



# Wide Band Low Noise Amplifier 14GHz~27GHz

## Features

- Gain: 20dB Typical
- Noise Figure: 2.0dB Typical
- P1dB Output Power: +15dB m Typical
- Supply Voltage: +4V @ 90mA
- 50 Ohm Matched Input / Output
- Size: 0.63" x 0.59" x 0.41"



## Typical Applications

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

RF Microwave & VSAT  
Fiber Optics

Parameter	Min.	Typ.	Max.	Units
Frequency Range	14		27	GHz
Gain	17	20		dB
Gain Flatness		±1.5		dB
Gain Variation Over Temperature(-40°C~+85°C)		±0.8	±1.0	dB
Noise Figure		2.0	2.8	dB
Input VSWR		1.5	2.0	: 1
Output VSWR		1.7	2.0	: 1
Output 1dB Compression Point (P1dB)	14	15		dBm
Saturated Output Power (Psat)		17		dBm
Output Third Order Intercept (OIP3)		26		dBm
Supply Current (Vdd=+4V, Vgg=-5V)		90	150	mA
Isolation S12		-38		dB

Weight	1.06 ounces	Impedance	50ohms
Input / Output Connectors	2.92mm-Female	Material	copper
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Option with extra charge)



### Absolute Maximum Ratings

Operating Voltage	+4.5V
RF Input Power(+4V)	-2dBm

### Biassing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
step 3	Connect -5V biasing
Step 4	Connect +4V biasing

### Power OFF Procedure

Step 1	Turn off +4V biasing
step 2	Turn off -5V biasing
Step 3	Remove RF connection
Step 4	Remove Ground.

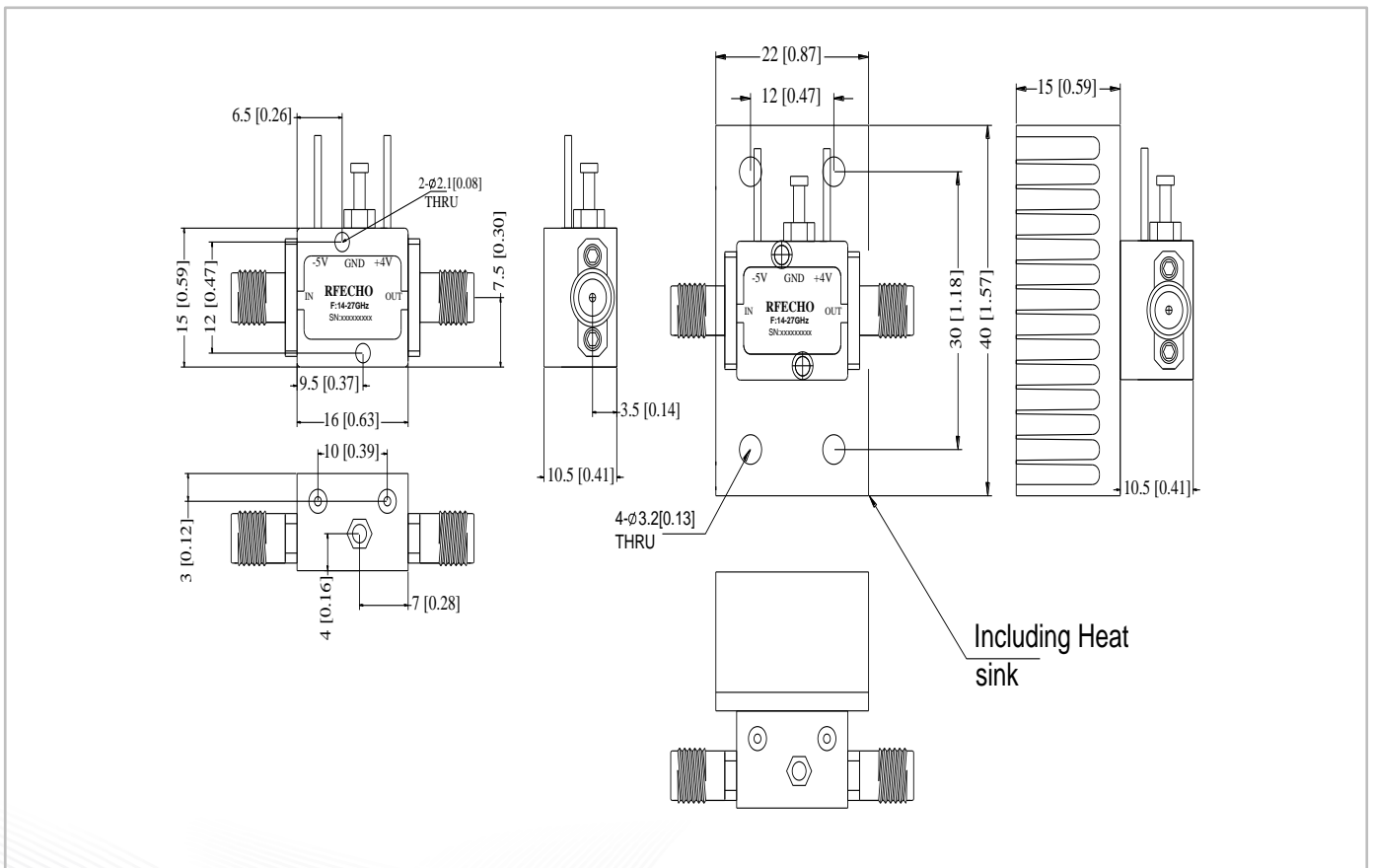
### Environmental Specifications

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:

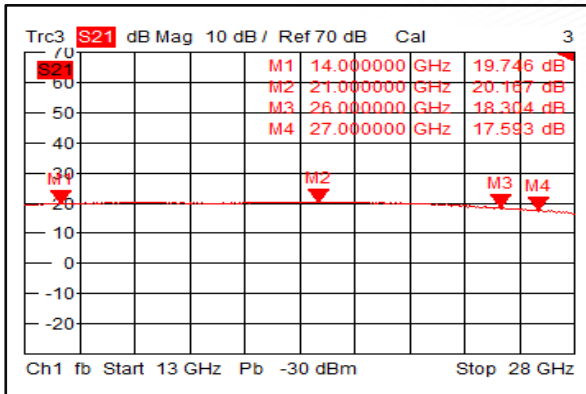
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

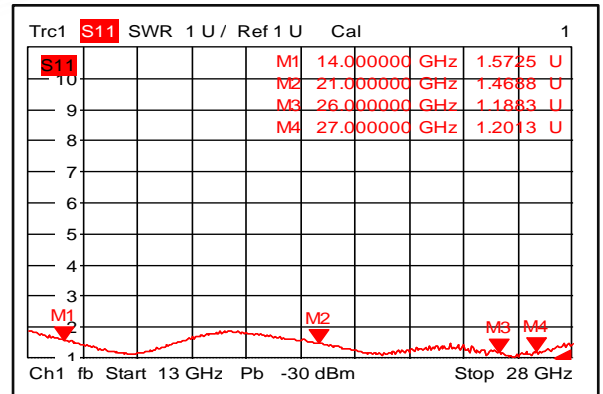




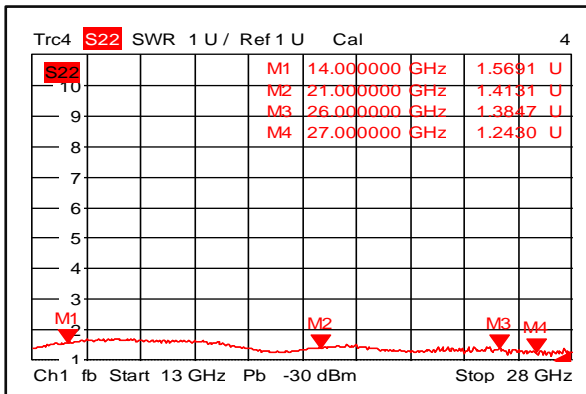
### Gain @ +25°C



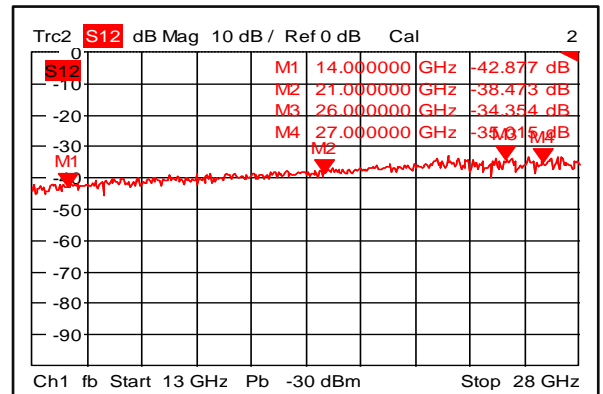
### Input VSWR @ +25°C



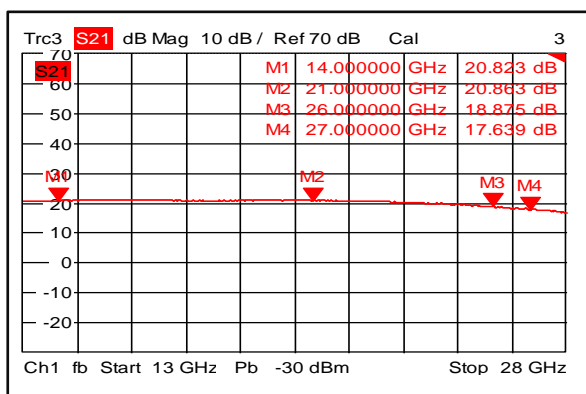
### Output VSWR @ +25°C



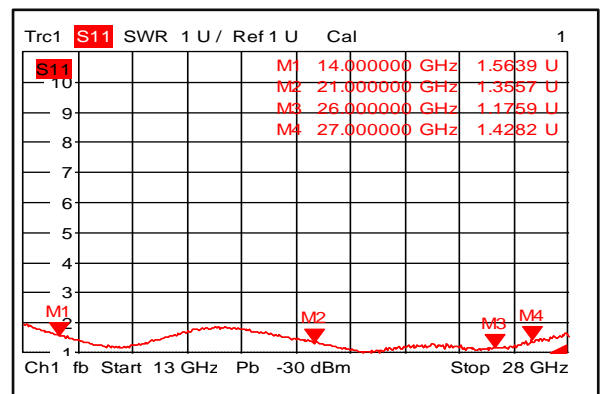
### Isolation @ +25°C



### Gain @ -40°C

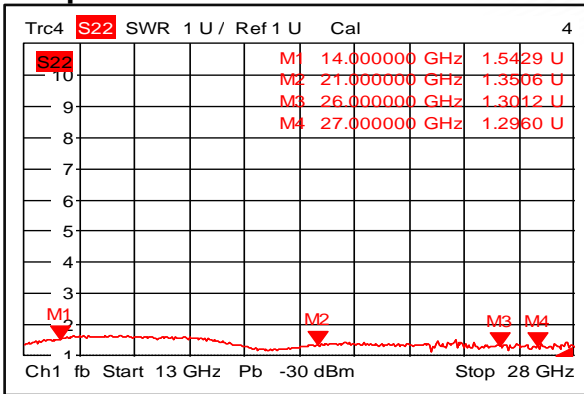


### Input VSWR @ -40°C

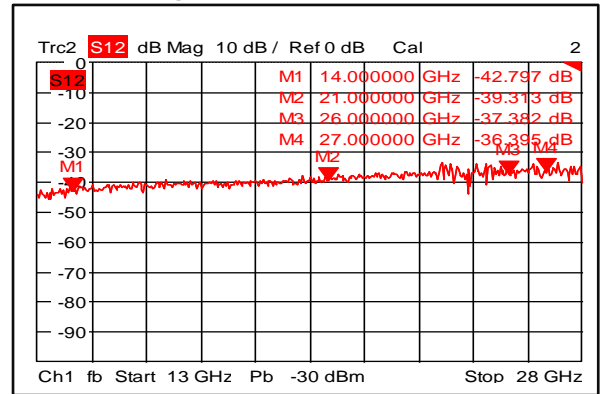




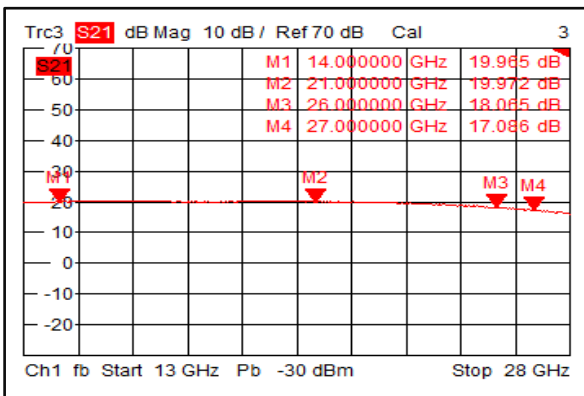
### Output VSWR @ -40°C



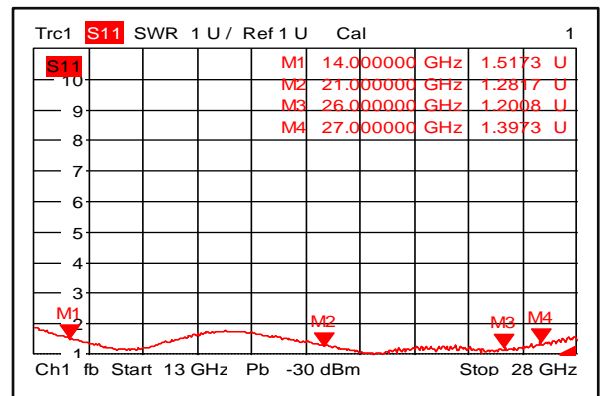
### Isolation @ -40°C



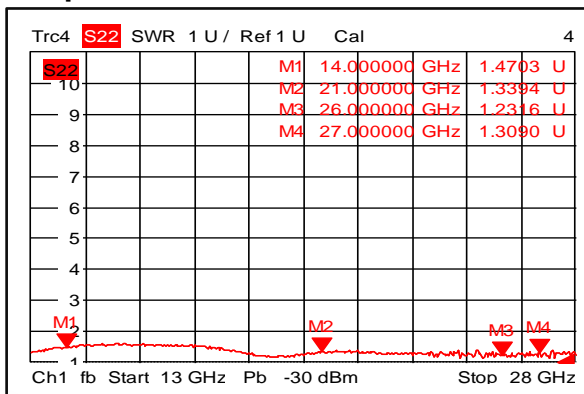
### Gain @ +85°C



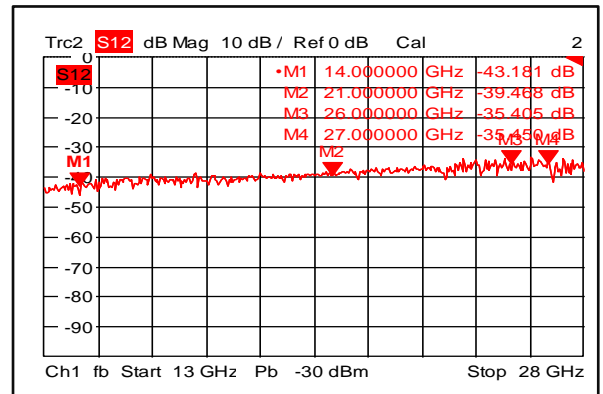
### Input VSWR @ +85°C



### Output VSWR @ +85°C

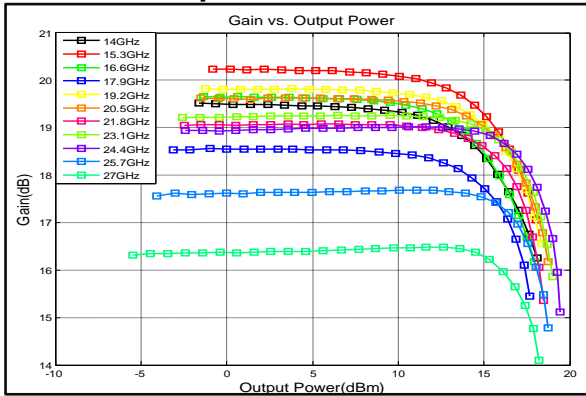


### Isolation @ +85°C

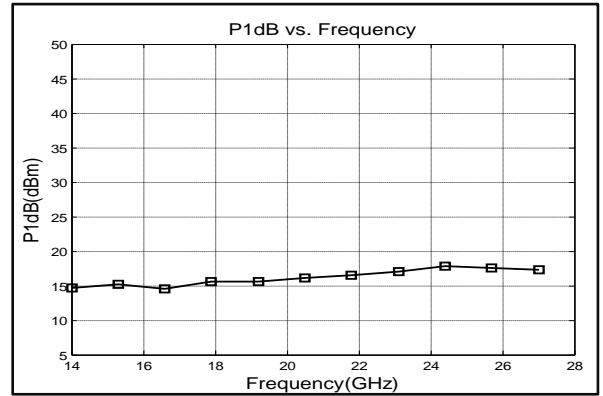




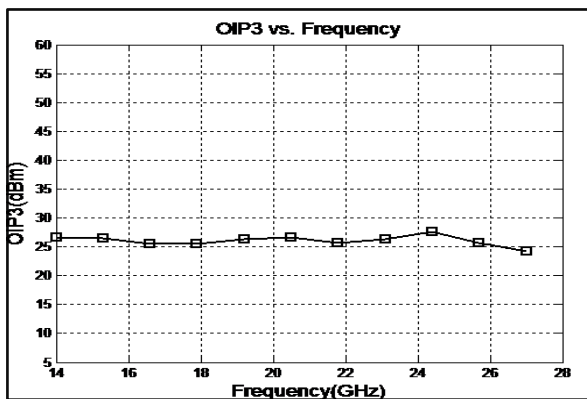
### Gain vs. Output Power



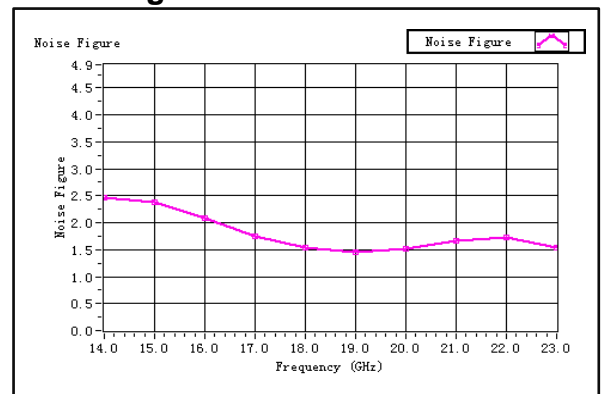
### P1dB vs. Frequency



### Output Third Order Intercept (OIP3)



### Noise Figure



### 2nd Harmonic Wave Output Power

