



# Wide Band Low Noise Amplifier 24GHz~28GHz

## Features

- Gain: 24dB Typical
- Noise Figure: 3.0dB Typical
- P1dB Output Power: +13dBm Typical
- Supply Voltage: +3V
- 50 Ohm Matched



## Typical Applications

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

RF Microwave & VSAT  
Fiber Optics

Parameter	Min.	Typ.	Max.	Units
Frequency Range	24		28	GHz
Gain	22	24		dB
Gain Flatness		±1.0		dB
Gain Variation Over Temperature(-40°C~+85°C)		±2.0		dB
Noise Figure		3.0	4.0	dB
Input VSWR		1.6	2.2	: 1
Output VSWR		1.8	2.2	: 1
Output 1dB Compression Point (P1dB)	9	10.5		dBm
Saturated Output Power (Psat)		15		dBm
Output Third Order Intercept (OIP3)		23		dBm
Supply Current (Vcc=+3V, Vgg=-5V)		80	90	mA
Isolation S12		-35		dB

Weight	0.35ounces	Impedance	50ohms
Input /Output Connectors	2.92mm - Female	Material	Aluminum
Finish	Gold Plated	Package Sealing	Epoxy Sealed (Standard)
			Hermetically Sealed (Option with extra charge)



### Absolute Maximum Ratings

Operating Voltage	+4.5V
RF Input Power (RFIN)	-5dBm

### Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output
step3	Connect -5V biasing
Step 4	Connect +3V biasing

### Power OFF Procedure

Step 1	Turn off +3V biasing
step2	Turn off -5V biasing
Step 3	Remove RF connection
Step 4	Remove Ground.

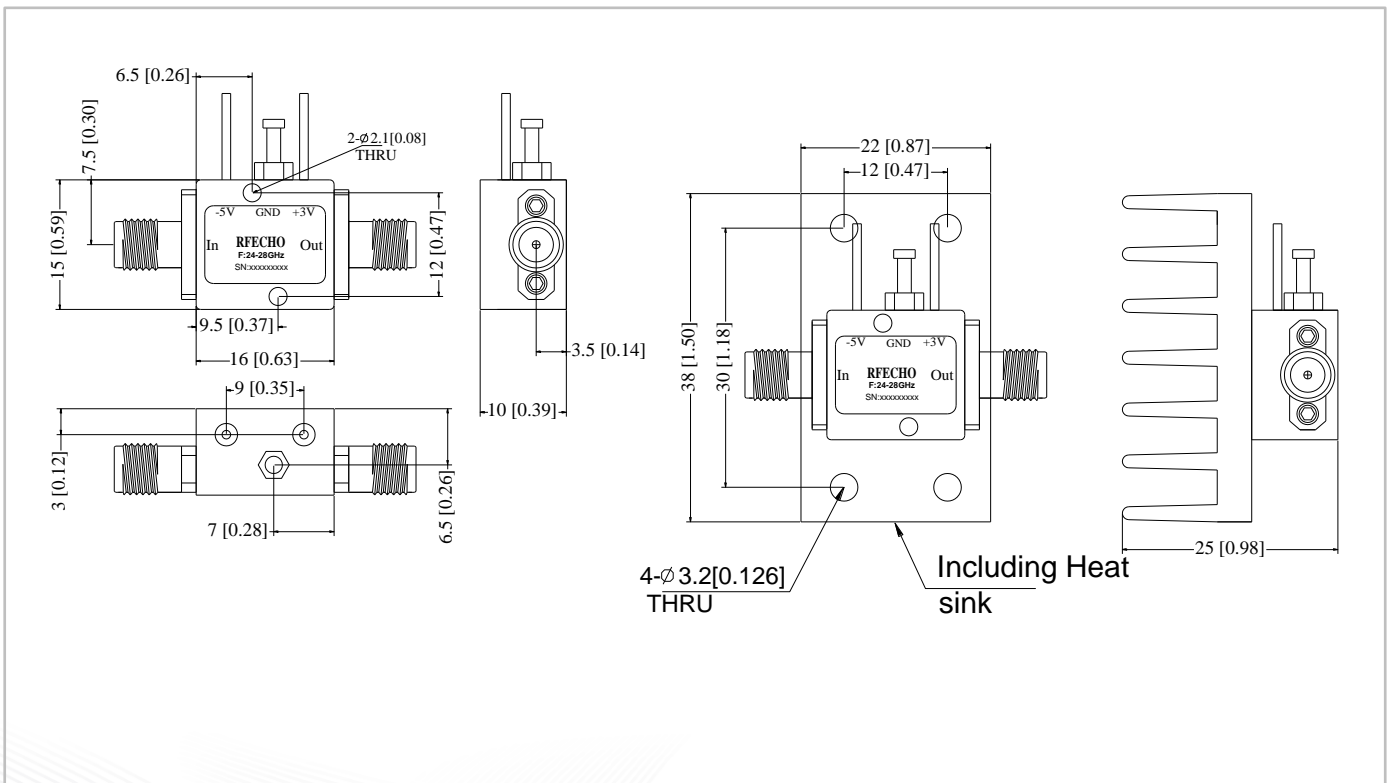
### Environmental Specifications

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:

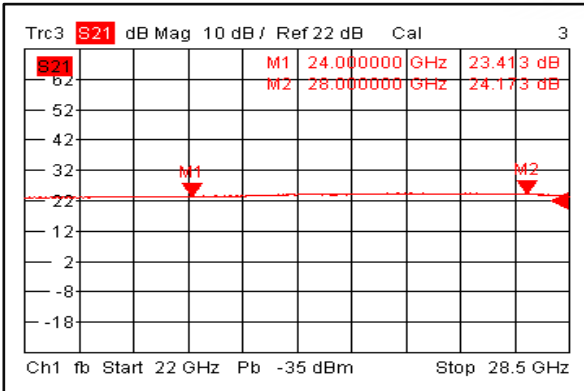
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

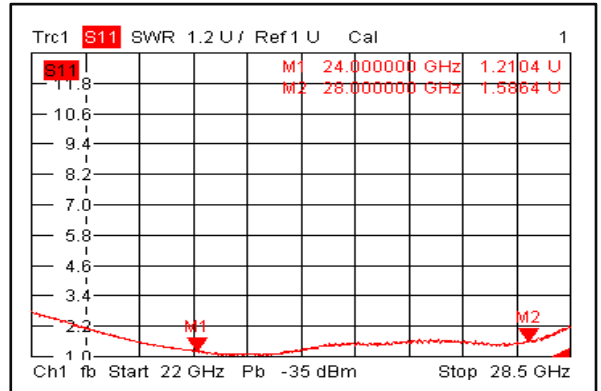




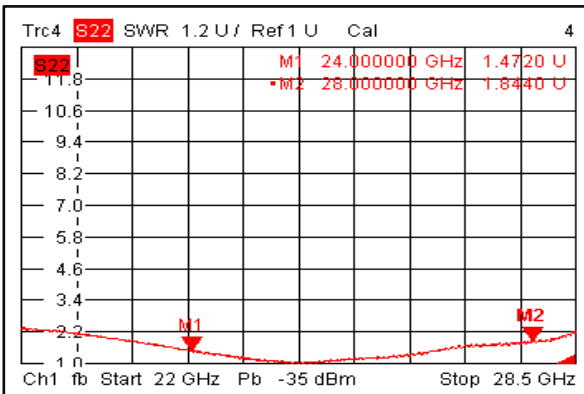
### Gain @+25°C



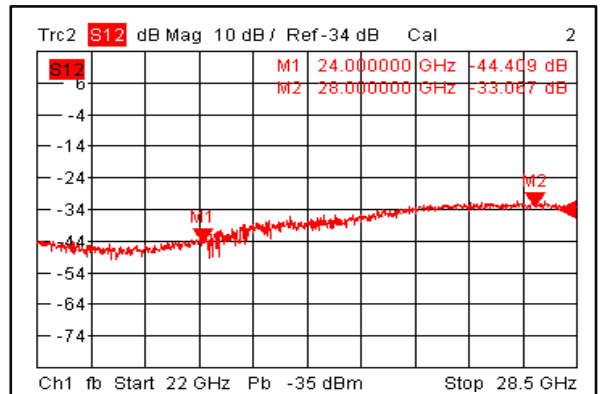
### Input VSWR @+25°C



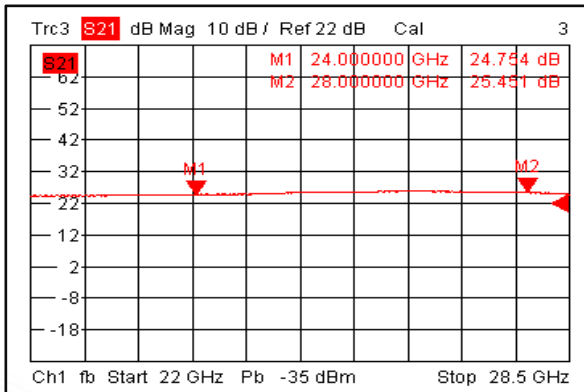
### Output VSWR @+25°C



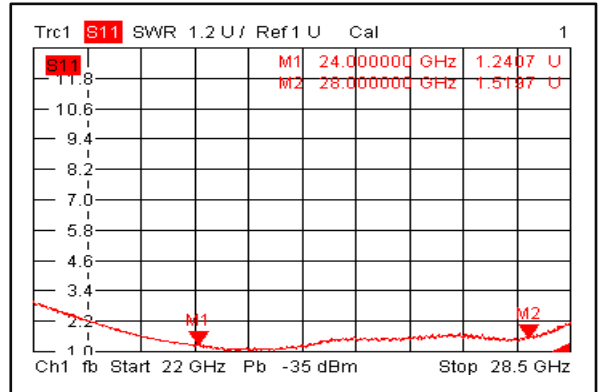
### Isolation @+25°C



### Gain @-40°C

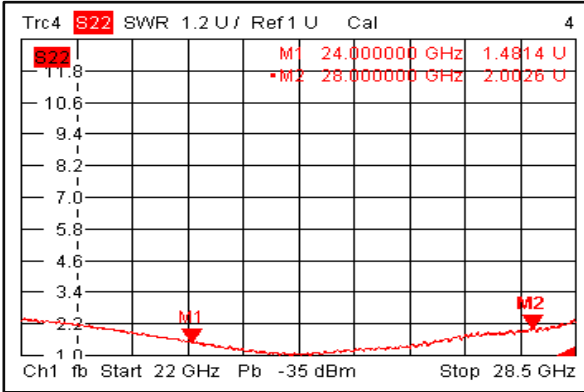


### Input VSWR @-40°C

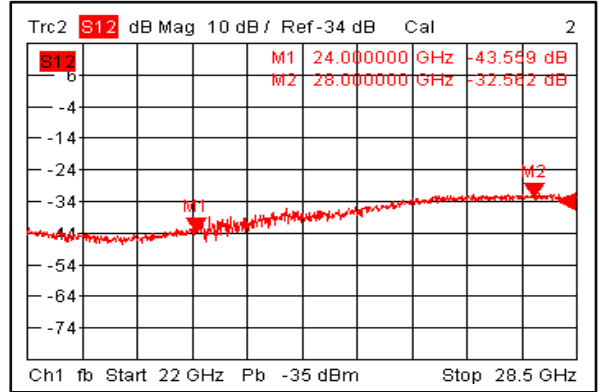




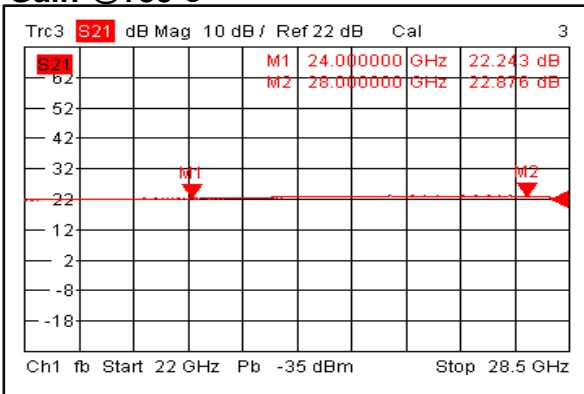
### Output VSWR @-40°C



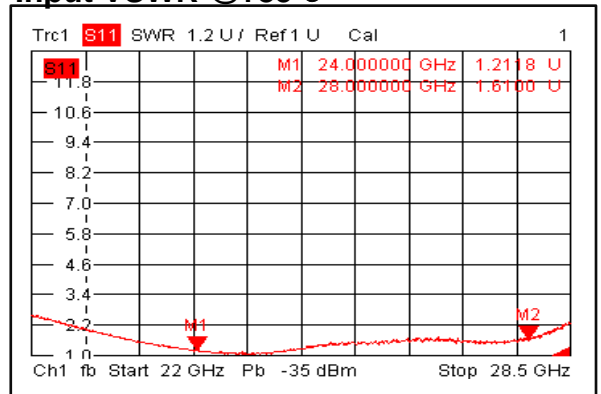
### Isolation @-40°C



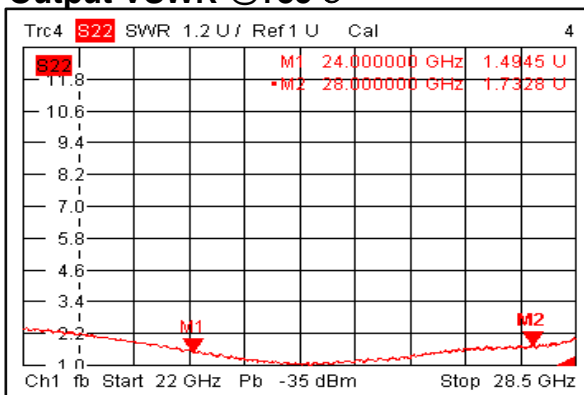
### Gain @+85°C



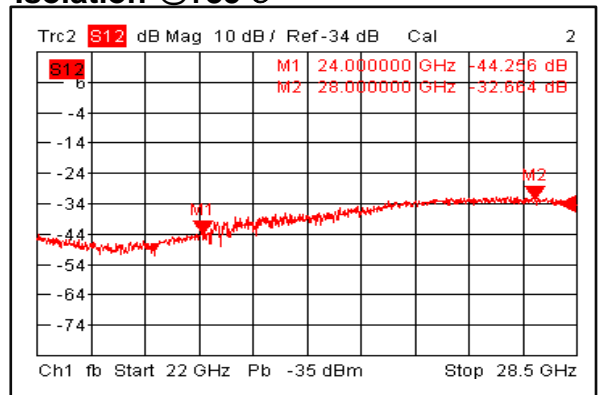
### Input VSWR @+85°C



### Output VSWR @+85°C

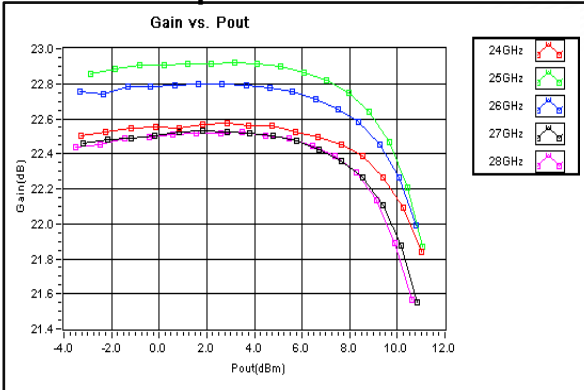


### Isolation @+85°C

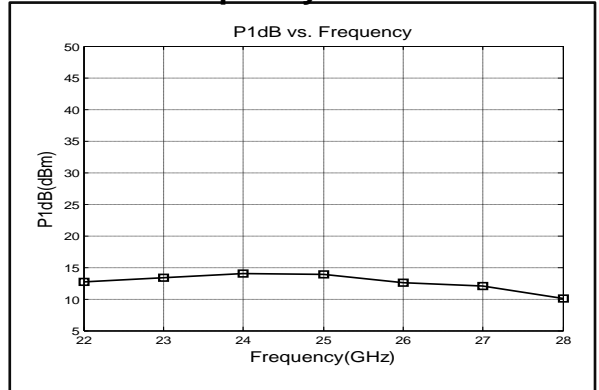




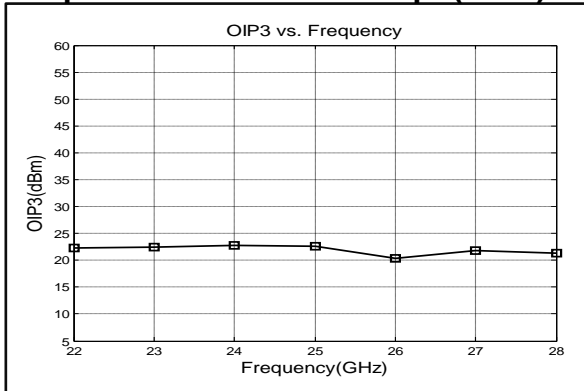
### Gain vs. Output Power



### P1dB vs. Frequency



### Output Third Order Intercept (OIP3)



### Noise Figure

