# AMT-A0087 2 GHz to 18 GHz
# Broadband High Power Amplifier Module

Data Sheet

## Features

- 2 GHz to 18 GHz Frequency Range
- Typical P1dB power > +31 dBm (1.2W)
- Gain 34 dB Typical
- Gain Flatness ± 2 dB Typical
- Internally Regulated
- Low Spurious < -80 dBc typical
- Operates from +15V Supply and –5V
- Unconditionally Stable
- State-of-the-Art GaAs Technology

## Description

The AMT-A0087 is a +31 dBm P1dB Broadband power amplifier in a compact size. The performance is achieved through the use of AMTI's proprietary matching technology and latest in GaAs technology. The amplifier I/Os are Internally matched to 50 Ohms and are DC blocked. The AMT-A0087 is ideal for use as extending power range of test equipment, EW systems or where broadband amplification and power are required in a Hi-Rel communications system for Commercial or Military applications

## Applications

- Radar
- Test Equipment
- EW Systems
- Lab Applications

### MAXIMUM RATINGS[1]

| Parameter | Symbol | Units | MIN | MAX |
|---|---|---|---|---|
| Operating Temperature – Case | $T_{MO}$ | ° C | -10 | +60 |
| Storage Temperature - Case | $T_{MS}$ | ° C | -55 | +125 |
| RF Input power (CW) | Pin | dBm | | +18 |
| Die $T_{Junction}$ | $T_J$ | ° C | | +150 |
| Positive Supply Voltage | $V_{+SS}$ | V | | +16 |

**Appropriate Heat sink must be used**

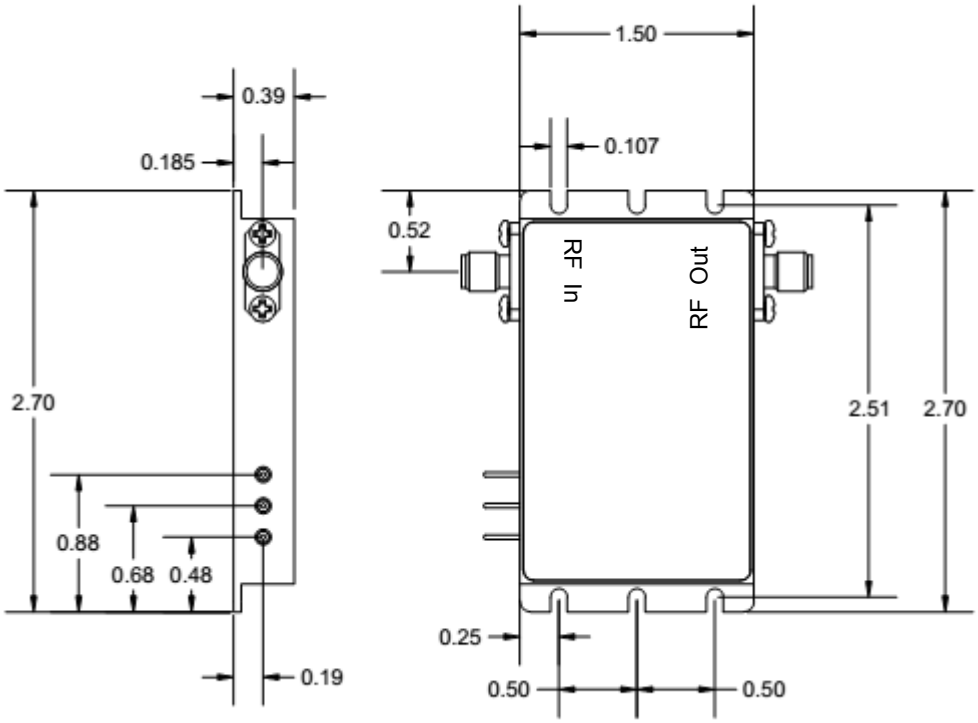
1.Stresses above those listed under "Absolute Maximum Rating" may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

## ELECTRICAL SPECIFICATIONS @ 23ºC

| Parameter | Conditions | Units | MIN | Typical | MAX |
|---|---|---|---|---|---|
| Frequency Range | | GHz | 2 | | 18 |
| Gain | Small Signal | dB | 30 | 35 | |
| Gain Flatness | | dB | | ±2 | ±2.8 |
| Gain Flatness 1 GHz BW | | dB | | ±0.6 | ±1.1 |
| Noise Figure | | dB | | 4 | 6 |
| Output Power (P1dB) | | dBm | 30 | 31 | |
| OIP3 | OPI3 measured @ 9 GHz Two tone F1-F2= 10MHz | dB | | 40 | |
| Spurious | Measured with input terminated Output connected to spectrum analyzer and BW adjusted to achieve dynamic range required | dBm /dBc | | -80 | -75 |
| RF Input Impedance | Reference to 50 ohms VSWR | | | 1.8:1 | 2.2:1 |
| RF Output Impedance | Reference to 50 ohms VSWR | | | 1.8:1 | 2.2:1 |
| Supply Voltage<br>Positive:<br>Negative:<br><br>Supply Current<br>Positive:<br>Negative: | Small signal | V<br><br>mA | | +15<br>-5V<br><br>720<br>20 | <br><br><br>850<br>40 |

Notes:
1/ Unconditional Stability
Tested Parameter @ 23C Gain, Gain Flatness, NF, P1dB @ 2,10 and 18 GHz, Spurious, VSWR, Current
Tested Parameters @ 0C & +60C Gain, Gain Flatness, Spurious, current
Customized configurations of the above specifications are available

## Package Outline M055: SMA Connectorized (inches)




**Field replaceable SMA Connectors**

**Note: The unit must be attached to proper heat sink with thermal interface material ( Thermal Pad or Thermal Grease)**

| Model Number | Description | Hermeticity | Package |
|---|---|---|---|
| AMT-A0087 | SMA Female | Non-Hermetic | Outline: M055 |

Contact us for custom configurations and special requirements.

Our highly experienced team of engineers can quickly identify and implement innovative solutions using latest technology to improve performance and reduce cost.

- Add additional functionality: Input limiter, Temperature compensation, Amplitude/Phase matching, Amplitude/Phase Tracking, Automatic Gain control, Gain sloping, Bypass path, Specific supply voltage, Regulation, Power detector, Health status, and others

- Integrated: Filters, Switches, Limiter, Digital attenuator, Phase shifter, Microcontroller, Multiple amplifiers, Switch matrix, Comb generators and others

- Mechanical: Custom packages - Surface Mount, Connectorized, Waveguide, Carrier, Drop-in, Hermetic and others

Agile Microwave Technology Inc is the logical choice for all your commercial or military RF/Microwave components/module requirements.

## Contact Information:

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**ISO 9001:2015**
**Certified Company**

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