



Ultra Wide Band AC-Low Noise Amplifier 0.01GHz~6GHz

Features

- High Output Power 25dBm 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 | 0.1 | | 3 | 3 | | 6 | GHz |
| Gain | 28 | 30 | | 28 | 30 | | dB |
| Gain Flatness | | ±1.5 | ±2.0 | | ±1.5 | ±2.0 | dB |
| Gain Variation Over Temperature (-40°C~+85°C) | | ±1.0 | | | ±1.0 | | dB |
| Noise Figure | | 4.5 | | | 3.0 | 4.5 | dB |
| Input VSWR | | 2.0 | 3.0 | | 2.0 | 3.0 | : 1 |
| Output VSWR | | 1.5 | 2.0 | | 1.6 | 2.0 | : 1 |
| Output 1dB Compression Point (P1dB) | 23 | 25 | | 24 | 25 | | dBm |
| Saturated Output Power (Psat) | | 27 | | | 26 | | dBm |
| Output Third Order Intercept (OIP3) | | 36 | | | 35 | | dBm |
| Isolation S12 | | -60 | | | -55 | | dB |
| Supply Current (Idd) (AC=110~220V) | / | | | | | | mA |
| Weight | 39.15 ounces | | Impedance | 50ohms | | | |
| Input /Output Connectors | SMA-Female | | Material | Aluminum | | | |
| Finish | Gray Painted | | | | | | |



Absolute Maximum Ratings

| | |
|----------------------|------------|
| Supply Voltage | AC110~230V |
| RF Input Power(RFIN) | -5dBm |

Note: Maximum RF input power is defined to protect the amplifier from damage.
Input power may be increased at the users own risk to achieve the full output power of the amplifier. Please reference gain and power curves and monitor the temperature.

Biassing 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

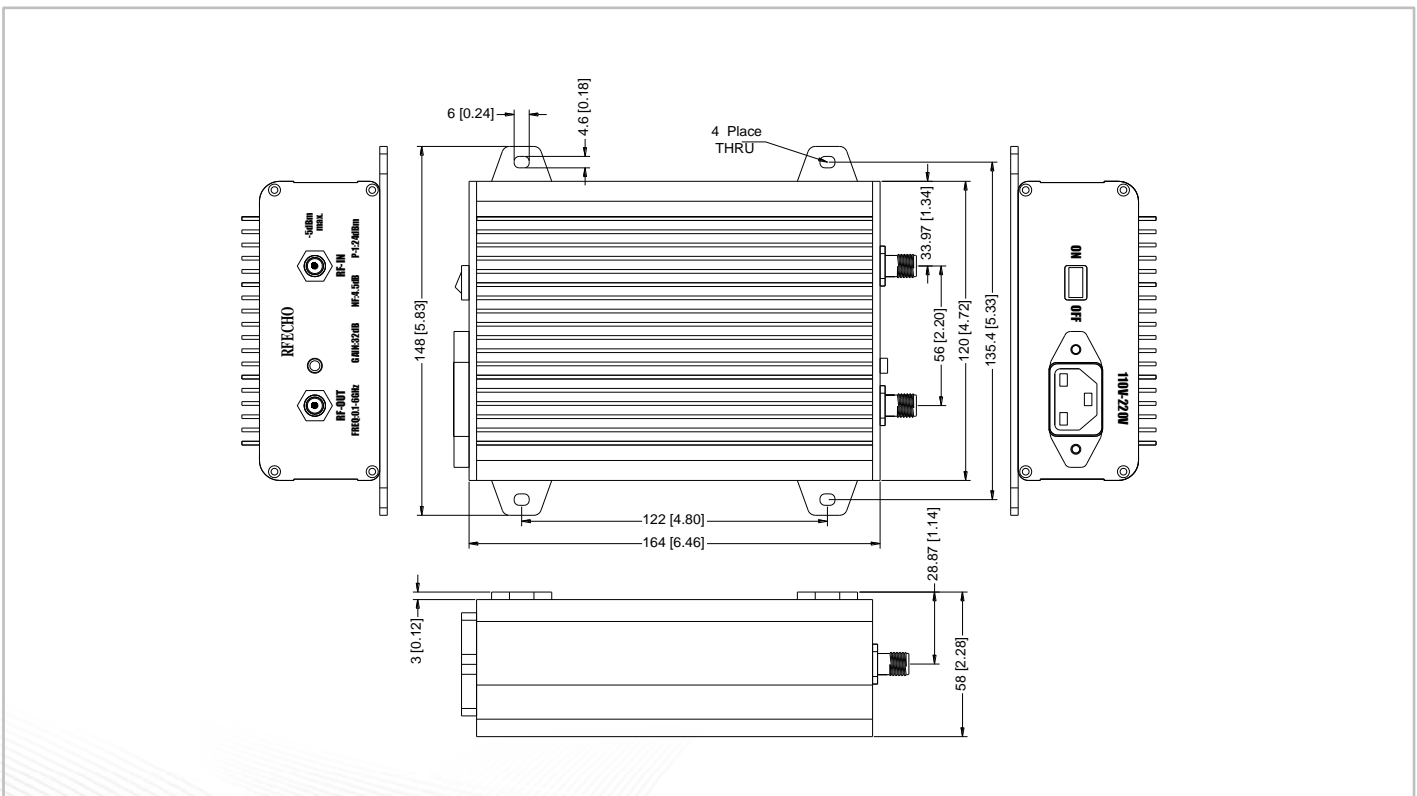
| | |
|--------|-------------------------------|
| Step 1 | Flip switch to "OFF" position |
| Step 2 | Remove AC Plug |
| Step 3 | Remove RF Connection |

Environmental Specifications

| | |
|-------------------------|----------------------------------------------------------------------------------|
| Operational Temperature | -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 |

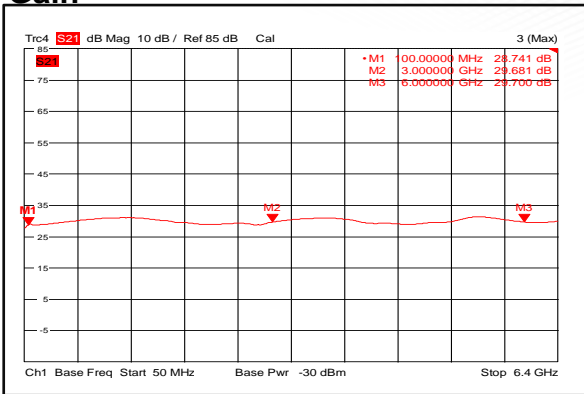
Outline Drawing:

All Dimensions in mm (inches)

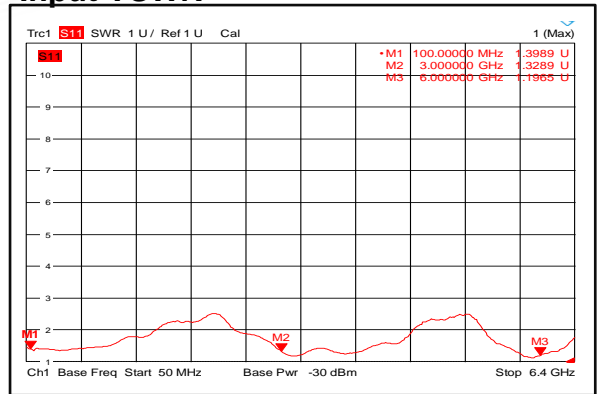




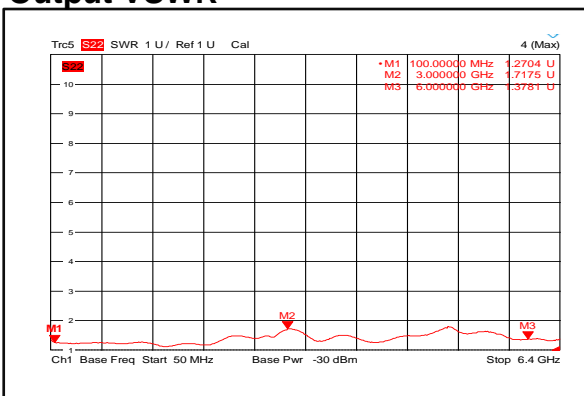
Gain



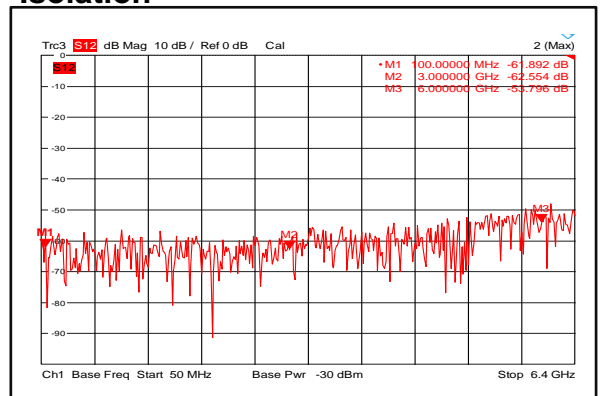
Input VSWR



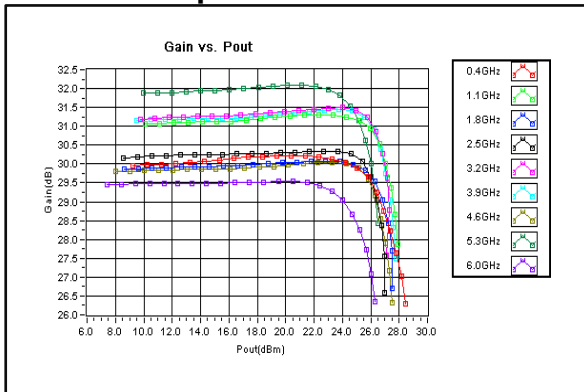
Output VSWR



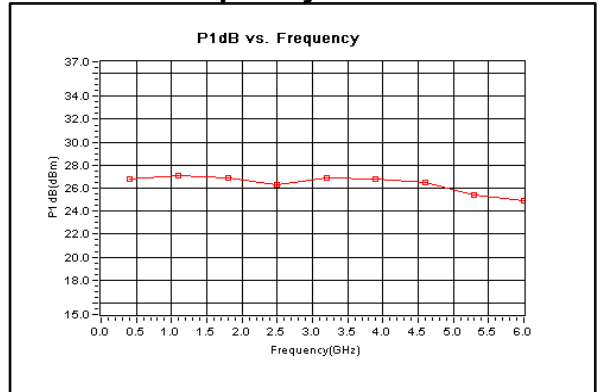
Isolation



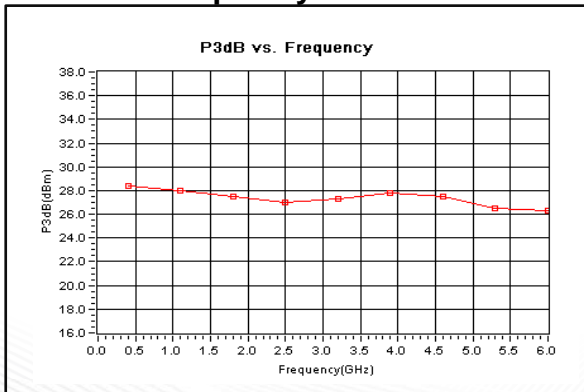
Gain vs. Output Power



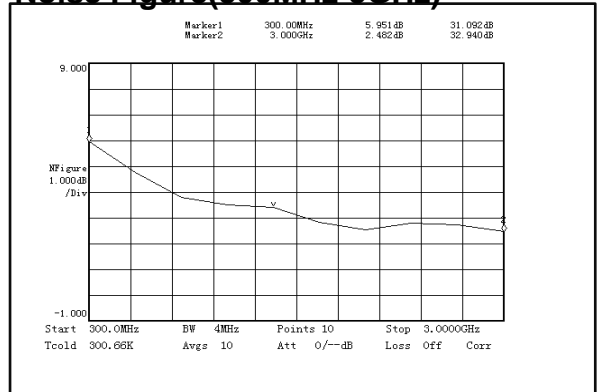
P1dB vs. Frequency



P3dB vs. Frequency

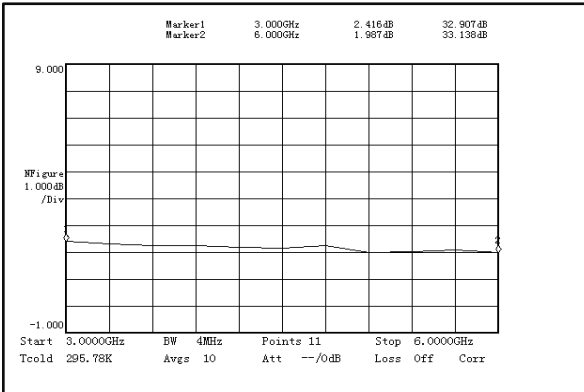


Noise Figure(300MHz-3GHz)

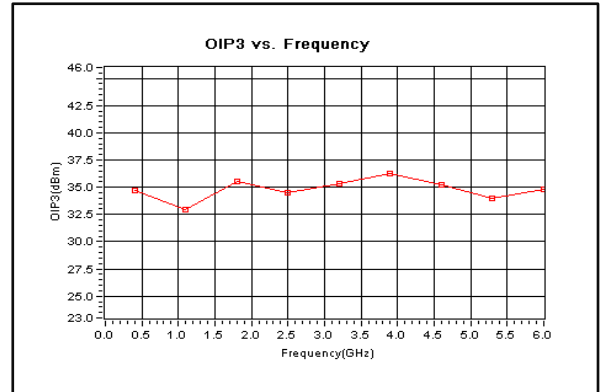




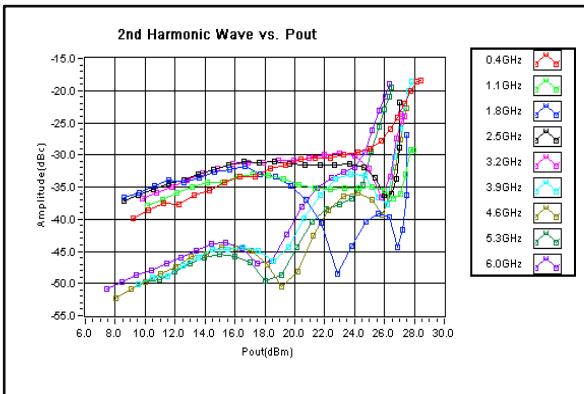
Noise Figure(3GHz-6GHz)



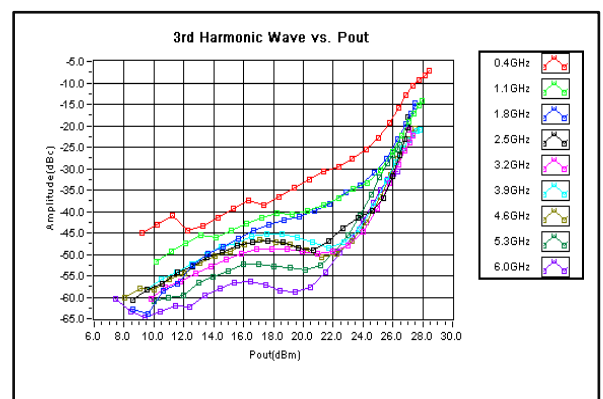
Output Third Order Intercept (OIP3)



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power

