



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RAMP07G06GE

10W Ultra Wide Band Amplifier 0.7GHz~ 6GHz



Features

- Gain: 36 dB Typical
- Output power +38dBm Typical
- High P1dB: +35dB m Full Band
- 50 Ohm Matched
- AC 110V/220V powered

Typical Applications

- Wireless Infrastructure
- RF Microwave & VSAT
- Military & Aerospace
- Test Instrument
- Fiber Optics

Electrical Specifications, TA = +25°C

| Parameter | Min. | Typ. | Max. | Min. | Typ. | Max. | Units |
|--|--|------|------|------|------|------|--------|
| Frequency Range | 0.7 | | 3.0 | 3.0 | | 6.0 | GHz |
| Gain | 35 | 37 | | 35 | 37 | | dB |
| Gain Flatness | | ±2.5 | | | ±2.0 | | dB |
| Gain Variation Over Temperature(-45 ~ +85) | | ±1.0 | | | ±1.0 | | dB |
| Input Return Loss | | 15 | | | 12 | | dB |
| Output 1 dB Compression Point (P1dB) | 35 | 38 | | 35 | 38 | | dBm |
| Saturated Output Power (Psat) | | 41 | | | 40 | | dBm |
| Supply Current | | 350 | 1350 | | 350 | 1350 | mA |
| Isolation S12 | 65 | 70 | | 65 | 70 | | dB |
| Weight | 106.15 | | | | | | ounces |
| Impedance | 50 | | | | | | Ohms |
| Input / Output Connectors | SMA - Female | | | | | | |
| Finishing | Black Painted Finish | | | | | | |
| Material | Aluminum | | | | | | |
| Package Sealing | Epoxy Sealing (Standard) | | | | | | |
| | Hermetically Sealed (Option with extra charge) | | | | | | |

10W Ultra Wide Band 0.7GHz~ 6GHz



| Absolute Maximum Ratings | |
|--------------------------|-------------|
| Supply Voltage | 230 VAC |
| RF Input Power (RFIN) | +8dBm |
| Storage Temperature(°C) | -50 to +125 |

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.

| 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 (°C) | -45 ~ +85 (Case Temperature below 85) |
| 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 35c, 95%RH at 40°c |
| Shock | 20G for 11msec half sine wave, 3 axis both directions |

| Ordering Information | |
|----------------------|-------------------------------|
| Part No. | Description |
| RAMP07G06GE | 0.7GHz ~ 6GHz Power Amplifier |

Amplifier Use

Ensure that the amplifier input and output ports are safely terminated into a proper 50 ohm load before turning on the power. Never operate the amplifier without a load. A proper 50 ohm load is defined as a load with impedance less than 1.9:1 or return loss larger than 10dB relative to 50 Ohm within the specified operating band width.

Power Supply Requirements

Power supply must be able to provide adequate current for the amplifier. Power supply should be able to provide 1.5 times the typical current or 1.2 times the maximum current (whichever is greater).

In most cases, RF - Lambda amplifiers will withstand severe mismatches without damage. However, operation with poor loads is discouraged. If prolonged operation with poor or unknown loads is expected, an external device such as an isolator or circulator should be used to protect the amplifier.

Ensure that the power is off when connecting or disconnecting the input or output of the amp.

Prevent overdriving the amplifier. Do not exceed the recommended input power level.

Adequate heat-sinking required for RF amplifier modules. Please inquire.

Amplifiers do not contain Thermal protection, Reverse DC polarity or Over voltage protection with the exception of a few models. Please inquire.

Proper electrostatic discharge (ESD) precautions are recommended to avoid performance degradation or loss of functionality.

What is not covered with warranty?

Each RF - Lambda amplifier will go through power and temperature stress testing.
Since the die, ICs or MMICs are fragile, these are not covered by warranty. Any damage to these will NOT be free to repair.



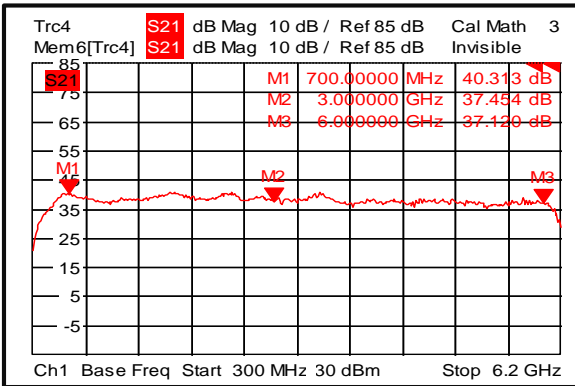
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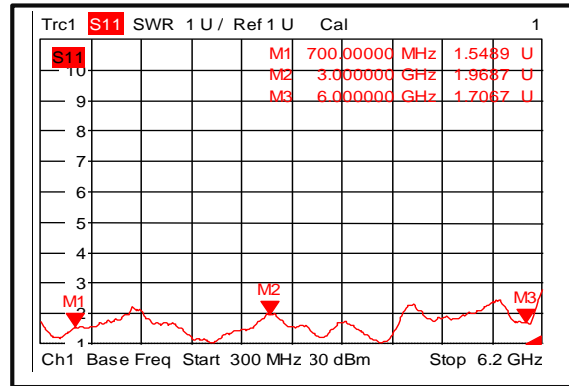
RAMP07G06GE

Typical Performance Plots

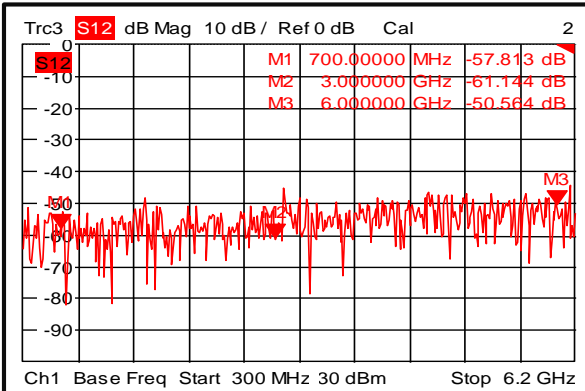
Gain



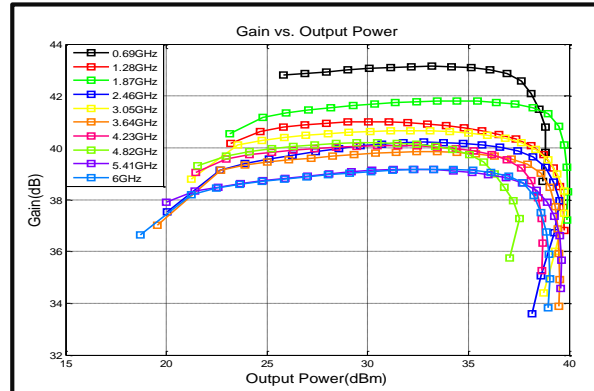
Input VSWR



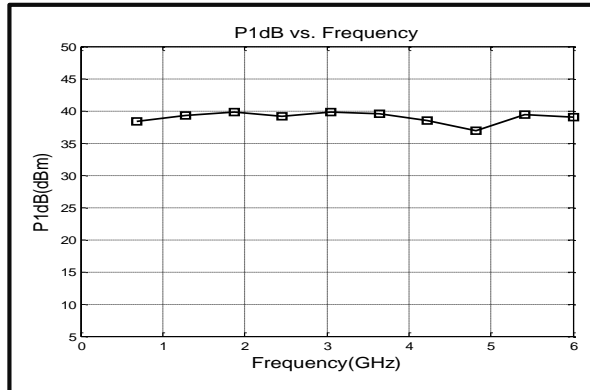
Isolation



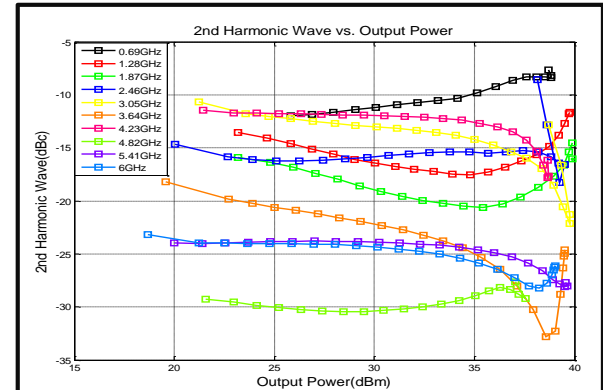
Gain vs. Output Power



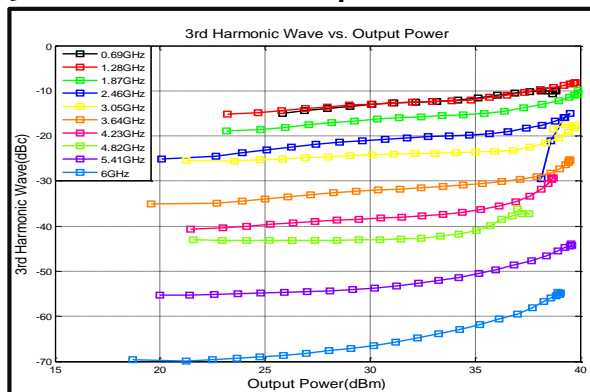
P1dB vs. Frequency



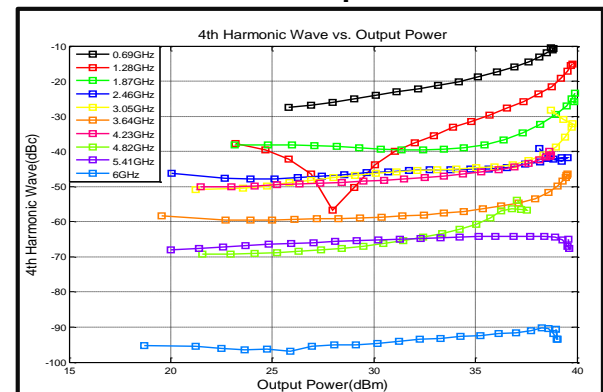
2nd Harmonic Wave Output Power



3rd Harmonic Wave Output Power



4th Harmonic Wave Output Power



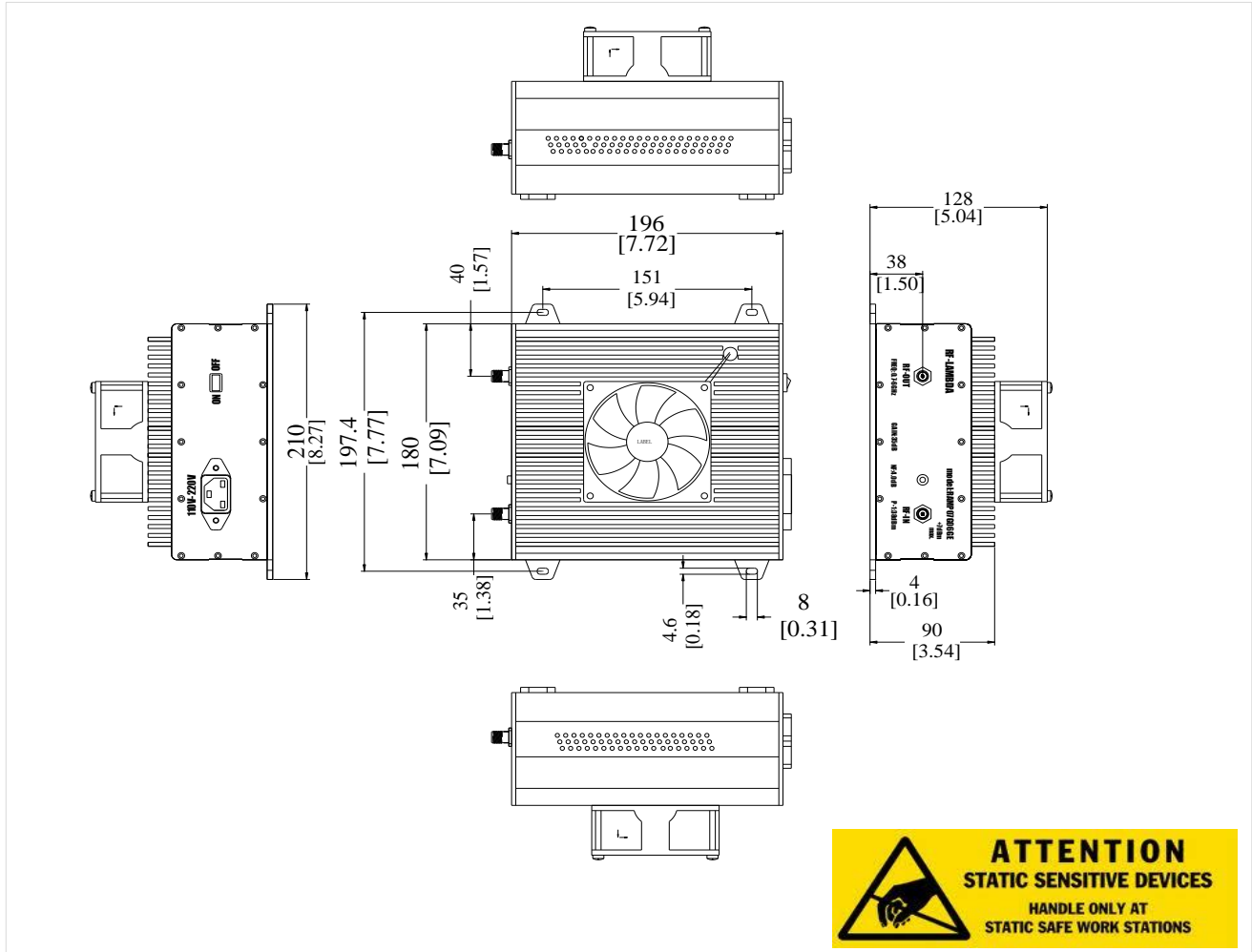
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Outline Drawing:

All Dimensions in mm [inches]

Heat Sink required during operation



Important Notice

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