



# Low Noise Amplifier 17GHz~26GHz

## Features

- Gain: 35dB typical
- Noise Figure: 1.8dB typical
- High P1dB: +21dBm typical
- Supply Voltage: +12V @ 160mA
- 50 Ohm Matched



## Typical Applications

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

RF Microwave & VSAT  
Fiber Optics

| Parameter                                     | Min. | Typ. | Max. | Min. | Typ. | Max. | Units |
|---|------|------|------|------|------|------|-------|
| Frequency Range                               | 18   |      | 20.9 | 17   |      | 26   | GHz   |
| Gain  | 32   | 35   | 37   | 30   | 34   | 37   | dB    |
| Gain Flatness                                 |      | ±0.5 | ±1.0 |      | ±1.5 |      | dB    |
| Gain Variation Over Temperature (-40°C~+85°C) |      | ±1.0 |      |      | ±1.5 |      | dB    |
| Noise Figure                                  |      | 1.8  | 2.2  |      | 1.8  | 3.0  | dB    |
| Input VSWR                                    |      | 1.2  | 1.6  |      | 1.5  |      | : 1   |
| Output VSWR                                   |      | 1.8  | 2.2  |      | 1.8  |      | : 1   |
| Output 1dB Compression Point (P1dB)           | 20   | 21   |      | 17   | 21   |      | dBm   |
| Saturated Output Power (Psat)                 |      | 23   |      |      | 23   |      | dBm   |
| Output Third Order Intercept (OIP3)           |      | 27   |      |      | 26   |      | dBm   |
| Isolation S12                                 |      | -65  |      |      | -60  |      | dB    |
| Supply Current (Vcc=+12V)                     |      | 160  | 200  |      | 160  | 200  | mA    |

|                           |                 |                 |                                |
|---------------------------|-----------------|-----------------|--------------------------------|
| Weight                    | 1.4 Max. ounces | Impedance       | 50ohms                         |
| Input / Output Connectors | 2.92mm-Female   | Material        | Aluminum                       |
| Finish                    | Gold Plated     | Package Sealing | Epoxy Sealed (Standard)        |
|                           |                 |                 | Hermetically Sealed (Optional) |



### Absolute Maximum Ratings

|                       |              |
|-----------------------|--------------|
| Operating Voltage     | +15V @ 25°C  |
| RF Input Power (RFIN) | -5dBm @ 25°C |

### Biassing 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         |

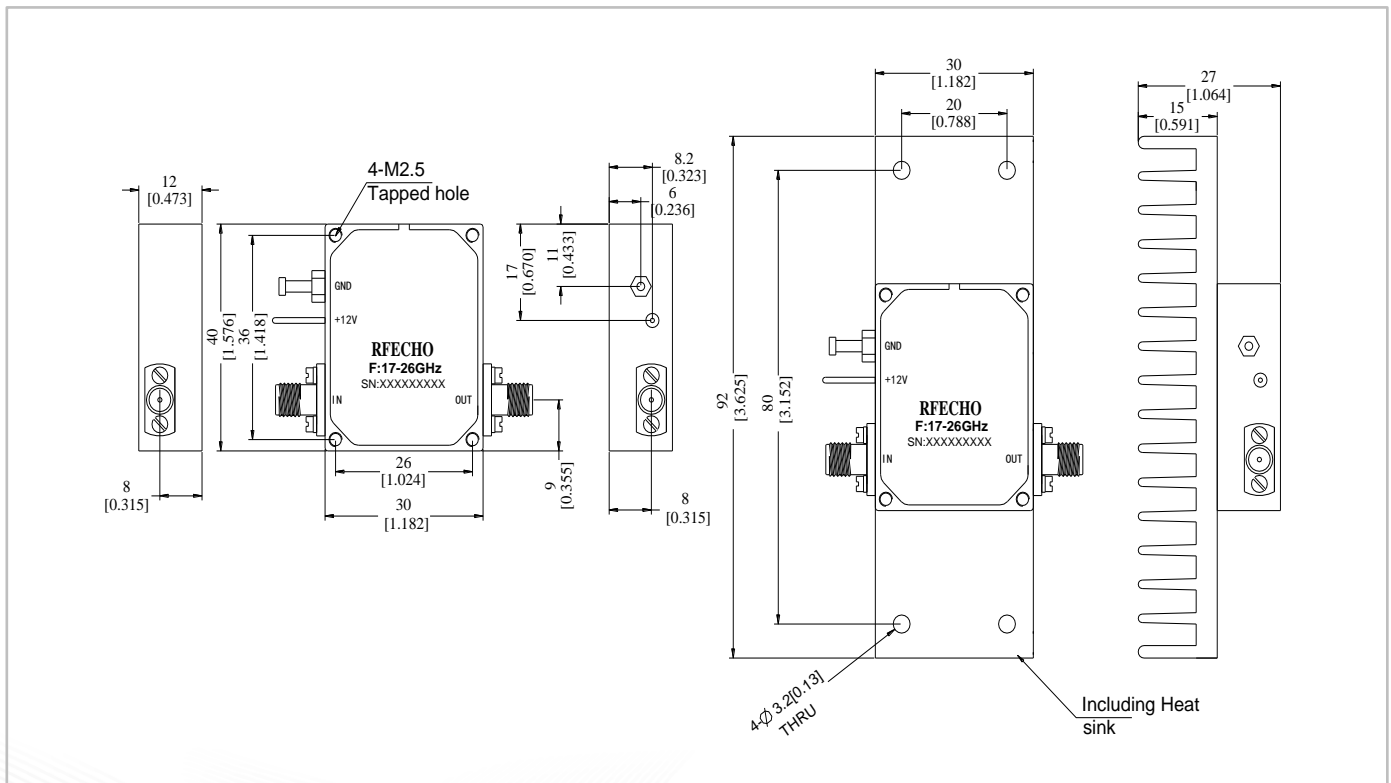
### Environmental Specifications

|                         |  |
|-------------------------|--|
| 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:

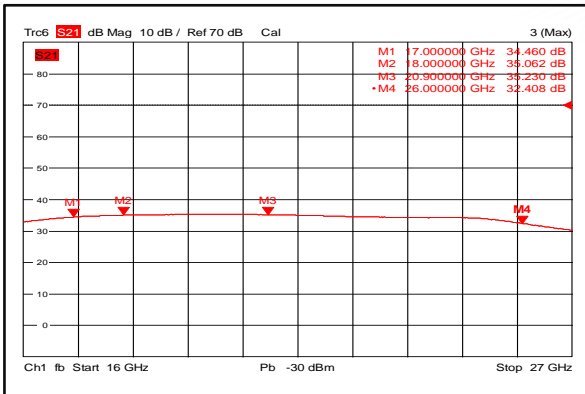
All Dimensions in mm (inches)

Heat Sink required during operation(Sold Separately)

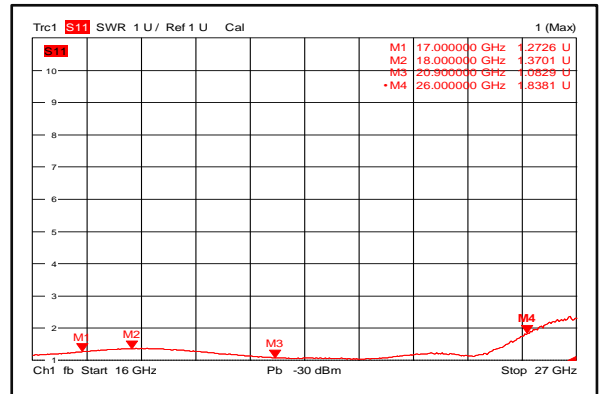




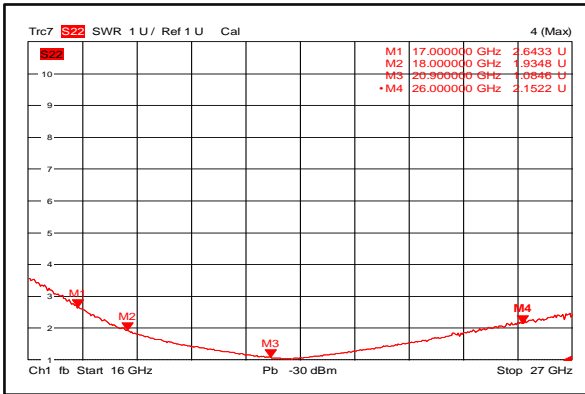
### Gain @ +25°C



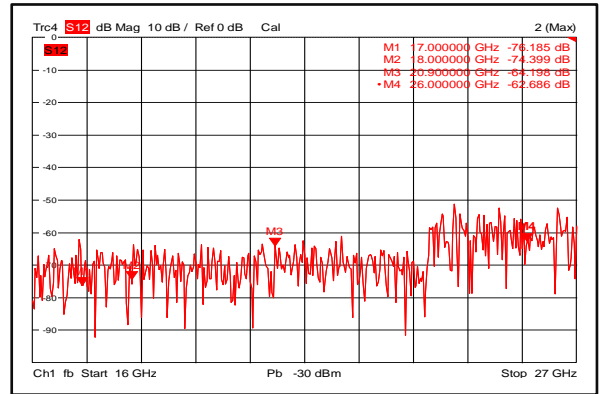
### Input VSWR @ +25°C



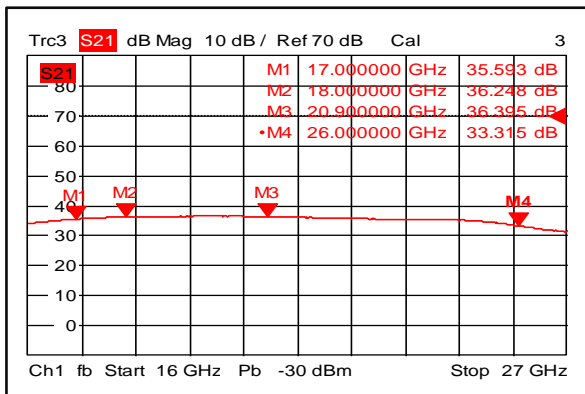
### Output VSWR @ +25°C



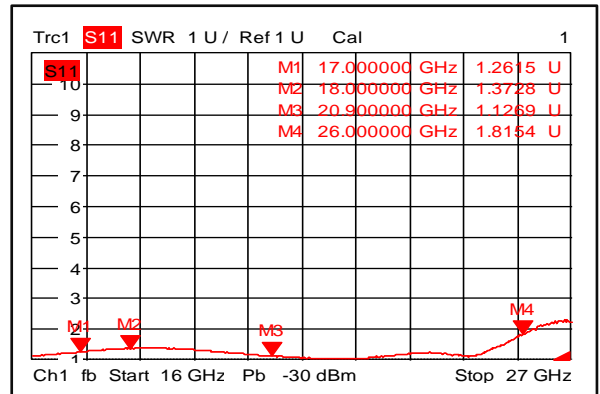
### Isolation @ +25°C



### Gain @ -40°C

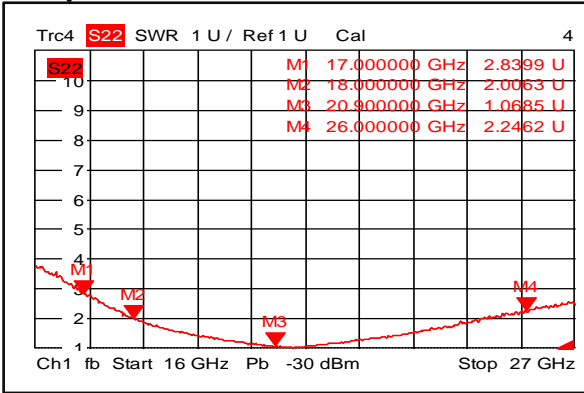


### Input VSWR @ -40°C

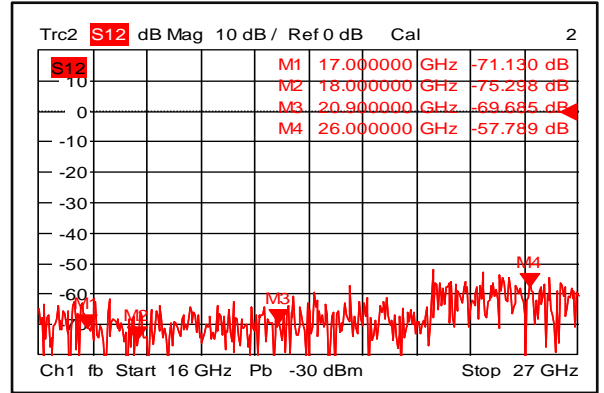




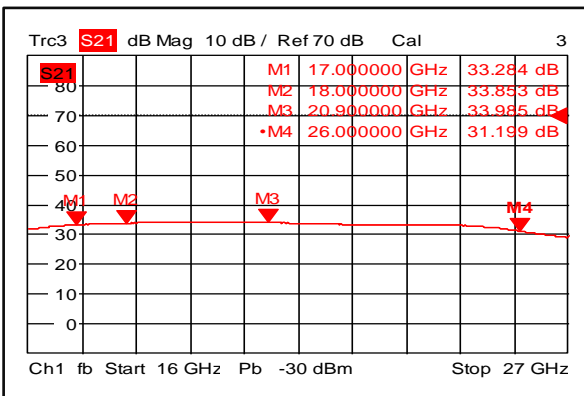
### Output VSWR @ -40°C



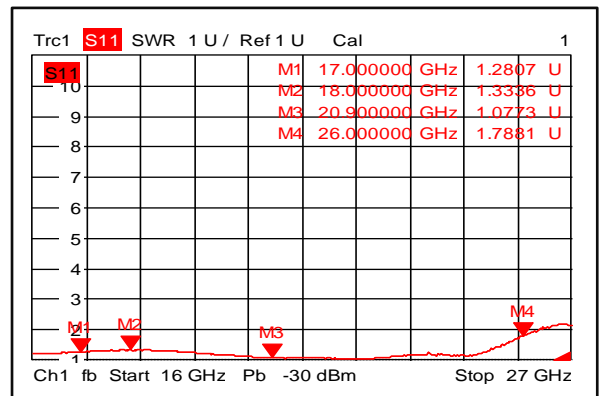
### Isolation @ -40°C



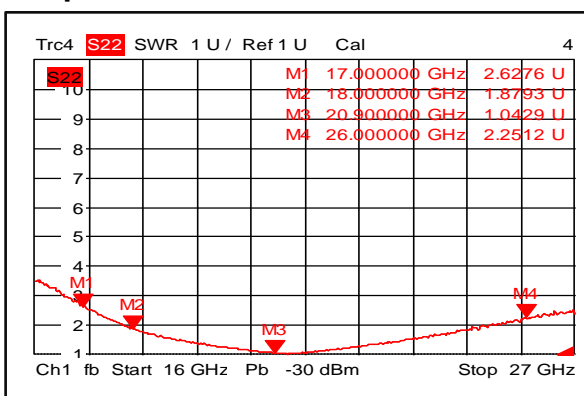
### Gain @ +85°C



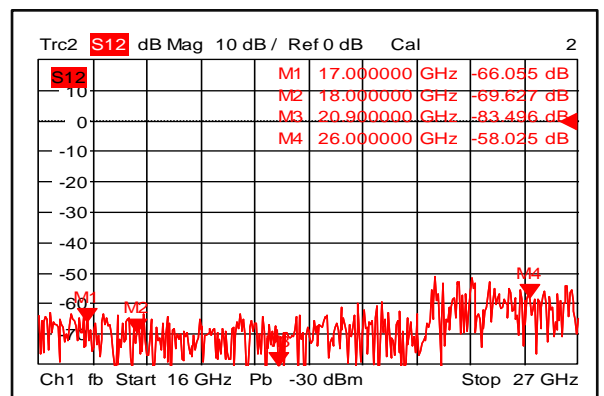
### Input VSWR @ +85°C



### Output VSWR @ +85°C

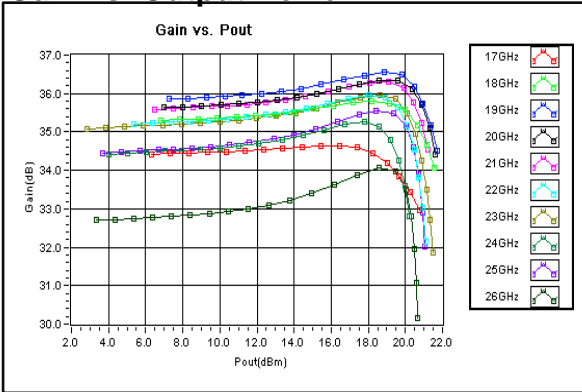


### Isolation @ +85°C

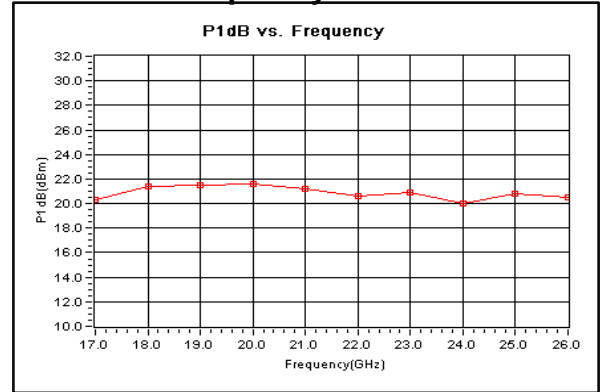




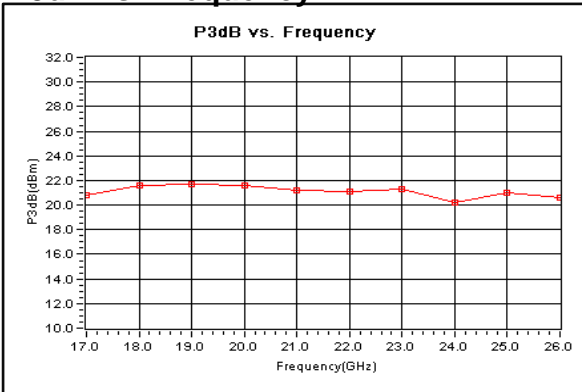
### Gain vs. Output Power



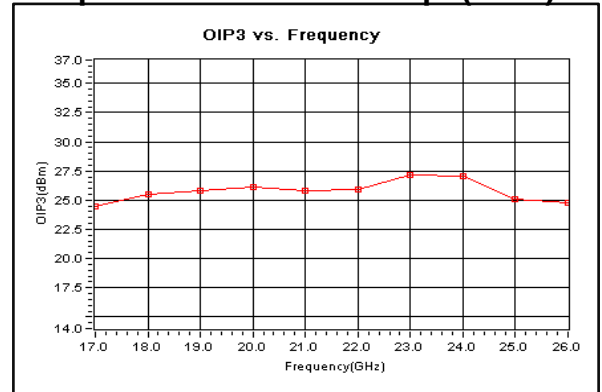
### P1dB vs. Frequency



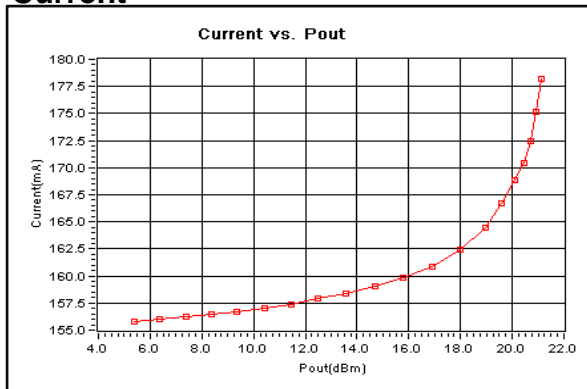
### P3dB vs. Frequency



### Output Third order Intercept (OIP3)



### Current



### Noise Figure

