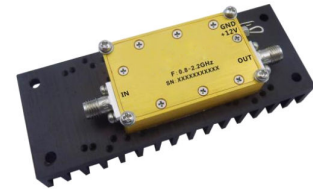




# Low Noise Amplifier 0.8GHz~2.2GHz

## Features

- Gain:49dB Typical
- Noise Figure: 1.0dB Typical
- P1dB Output Power: +20dBm Typical
- Supply Voltage: +12V @ 240mA
- 50 Ohm Matched



## Typical Applications

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

RF Microwave & VSAT  
Fiber Optics

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.
Frequency Range	0.8		1.5	1.5		2.2	GHz
Gain	46	49	53	46	49	53	dB
Gain Flatness		±0.5	±1.0		±0.5	±1.0	dB
Gain Variation Over Temperature (-40°C~+85°C)		±0.5			±1.0		dB
Noise Figure		1.0	1.5		1.0	1.5	dB
Input VSWR		1.6	2.0		1.7	2.2	: 1
Output VSWR		1.5	1.8		1.5	2.0	: 1
Output 1dB Compression Point (P1dB)	18	20		18	19		dBm
Saturated Output Power (Psat)		23			21		dBm
Output Third Order Intercept (OIP3)		31			29		dBm
Supply Current (Vcc=+12V)		240	300		240	300	mA
Isolation S12		-55			-55		dB

Weight	3.5 Max.(Including Heat sink)	Impedance	50ohms
Input /Output Connectors	SMA-Female	Material	Aluminum
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Optional)



### Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power (RFIN)	-20dBm

### Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +12V biasing

### Power OFF Procedure

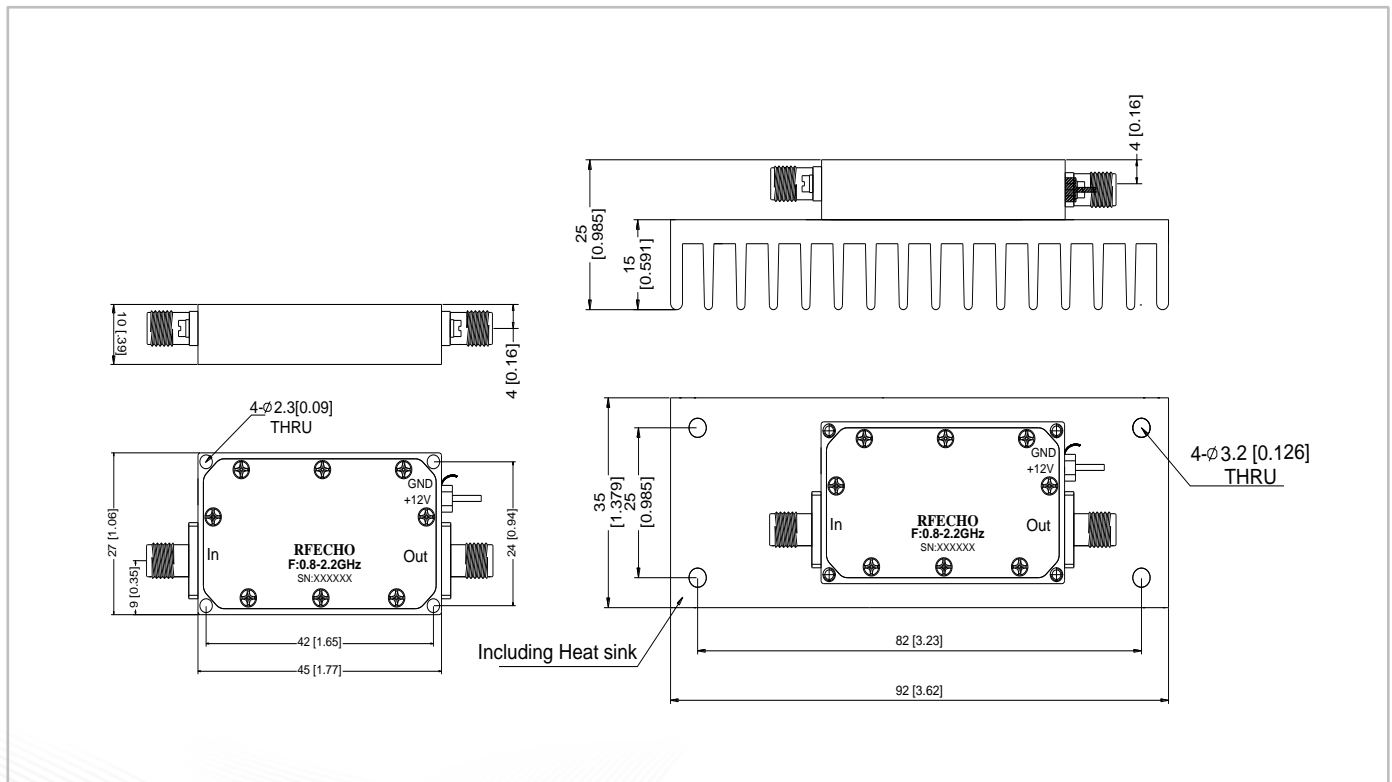
Step 1	Turn off +12V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

### Environmental Specifications

Operational Temperature	-40°C~+85°C
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 35°C, 95%RH at 40°C
Shock	20G for 11 msec half sine wave, 3 axis both directions

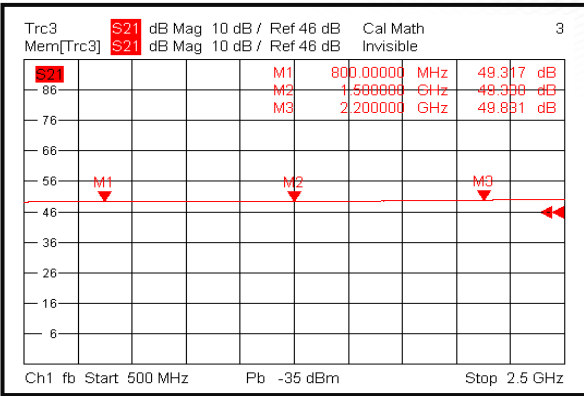
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

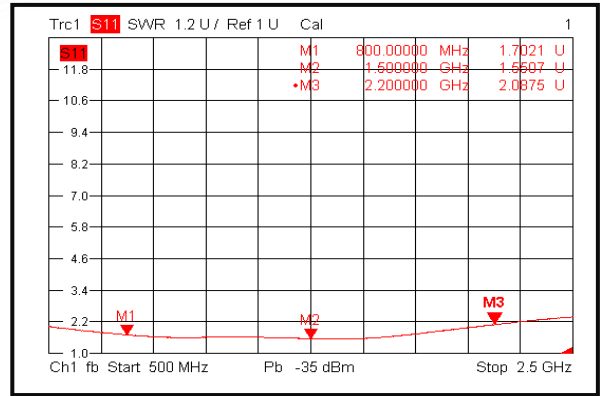




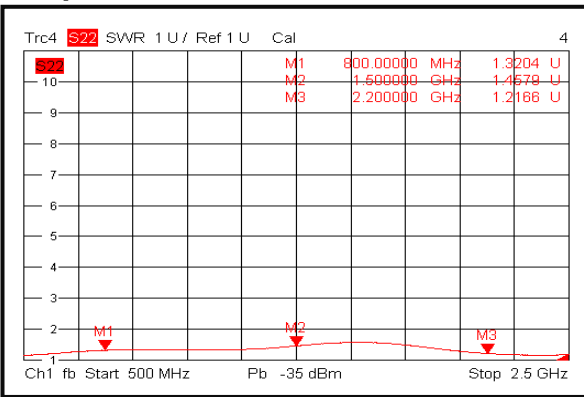
### Gain @+25°C



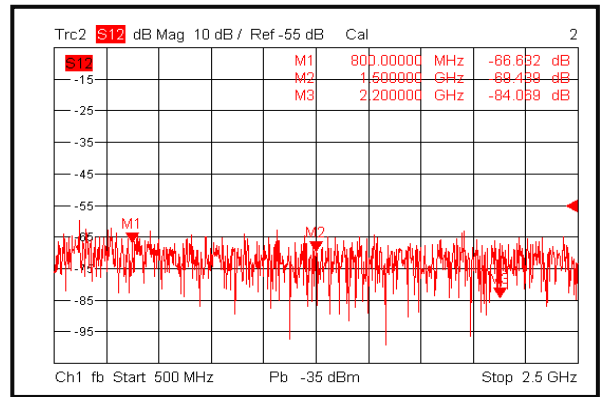
### Input VSWR @+25°C



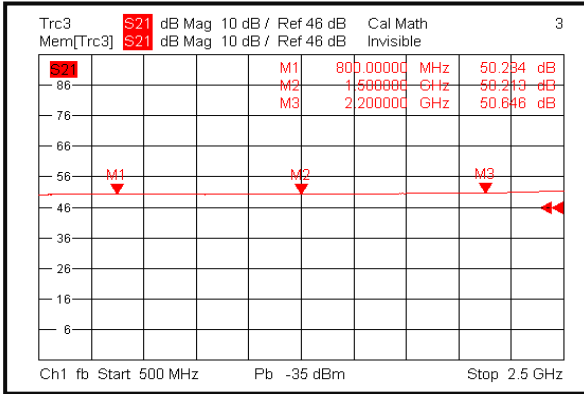
### Output VSWR @+25°C



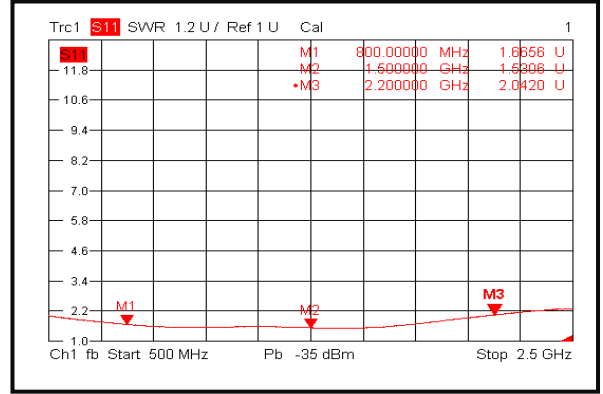
### Isolation @+25°C



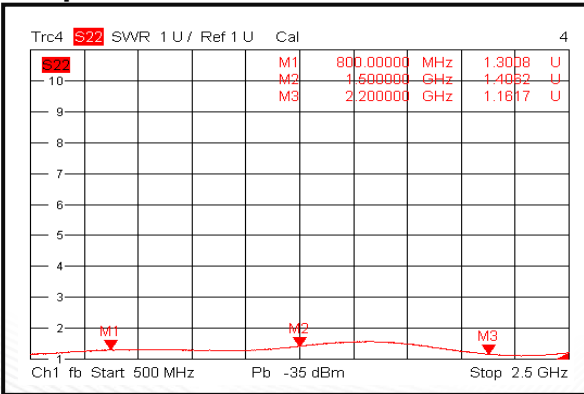
### Gain @-40°C



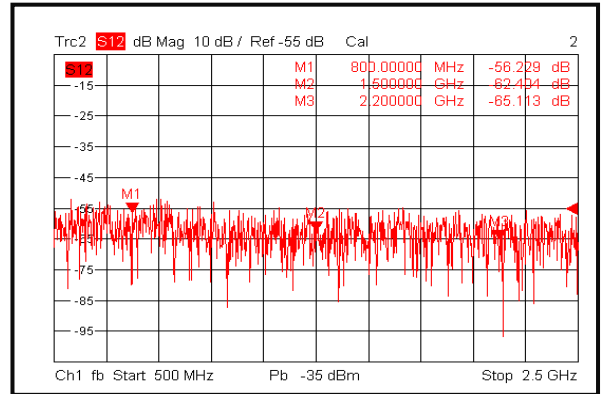
### Input VSWR @-40°C



### Output VSWR @-40°C

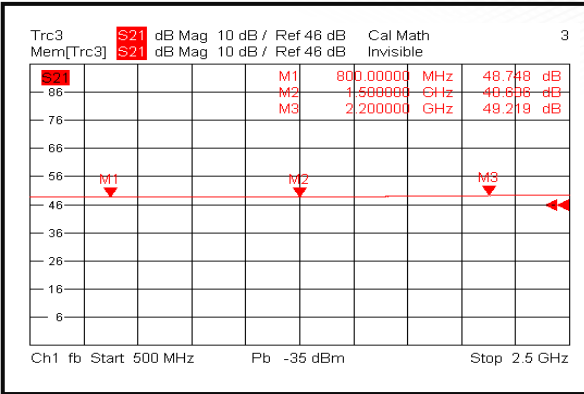


### Isolation @-40°C

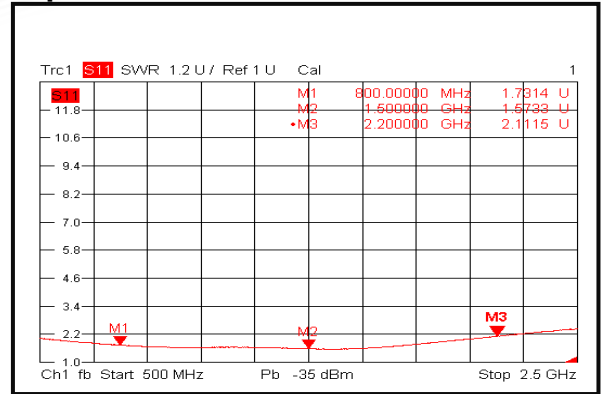




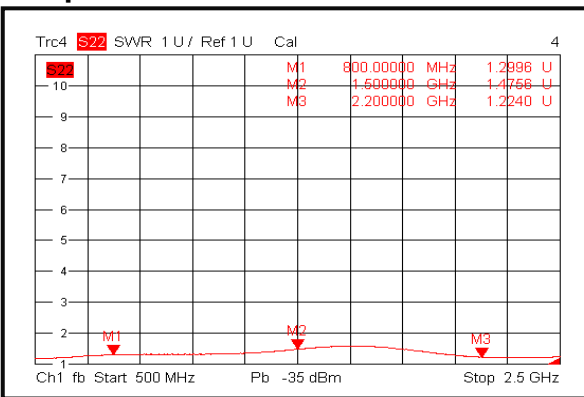
### Gain @+85°C



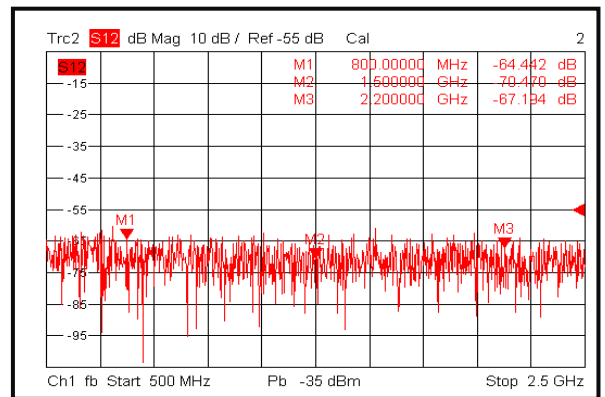
### Input VSWR @+85°C



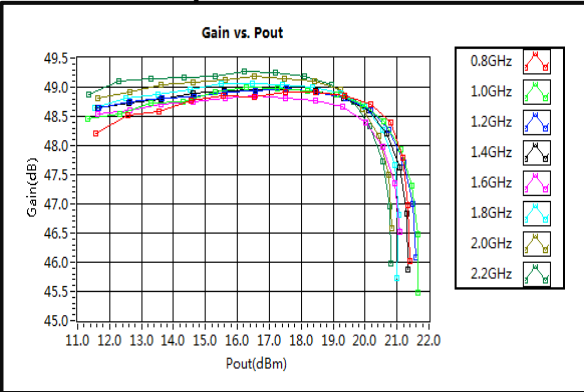
### Output VSWR @+85°C



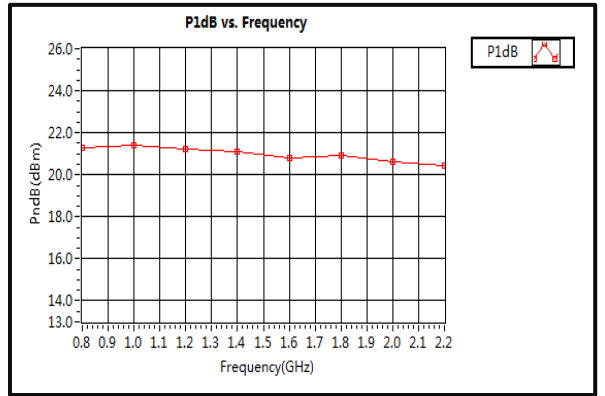
### Isolation @+85°C



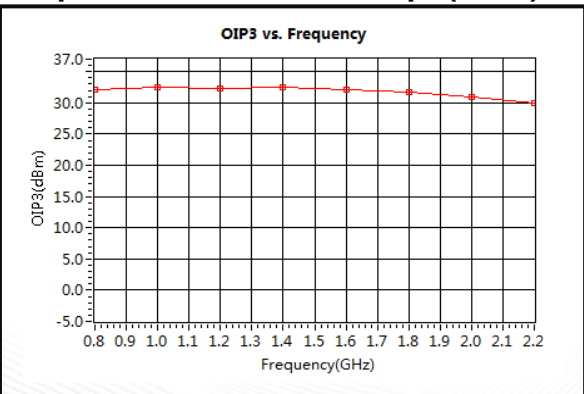
### Gain vs. Output Power



### P1dB vs. Frequency



### Output Third Order Intercept (OIP3)

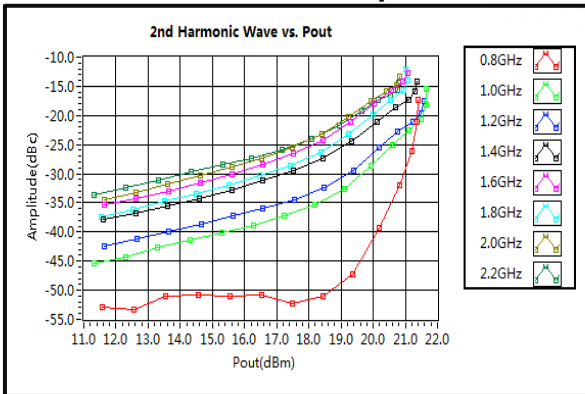


### Noise Figure

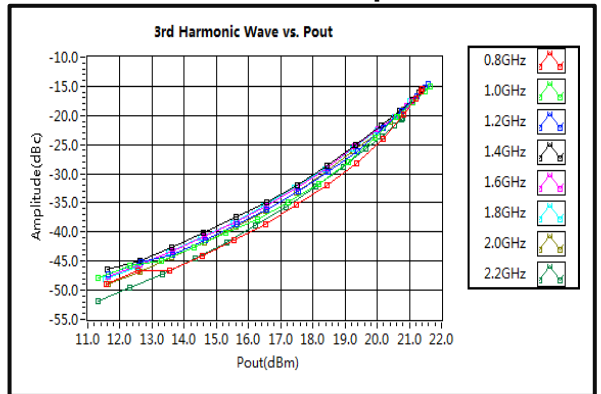




### 2nd Harmonic Wave Output Power



### 3rd Harmonic Wave Output Power



### 4th Harmonic Wave Output Power

