# Wide Band Solid State Power Amplifier 0.7GHz~2.7GHz

## Features

- Gain: 57dB typical
- Output power: +53dBm typical
- Supply Voltage: +36V

## Typical Applications

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

RF Microwave & VSAT
Fiber Optics

| Parameter | Min. | Typ. | Max. | Units |
|---|---|---|---|---|
| Frequency Range | 0.7 | | 2.7 | GHz |
| Gain | 55 | 57 | | dB |
| Gain Flatness | | ±2.0 | ±3.0 | dB |
| Gain Variation Over Temperature (-40℃~+85℃ ) | | ±2.5 | | dB |
| Input Return Loss | | 15 | | dB |
| Output 1dB Compression Point (P1dB) | 49.5 | 51 | | dBm |
| Saturated Output Power (Psat) | 51 | 53 | | dBm |
| 3rd Order Intermodulation Product(IM3) | | -35 | | dBc |
| Supply Current (Idd) (Vcc=+36V) | | 3.8 | 20 | A |
| Efficiency at P1dB | | 25 | | % |
| Isolation S12 | | -55 | | dB |

| | | | |
|---|---|---|---|
| Weight | 108 ounces Max.(Net) | Impedance | 50 ohms |
| Input / Output Connectors | Input: SMA-Female,<br>Output: N-Female | Material | Aluminum |
| Finish | Nickel Plated | Package Sealing | Epoxy Sealing (Standard) |
| | | | Hermetically Sealed (Option with extra charge) |

## Absolute Maximum Ratings

| | | |
|---|---|---|
| Operating Voltage | AC110~240V | |
| RF Input Power (RFIN) | @0.7~1GHz | +5dBm |
| | @1~6GHz | +7dBm |

## Environmental Specifications

| | |
|---|---|
| Operational Temperature | -40℃~+70℃ |
| Storage Temperature | -50℃~+105℃ |
| 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℃, 95%RH at 40℃ |
| Shock | 20G for 11msec half sine wave,3 axis both directions |

## Biasing Up Procedure

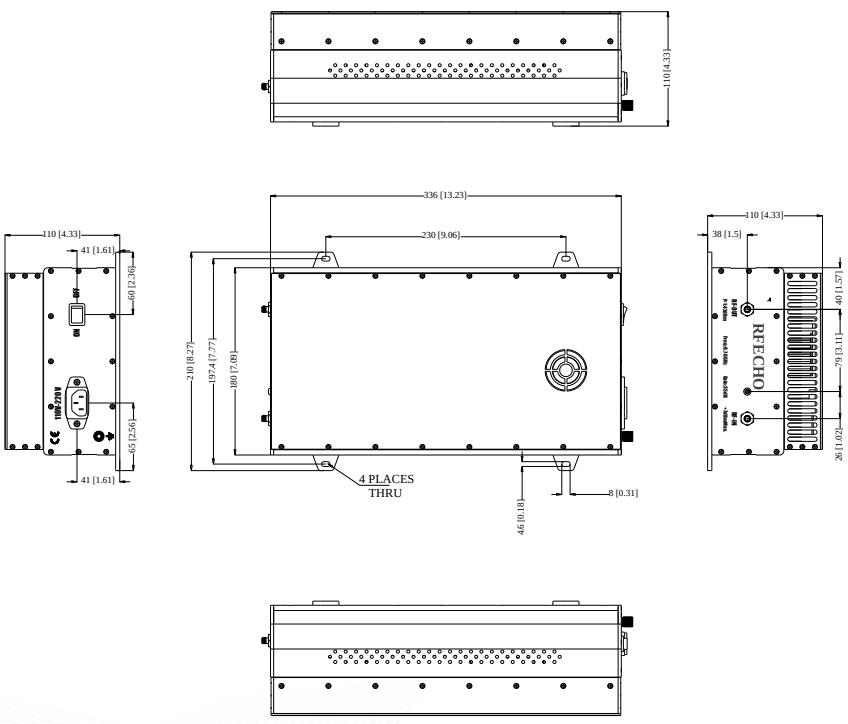
| | |
|---|---|
| Step 1 | Connect input and output with 50 Ohm source and load with in band return loss better than 10dB. |
| Step 2 | Connect AC Plug |
| Step 3 | Flip switch to “ON” position |

## Power OFF Procedure

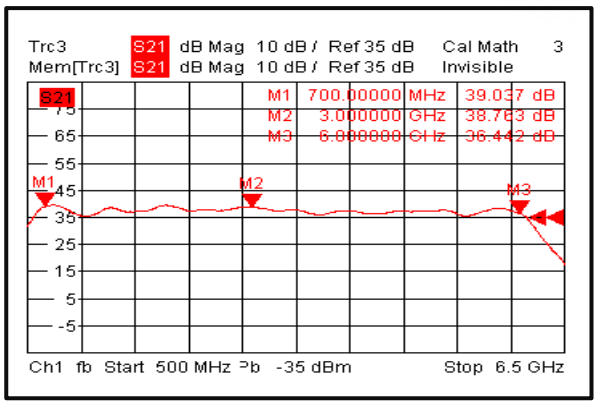
| | |
|---|---|
| Step 1 | Flip switch to “OFF” position |
| Step 2 | Remove AC Plug |
| Step 3 | Remove RF Connection |

## Outline Drawing:

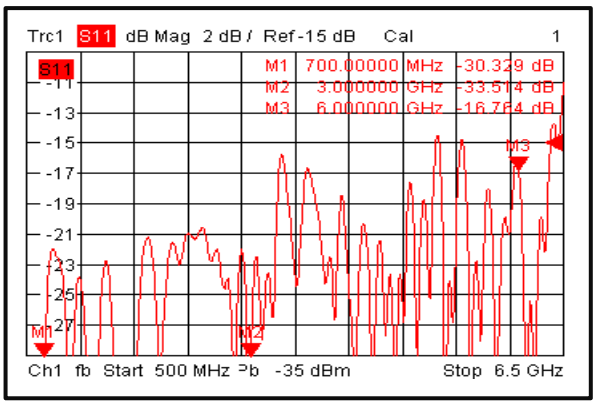
All Dimensions in mm (inches)



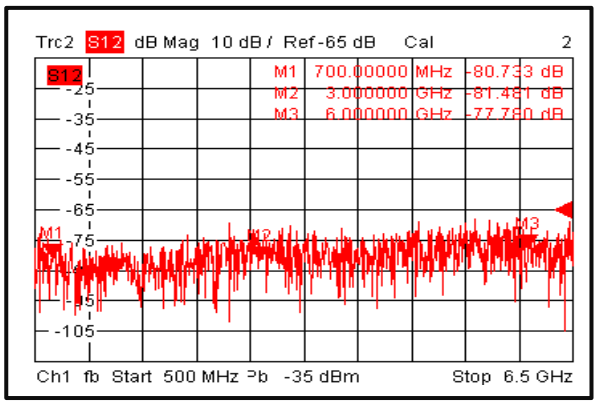
## Gain



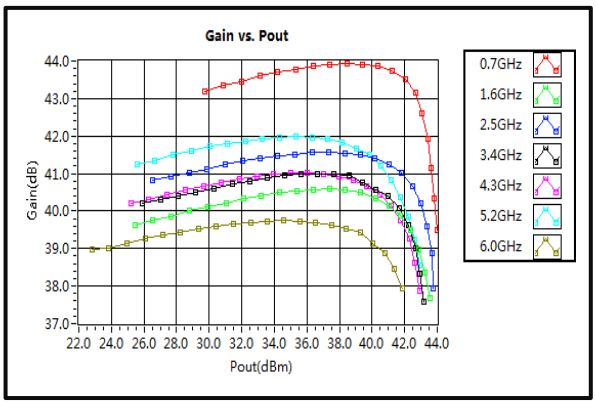

## Input Return loss



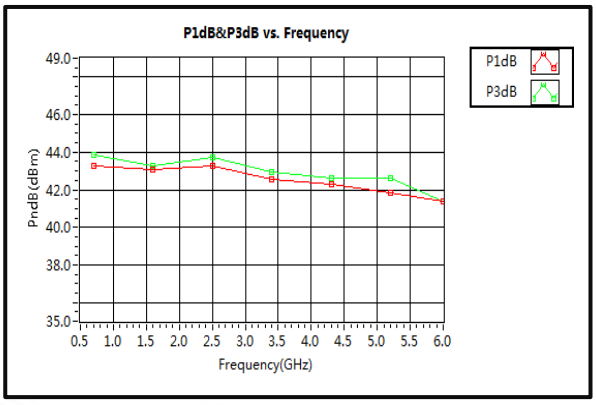

## Isolation



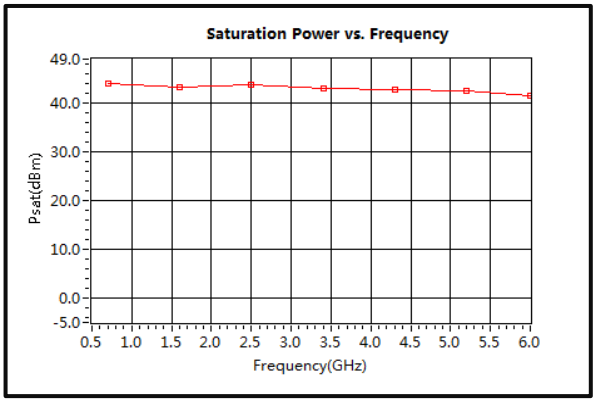

## Gain vs. Output Power



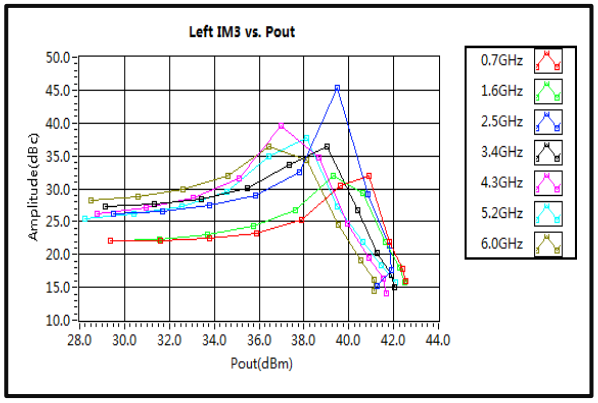

## P1dB &P3dB vs. Frequency



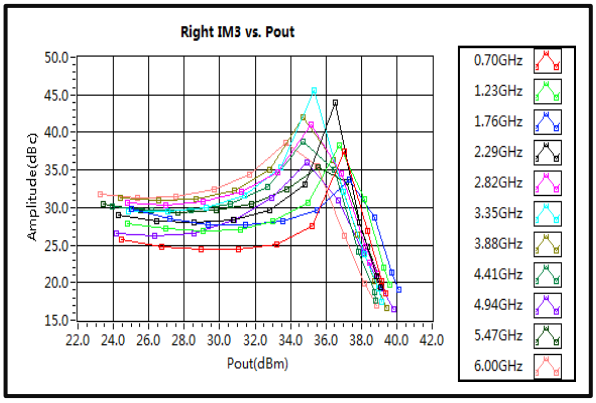

## Saturated Power vs. Frequency



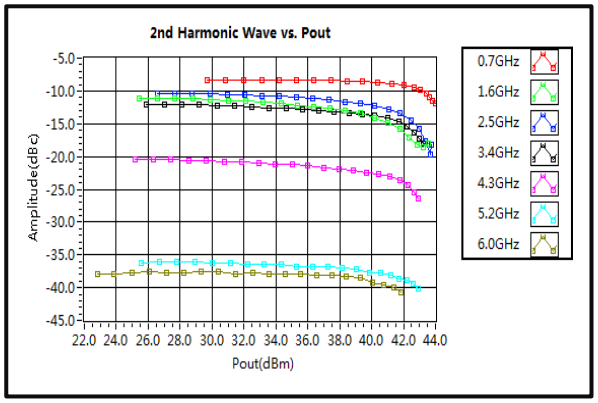
## Left IM3 vs. Pout



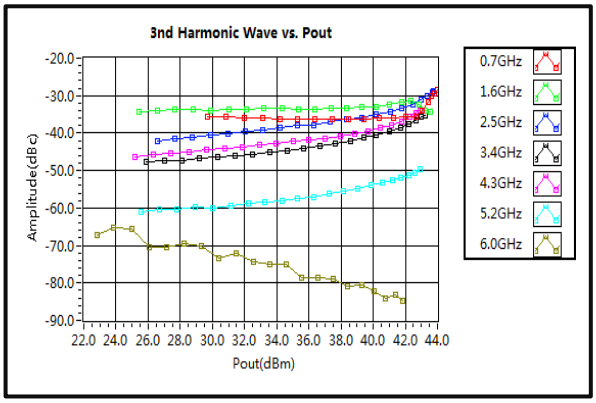

## Right IM3 vs. Pout




## 2nd Harmonic Wave Output Power




## 3rd Harmonic Wave Output Power




## 4th Harmonic Wave Output Power