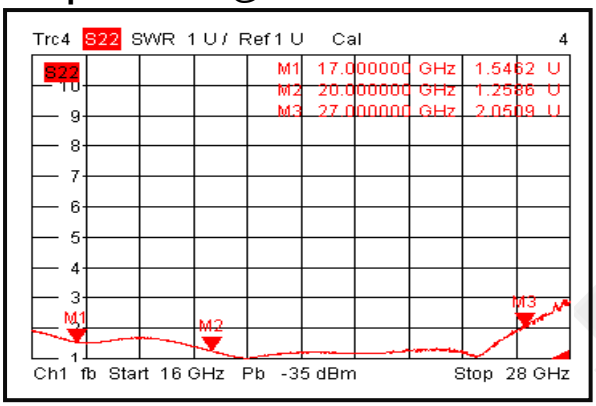
Gain @+85℃



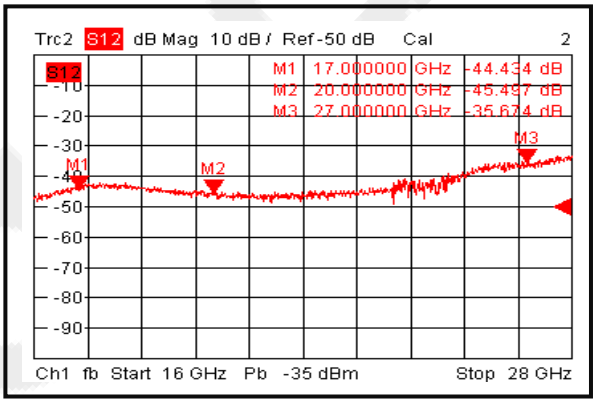
Input VSWR @+85℃



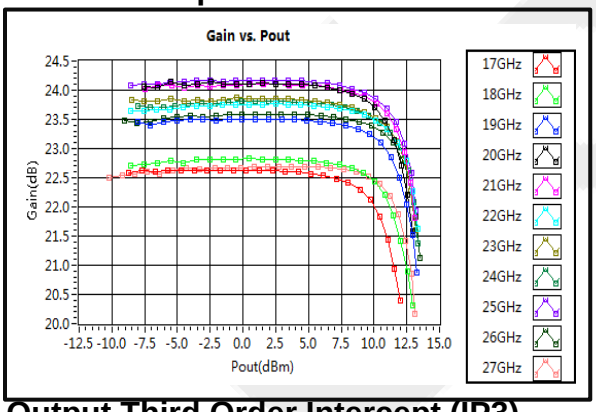
Output VSWR @+85℃



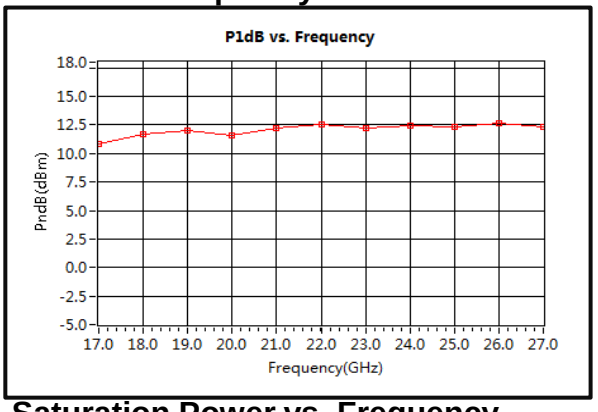
Isolation @+85℃



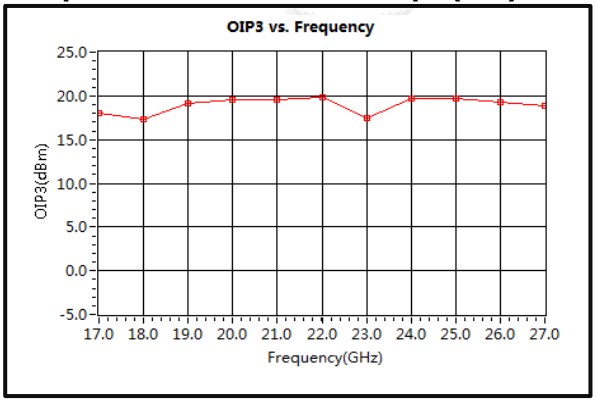
Gain vs. Output Power



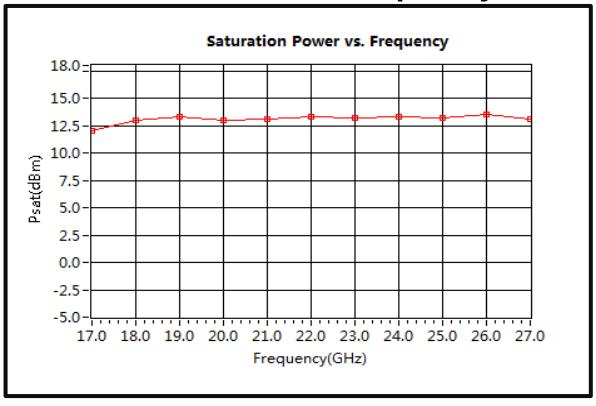
P1dB vs. Frequency



Output Third Order Intercept (IP3)



Saturation Power vs. Frequency



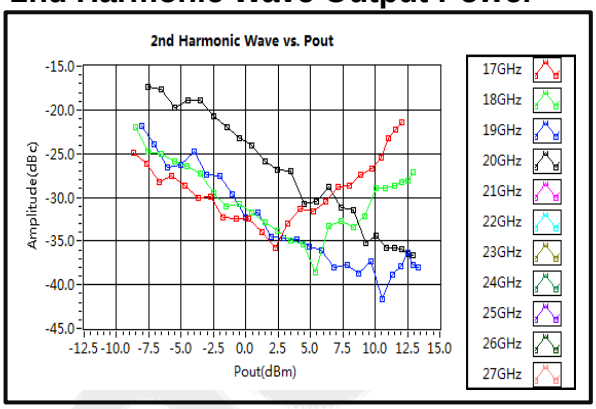
QOTANA TECHNOLOGIES

Low Noise Amplifier 17GHz~27GHz

Noise Figure



2nd Harmonic Wave Output Power



QOTANA TECHNOLOGIES and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit www.qotana.com for additional data sheets and product information.