



# Low Noise Amplifier 18GHz~40GHz

## Features

- Gain: 15dB Typical
- Noise Figure: 3.0dB Typical
- P1dB Output Power: +13dBm Typical
- Supply Voltage: +5V @ 85mA
- 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	18		40	15		42	GHz
Gain	13	15		12	15		dB
Gain Flatness		±1.0	±1.5		±1.5	±2.0	dB
Gain Variation Over Temperature (-45°C~+85°C)		±1.5			±1.5		dB
Noise Figure		3.0			3.0		dB
Input VSWR		1.6	2.0		1.8	2.5	: 1
Output VSWR		1.6	2.0		1.6	2.2	: 1
Output 1dB Compression Point (P1dB)	10	13		8	13		dBm
Saturated Output Power (Psat)		14			14		dBm
Output Third Order Intercept (OIP3)		25			25		dBm
Supply Current (I <sub>dd</sub> ) (V <sub>cc</sub> =+5V)		85			85		mA
Isolation S <sub>12</sub>		-40			-40		dB

Weight	0.35 ounces	Impedance	50ohms
Input / Output Connectors	2.92mm-Female	Material	Aluminum
Finish	Standard: Gold 40 micron; Nickel 220 micron thickness	Package Sealing	Epoxy Sealed (Standard)
	Option: Gold 80 micron; Nickel 180 micron thickness		Hermetically Sealed (Option with extra charge)



### Absolute Maximum Ratings

Operating Voltage	+7V
RF Input Power (RFIN)	+20dBm

### Biassing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
Step 3	Connect +5V biasing

### Power OFF Procedure

Step 1	Turn off +5V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

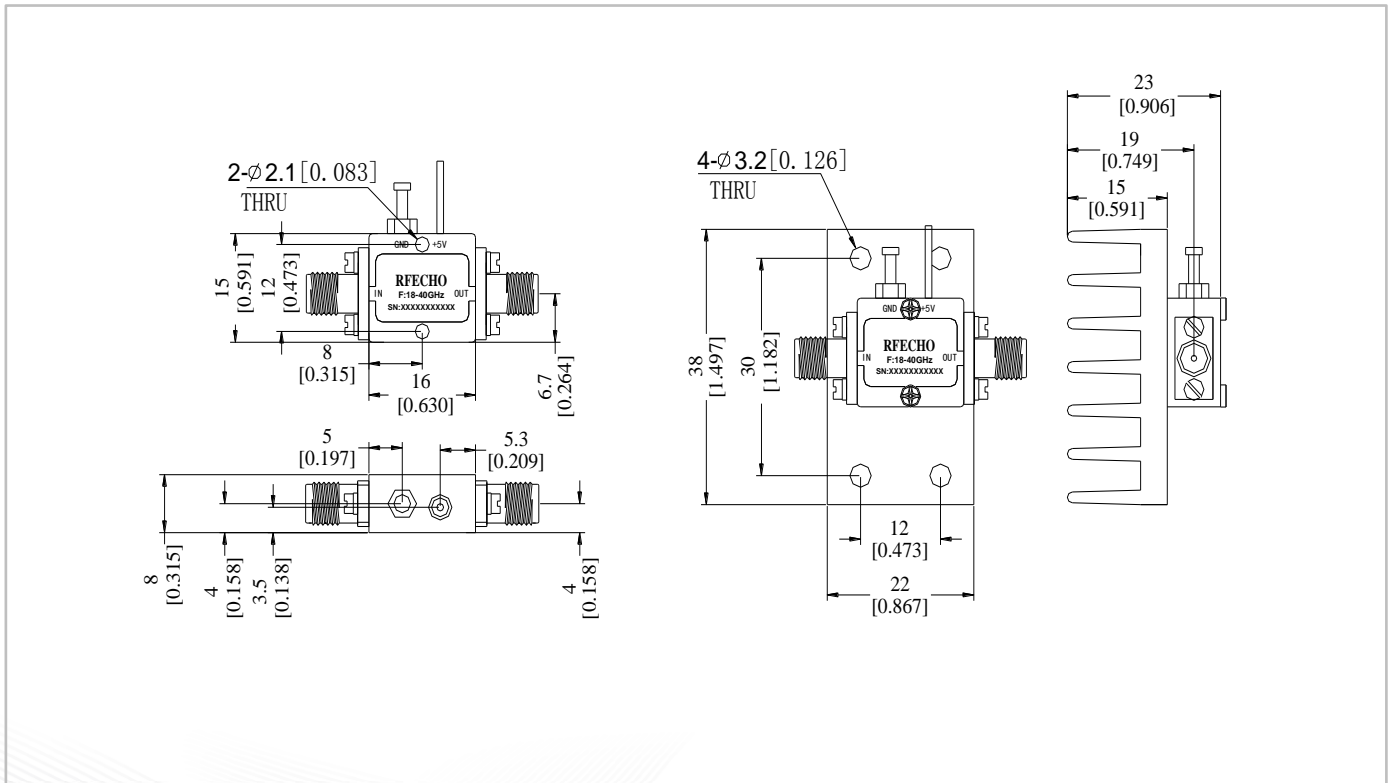
### Environmental Specifications

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 35c, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

### Outline Drawing:

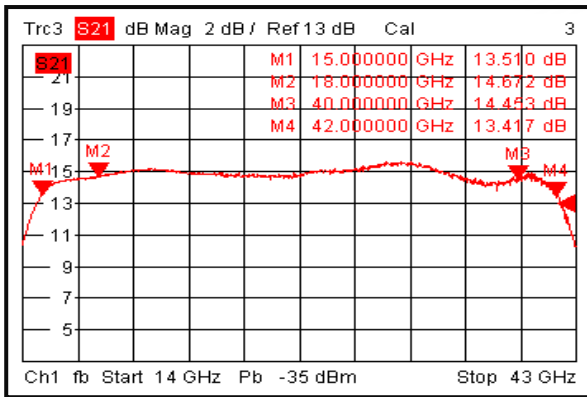
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

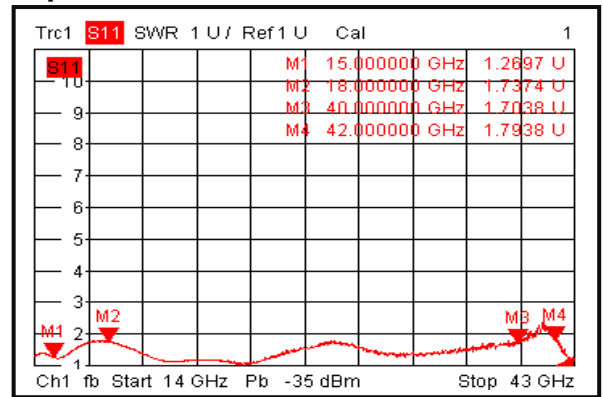




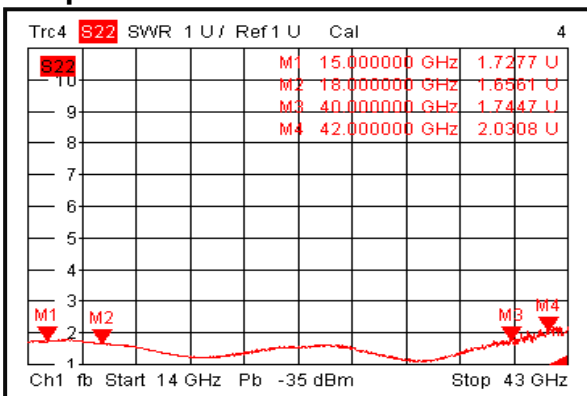
### Gain



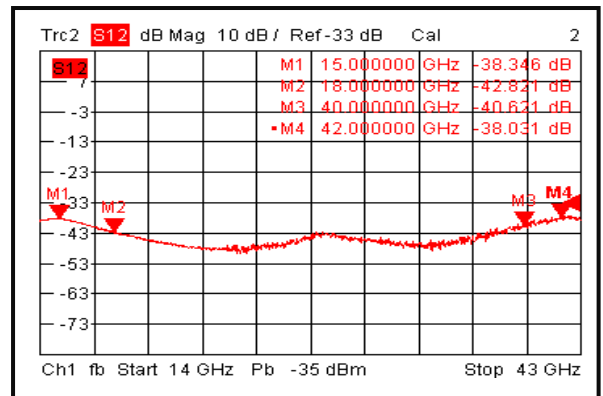
### Input VSWR



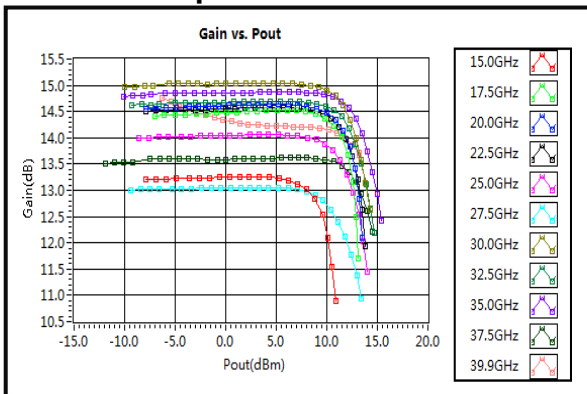
### Output VSWR



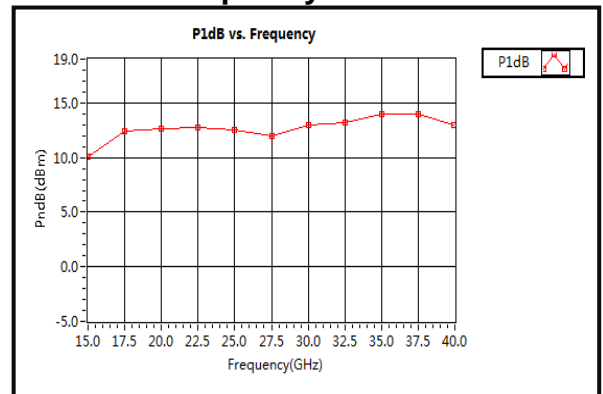
### Isolation



### Gain vs. Output Power

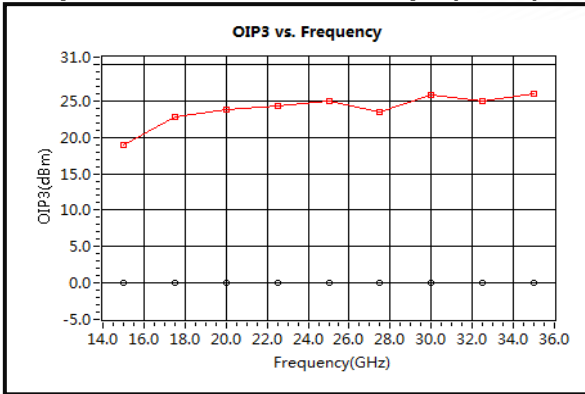


### P1dB vs. Frequency

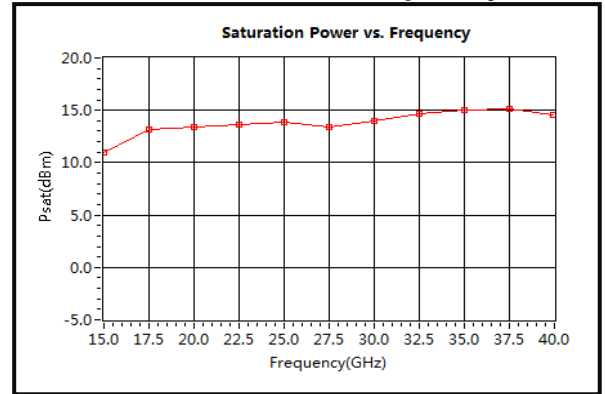




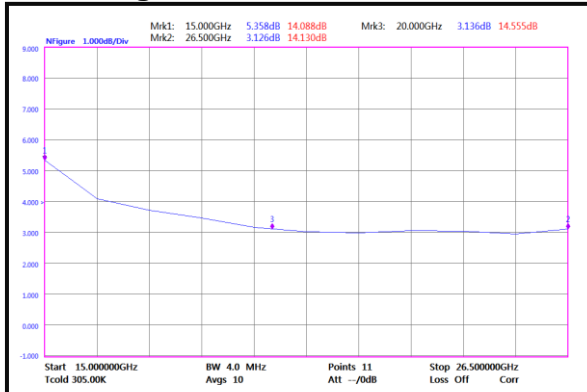
### Output Third Order Intercept (OIP3)



### Saturation Power vs. Frequency



### Noise Figure



### 2nd Harmonic Wave Output Power

