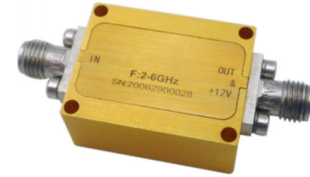


# Wide Band Low Noise Amplifier

## 2GHz~6GHz

### Features

- Gain: 20dB Typical
- Noise Figure: 1dB Typical
- P1dB Output Power: 15dBm Typical
- Psat Output power 10dBm Typical
- Supply Voltage: +12V @ 150mA
- 50 Ohm Matched Input / Output
- Size: 1.02" x 0.79" x 0.47"



### Typical Applications

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

RF Microwave & VSAT  
Fiber Optics

Parameter	Min.	Typ.	Max.	Units
Frequency Range	2		6	GHz
Gain	19	20		dB
Gain Flatness			1.0	dB
Gain Flatness over any 50MHz			0.3	dB
Gain Variation Over Temperature(-40°C~+85°C)		±1.5		dB
Noise Figure		1.5	1.8	dB
Input VSWR		1.6		: 1
Output VSWR		1.8		: 1
Output Power for 1 dB Compression (P1dB)	10	15		dBm
Output Third Order Intercept (OIP3)		28		dBm
Supply Current (I <sub>dd</sub> ) (V <sub>cc</sub> =+12V)		150	200	mA
Isolation S12		-50		dB

Weight	0.8 ounces Max.	Impedance	50 ohms
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	+18dBm

### 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

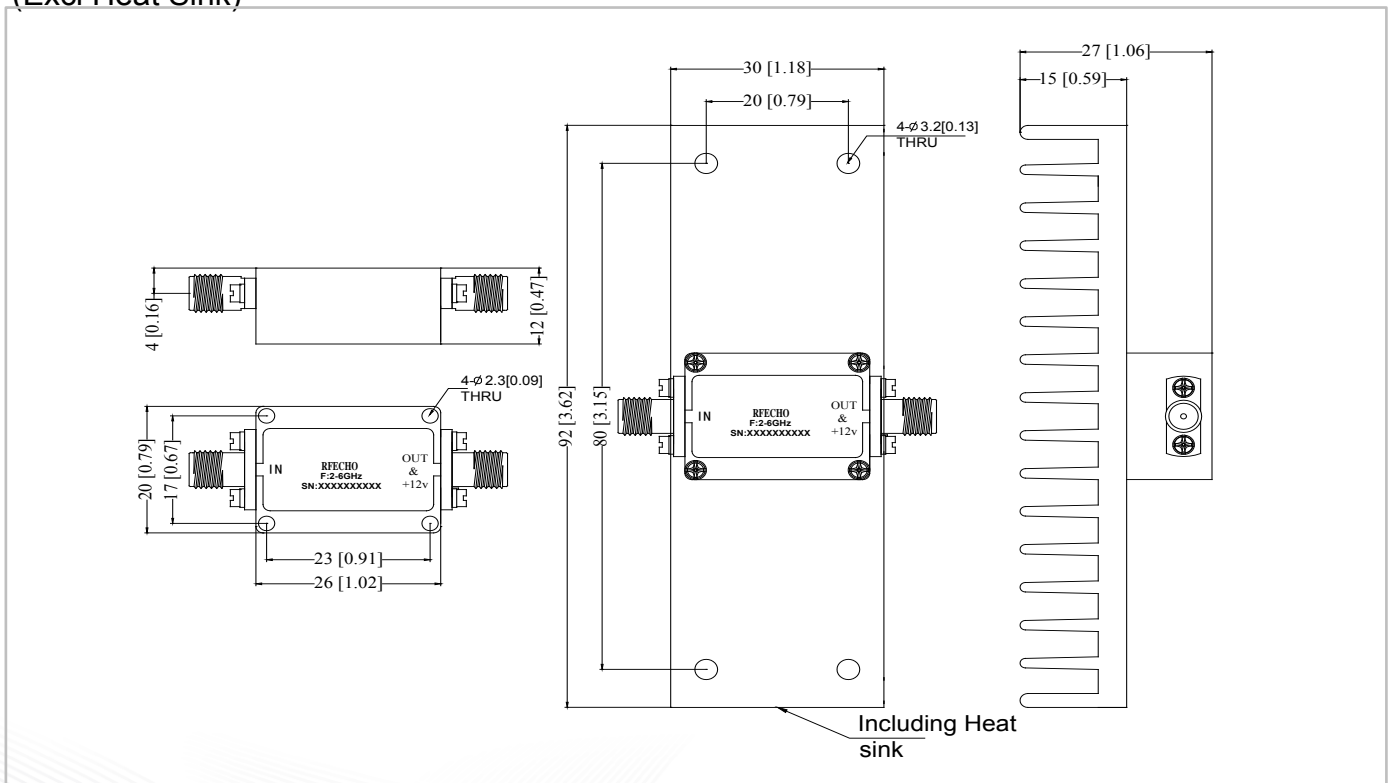
### Environmental Specifications

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 11msec half sine wave, 3 axis both directions

### Outline Drawing:

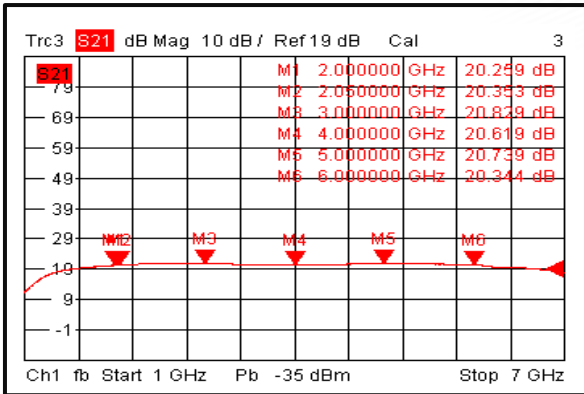
All Dimensions in mm (inches)  
Housing Tolerances  $\pm 0.1(0.004)$   
(Excl Heat Sink)

Heat Sink required during operation(Sold Separately)

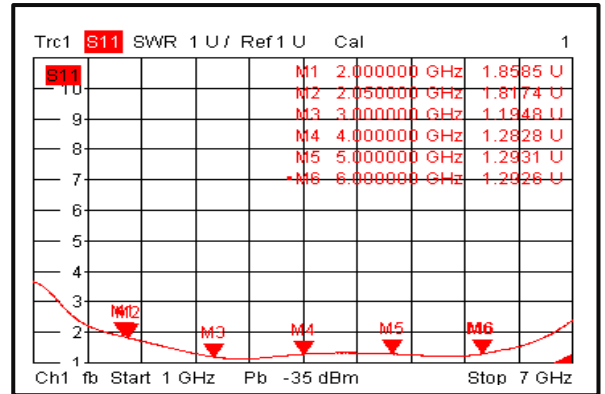




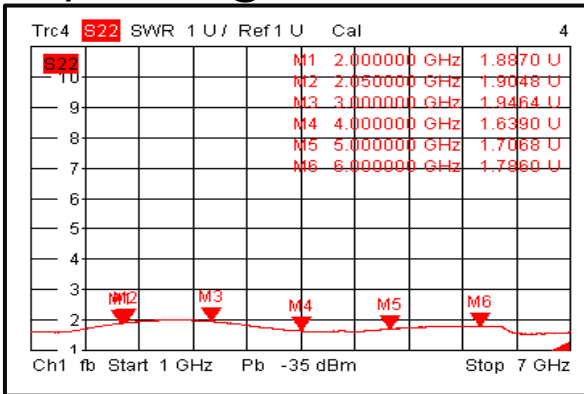
### Gain @ +25°C



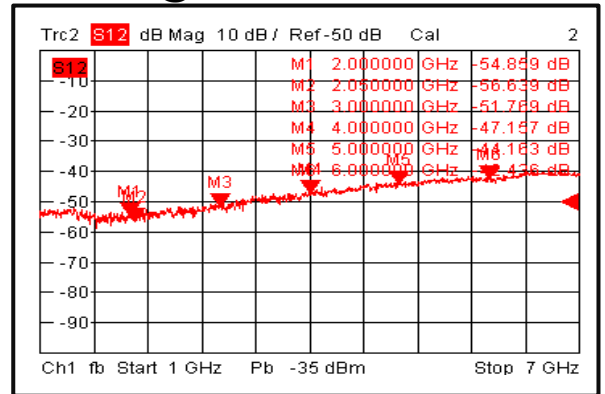
### Input VSWR @ +25°C



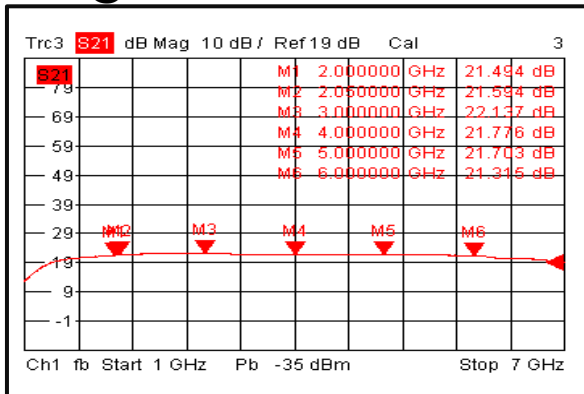
### Output VSWR @ +25°C



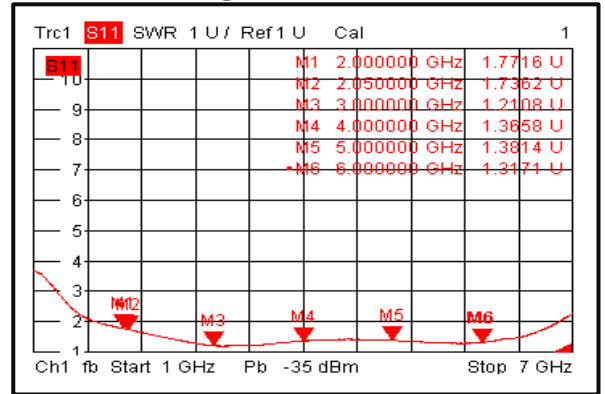
### Isolation @ +25°C



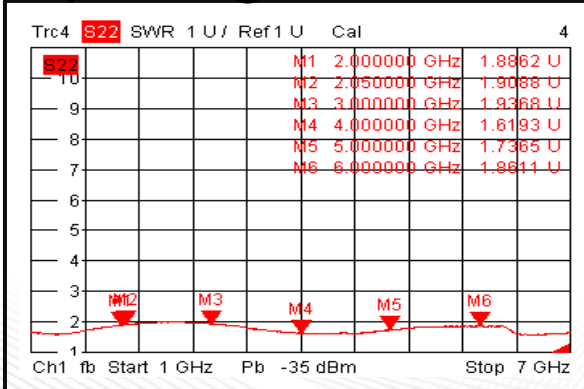
### Gain @ -40°C



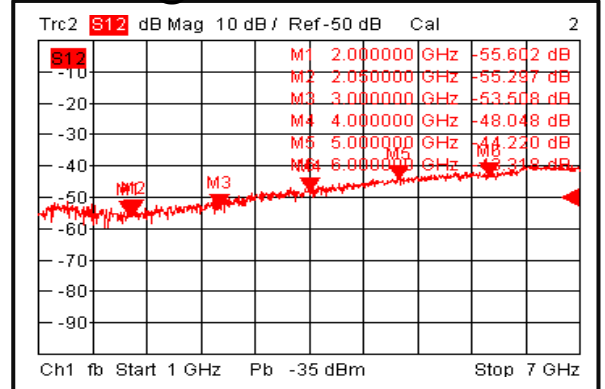
### Input VSWR @ -40°C



### Output VSWR @ -40°C

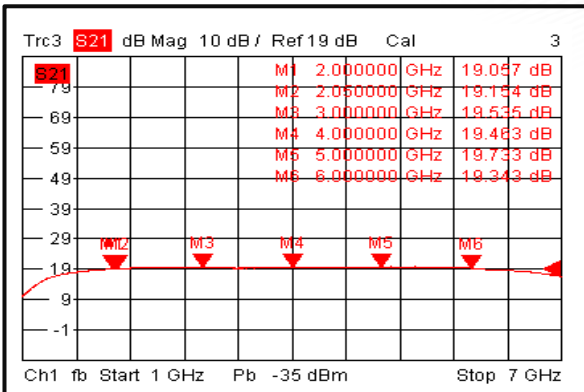


### Isolation @ -40°C

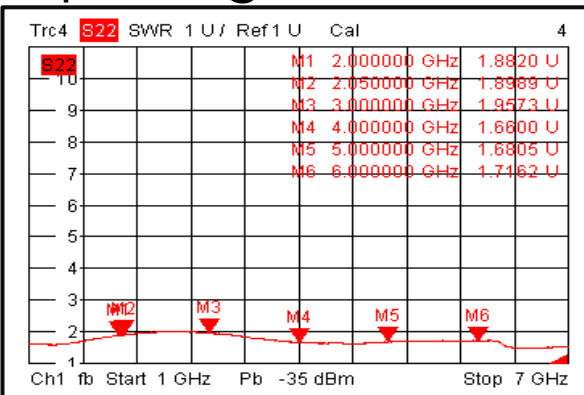




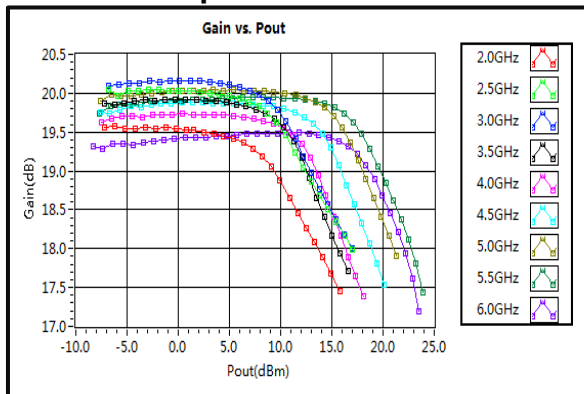
### Gain @ +85°C



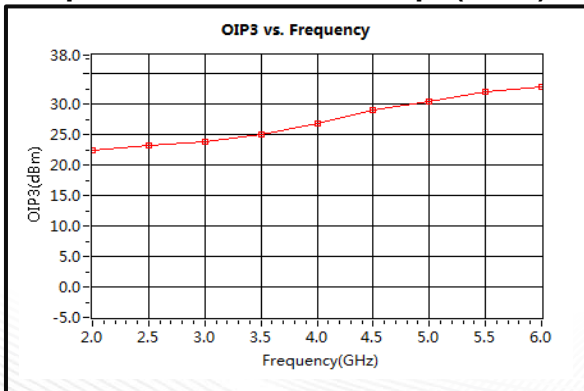
### Output VSWR @ +85°C



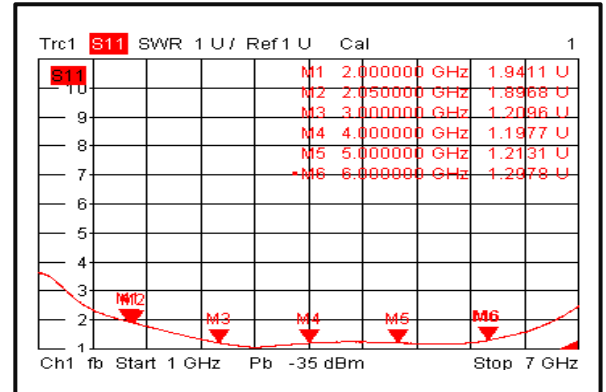
### Gain vs. Output Power



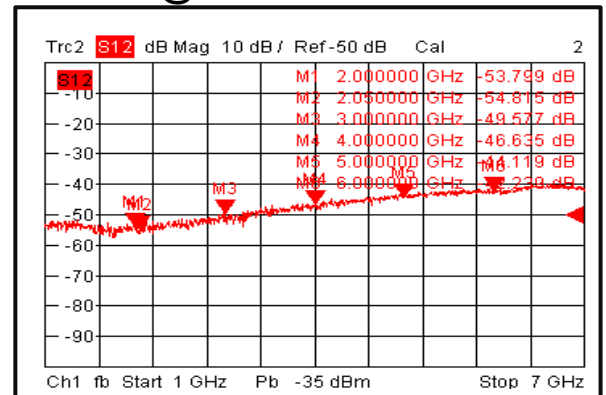
### Output Third Order Intercept (OIP3)



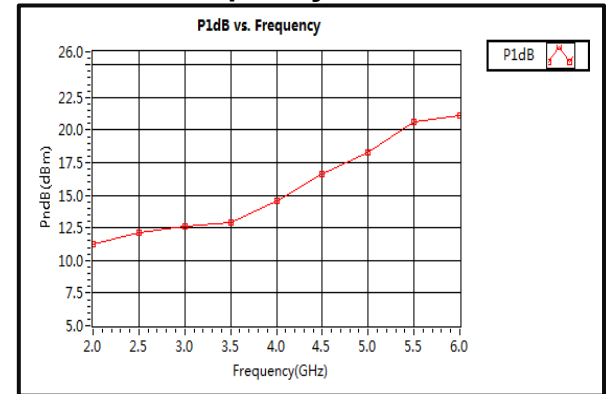
°C



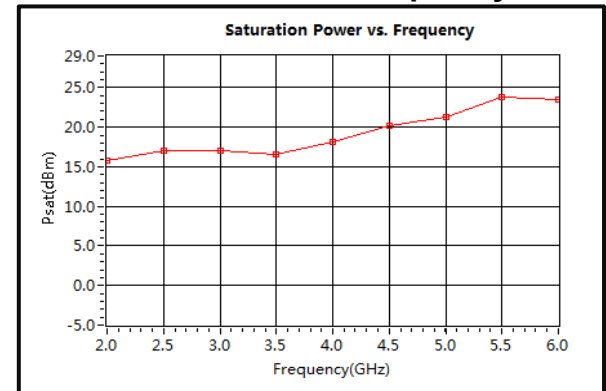
### Isolation @ +85°C



### P1dB vs. Frequency

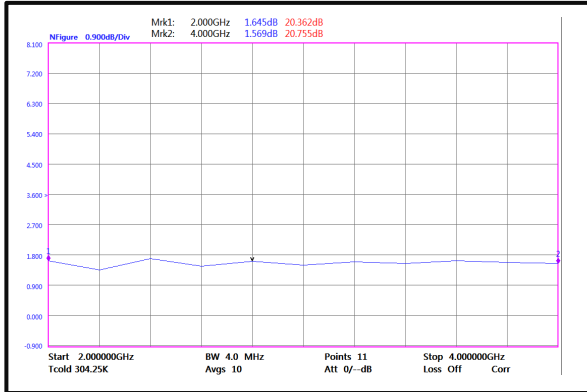


### Saturation Power vs. Frequency

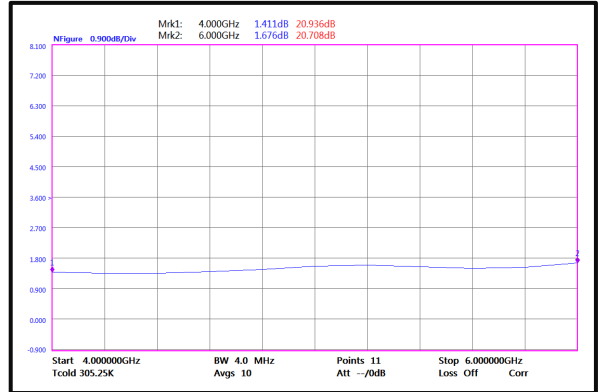




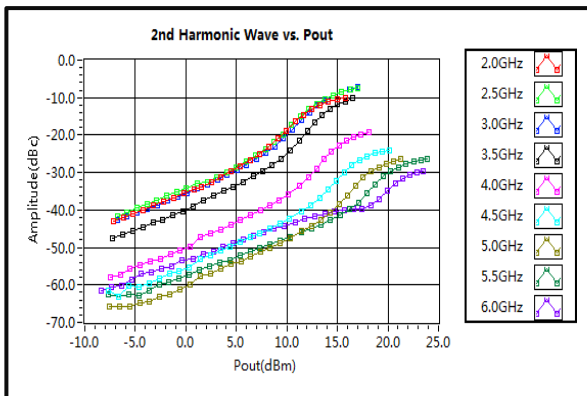
### Noise Figure(2-4GHz)



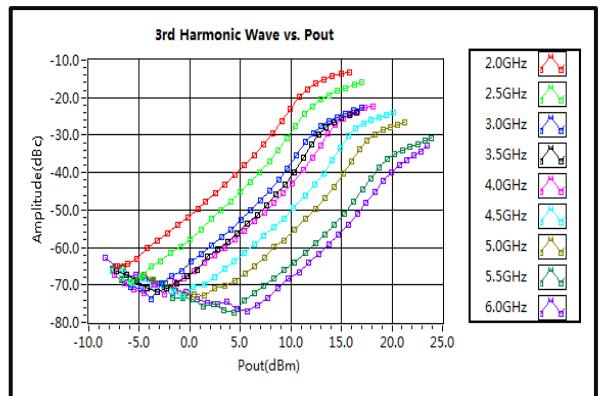
### Noise Figure(4-6GHz)



### 2nd Harmonic Wave Output Power



### 3rd Harmonic Wave Output Power



### 4th Harmonic Wave Output Power

