

# AMT-A0117 100 MHz to 1500 MHz High Linearity Power Amplifier with LNA

## Data Sheet



## Features

- 100 MHz to 1500 MHz Frequency Range
- P1dB > +34 dBm Typical
- Gain 36 dB Typical
- Gain Flatness <  $\pm 1.2$  dB Typical  $\pm 2$  max
- High Linearity OIP3> +50 dBm typical
- Noise Figure 2.8 dB Typical 4dB max
- Internally Regulated
- Operates from +15V Supply
- Unconditionally Stable
- Compact Size



## Description

The AMT-A0117 is a High power amplifier with high linearity 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-A0117 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
- Communication systems
- Microwave Radio systems
- Test Equipment

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

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		+10
Die T <sub>Junction</sub>	T <sub>J</sub>	° C		+150
Positive Supply Voltage	V <sub>+SS</sub>	V		+16V

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

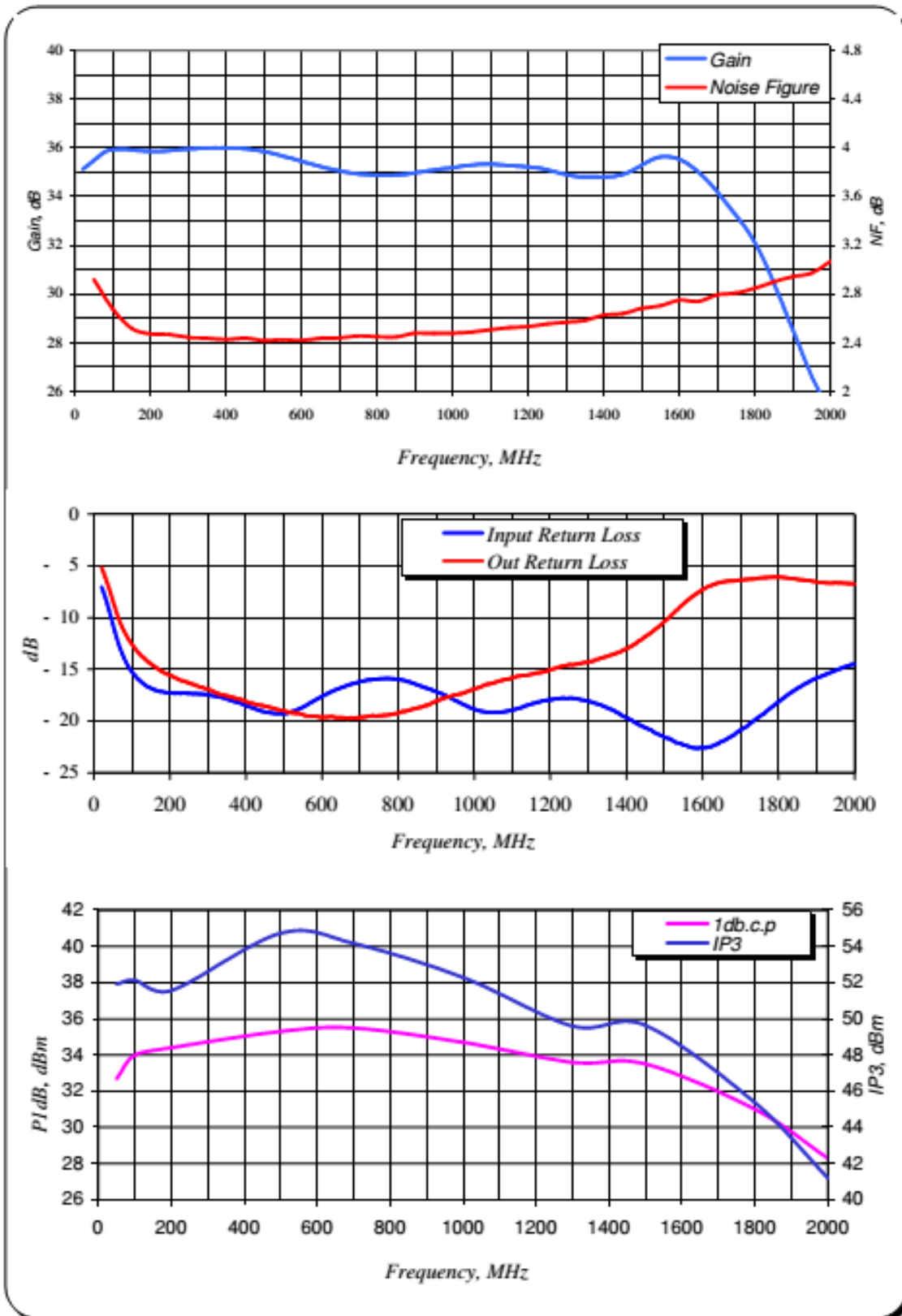
Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		MHz	100		1500
Gain	Small Signal	dB	33	36	
Gain Flatness		dB		±1.2	±2
Output Power (P1dB)	1 dB compression point	dBm	+33	+35	
OIP3	OIP3 measured @ 700 MHz Two tone F1-F2=10MHz	dBm	+43	+50	
Noise Figure		dB		3	4
RF Input Impedance	Reference to 50 ohms VSWR			1.6:1	2.3:1
RF Output Impedance	Reference to 50 ohms			1:6:1	2.3:1
Supply Voltage Positive: Negative:		V		+15V	
Supply Current Positive: Negative:		A		1.2	1.4

Notes:

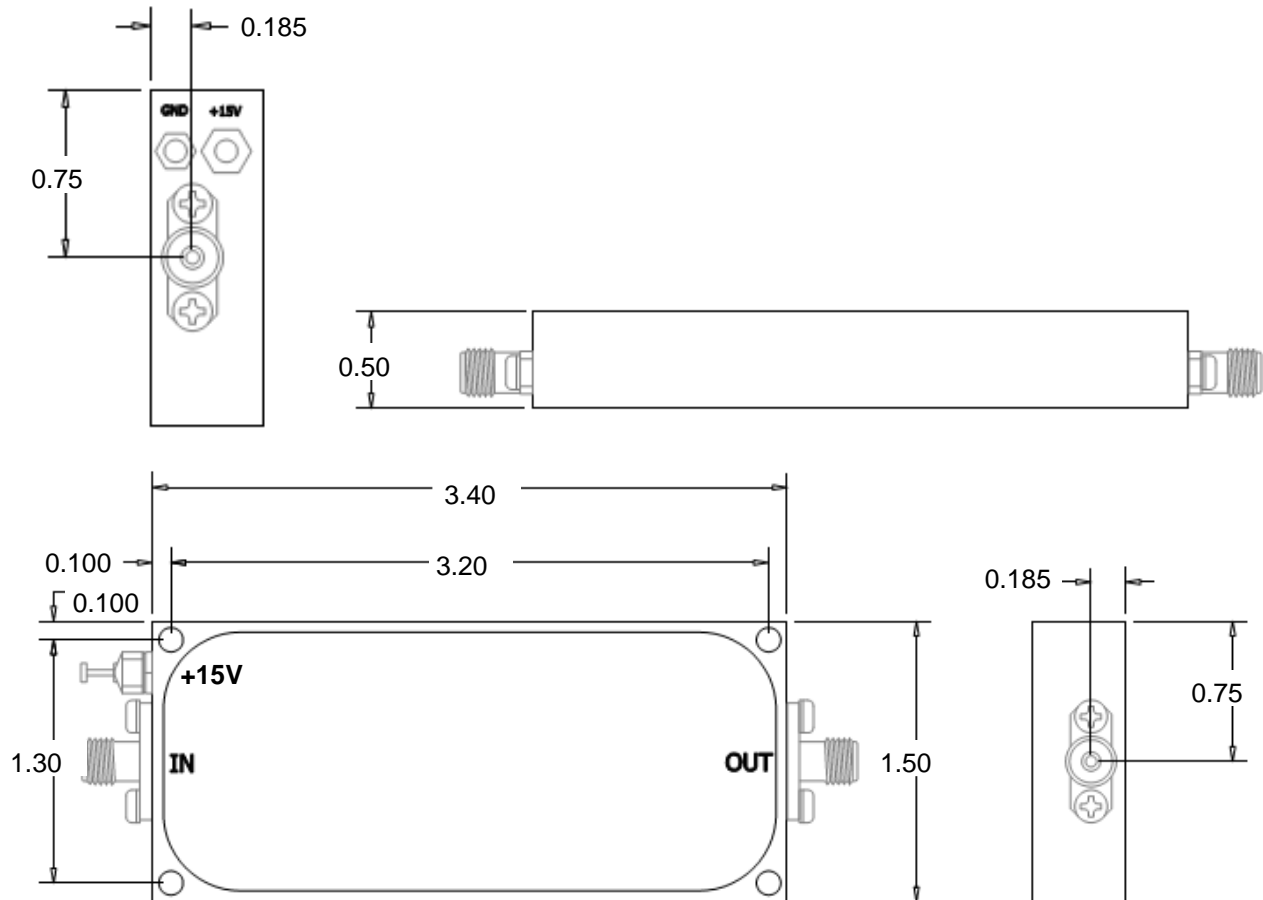
1/ Unconditional Stability:

Customized configurations of the above specifications are available

## Typical Measured Performance @ 23°C



## Package Outline: SMA Connectorized (inches)



**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-A0117	SMA Female	Non-Hermetic	Outline: M009-2

Contact us for custom configurations and special requirements.

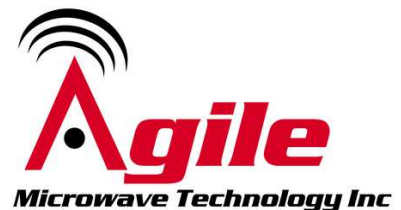
Our highly experienced team of engineers can quickly identify and implement innovative solutions using latest technology to improve performance and reduce cost.

- 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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