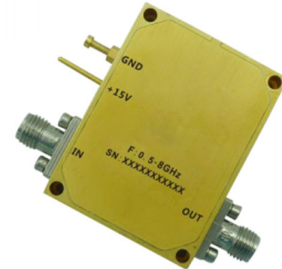




# Wide Band Low Noise Amplifier 0.5GHz ~ 8GHz

## Features

- Gain: 37dB Typical
- Noise Figure: 1.5dB Typical
- P1dB Output Power: +28dBm Typical
- Supply Voltage: +15V @ 480mA
- 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.	Units
Frequency Range	0.5		6	6		8	GHz
Gain	33	37		30	35		dB
Gain Flatness		± 1.5			± 1.0		dB
Gain Variation Over Temperature (-40°C~+85°C)		± 1.0			± 2.0		dB
Noise Figure		1.5	2.0		1.8	2.5	dB
Input VSWR		2.2			2.6		: 1
Output VSWR		1.8			1.5		: 1
Output Power for 1 dB Compression (P1dB)	27	29		25.5	26.5		dBm
Saturated Output Power (Psat)		31.5			28.5		dBm
Output Third Order Intercept (OIP3)		42			40		dBm
Isolation S12		-60			-60		dB
Supply Current (Vcc=+15V)		480	650		480	650	mA

Weight	3.5Max. ounces	Impedance	50ohms
Input / Output Connectors	SMA-Female	Material	Aluminum
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Option with extra charge)



### Absolute Maximum Ratings

Operating Voltage	+15V
RF Input Power (RFIN)	+2dBm

### Biassing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +15V biasing

### Power OFF Procedure

Step 1	Turn off +15V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

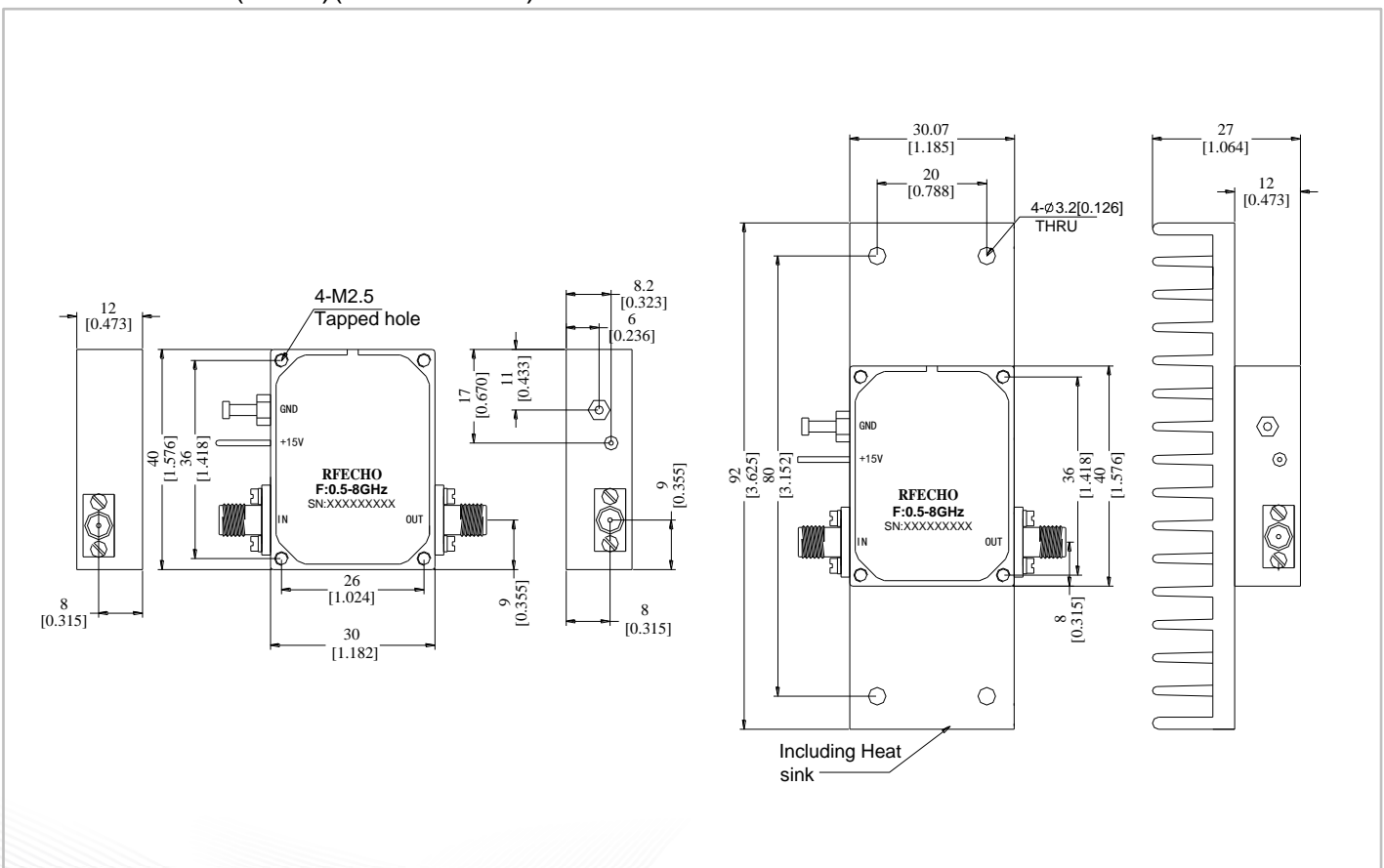
### Environmental Specifications

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 11msec half sine wave, 3 axis both directions

### Outline Drawing:

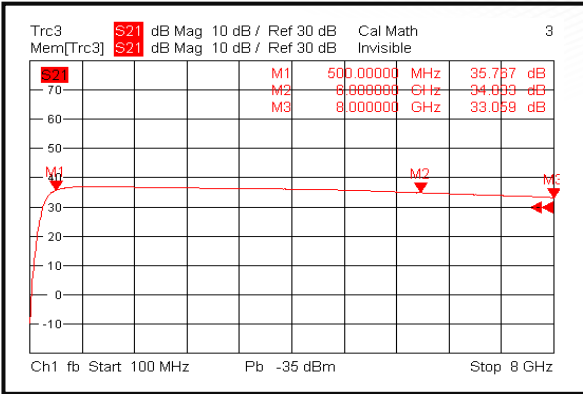
All Dimensions in mm (inches)  
Tolerances  $\pm 0.1$  (0.004) (Excl heatsink)

Heat Sink required during operation (Sold Separately)

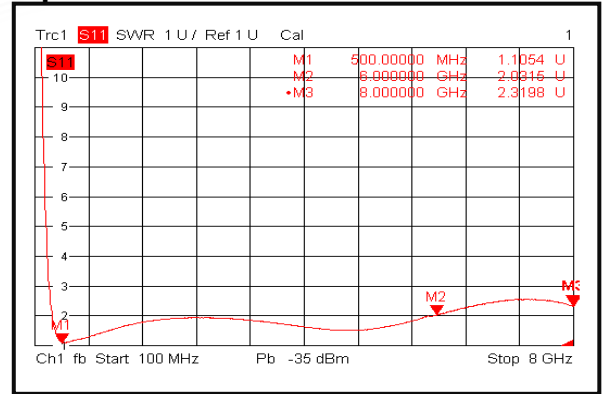




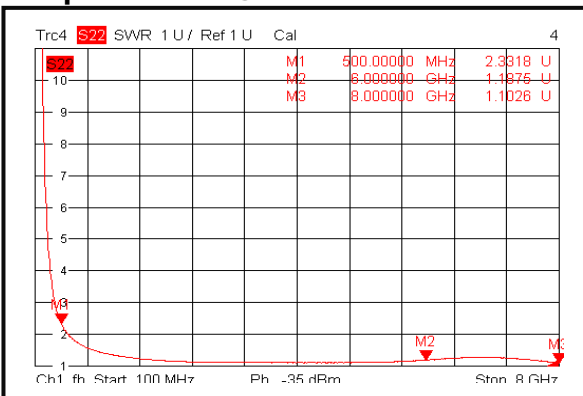
### Gain @+25°C



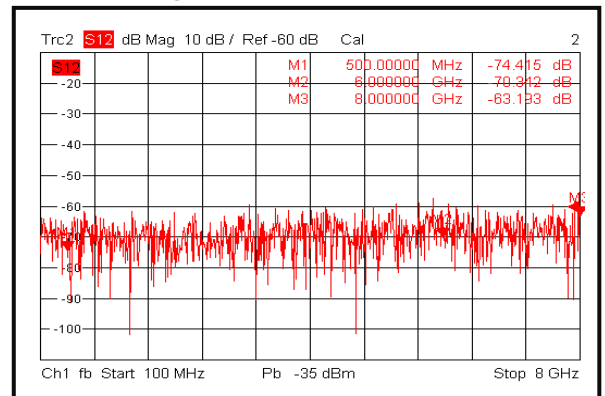
### Input VSWR @+25°C



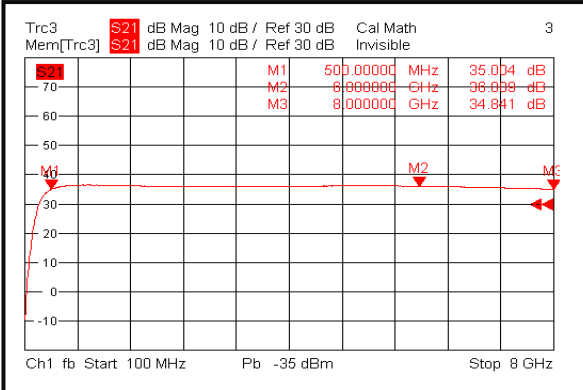
### Output VSWR @+25°C



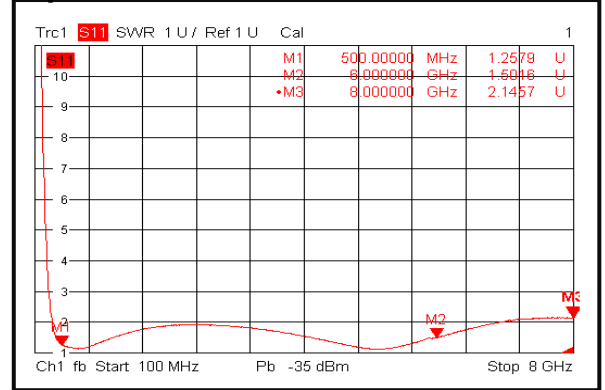
### Isolation @+25°C



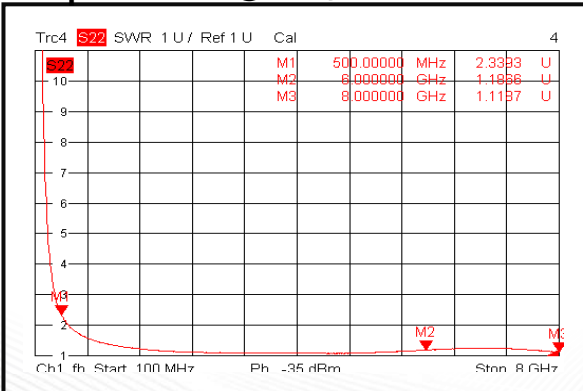
### Gain @-40°C



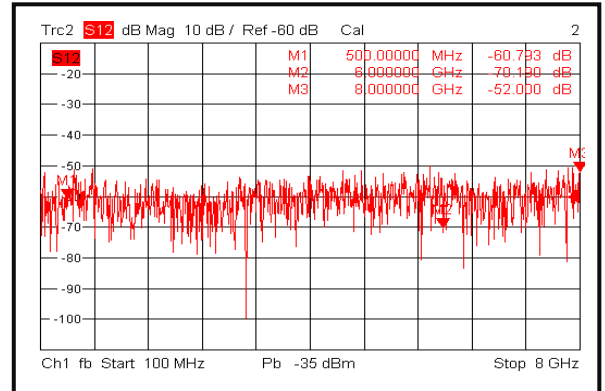
### Input VSWR @-40°C



### Output VSWR @-40°C

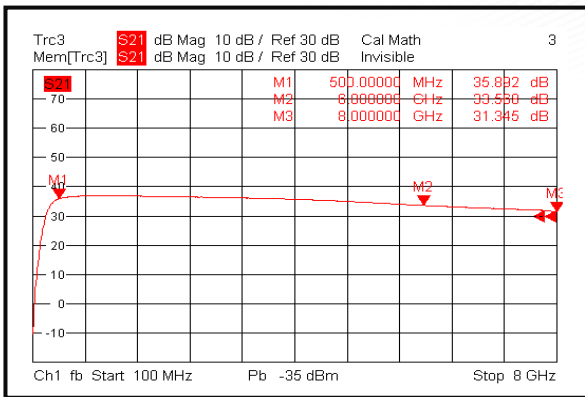


### Isolation @-40°C

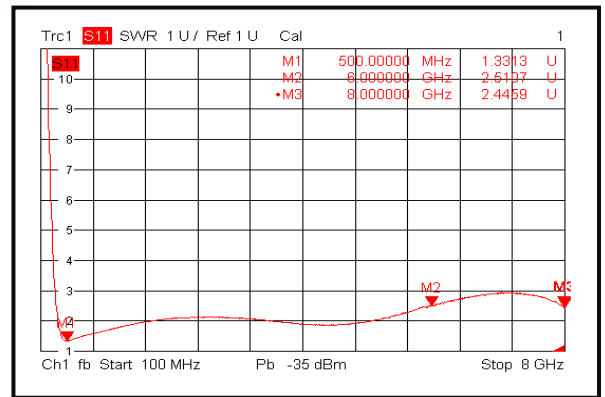




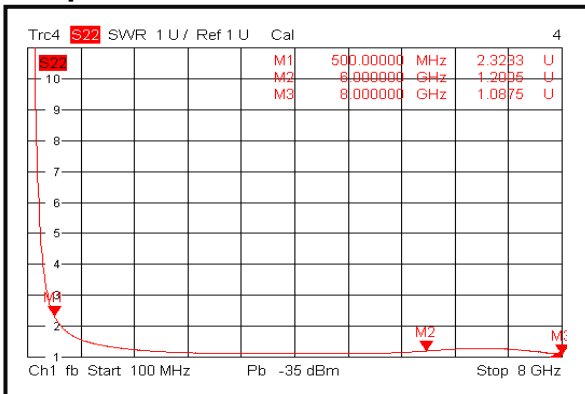
### Gain @+85°C



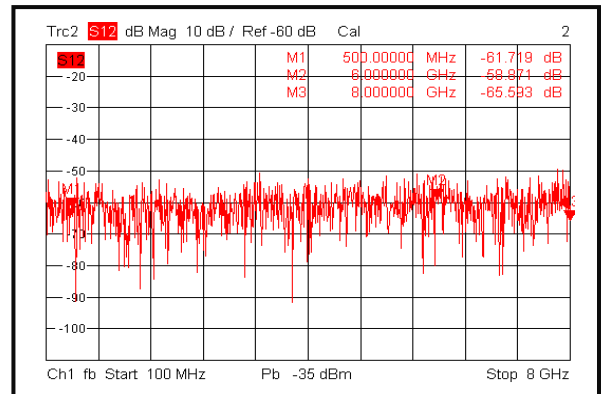
### Input VSWR @+85°C



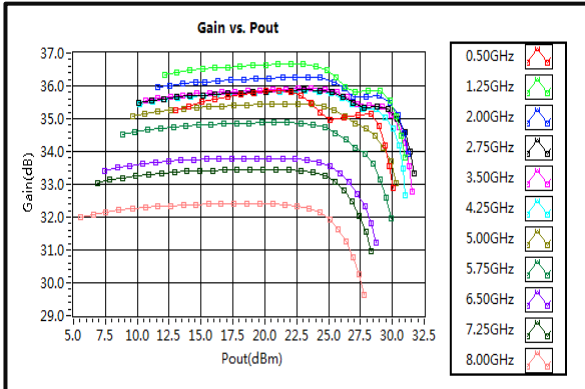
### Output VSWR @+85°C



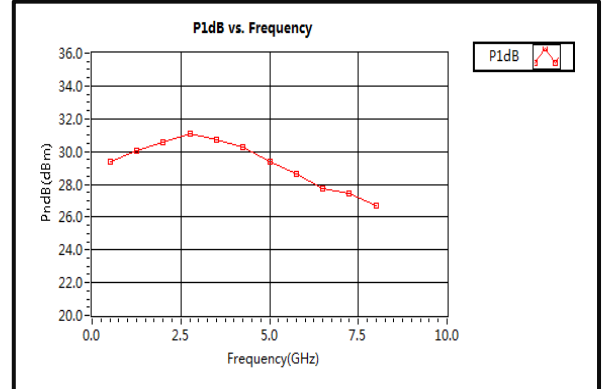
### Isolation @+85°C



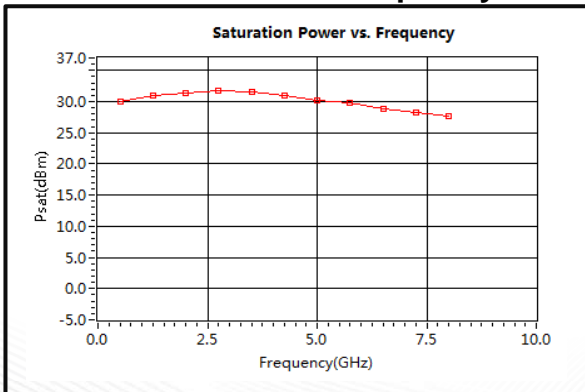
### Gain vs. Output Power



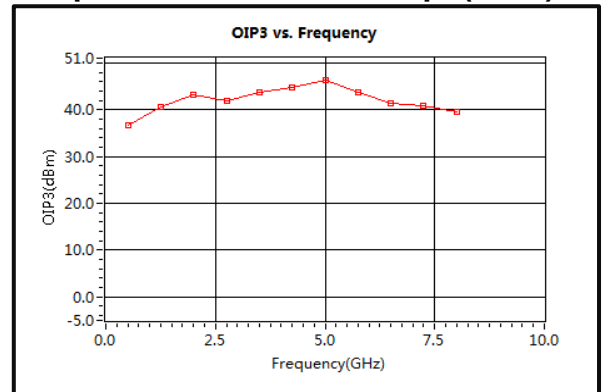
### P1dB vs. Frequency



### Saturation Power vs. Frequency

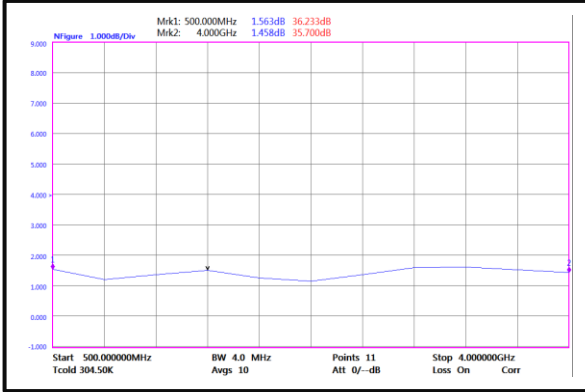


### Output Third Order Intercept (OIP3)

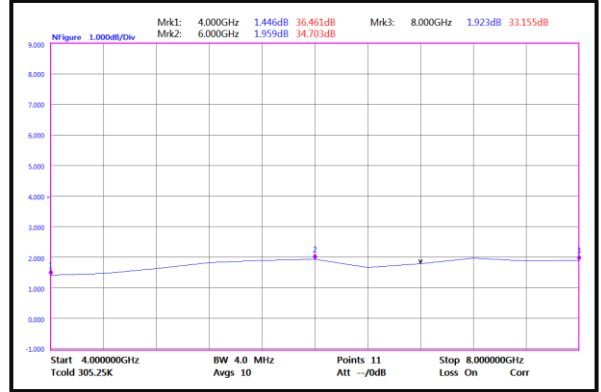




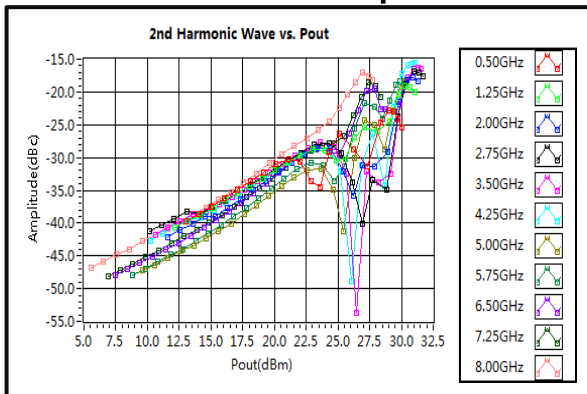
### Noise Figure (0.5-4GHz)



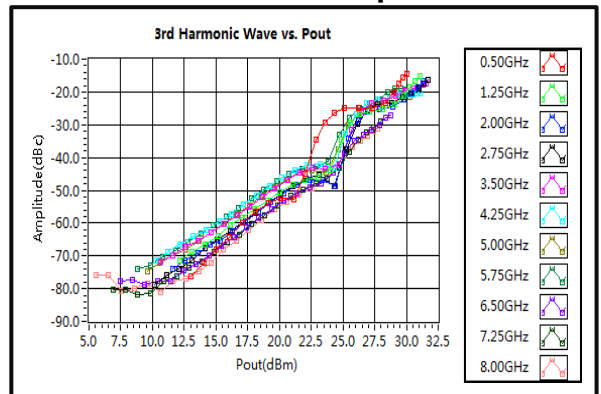
### Noise Figure (4-8GHz)



### 2nd Harmonic Wave Output Power



### 3rd Harmonic Wave Output Power



### 4th Harmonic Wave Output Power

