

# AMT-A0032 100MHz to 4000MHz Broadband Low Noise Amplifier

## Data Sheet



## Features

- 100 MHz to 4000 MHz Frequency Range
- Typical Noise Figure < 1.1 dB
- Gain 34 dB
- Gain Flatness <  $\pm 1.5$  dB
- Internally matched
- Internal DC Regulator
- Operates from a Single +5V Supply
- Unconditionally Stable
- State-of-the-Art GaAs Technology
- Excellent Value



## Description

The AMT-A0032 is a Broadband Low Noise amplifier with very low noise figure 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-A0032 is ideal for use as Front End of receiver system, or where amplification is required without adding excessive noise in a Hi-Rel communications system for Commercial or Military applications

## Applications

- Receiver front end,
- Communication systems
- Microwave Radio systems
- Test Equipment

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

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	$T_{MO}$	$^{\circ}C$	-40	+85
Storage Temperature - Case	$T_{MS}$	$^{\circ}C$	-40	+125
RF Input power (CW)	$P_{in}$	dBm		+8
Die $T_{Junction}$	$T_J$	$^{\circ}C$		+150
Positive Supply Voltage	$V_{+SS}$	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.

## ELECTRICAL SPECIFICATIONS @ 23°C

Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		MHz	100		4000
Gain	Small Signal	dB	30	34	
Gain Flatness		dB		±1.5	±1.8
Output Power (P1dB)	1 dB compression point @2 GHz	dBm	+7	+8	
OIP3	OPI3 measured @ 2 GHz Two tone F1-F2= 10MHz	dB		+18	
Noise Figure		dB		1.1	1.4
RF Input Impedance	Reference to 50 ohms VSWR			1.9:1	2.2:1
RF Output Impedance	Reference to 50 ohms			1:5:1	1.9:1
Stability Factor K	Unconditionally Stable		>1		
Stability Factor B1	Unconditionally Stable		>0		
Supply Voltage Positive:		V		+5V	
Supply Current Positive:		mA		57	75

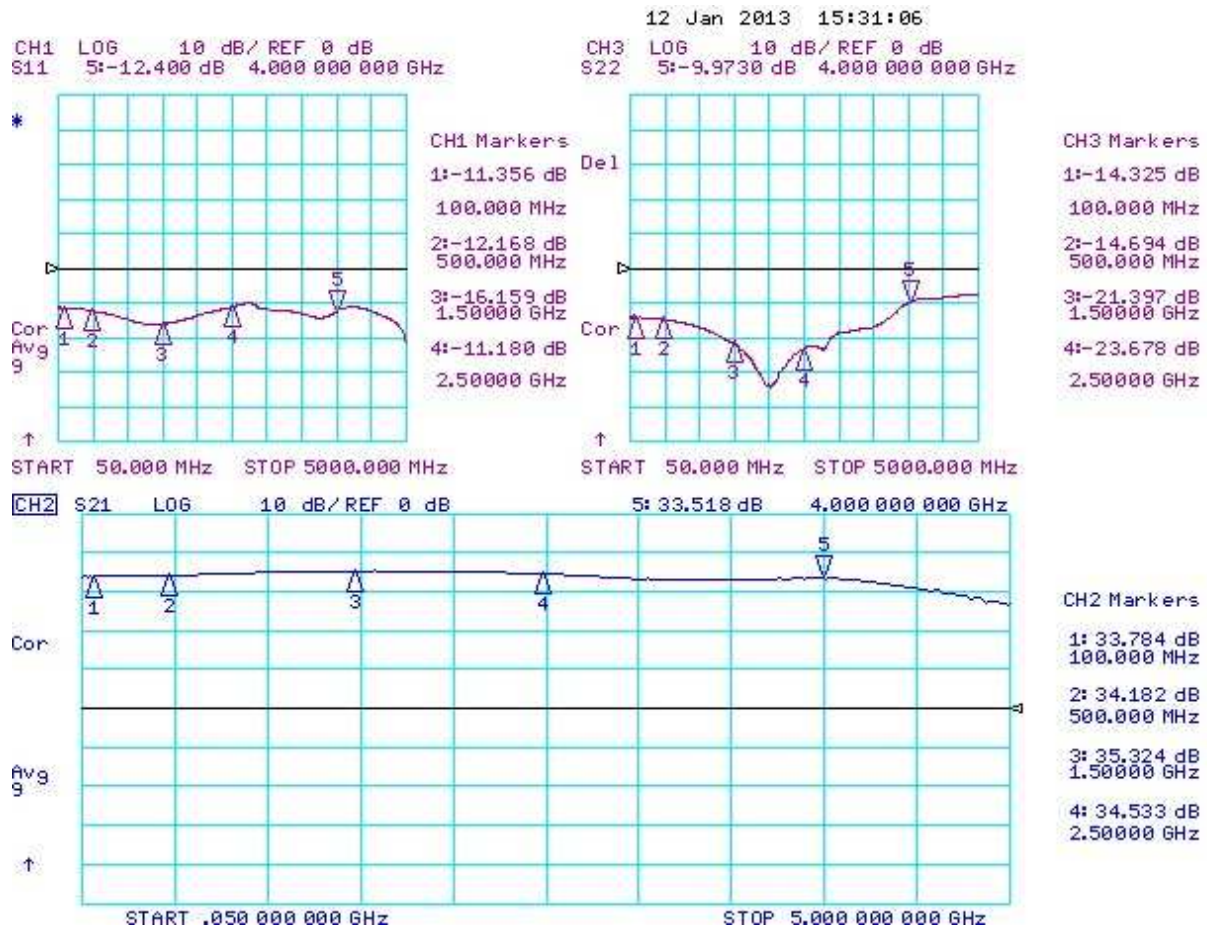
Notes:

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

Customized configurations of the above specifications are available

# Typical Performance @ 23°C

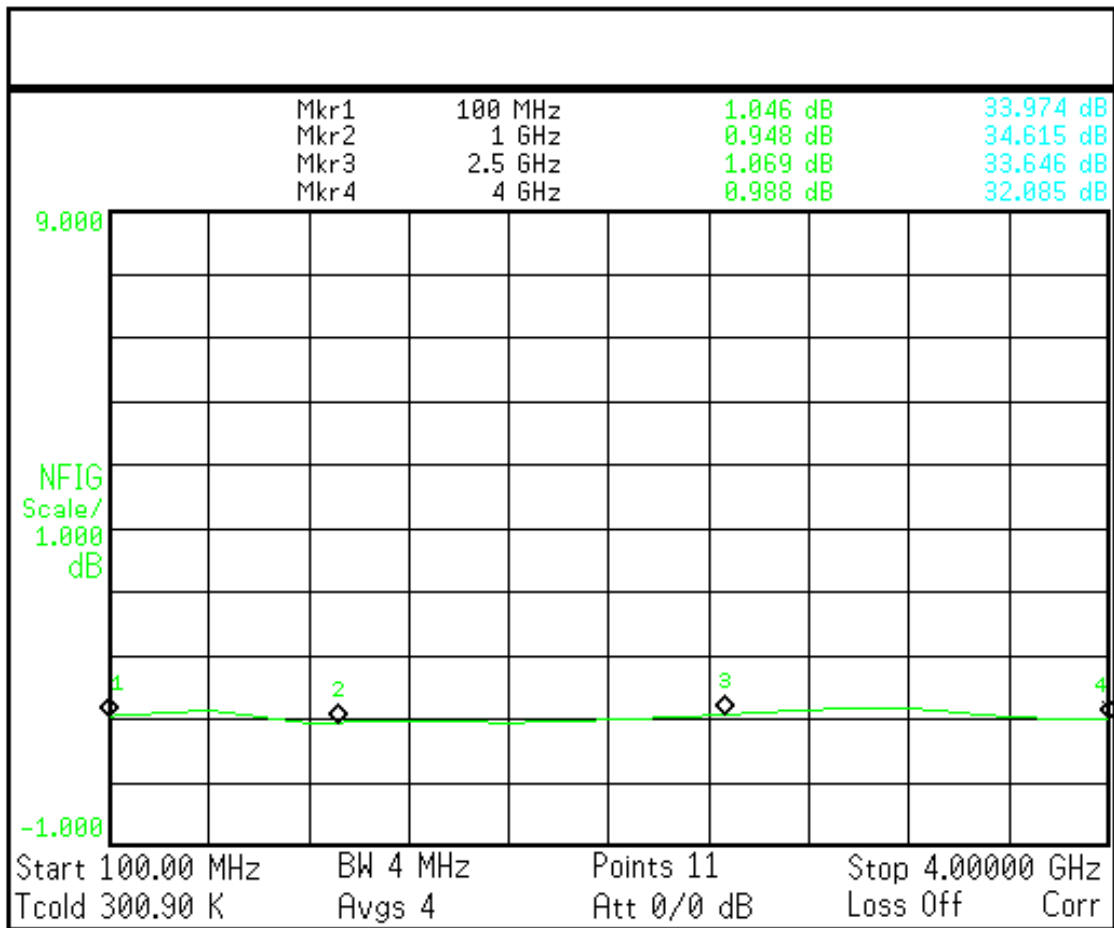
## S- Parameters



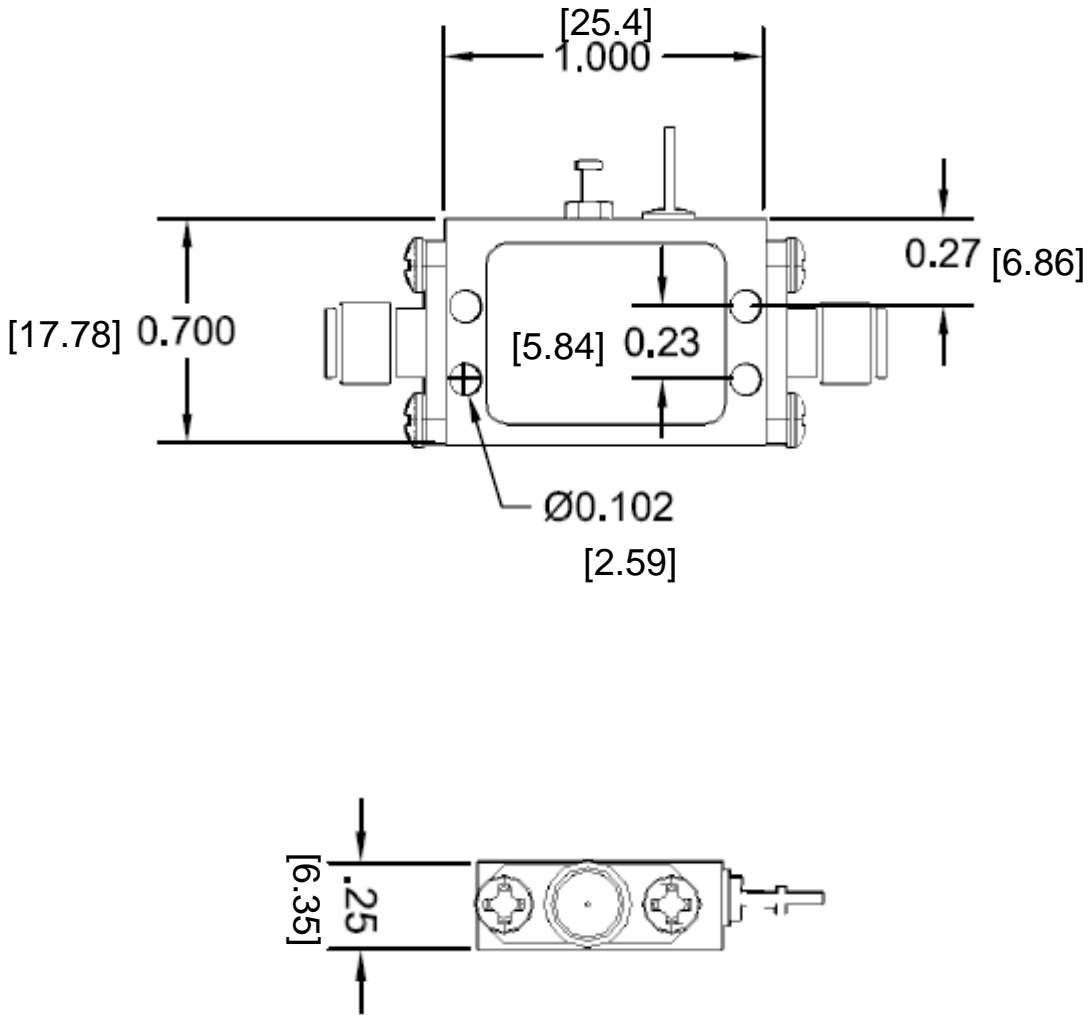
## Typical Performance

### Noise Figure @ 23C

Agilent 16:55:01 Apr 12, 2012



**Package Outline: SMA Connectorized inches [mm]**



<b>Model Number</b>	<b>Description</b>	<b>Hermeticity</b>	<b>Package</b>
AMT-A0024	SMA Female	Non-Hermetic	Outline: M007

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:

**101 Bloomingdale Road  
Hicksville, NY 11801  
Phone: (516) 931-1760  
Fax: (212) 374-1153**



**[info@agilemwt.com](mailto:info@agilemwt.com)    [www.agilemwt.com](http://www.agilemwt.com)**

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