Wide Band Low Noise Amplifier 2GHz~20GHz

Features

- Gain: 29dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: +26dBm Typical
- Supply Voltage: +12V @ 300mA

Typical Applications

- Wireless Infrastructure
- 5G communication
- Test and measurement Instrument

RF Microwave & VSAT
Fiber Optics

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	2		8	8		20	GHz
Gain	28	30		28	29.5		dB
Gain Flatness		±0.8	±1.0		±0.8	±1.0	dB
Gain Variation Over Temperature (-40ºC~+85ºC)		±1.0			±1.0		dB
Noise Figure		2.5	4.8		3.0	5.0	dB
Input VSWR		1.5	1.8		1.5	1.8	: 1
Output VSWR		1.5	1.8		1.5	1.8	: 1
Output Power for 1 dB Compression (P1dB)	25	26		21	23		dBm
Saturated Output Power (Psat)		28			27		dBm
Output Third Order Intercept (OIP3)		34			32		dBm
Isolation S12	60	65		55	60		dB
Supply Current (Idd) (Vcc=+12V)		300	350		300	350	mA

Weight	3.17 ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	copper
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Option with extra charge)

Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power(25C° 50Ω)	+5dB m

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

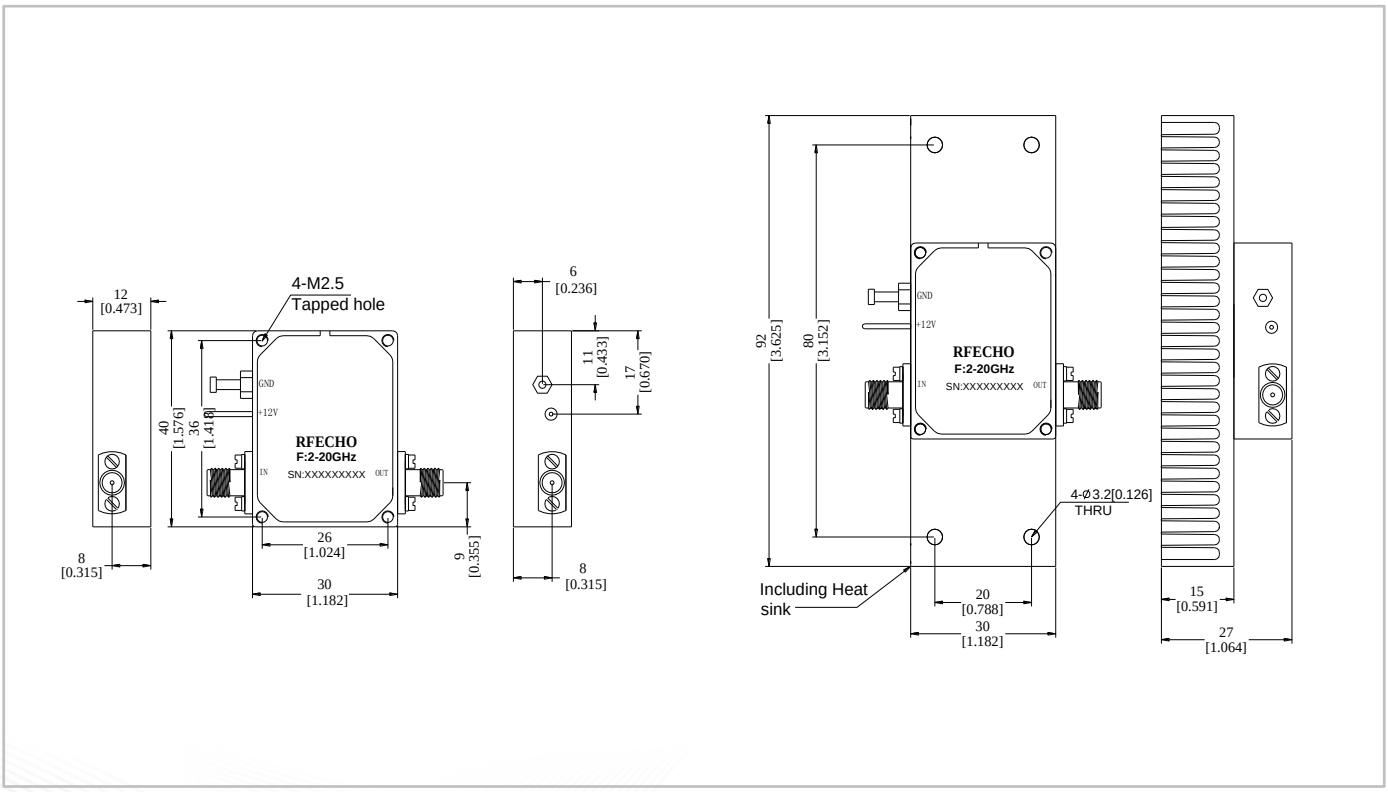
Environmental Specifications

Operational Temperature	-40ºC~+85ºC
Storage Temperature	-50ºC~+105ºC
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 sine wave,3 axis both directions

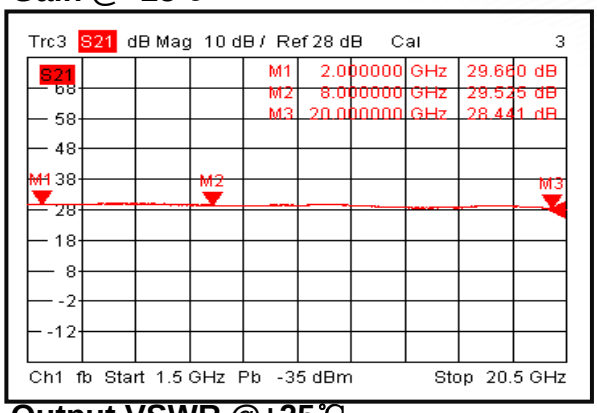
Outline Drawing:

All Dimensions in mm (inches)

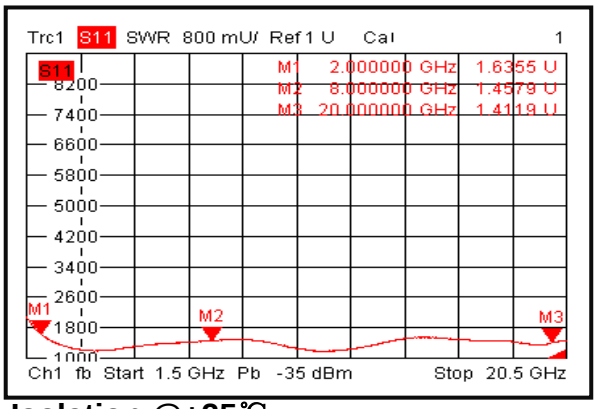
Heat Sink required during operation(Sold Separately)



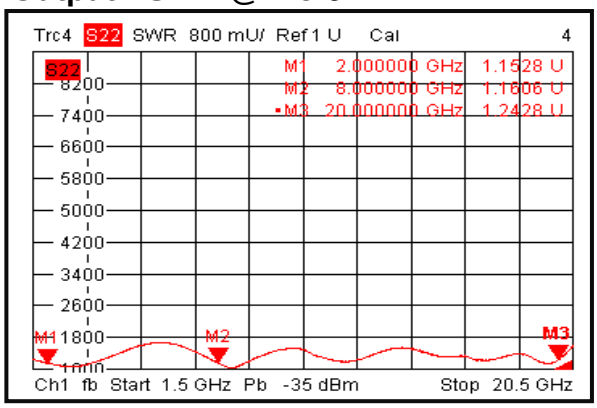
Gain @+25℃



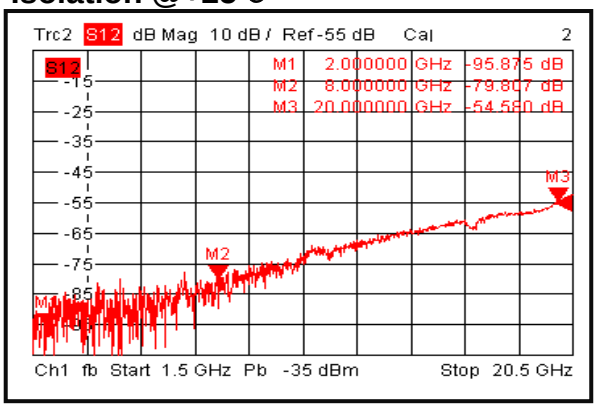
Input VSWR @+25℃



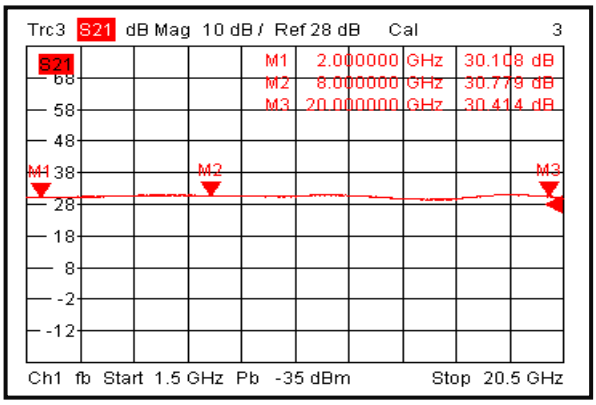
Output VSWR @+25℃



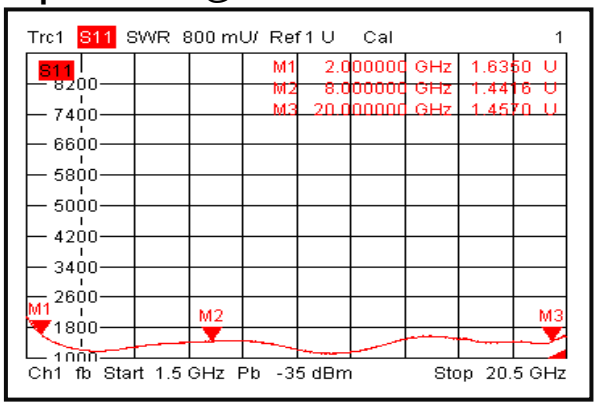
Isolation @+25℃



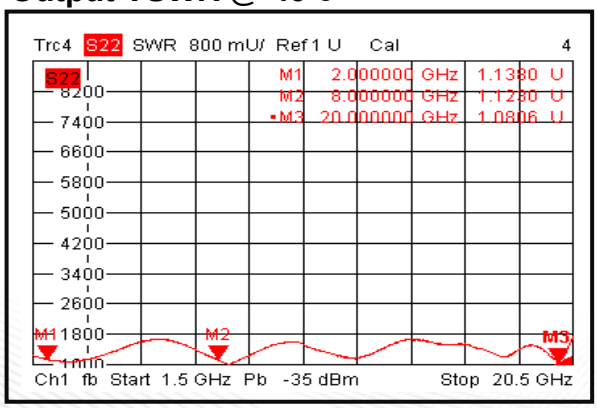
Gain @-40℃



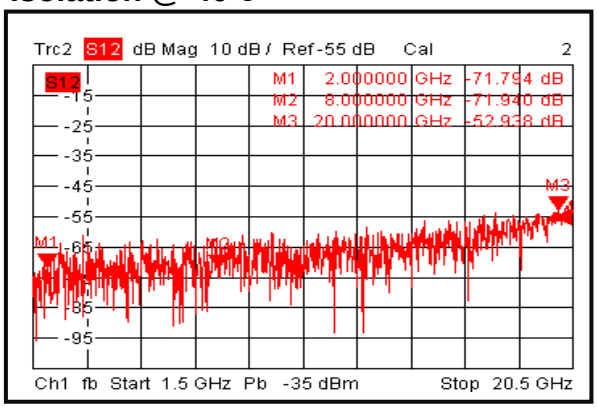
Input VSWR @-40℃



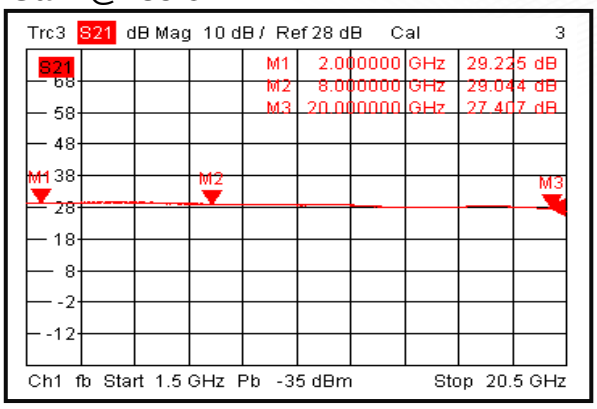
Output VSWR @-40℃



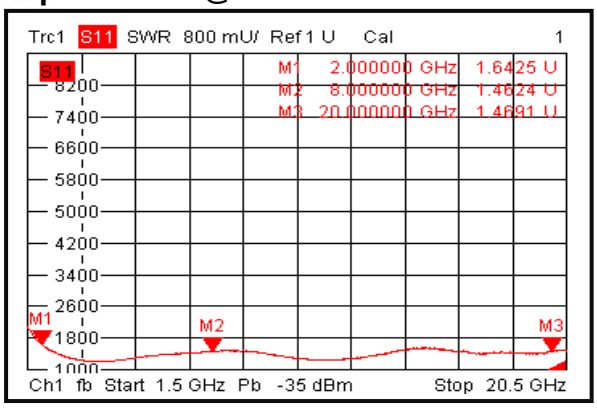
Isolation @-40℃



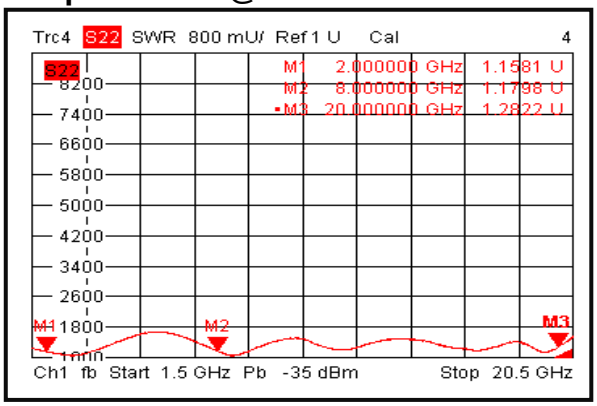
Gain @+85℃



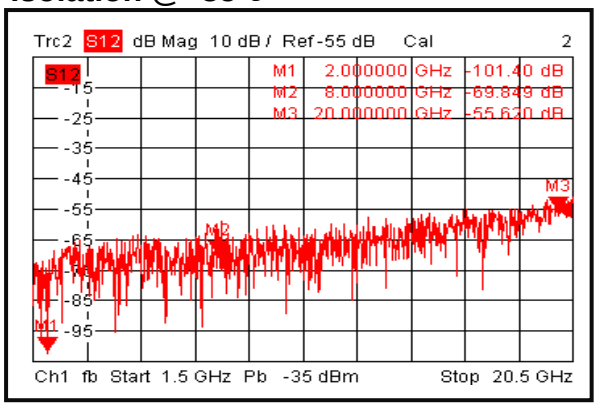
Input VSWR @+85℃



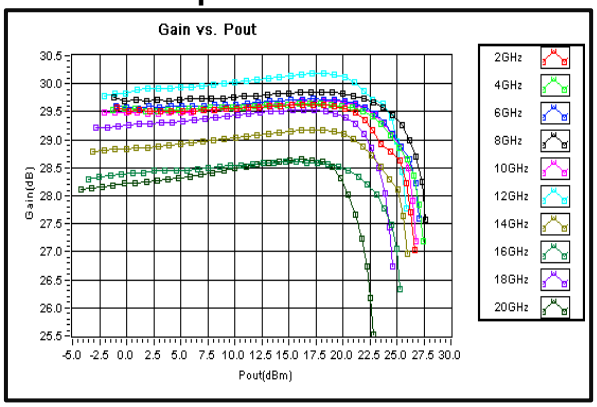
Output VSWR @+85℃



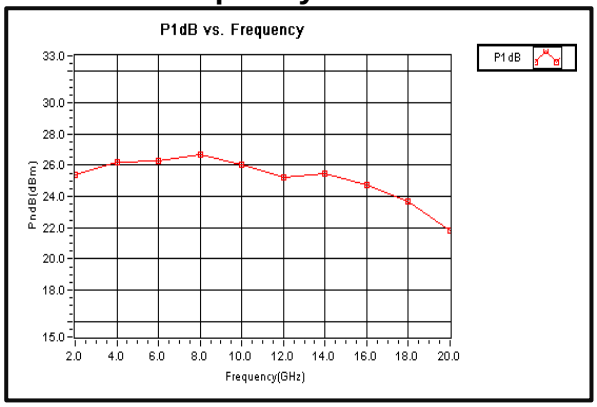
Isolation @+85℃



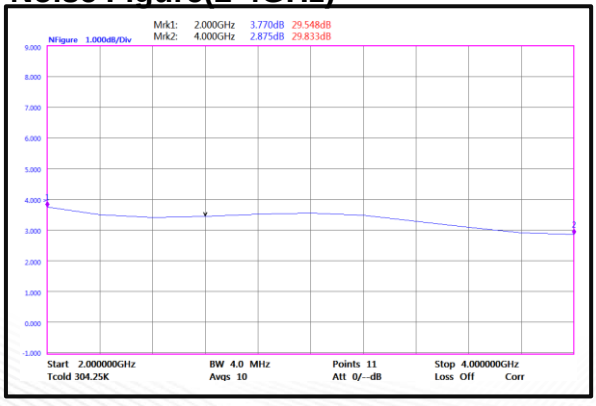
Gain vs. Output Power



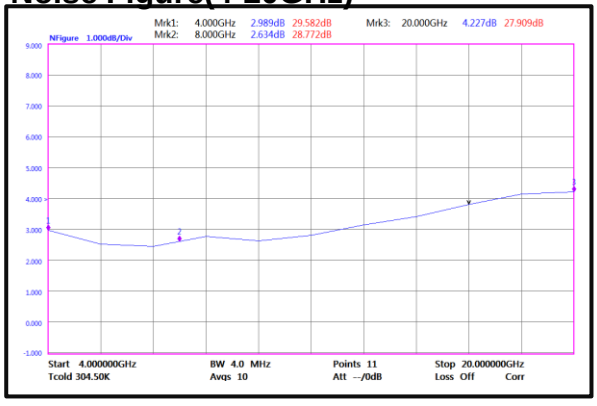
P1dB vs. Frequency



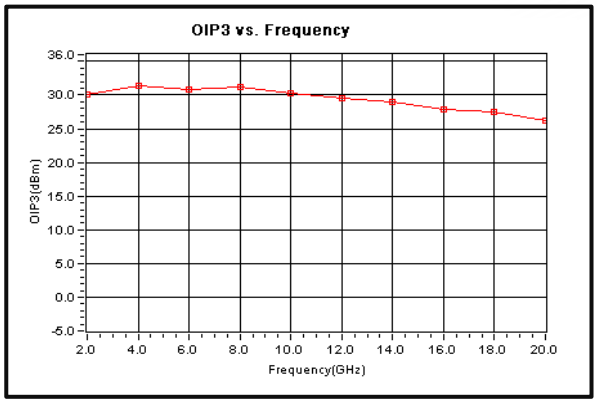
Noise Figure(2-4GHz)



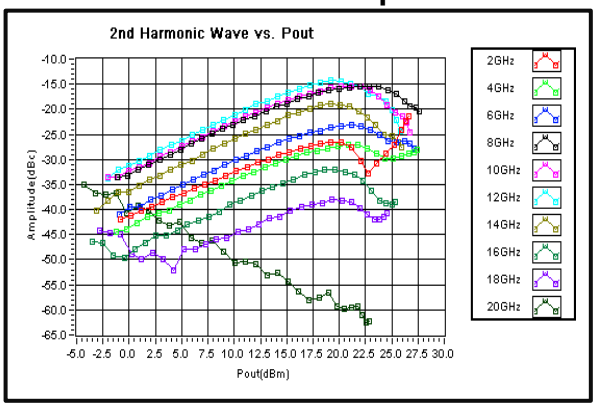
Noise Figure(4-20GHz)



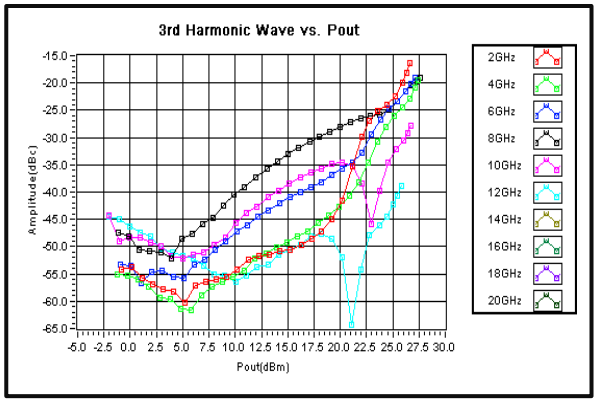
Output Third Order Intercept (OIP3)



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power