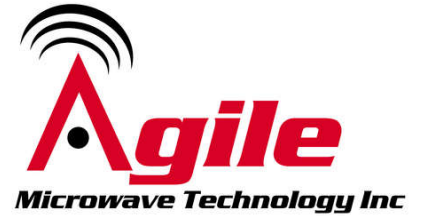


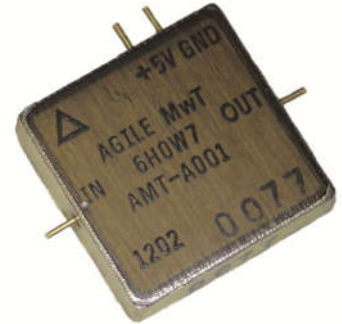
# AMT-A0037 100MHz to 200MHz Medium Power LNA Amplifier

Data Sheet



## Features

- 100 to 200 MHz Frequency Range
- +22 dBm Output power at 1 dB gain compression point
- Gain 19 dB
- High Linearity, OIP3 > +32 dBm
- 1.5 dB Noise Figure
- High Efficiency, 500mW (5V, 100mA)
- +24 dBm RF Input power with no damage
- High reliability Hermetic package
- Operates from a Single +5V Supply



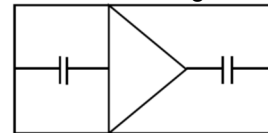
## Description

The AMT-A0037 is a medium power, high linearity, amplifier 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-A0037 is ideal for use as gain block, Input stage or driver stage in a Hi-Rel communications system for Commercial or Military applications

## Applications

- IF Amplifier, Input Amplifier
- RF Driver amplifier
- General purpose gain block

Functional Diagram



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

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T <sub>MO</sub>	° C	-54	+85
Storage Temperature - Case	T <sub>MS</sub>	° C	-55	+150
RF Input power (CW)	P <sub>in</sub>	dBm		+20
Die T <sub>Junction</sub>	T <sub>J</sub>	° C		+150
Thermal Resistance	Θ <sub>jc</sub>	° C/Watt		+76
ESD	V	<400 <sup>2</sup>		
Positive Supply Voltage	V <sub>+SS</sub>	V		+5.5

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.

2. ESD Human Body Model =400V, ESD machine model = 50V

## ELECTRICAL SPECIFICATIONS @ 23°C

Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		MHz	100		200
Gain	Small Signal	dB	17.5	19	
Gain Flatness		dB		±0.25	
Output Power	1 dB compression point @ 150 MHz	dBm	+20	+22	
OIP3	Two Tone F1—F2 = 1MHz @ 150 MHz	dBm		+32	
Noise Figure		dB		1.5	1.8
RF Input Impedance	Reference to 50 ohms			1.5:1	1.8:1
RF Output Impedance	Reference to 50 ohms			1.4:1	1.8:1
Stability Factor K	Unconditionally Stable		1		
Stability Factor B1	Unconditionally Stable		0		
Supply Voltage Positive:		V		+5V	
Supply Current Positive:		mA		100	120

Notes:

1/ Unconditional Stability: ( $K > 1$ ) and ( $B1 > 0$ )

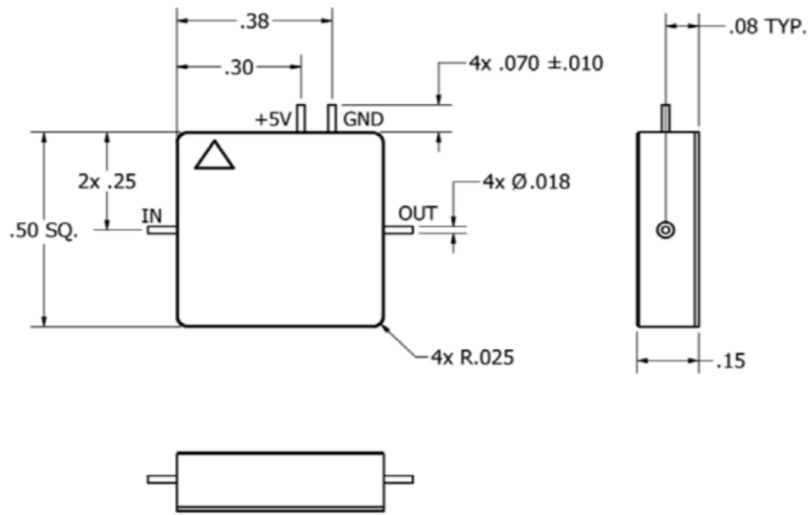
2/ Measured with VNA input power of -25dBm

Customized configurations of the above specifications are available

<b>Pin Numbers</b>	<b>Function</b>
1	RF Input
2	+5V
3	Ground
4	RF Output
Case	Ground
RFin and RFout pins have internal DC blocking capacitor	

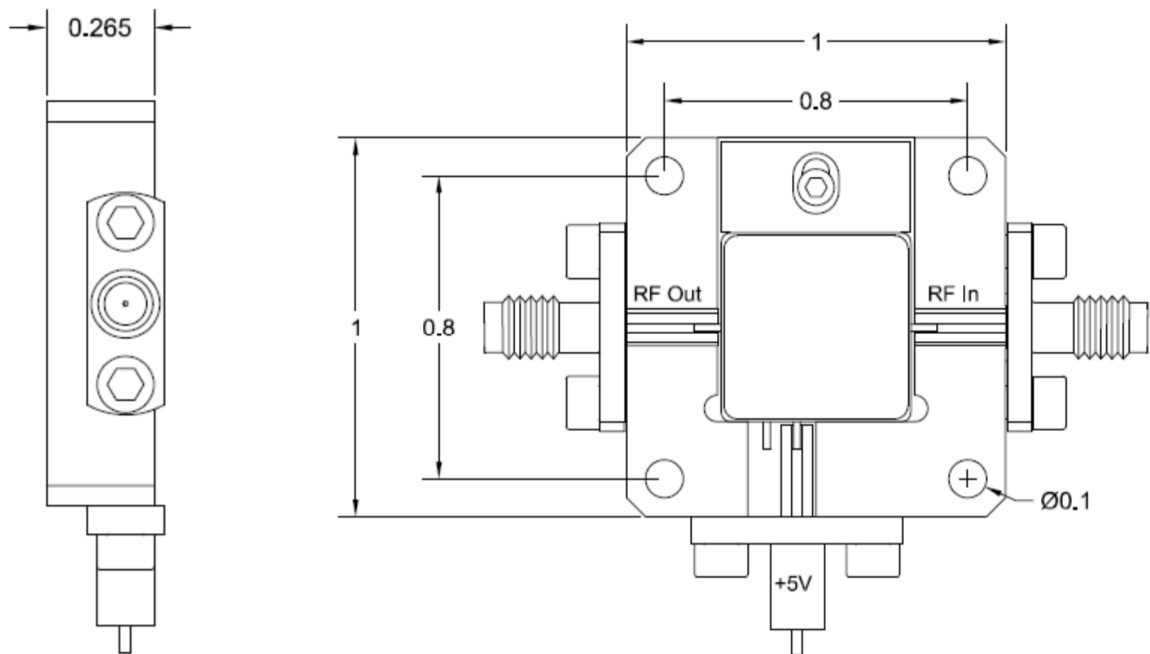
<b>Model Number</b>	<b>Description</b>	<b>Package</b>
AMT-A0037	4 pin Flat Pack	FP 0.500SQ, 0.170Ht AMT-M001

### Package Outline: Flat Pack 0.500SQ (inches)



PIN	FUNCTION	PIN	FUNCTION
1	RFIN	3	GND
2	+5V	4	RFOUT
CASE = GND			

### Package Outline: SMA Connectorized (inches)



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.

Note: Options availability is model dependent, please contact us

## Contact Information:

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