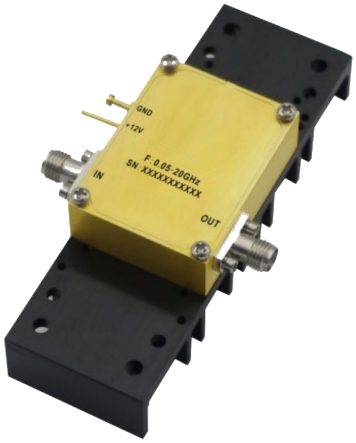
Atlantic Microwave
A Division of ETL Systems

A-LNAKX-380002-S5S5

Ultra Wide Band Low Noise Amplifier

50MHz~20GHz



- Gain:29dB Typical
- Noise Figure: 1.8dB Typical
- P1dB Output Power: 16dBm Typical
- Supply Voltage: +12V
- Wireless Infrastructure
- 5G Communication
- Test & Measurement Instrument
- RF Microwave & VSAT
- Fibre Optics

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	0.05		0.2	0.2		10	10		20	GHz
Gain	26	29		25	29		22	25		dB
Gain Flatness		±1.0	±2.0		±1.0	±1.5		±1.0	±1.0	dB
Gain Variation Over Temperature (-40°C~+85°C)		±0.5			±0.8			±1.0		dB
Noise Figure		3.0			1.8	3.5		2.5	4.0	dB
Input VSWR		2.5			1.8	2.0		1.8	2	:1
Output VSWR		1.8	2.0		1.5	1.8		1.5	1.8	:1
Output 1dB Compression Point (P1dB)	16	18		15	17		12	14		dBm
Saturated Output Power (Psat)		19			18			16		dBm
Output Third Order Intercept (OIP3)		26			27			25		dBm
Supply Current (Vcc=+12V)		150	200		150	200		150	200	mA
Isolation S12		-65			-60			-55		dB

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Weight	Net	1.3 Max. ounces	Impedance	50ohms
	Including Heat Sink	3.2 Max. ounces	Material	Aluminium
Input / Output Connectors		SMA–Female	Package Sealing	Epoxy Sealed (Standard)
Finish		Gold Plated		Hermetically Sealed (Optional with extra charge)

Absolute Maximum Ratings	
Operating Voltage	+15V
RF Input Power	+2dBm

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	-40°C~+85°C (case temperature)
Storage Temperature	-50°C~+105°C
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 35ºC, 95% RH at 40ºC
Shock	20G for 11msec half since wave, 3axis both directions

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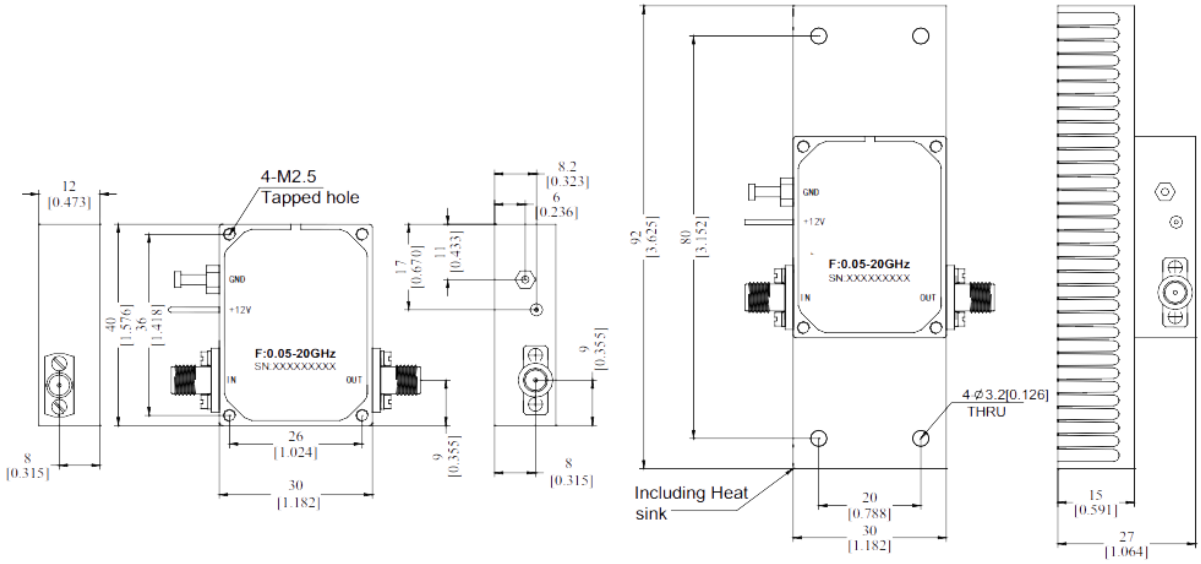
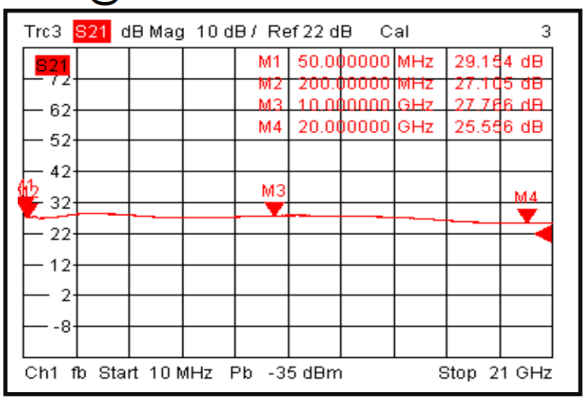
Outline Drawing:

All Dimensions in mm (inches)
Housing Tolerances ±0.1 (0.004)

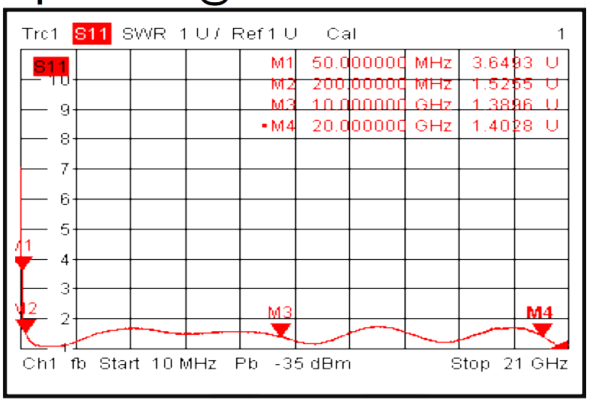
Heat Sink required during operation(Sold Separately)



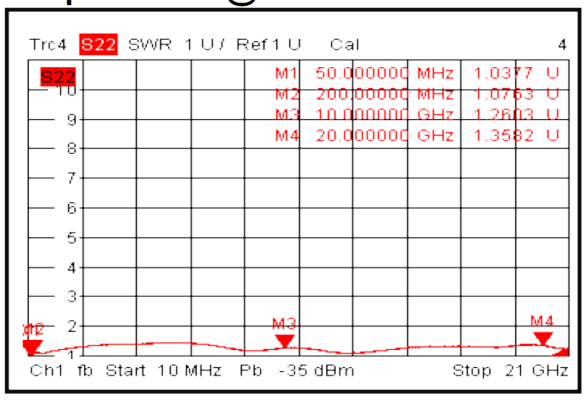
Gain @+25℃



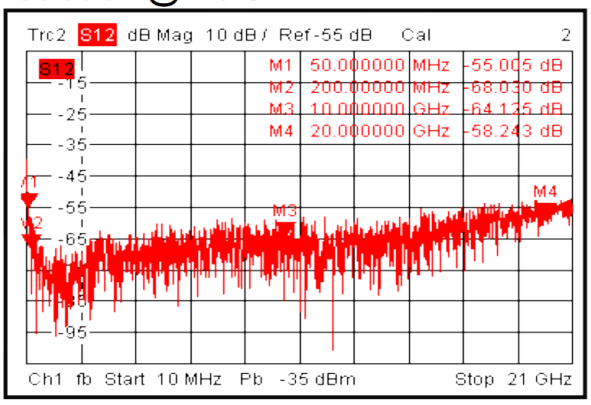
Input VSWR @+25℃



Output VSWR @+25℃



Isolation @+25℃



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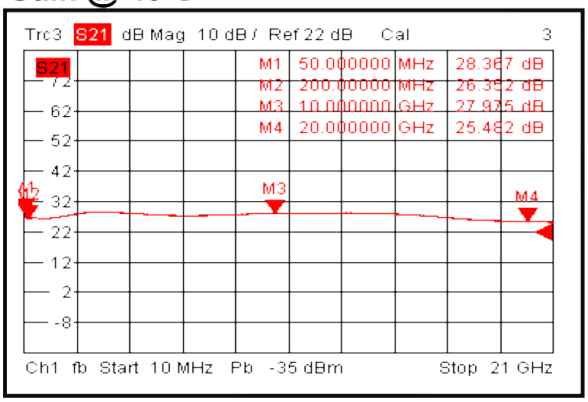
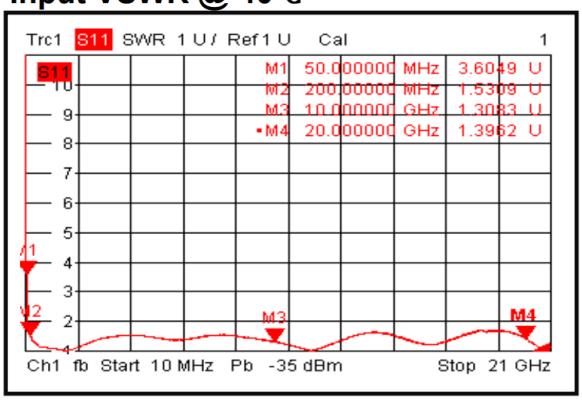
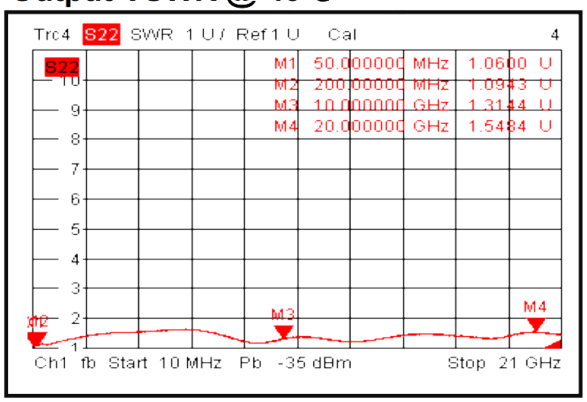
Gain @-40℃



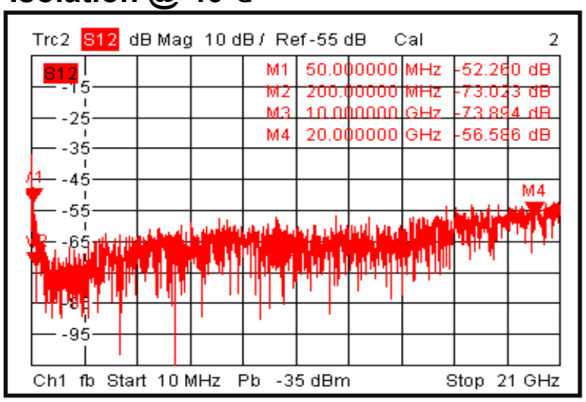
Input VSWR @-40℃



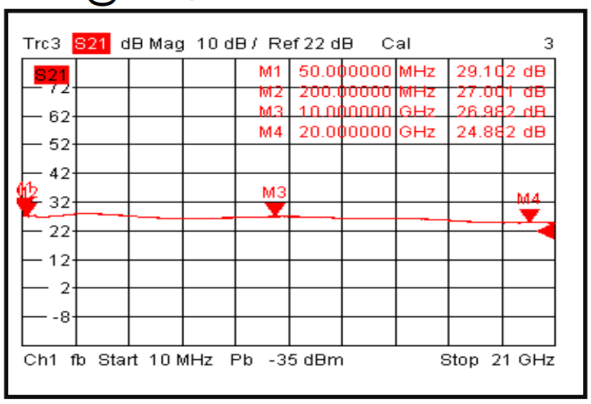
Output VSWR @-40℃



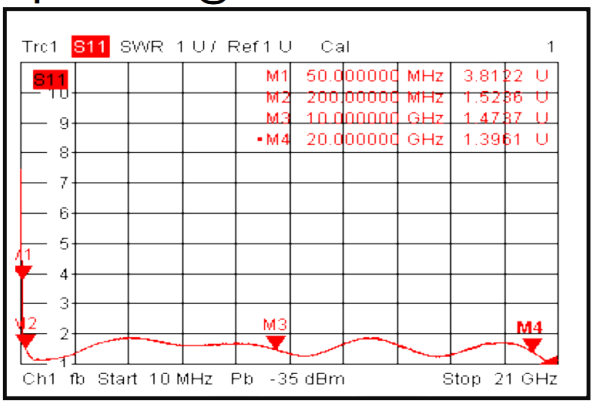
Isolation @-40℃



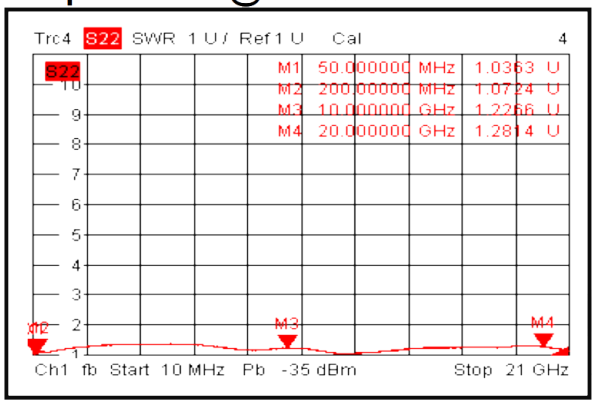
Gain @+85℃



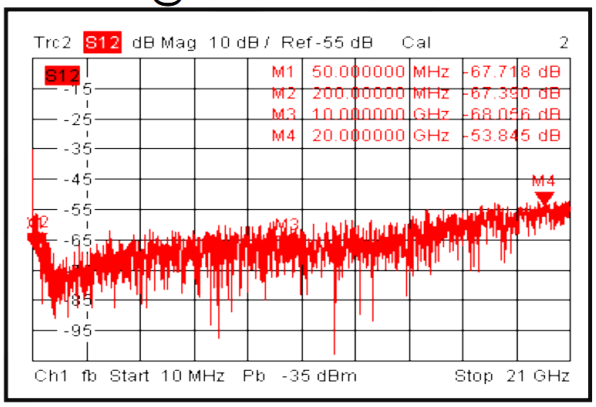
Input VSWR @+85℃



Output VSWR @+85℃



Isolation @+85℃



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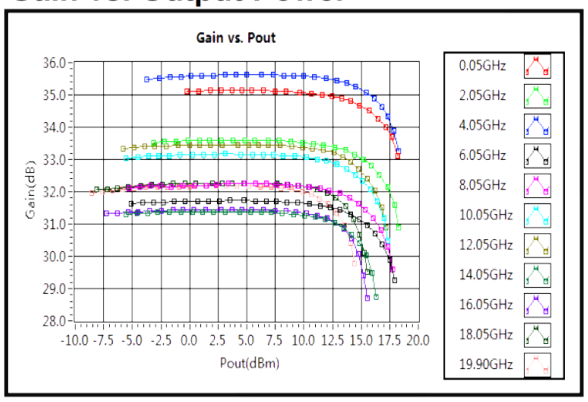
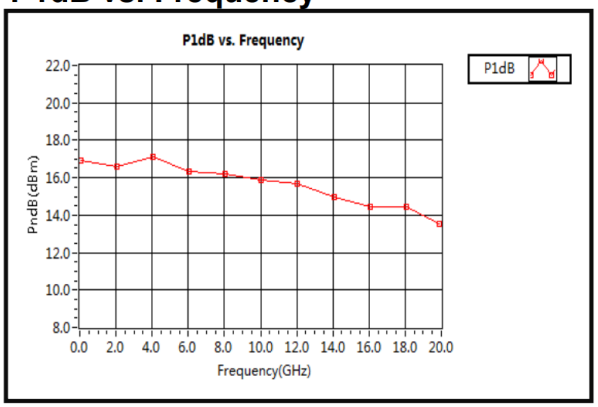
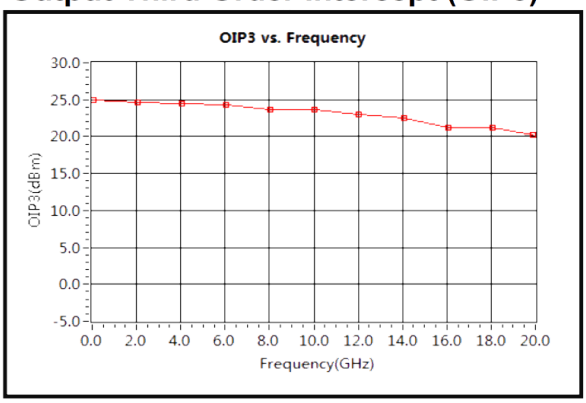
Gain vs. Output Power



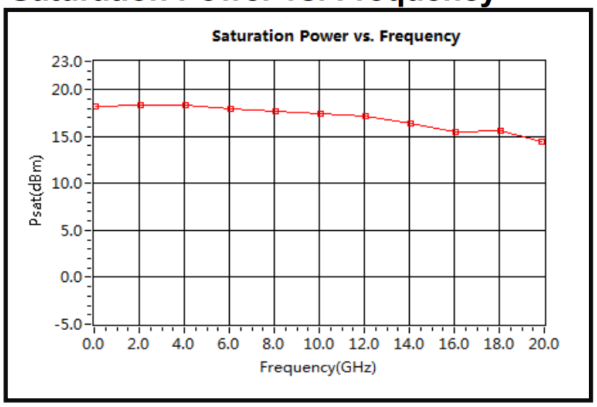
P1dB vs. Frequency



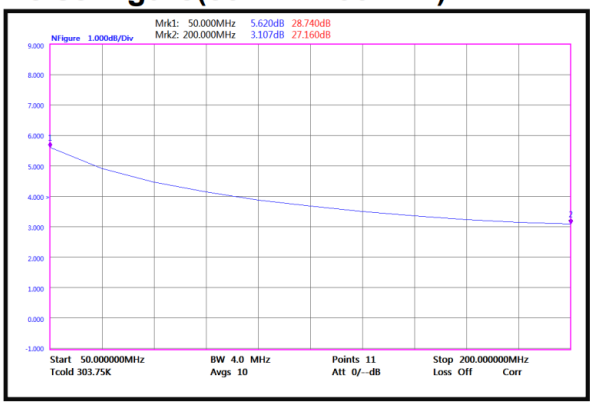
Output Third Order Intercept (OIP3)



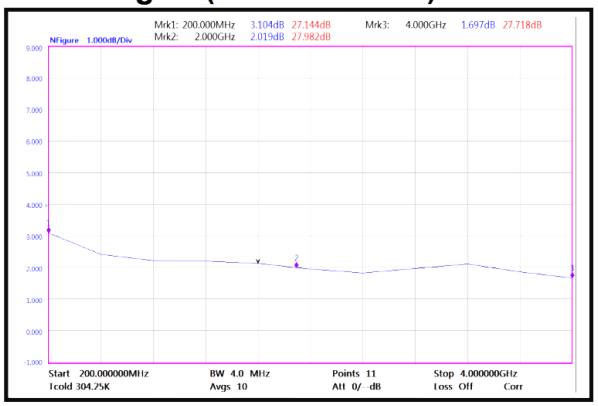
Saturation Power vs. Frequency



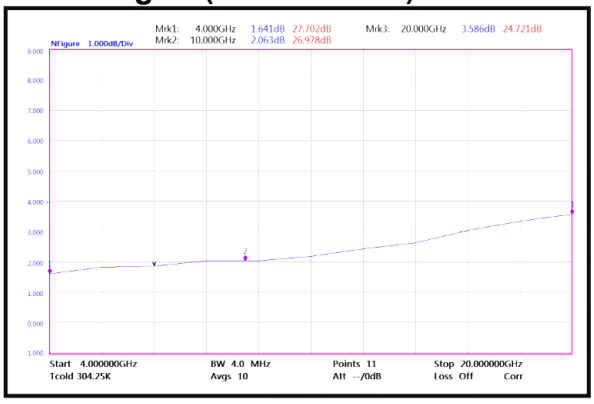
Noise Figure(50MHz-200MHz)



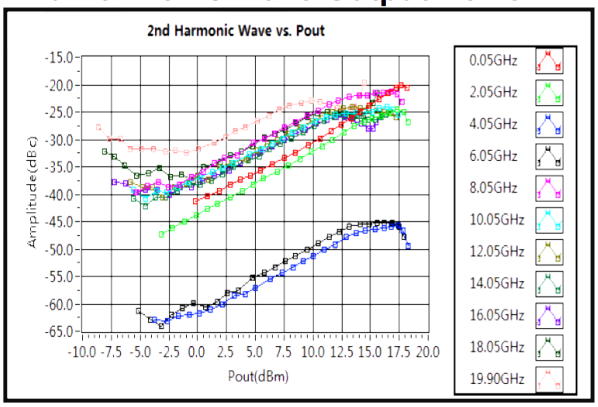
Noise Figure(200MHz-4GHz)



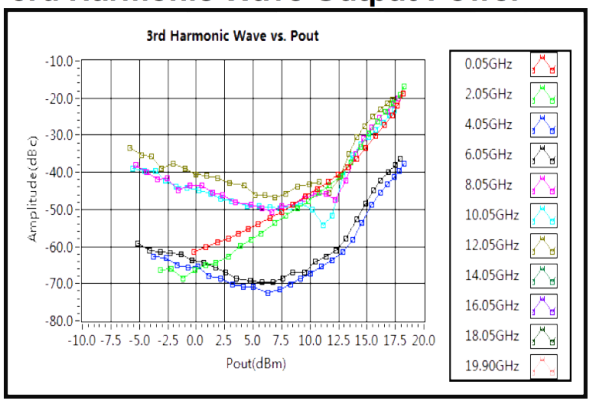
Noise Figure(4GHz-20GHz)



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power