

Features

- Gain: 53dB
- Output power +48dBm typical
- High P1dB: +44dBm Full Band
- Supply Voltage: +28V



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 | 0.7 | | 5.5 | 5.5 | | 6.0 | GHz |
| Gain | 49 | 55 | | 49 | 55 | | dB |
| Gain Flatness | | ±3.0 | ±5.0 | | ±2 | ±3 | dB |
| Gain Variation Over Temperature (-40°C ~ +70°C) | | ±3.0 | | | ±3.0 | | dB |
| Input VSWR | | 1.5 | | | 1.5 | | :1 |
| Output 1dB Compression Point (P1dB) | 45 | 47 | | 44 | 45 | | dBm |
| Saturated Output Power (Psat) | 46 | 48 | | 44 | 45 | | dBm |
| Isolation S12 | 50 | 60 | | 50 | 60 | | dB |
| Supply Current (Vcc=+28V) | | 0.7 | 14 | | 0.7 | 14 | A |
| FAN Supply Current (Vcc=+24V) | | 1.0 | | | 1.0 | | A |
| Efficiency at P1dB | 15 | 20 | | 15 | 17 | | % |
| Switching Speed (10% to 90%) | | 2.5 | 5 | | 2.5 | 5 | ms |

| | | | |
|---------------------------|------------------|-----------------|--|
| Weight | 364 ounces(Max.) | Impedance | 50ohms |
| Input / Output Connectors | SMA-Female | Material | Aluminum |
| Finish | Nickel Plated | Package Sealing | Epoxy Sealing (Standard) |
| | | | Hermetically Sealed (Option with extra charge) |

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Wide Band Power Amplifier 0.7GHz~6GHz

Absolute Maximum Ratings

| | |
|-----------------------|------|
| Operating Voltage | +30V |
| RF Input Power (RFIN) | 0dBm |

Biassing Up Procedure

| | |
|--------|--------------------------|
| Step 1 | Connect Ground Pin |
| Step 2 | Connect input and output |
| Step 3 | Connect +28V biasing |

Power OFF Procedure

| | |
|--------|-----------------------|
| Step 1 | Turn off +28V biasing |
| Step 2 | Remove RF connection |
| Step 3 | Remove Ground |

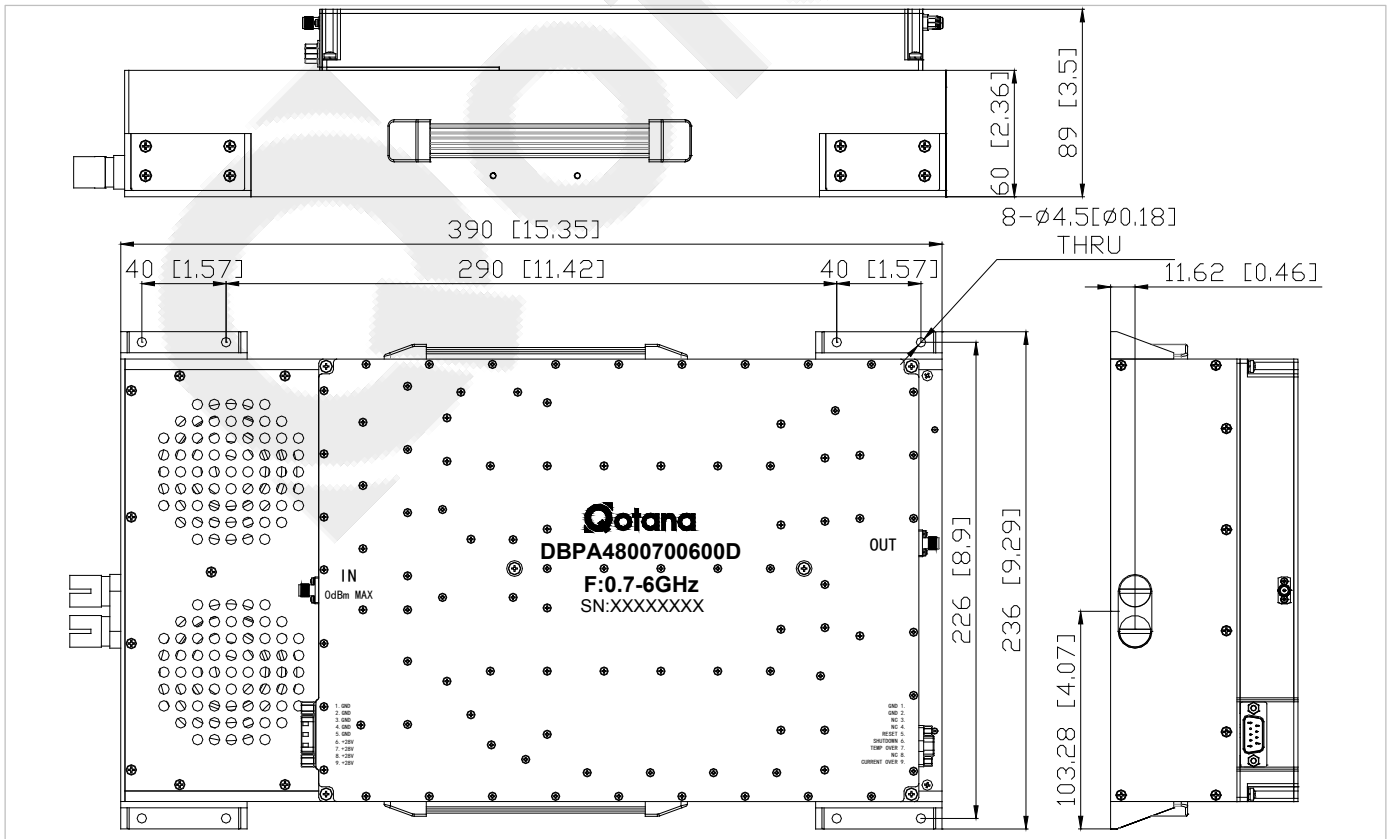
Environmental Specifications

| | |
|-------------------------|--|
| Operational Temperature | -40°C~+70°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)

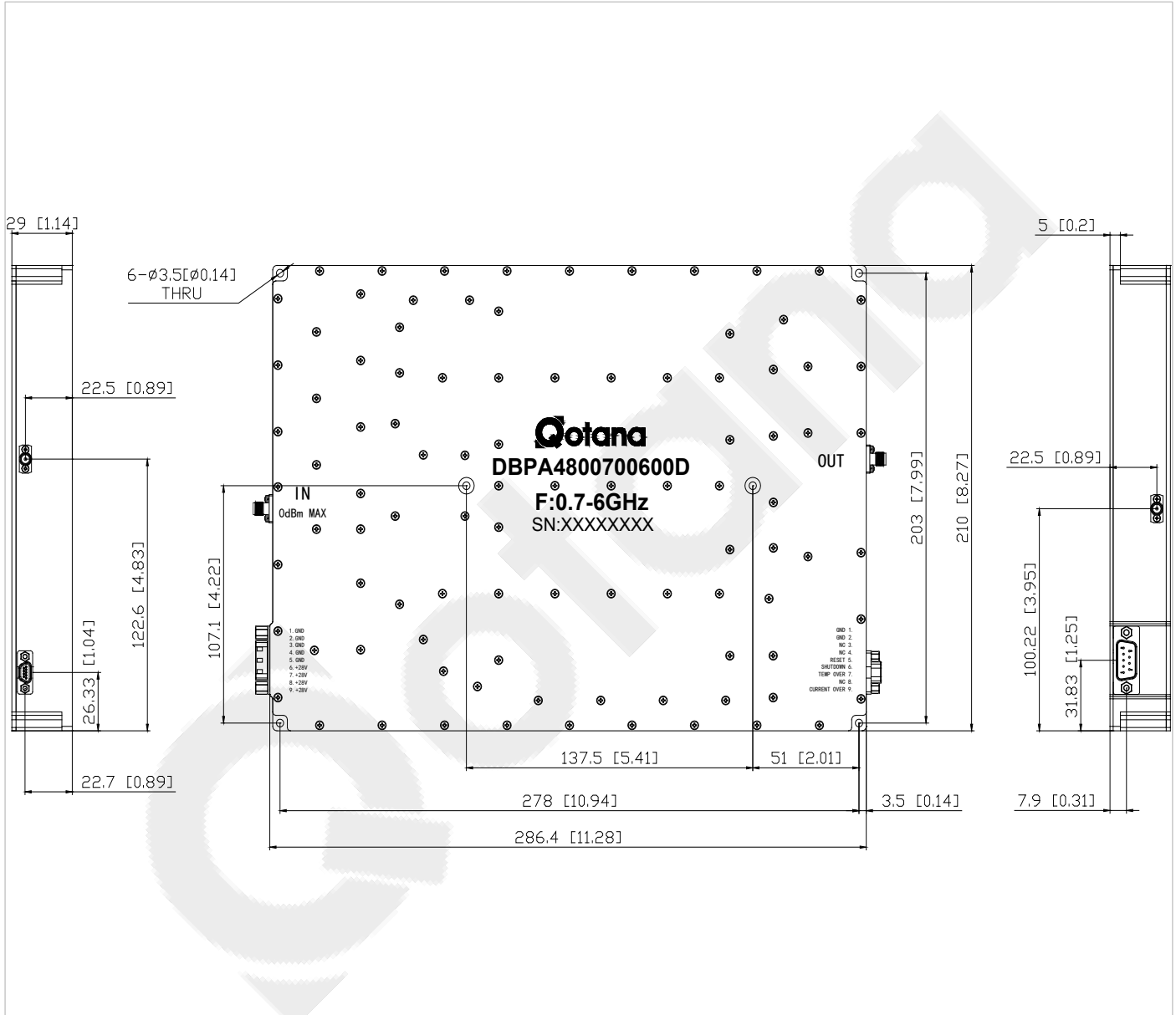
Heat Sink required during operation(Sold Separately)



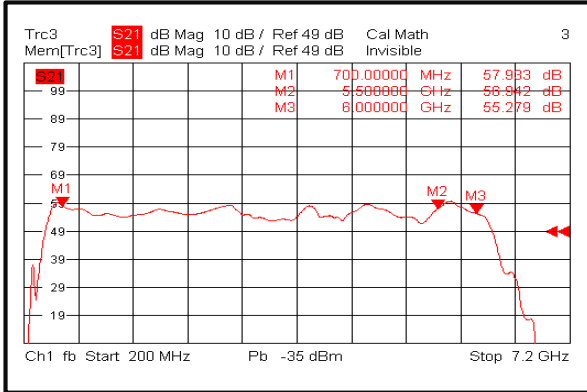
Outline Drawing:

All Dimensions in mm (inches)

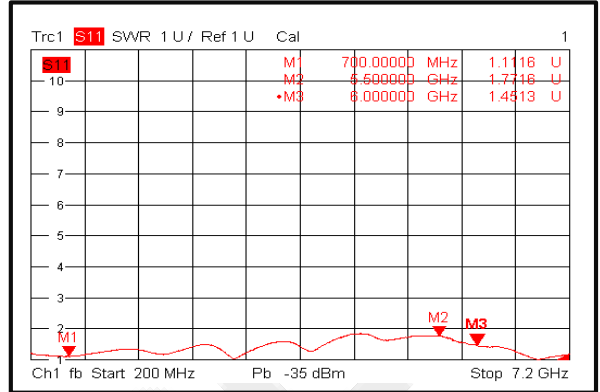
Heat Sink required during operation(Sold Separately)



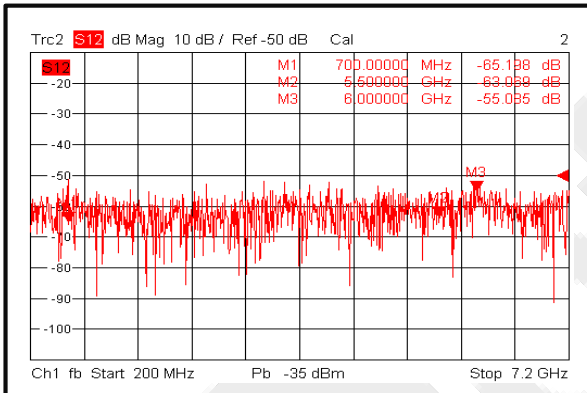
Gain@+25°C



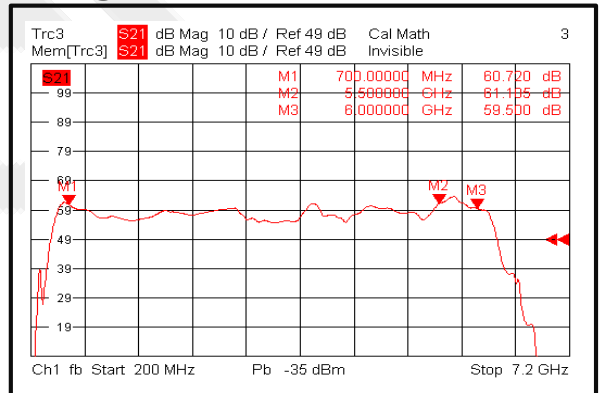
Input VSWR @+25°C



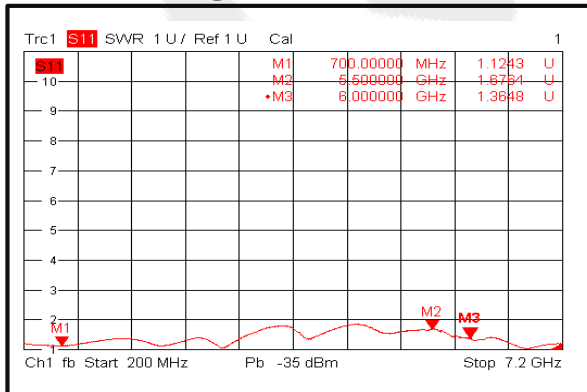
Isolation@+25°C



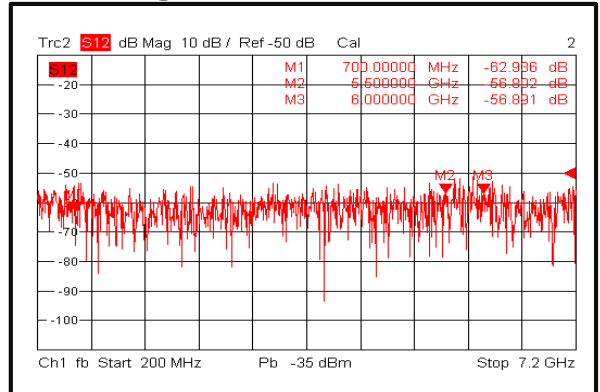
Gain@-40°C



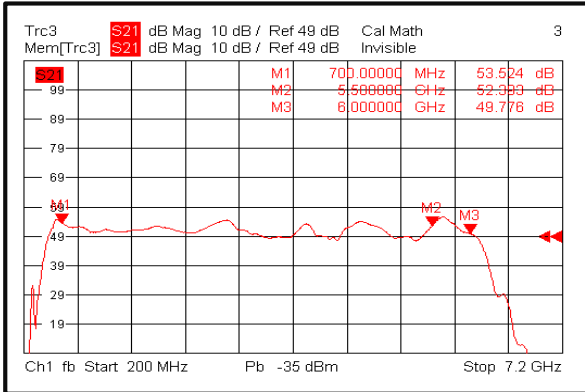
Input VSWR @-40°C



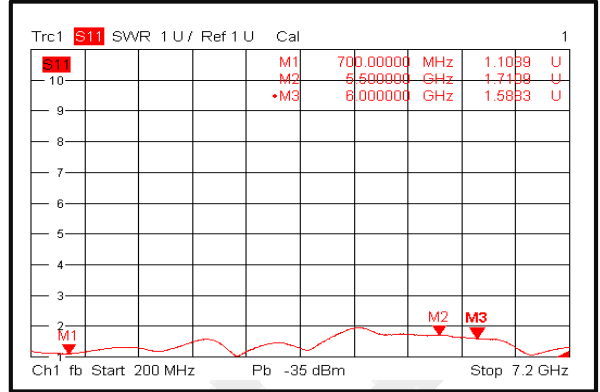
Isolation@-40°C



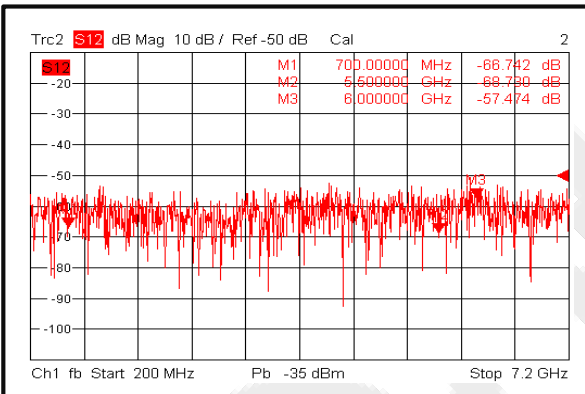
Gain@+70°C



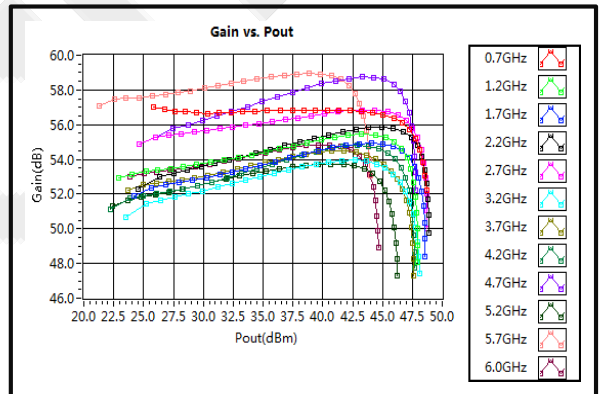
Input VSWR @+70°C



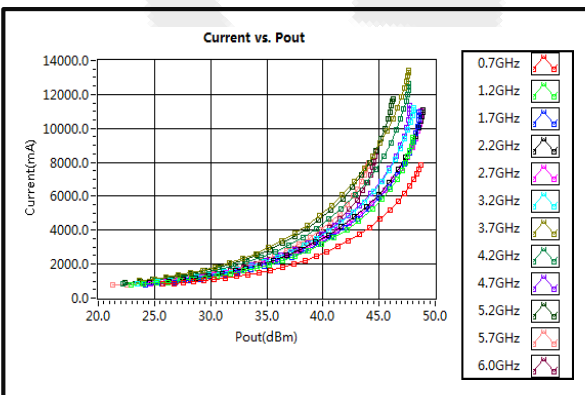
Isolation@+70°C



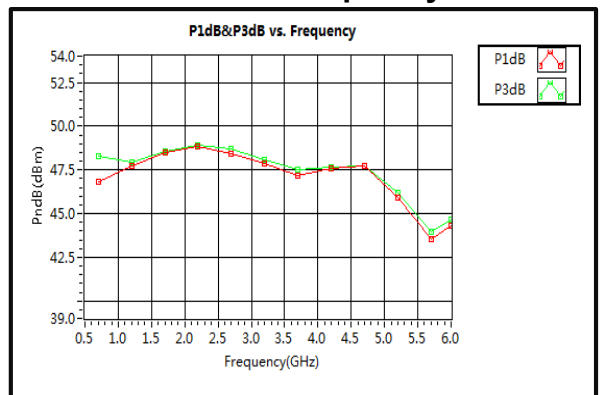
Gain vs. Output Power



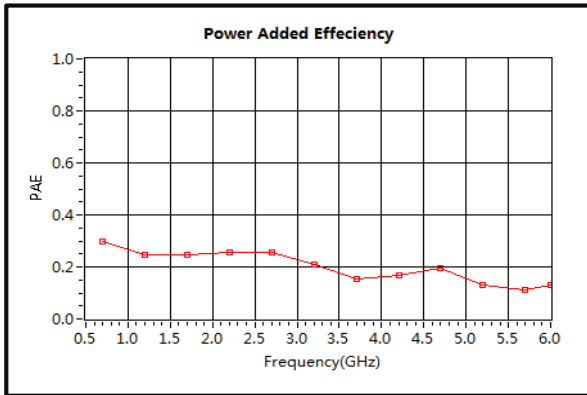
Current



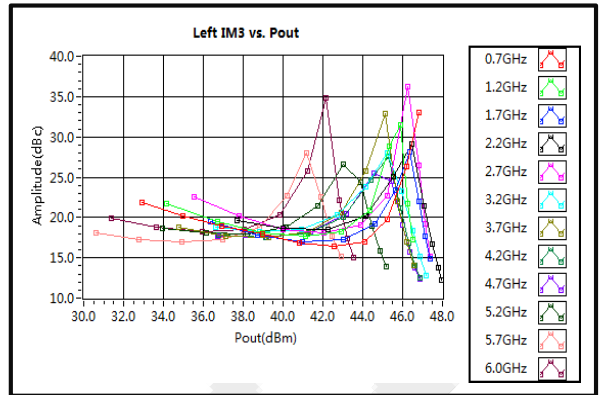
P1dB & P3dB vs. Frequency



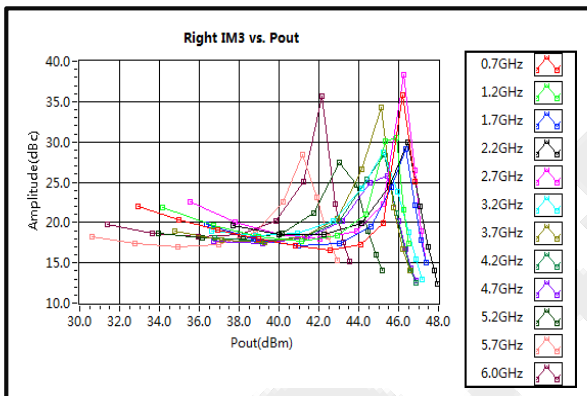
Power Added Efficiency



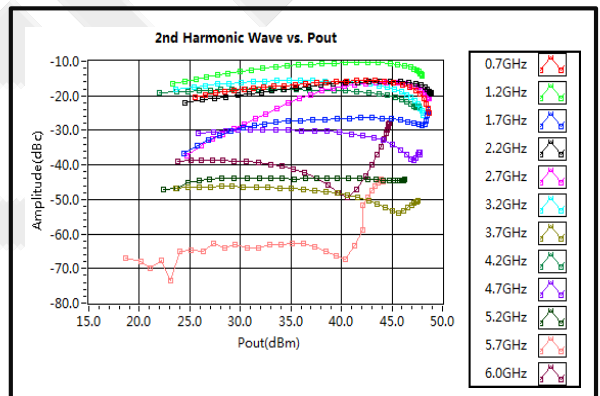
Left IM3 vs. Pout



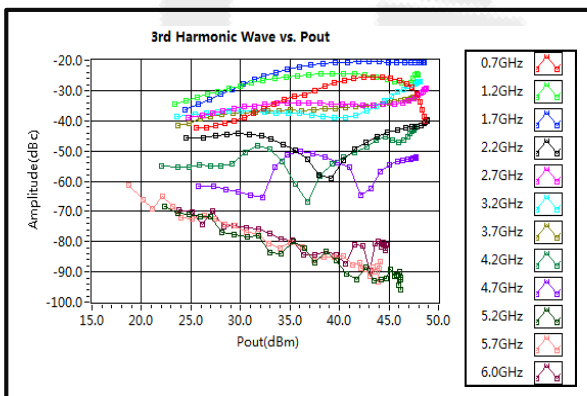
Right IM3 vs. Pout



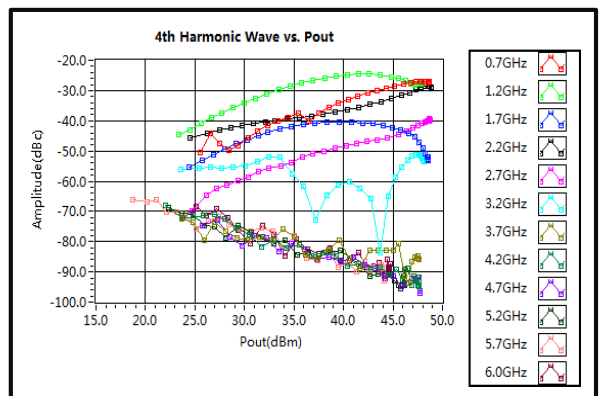
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power

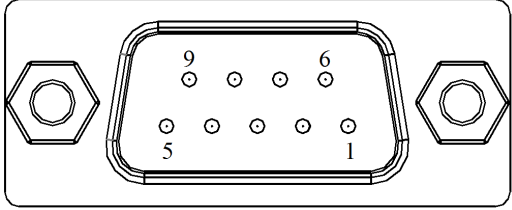


4th Harmonic Wave Output Power

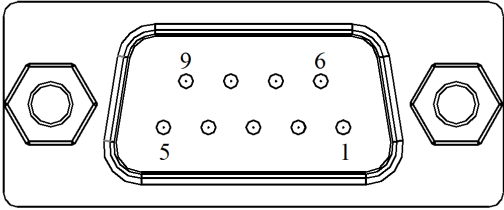


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Wide Band Power Amplifier 0.7GHz~6GHz

| | |
|--------------|--|
| D-Sub 9 Male |  |
|--------------|--|

| PIN # | NAME | DESCRIPTION |
|---------------|------|-------------|
| 1, 2, 3, 4, 5 | GND | Ground |
| 6, 7, 8, 9 | VDD | +28VDC |

| | |
|----------------------|--|
| Micro D-sub 9 Female |  |
|----------------------|--|

| PIN # | NAME | DESCRIPTION |
|-------|-------------|---|
| 1, 2 | GND | Ground |
| 3, 4 | NC | Not Connected |
| 5 | RESET | Resets PA when logic LOW is applied and released (Internally Pulled-High +3.3V) |
| 6 | SHUTDOWN | Applying logic LOW disables gates of amplifiers (Internally Pulled-High +3.3V) |
| 7 | TEMP OVER | PA will first shut down then latch this PIN to logic high when driven over Temperature |
| 8 | GND | Ground |
| 9 | CURREN OVER | PA will first shut down then latch this PIN to logic high when Current Limit is reached |

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