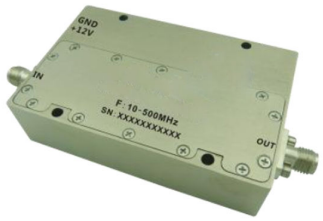
# Ultra Wide Band AC- Power Amplifier 0.01GHz~22GHz

## Features




- High Output Power 29dBm typical.
- High peak to average handling capability.
- High linearity and low noise figure.
- Convenient AC Power Input. (AC 110V/220V)
- Integrated Heat Sink and Fan.

## Typical Applications

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

RF Microwave & VSAT
Fiber Optics

| Parameters | Min. | Typ. | Max. | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|---|
| Frequency Range | 0.01 | | 12 | 12 | | 22 | GHz |
| Gain | 24 | 28 | | 24 | 26 | | dB |
| Gain Flatness | | ±2.0 | ±4.0 | | ±1.0 | ±2.0 | dB |
| Gain Variation Over Temperature (-40ºC~+85ºC) | | ±1.0 | | | ±1.5 | | dB |
| Noise Figure | | 2.5 | | | 3.0 | 5.0 | dB |
| Input VSWR | | 1.8 | | | 1.8 | | : 1 |
| Output VSWR | | 1.7 | | | 1.8 | | : 1 |
| Output 1dB Compression Point (P1dB) | 25.5 | 29 | | 23 | 26 | | dBm |
| Saturated Output Power (Psat) | | 30 | | | 28 | | dBm |
| Isolation S12 | | -55 | | | -55 | | dB |
| Reference Supply Current @Vdd= +12V | | 600 | 800 | | 600 | 800 | mA |

| | | | |
|---|---|---|---|
| Weight | 37.74 ounces | Impedance | 50ohms |
| Input / Output Connectors | SMA-Female | Material | Aluminum |
| Finish | Gray Painted | | |

## Absolute Maximum Ratings

| | |
|---|---|
| Operating Voltage | +15V |
| RF Input Power (RFIN) | +8dBm |

## 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 |

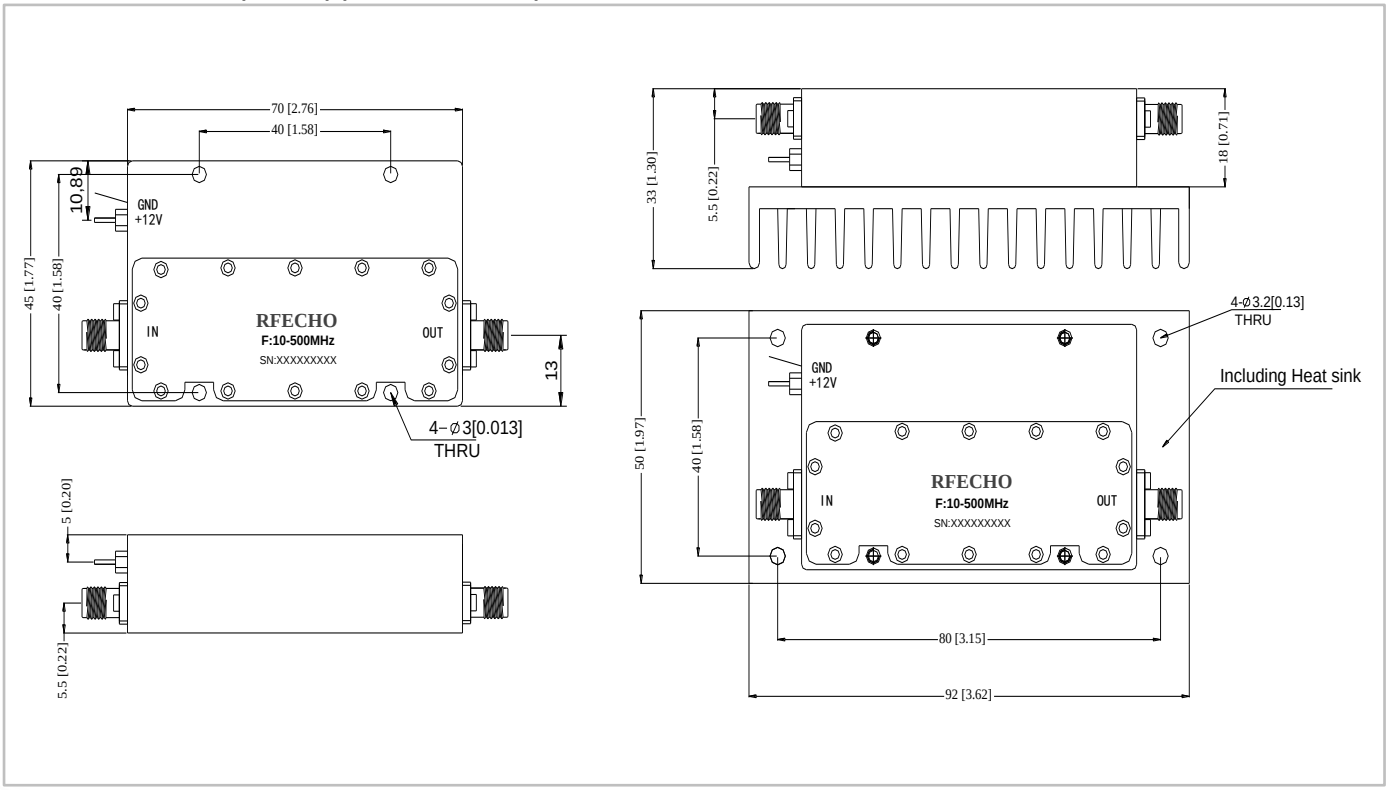
## Environmental Specifications

| | |
|---|---|
| Operational Temperature | -40ºC~+85ºC |
| Storage Temperature | -50ºC~+105ºC |
| 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 35ºc, 95%RH at 40ºc |
| Shock | 20G for 11msec half sine wave,3 axis both directions |

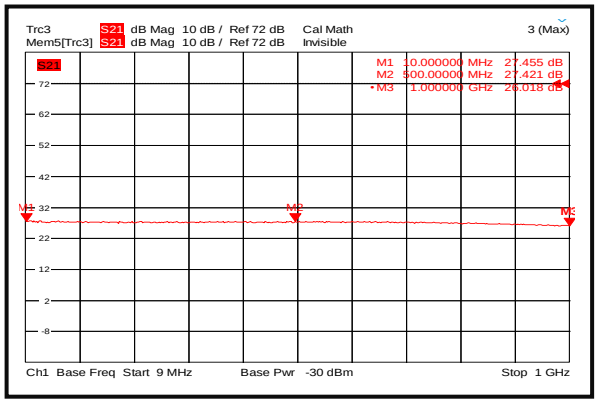
## Outline Drawing:

All Dimensions in mm (inches)
Tolerances ±0.2(0.008)(Excl heatsink)

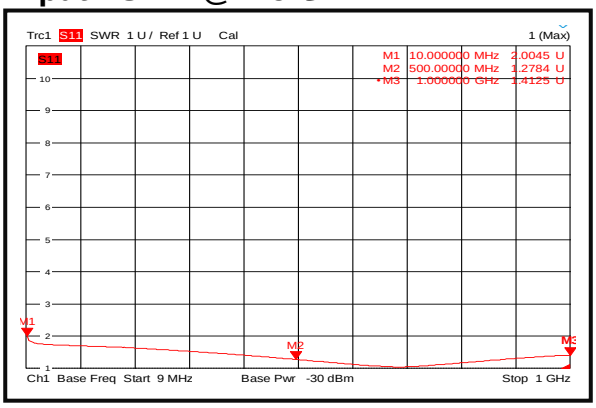
Heat Sink required during operation(Sold Separately)



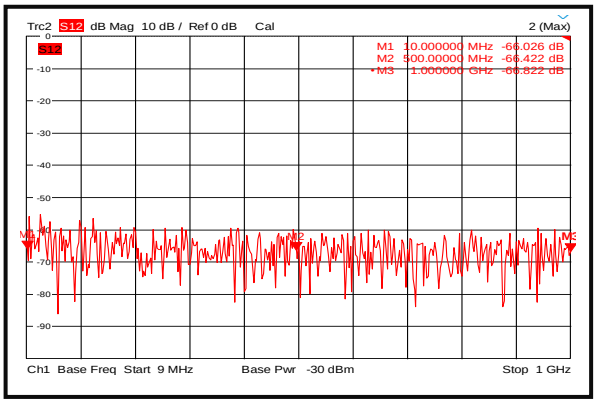
## Gain @+25℃



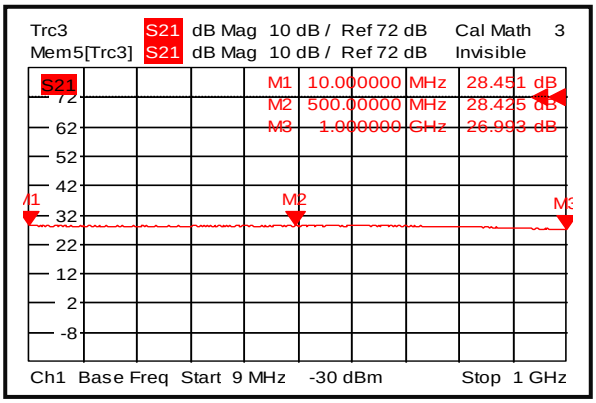

## Input VSWR @+25℃



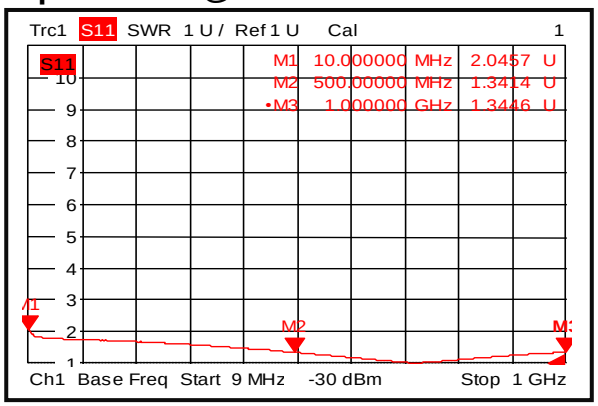

## Isolation @+25℃



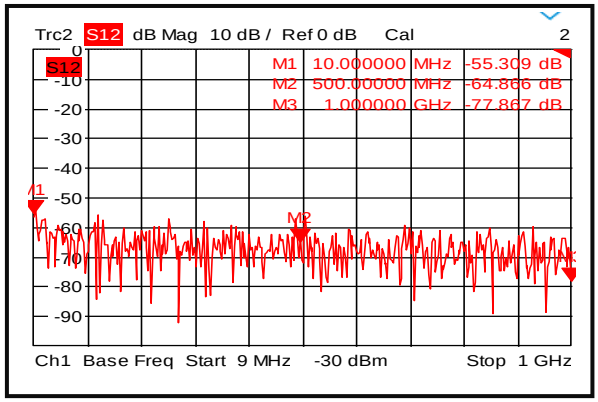

## Gain @-40℃



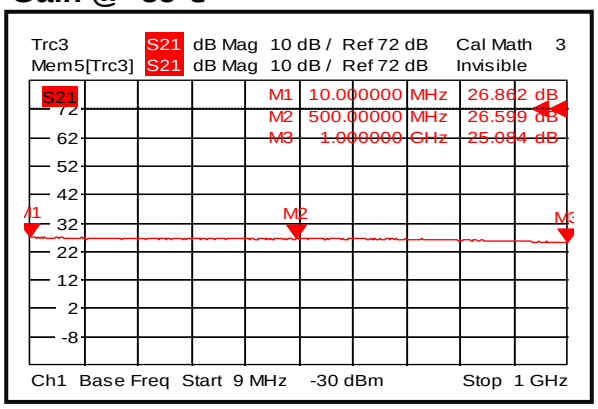

## Input VSWR @-40℃



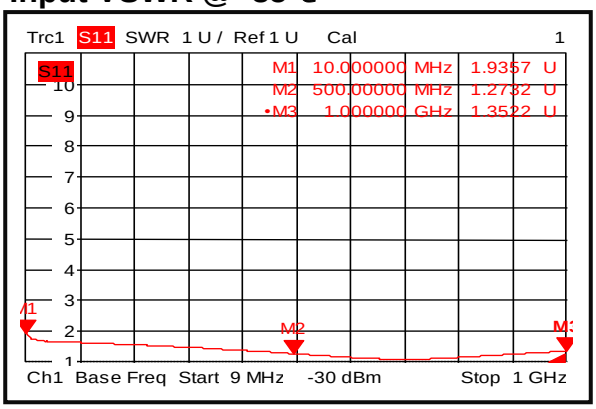

## Isolation @-40℃



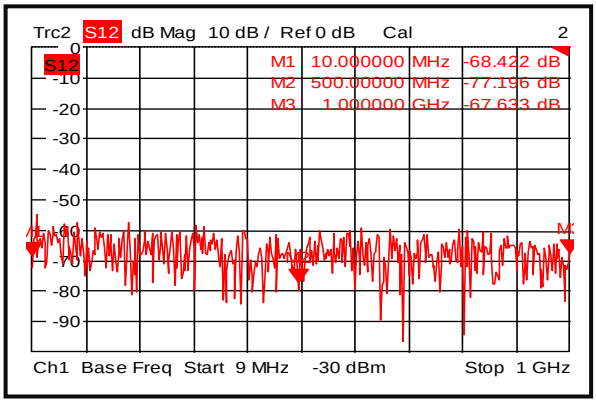
## Gain @+85℃



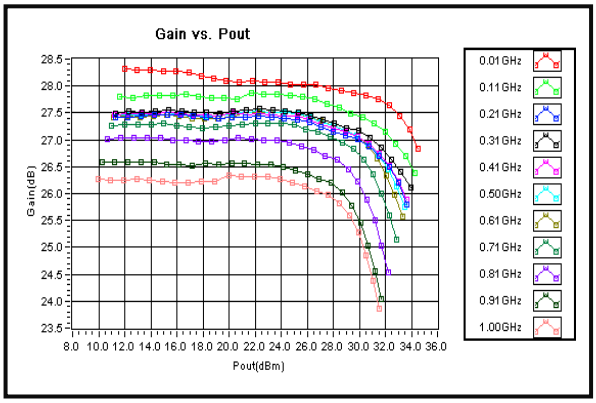

## Input VSWR @+85℃



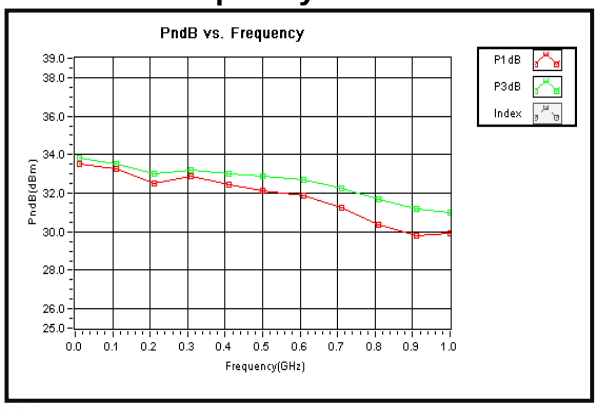

## Isolation @+85℃



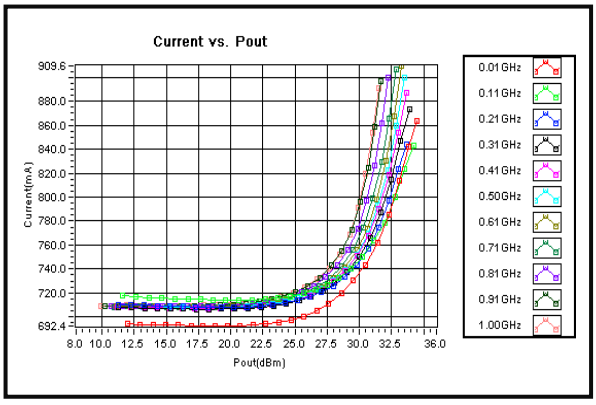

## Gain vs. Output Power



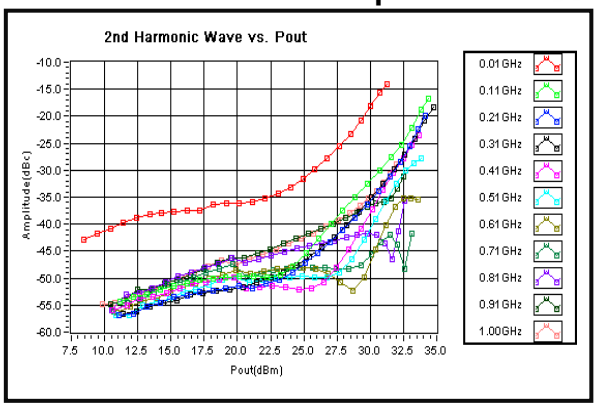

## P1dB vs. Frequency



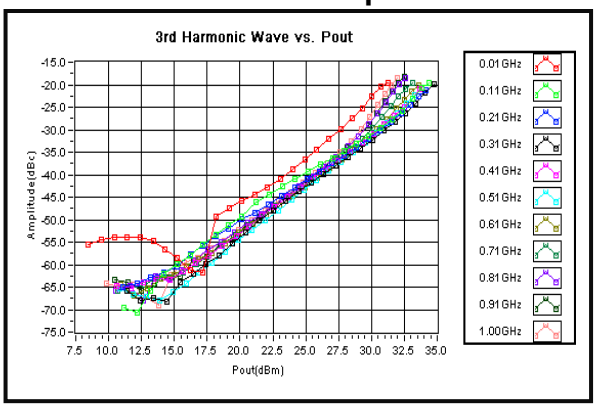

## Current



## 2nd Harmonic Wave Output Power




## 3rd Harmonic Wave Output Power




## 4th Harmonic Wave Output Power