# Ultra Wide Band AC-Low Noise Amplifier 0.5GHz~40GHz

## Features

- High Output Power 18dBm 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 | 0.5 | | 18 | 18 | | 40 | GHz |
| Gain | 38 | 45 | | 37 | 43 | | dB |
| Gain Flatness | | ±4.0 | | | ±2.5 | | dB |
| Gain Variation Over Temperature (-40ºC~+85ºC) | | ±1.5 | | | ±1.5 | | dB |
| Noise Figure | | 4.0 | | | 5.0 | | dB |
| Input VSWR | | 1.6 | 2.5 | | 2.5 | | : 1 |
| Output VSWR | | 1.6 | 2.0 | | 2.0 | | : 1 |
| Output 1dB Compression Point (P1dB) | 18 | 22 | | 13 | 18 | | dBm |
| Saturated Output Power (Psat) | | 23 | | | 20 | | dBm |
| Output Third Order Intercept (OIP3) | | 27 | | | 22 | | dBm |
| Isolation S12 | | -70 | | | -60 | | dB |
| Supply Current (Idd) (AC=110~220V) | | 120 | | | 120 | | mA |

| | | | |
|---|---|---|---|
| Weight | 37.74 | Impedance | 50ohms |
| Input /Output Connectors | 2.92mm-Female | Material | Aluminum |
| Finishing | Gray Painted | | |

## Absolute Maximum Ratings

| | |
|---|---|
| Supply Voltage | AC110~220V |
| RF Input Power(RFIN) | @0.5-6GHz -22dBm<br>@6-26.5GHz -18dBm<br>@26.5-40GHz -15dBm |

temperature.

## Biasing Up Procedure

| | |
|---|---|
| Step 1 | Connect input and output with 50 Ohm source and load with in band return loss better than 10dB. |
| Step 2 | Connect AC Plug |
| Step 3 | Flip switch to “ON” position |

## Power OFF Procedure

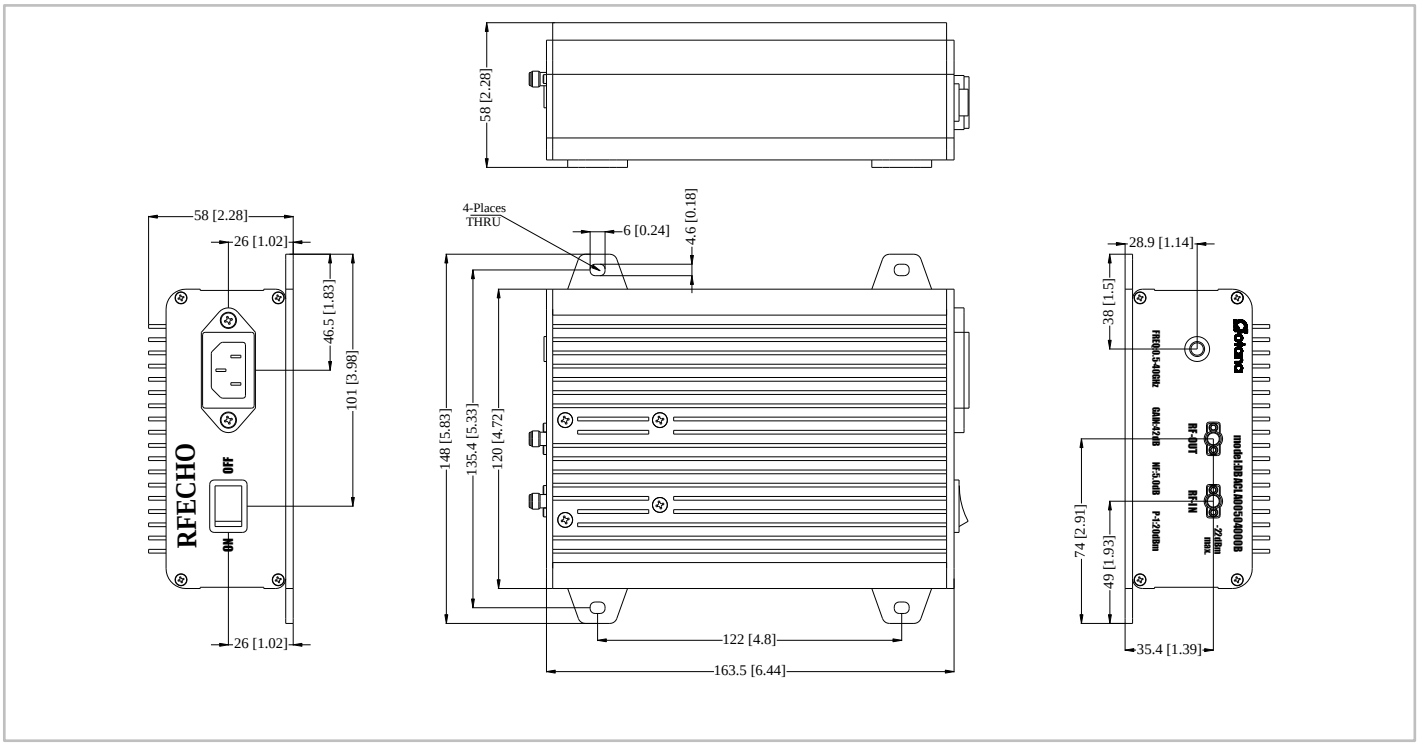
| | |
|---|---|
| Step 1 | Flip switch to “OFF” position |
| Step 2 | Remove AC Plug |
| Step 3 | Remove RF Connection |

## Environmental Specifications

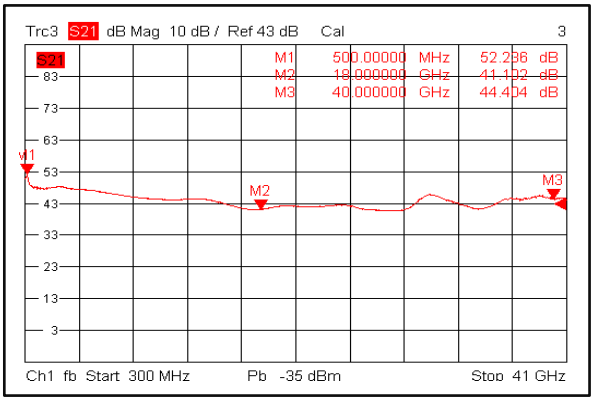
| | |
|---|---|
| Operational Temperature | -40ºC~+85ºC |
| Storage Temperature | -50ºC~+105ºC |
| Altitude | 30,000 ft. (Epoxy Sealed Controlled environment) |
| | 60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional) |
| Vibration | 25g RMS (15 degrees 2KHz) endurance, 1 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:

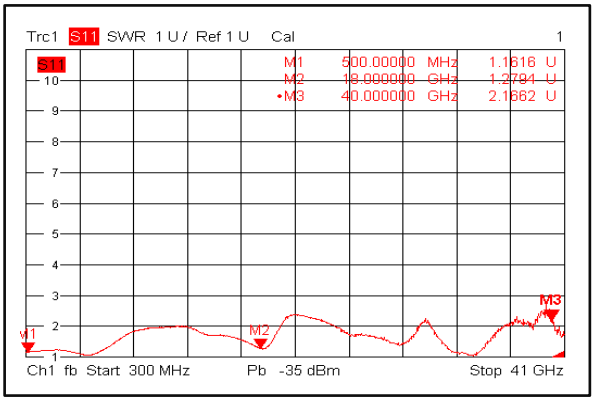
All Dimensions in mm (inches)



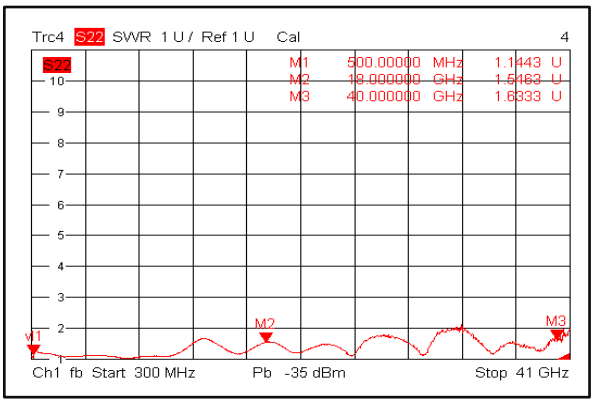
## Gain



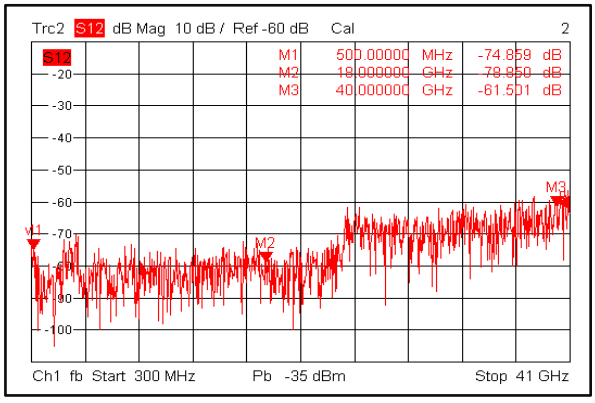

## Input VSWR



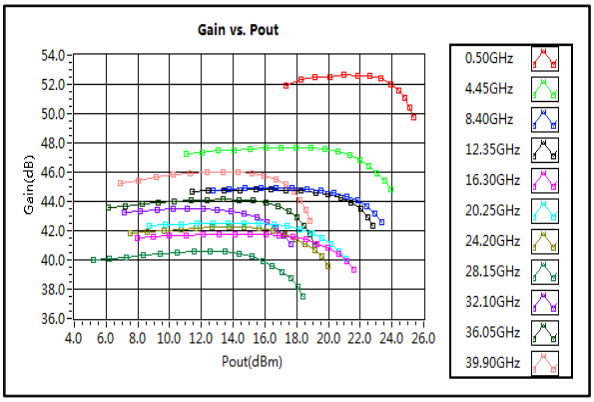

## Output VSWR



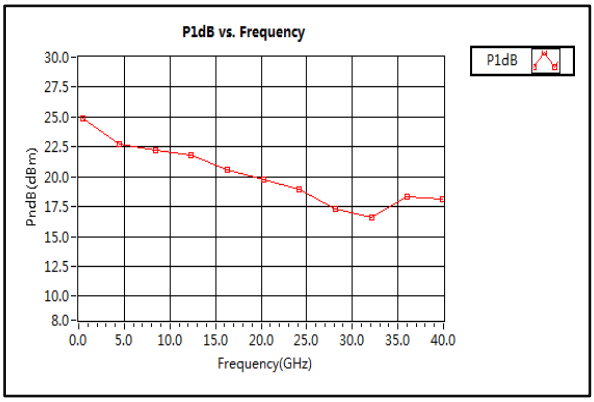

## Isolation



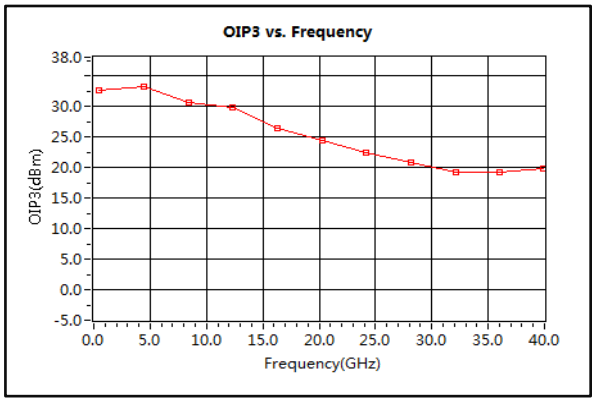

## Gain vs. Output Power



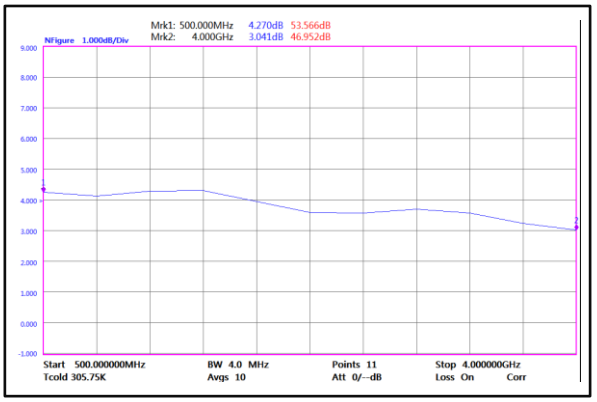

## P1dB vs. Frequency



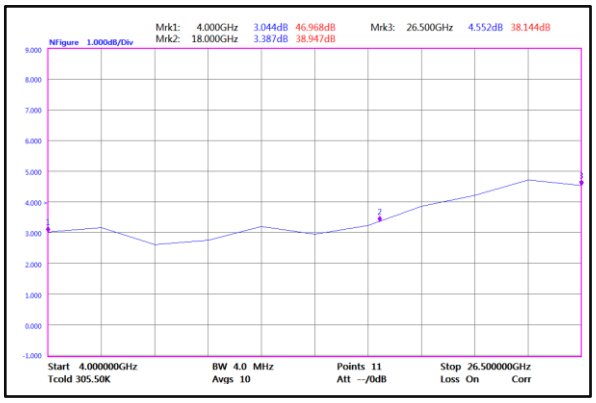
## Output Third Order Intercept (OIP3)



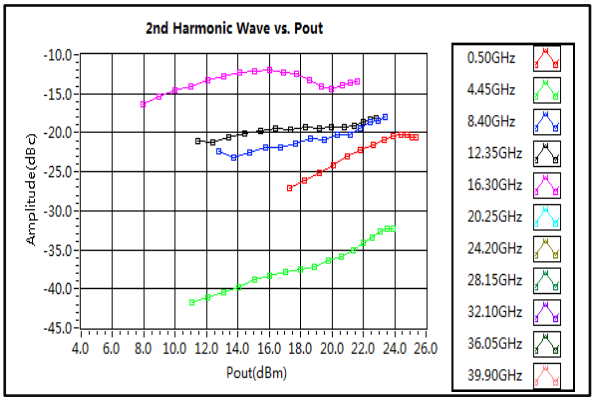

## Noise Figure(0.5-4GHz)



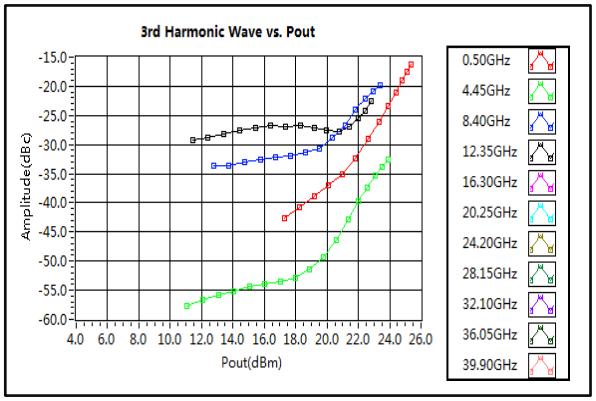

## Noise Figure(4-26.5GHz)




## 2nd Harmonic Wave Output Power




## 3rd Harmonic Wave Output Power




## 4th Harmonic Wave Output Power