

# AMT-A0335 8500 MHz to 9600 MHz 4W P1dB High Linearity Power Amplifier

Data Sheet



## Features

- 8500 MHz to 9600 MHz Frequency Range
- OIP3 > +47dBm Typical
- P1dB > +36 dBm
- Gain 39 dB Typical, 35 dB min
- Gain Flatness < ± 1 dB Typical
- NF 3 dB typical, 4 dB Max
- Return Loss In/Out Typ > 20 dB
- Internally Regulated
- Operates from Single +15V Supply



## Description

The AMT-A0335 is a High power amplifier with +36 dBm P1dB typical over the full frequency range. The performance is achieved through the use of AMTI's proprietary technology. The amplifier I/Os are Internally matched to 50 Ohms and are DC blocked. The AMT-A0335 is ideal for use as driver amplifier, or high power amplifier in a Hi-Rel communications system for Commercial or Military applications

## Applications

- Driver Amplifier
- High power output amplifier
- SATCOM
- Communication systems
- Microwave Radio systems
- Lab Use

## MAXIMUM RATINGS<sup>1</sup>

EAR99 NLR

| Parameter                    | Symbol           | Units | MIN | MAX  |
|------------------------------|------------------|-------|-----|------|
| Operating Temperature – Case | T <sub>MO</sub>  | ° C   | -20 | +65  |
| Storage Temperature - Case   | T <sub>MS</sub>  | ° C   | -40 | +125 |
| RF Input power (CW)          | P <sub>in</sub>  | dBm   |     | +15  |
| Die T <sub>Junction</sub>    | T <sub>J</sub>   | ° C   |     | +150 |
| Positive Supply Voltage      | V <sub>+SS</sub> | V     |     | +16V |

### The HPA must be attached to proper heat sink

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 @ 23°C

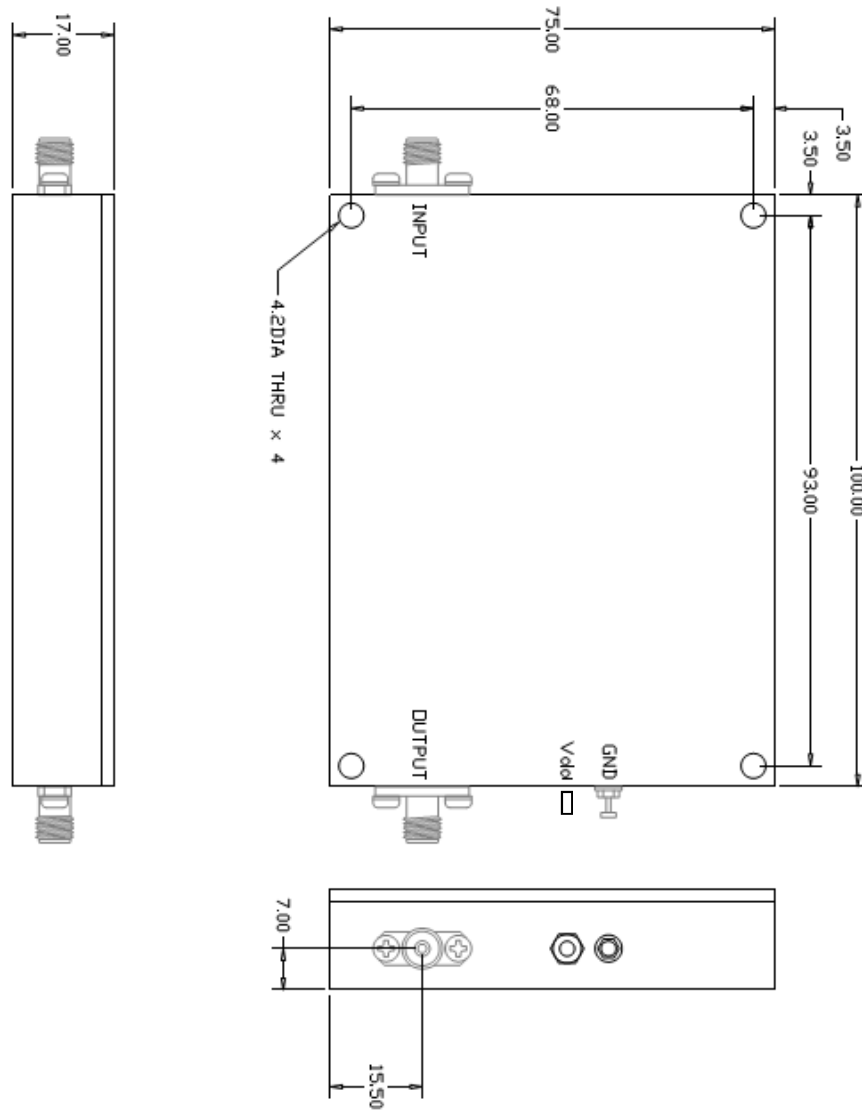
| Parameter                                | Conditions                                    | Units | MIN  | Typical | MAX   |
|--|---|-------|------|---------|-------|
| Frequency Range                          |   | MHz   | 8500 |         | 9600  |
| Gain                                     | Small Signal                                  | dB    | 35   | 39      |       |
| Gain Flatness                            |   | dB    |      | ±1      |       |
| Output Power (P1dB)                      | 1 dB compression point                        | dBm   | +35  | +36     |       |
| OIP3                                     | OIP3 measured @ 7000 MHz Two tone F1-F2=10MHz | dBm   | 45   | 48      |       |
| Noise Figure                             |   | dB    |      | 3       | 4     |
| RF Input Impedance                       | Reference to 50 ohms VSWR                     |       |      | 1.4:1   | 2.:1  |
| RF Output Impedance                      | Reference to 50 ohms                          |       |      | 1:4:1   | 1.5:1 |
| Supply Voltage<br>Positive:<br>Negative: |   | V     |      | +15V    |       |
| Supply Current<br>Positive:<br>Negative: |   | A     |      | 2.5     |       |

Notes:

1/ Unconditional Stability:

Customized configurations of the above specifications are available

**Package Outline: AL7700-8500-39 SMA Connectorized (mm)**



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

| <b>Model Number</b> | <b>Description</b> | <b>Hermeticity</b> | <b>Package</b>          |
|---------------------|--------------------|--------------------|-------------------------|
| AMT-A0335           | SMA Female         | Non-Hermetic       | Outline: AL7700-8500-39 |

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.

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