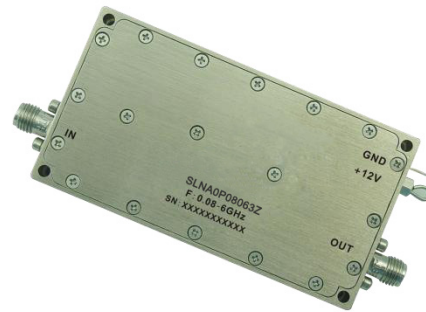


Ultra wide band Low Noise Amplifier 0.08GHz-6GHz
Features

- Gain: 50dB Typical
- Noise Figure: 2.5dB Typical
- P1dB Output Power: 26dBm Typical
- Supply Voltage: +12V @ 380mA
- 50 Ohm Matched Input / Output
- Size: 2.92" x 1.58" x 0.47"


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 | 0.08 - 3 | | 3 - 6 | | | | GHz |
| Gain | 48 | 50 | | 46 | 50 | | dB |
| Gain Flatness | | ±1.5 | ±2.5 | | ±1.5 | ±2.5 | dB |
| Gain Variation Over Temperature (-40°C to +85°C) | | ±1.0 | | | ±2.0 | | dB |
| Noise Figure | | 2.5 | 3.5 | | 3.0 | 4.5 | dB |
| Input VSWR | | 2.5 | | | 2.5 | | : 1 |
| Output VSWR | | 1.8 | | | 1.8 | | : 1 |
| Output 1dB Compression Point (P1dB) | 24 | 26 | | 23 | 26 | | dBm |
| Saturated Output Power (Psat) | | 28 | | | 27 | | dBm |
| Output Third Order Intercept (OIP3) | | 32 | | | 32 | | dBm |
| Supply Current (Vcc=+12V) | | 380 | 550 | | 380 | 550 | mA |
| Isolation S12 | | -65 | | | -65 | | dB |

| | | | |
|--------------------------|-----------------|-----------------|--------------------------------|
| Weight | 3.0 Max. ounces | Impedance | 50 ohms |
| Input /Output Connectors | SMA-Female | Material | Aluminum |
| Finish | Nickel Plated | Package Sealing | Epoxy Sealed (Standard) |
| | | | Hermetically Sealed (Optional) |

Ultra wide band Low Noise Amplifier 0.08GHz-6GHz

Absolute Maximum Ratings

| | |
|-----------------------|--------|
| Operating Voltage | +15V |
| RF Input Power (RFIN) | -20dBm |

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 |

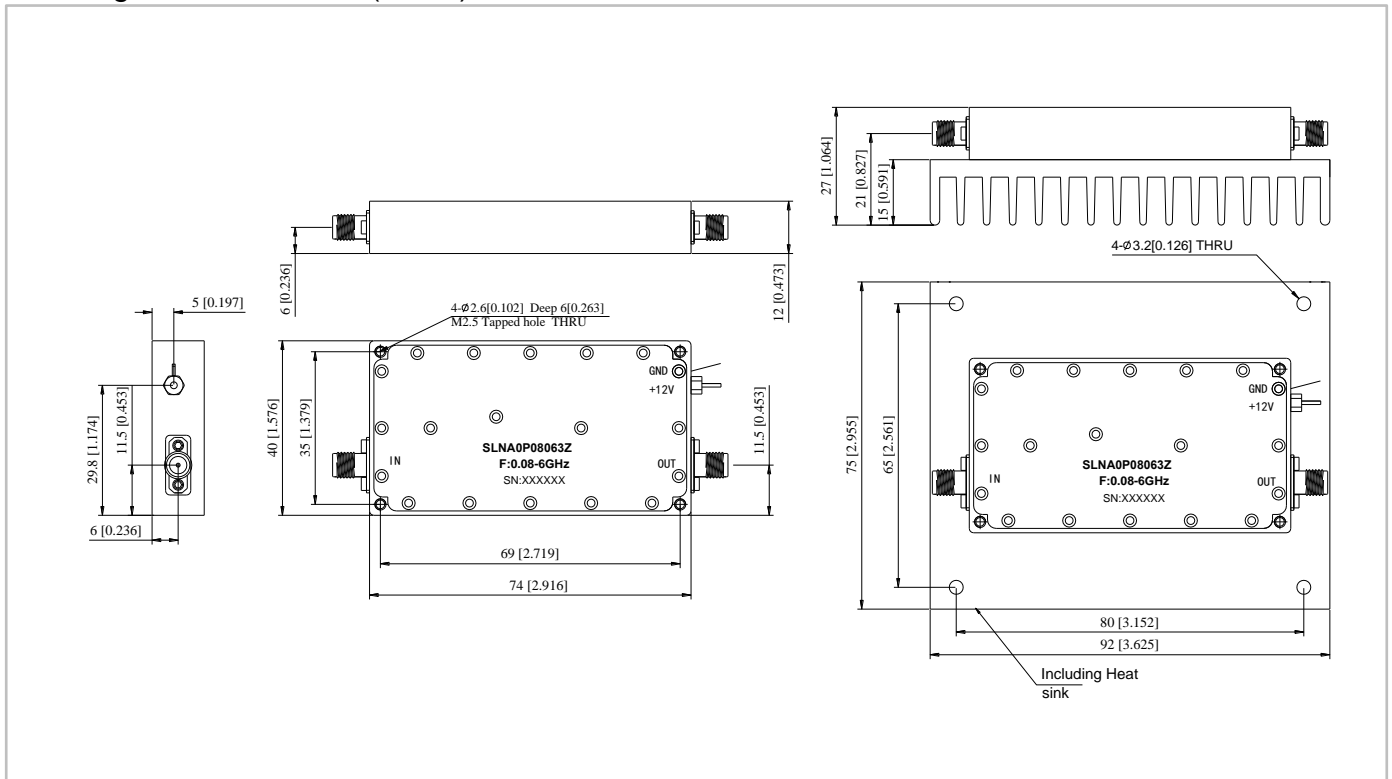
Environmental Specifications

| | |
|-------------------------|--|
| Operational Temperature | -40°C to +85°C |
| Storage Temperature | -50°C to +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 |

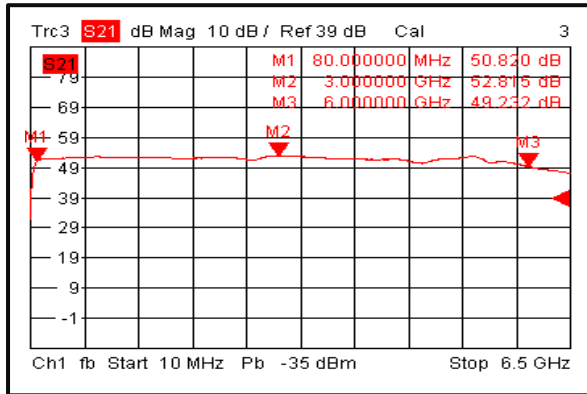
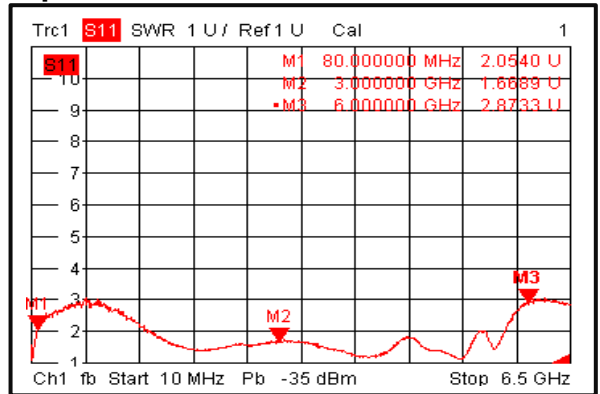
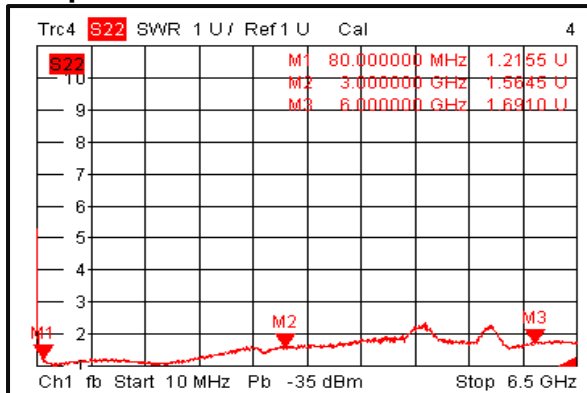
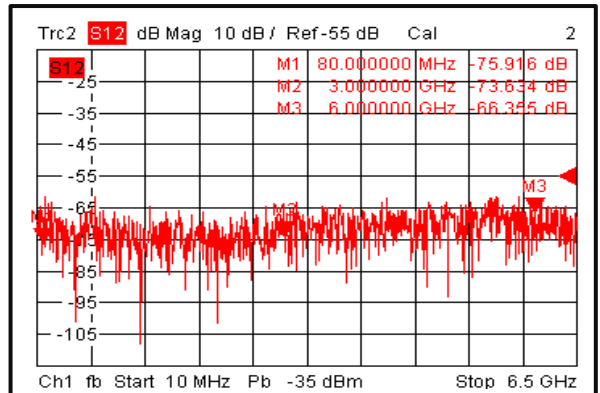
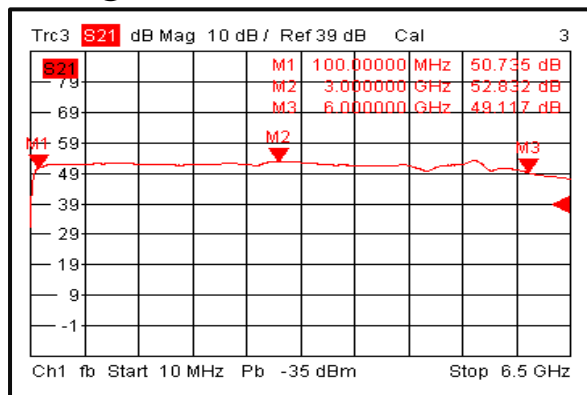
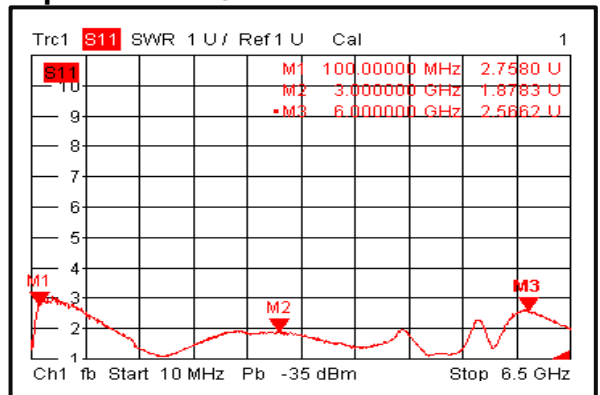
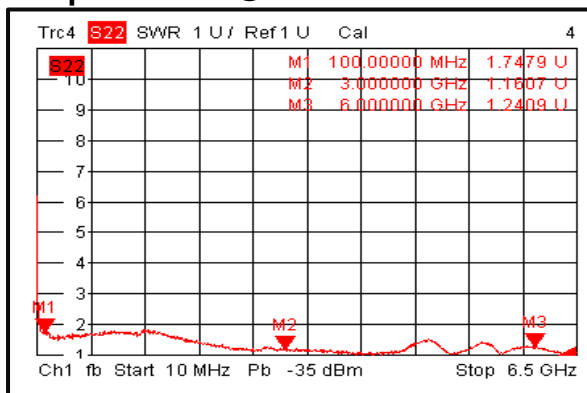
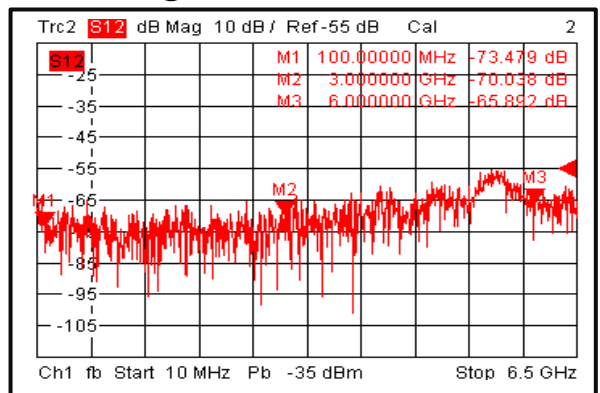
Outline Drawing:

All Dimensions in mm (inches)
Housing Tolerances ±0.2(0.008)

Heat Sink required during operation(Sold Separately)

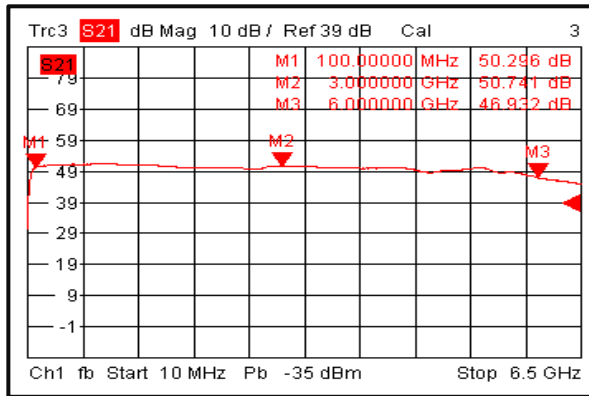


Ultra wide band Low Noise Amplifier 0.08GHz-6GHz

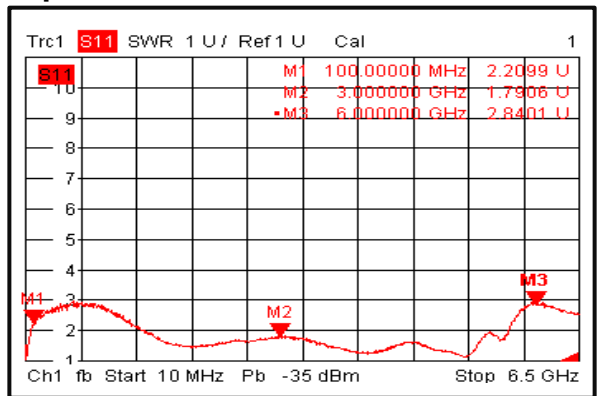
Gain @+25°C

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


Ultra wide band Low Noise Amplifier 0.08GHz-6GHz

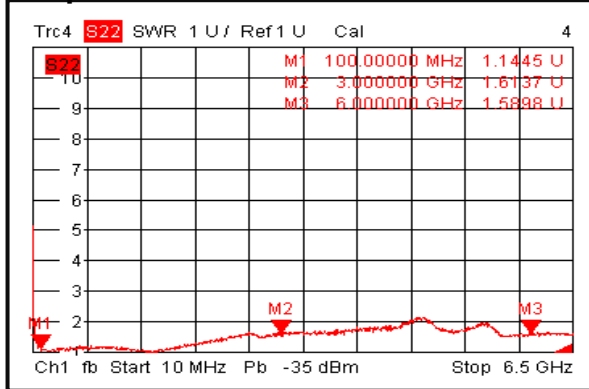
Gain @+85°C



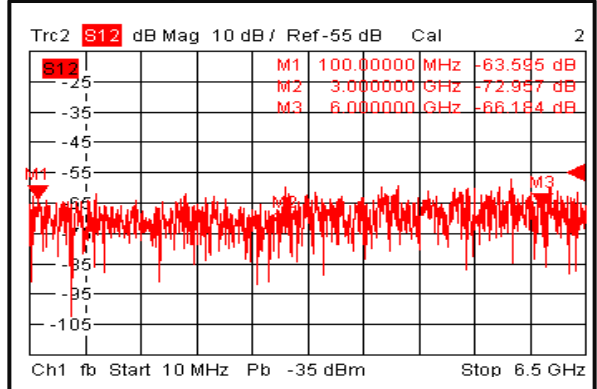
Input VSWR @+85°C



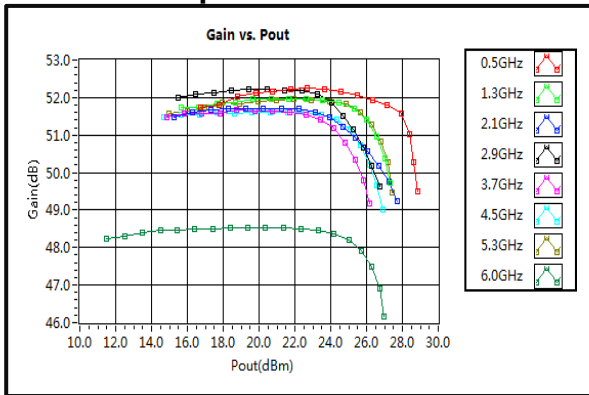
Output VSWR @+85°C



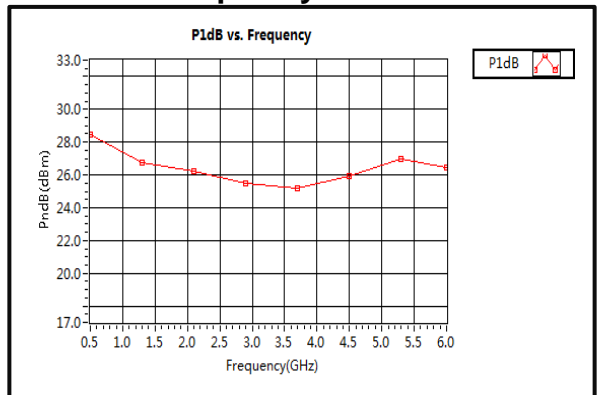
Isolation @+85°C



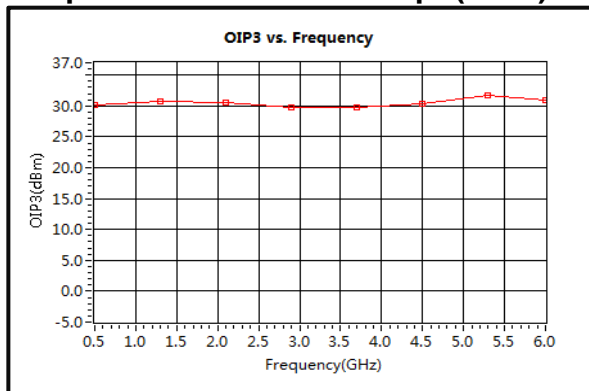
Gain vs. Output Power



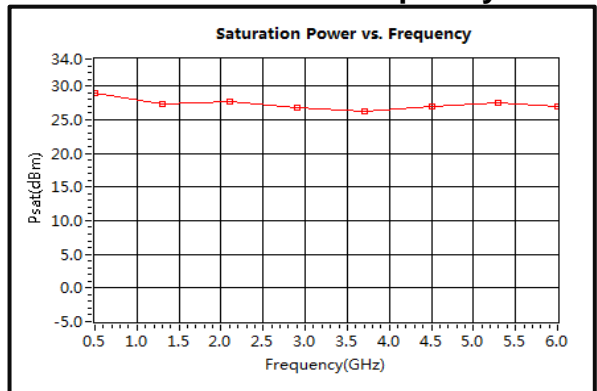
P1dB vs. Frequency



Output Third Order Intercept (OIP3)

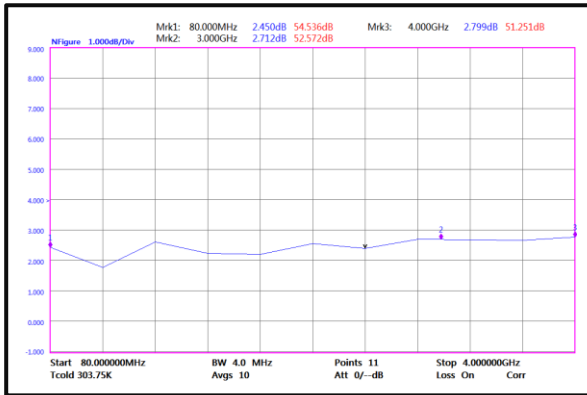


Saturation Power vs. Frequency

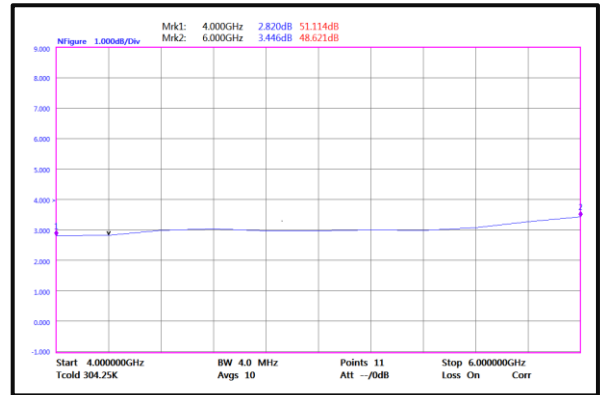


Ultra wide band Low Noise Amplifier 0.08GHz-6GHz

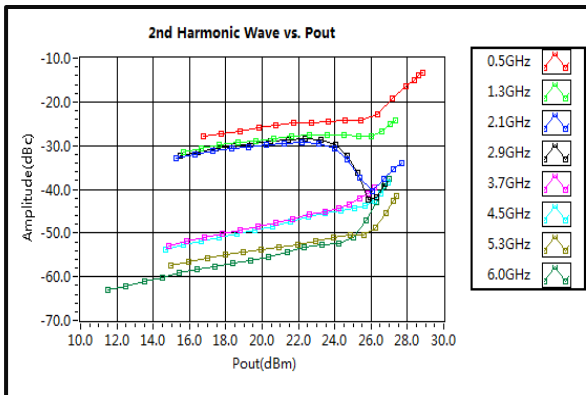
Noise Figure (80MHz-4GHz)



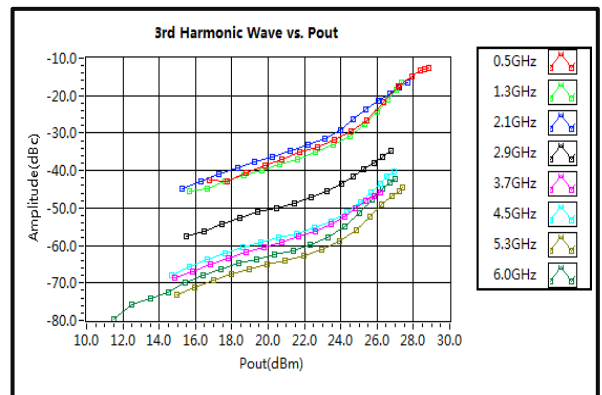
Noise Figure ((4GHz-6GHz)



2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power

