



# Wide Band Low Noise Amplifier 6GHz ~ 18GHz

## Features

- Gain: 34dB Typical
- Noise Figure: 2.0dB Typical
- P1dB Output Power: +28dB m Typical
- Supply Voltage: +12V @ 680mA
- 50 Ohm Matched



## Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics
- RF Microwave & VSAT
- Test Instrument

Parameter	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	6		12	12		18	GHz
Gain	31	37	39	31	34	37	dB
Gain Flatness		±2.0	±3.0		±1.5	±2.5	dB
Gain Variation Over Temperature (-45°C~+85°C)		±1.0			±1.5		dB
Noise Figure		2.0	3.0		2.5	3.0	dB
Input VSWR		1.8	2.3		1.8	2.3	: 1
Output VSWR		1.8	2.3		1.8	2.5	: 1
Output 1dB Compression Point (P1dB)	25	29		24	28		dBm
Saturated Output Power (Psat)		31			30		dBm
Output Third Order Intercept (OIP3)		39			38		dBm
Isolation S12		-60			-55		dB
Supply Current (Vcc=+12V)		680	1000		680	1000	mA

Weight	3.53 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 (RFIN)	0dBm

### 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

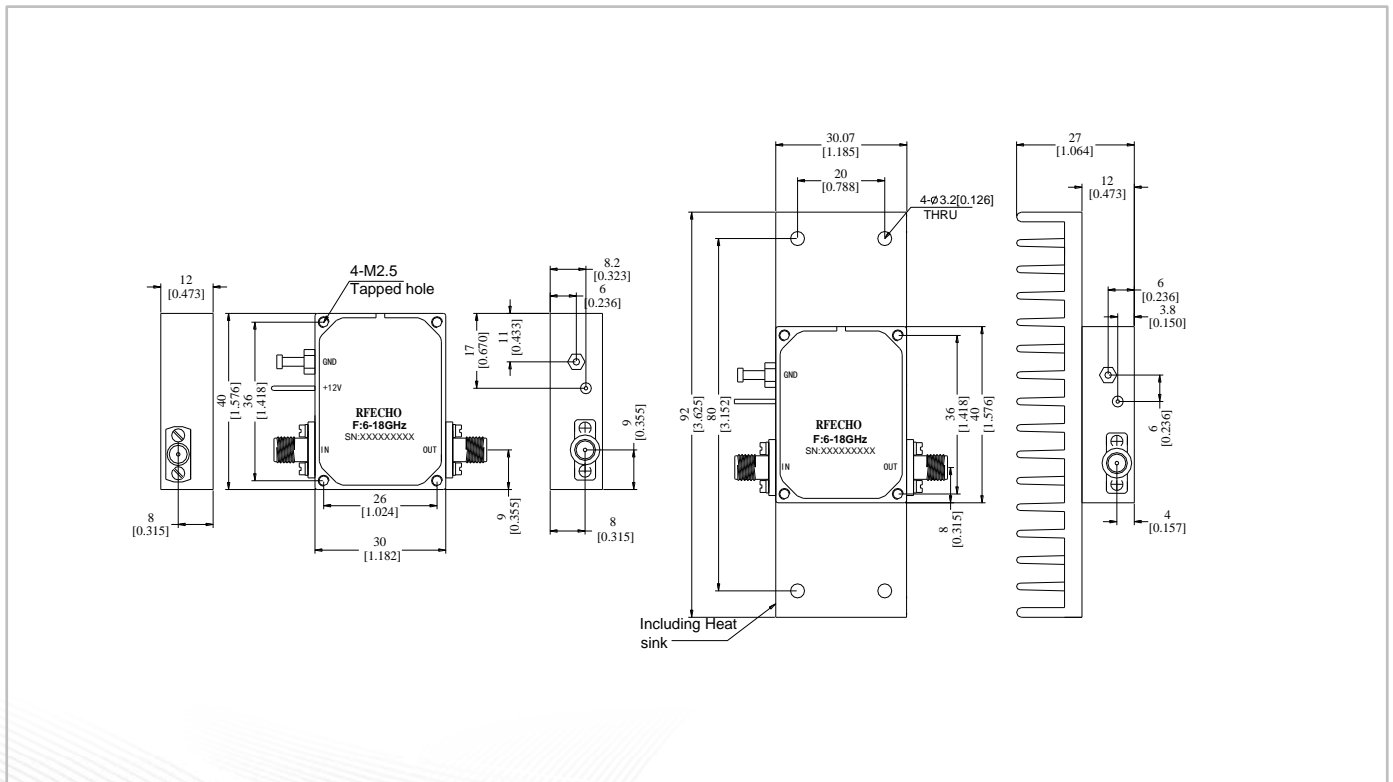
### Environmental Specifications

Operational Temperature	-45°C~+85°C
Storage Temperature	-55°C~+125°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:

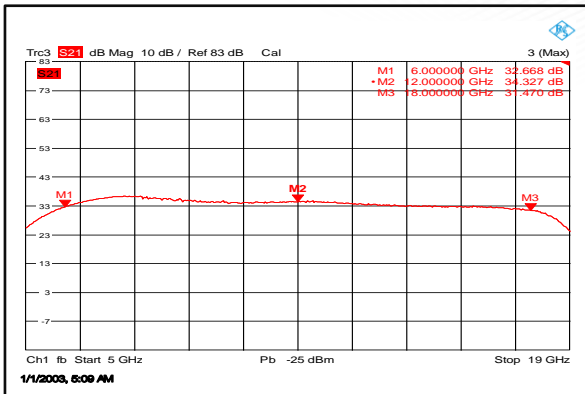
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

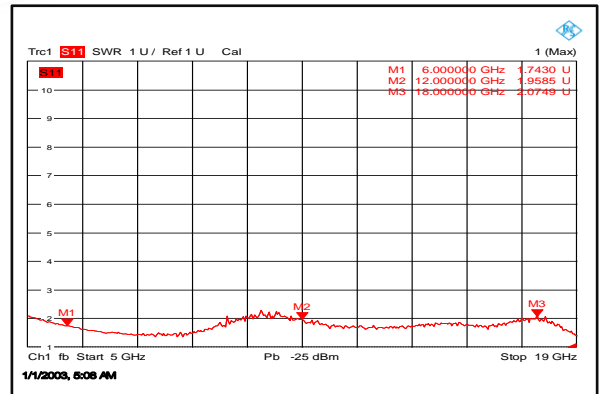




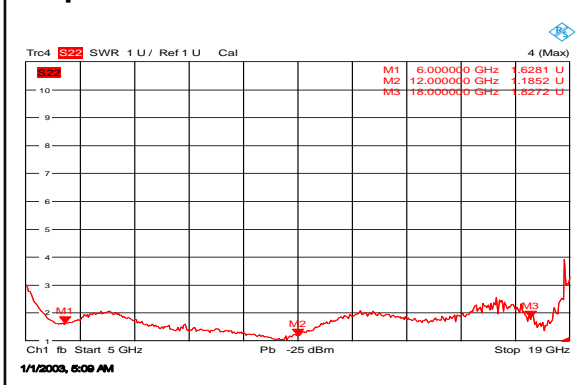
### Gain @+25°C



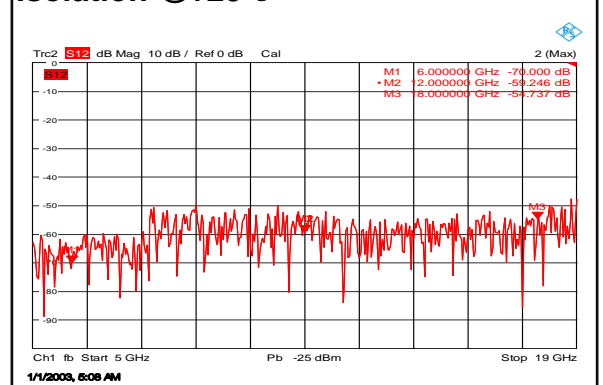
### Input VSWR @+25°C



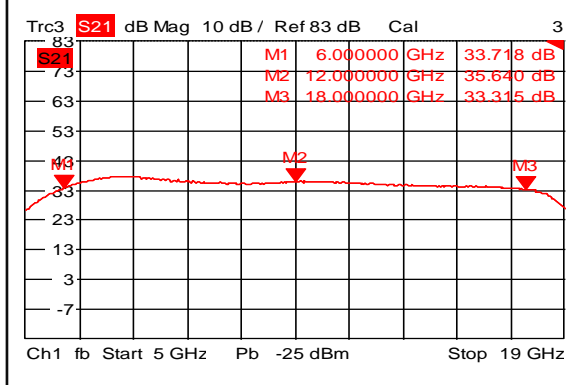
### Output VSWR @+25°C



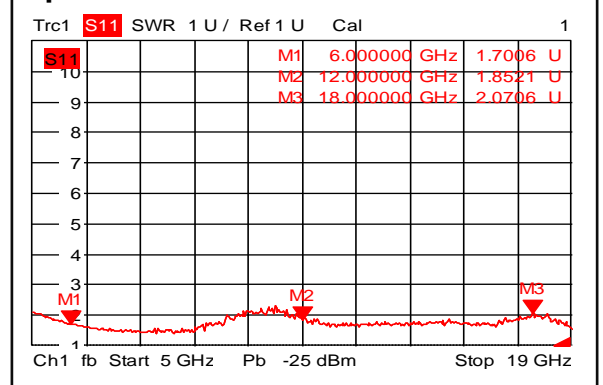
### Isolation @+25°C



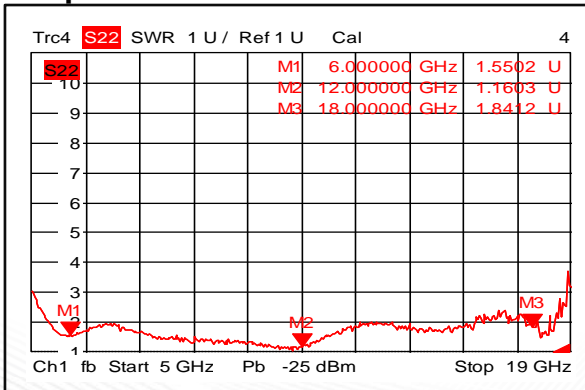
### Gain @-45°C



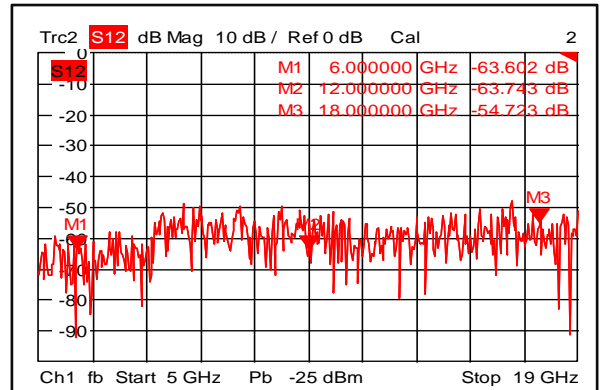
### Input VSWR @-45°C



### Output VSWR @-45°C

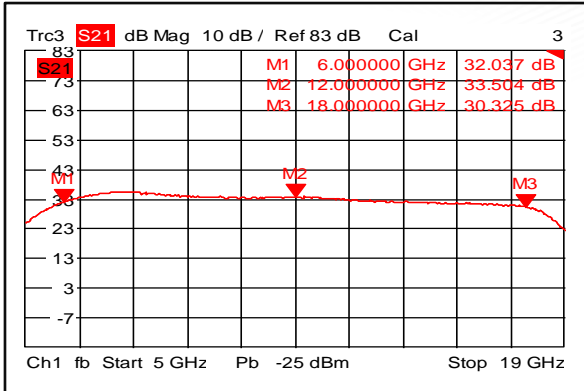


### Isolation @-45°C

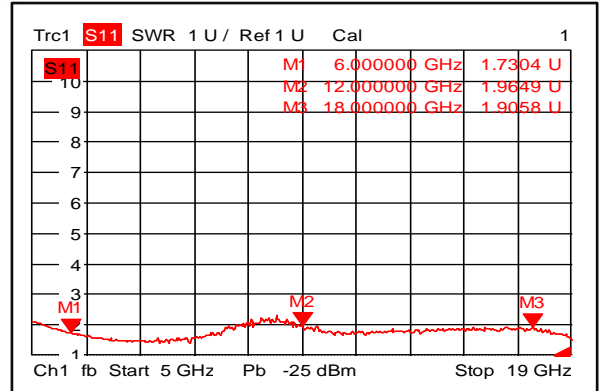




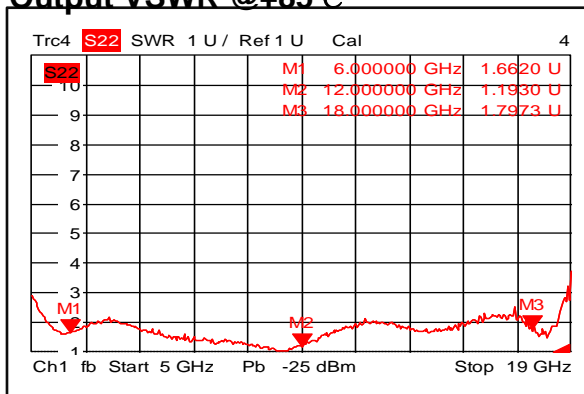
### Gain @+85°C



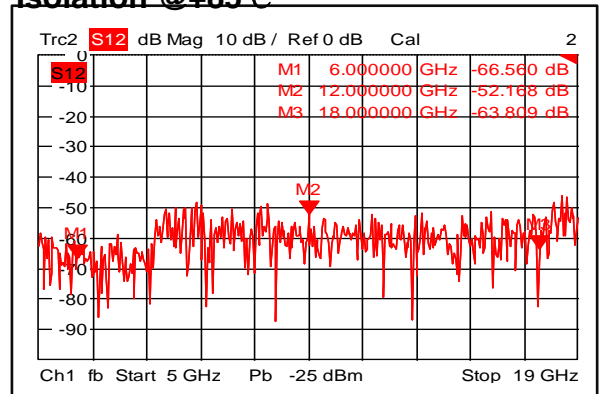
### Input VSWR @+85°C



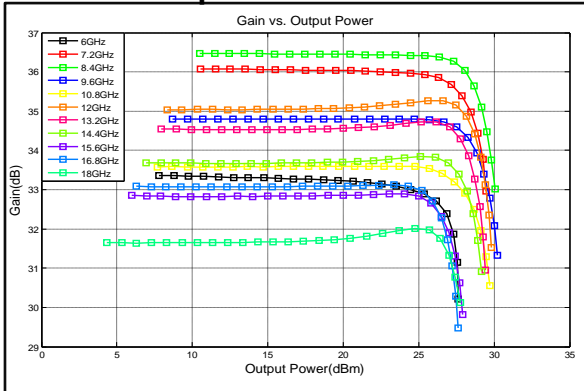
### Output VSWR @+85°C



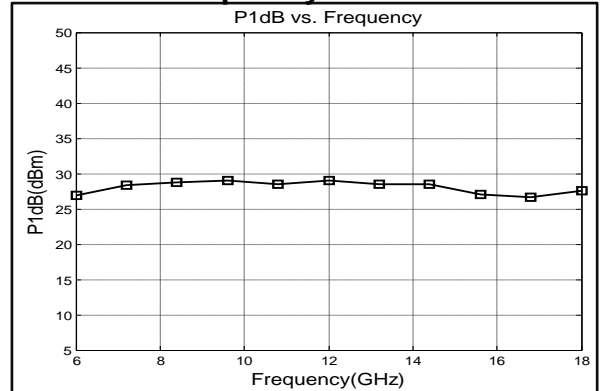
### Isolation @+85°C



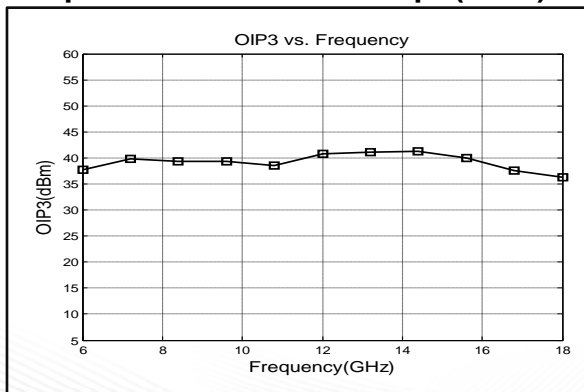
### Gain vs. Output Power



### P1dB vs. Frequency



### Output Third Order Intercept (OIP3)

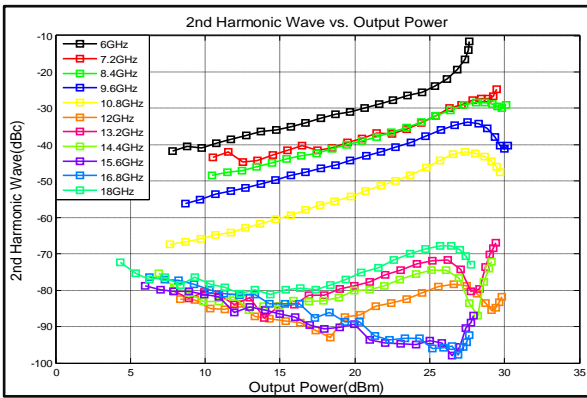


### Noise Figure

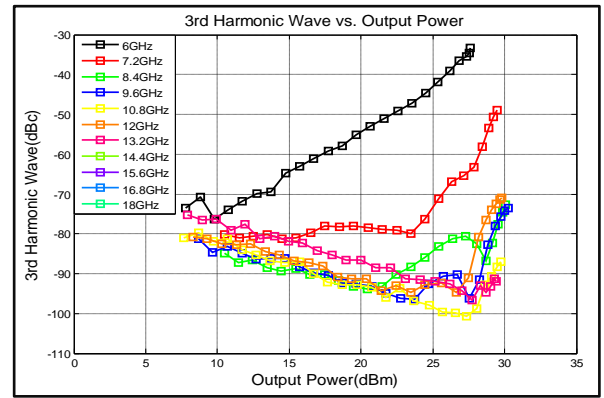




## 2nd Harmonic Wave output Power



## 3rd Harmonic Wave output Power



## 4th Harmonic Wave output Power

