

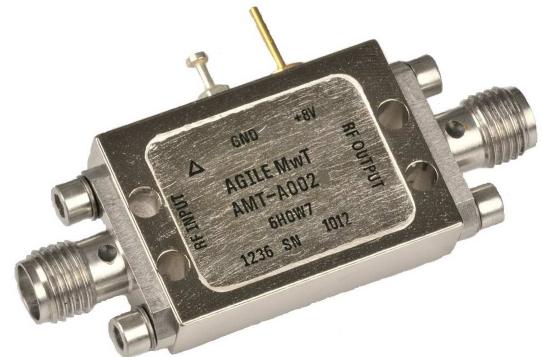
AMT-A0031 0.03 MHz to 4000MHz Broadband Flat Gain Block with constant phase

Data Sheet



Features

- 10 MHz to 4000 MHz Frequency Range
- Gain 26 dB
- Gain Flatness $< \pm 0.4$ dB
- Constant Phase
- Internally matched
- Internal DC Regulator
- Operates from a Single +8V Supply
- Unconditionally Stable
- State-of-the-Art GaAs Technology
- Excellent Value



Description

The AMT-A0031 is a Broadband Flat gain amplifier with very stable gain and constant phase 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-A0031 is ideal for use as stable gain block, or where amplification is required in a Hi-Rel communications system for Commercial or Military applications

Applications

- Communication systems
- Microwave Radio systems
- Test Equipment

MAXIMUM RATINGS¹

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T _{MO}	° C	-40	+85
Storage Temperature - Case	T _{MS}	° C	-40	+125
RF Input power (CW)	P _{in}	dBm		+8
Die T _{Junction}	T _J	° C		+150
Positive Supply Voltage	V _{+ss}	V		+8.5

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

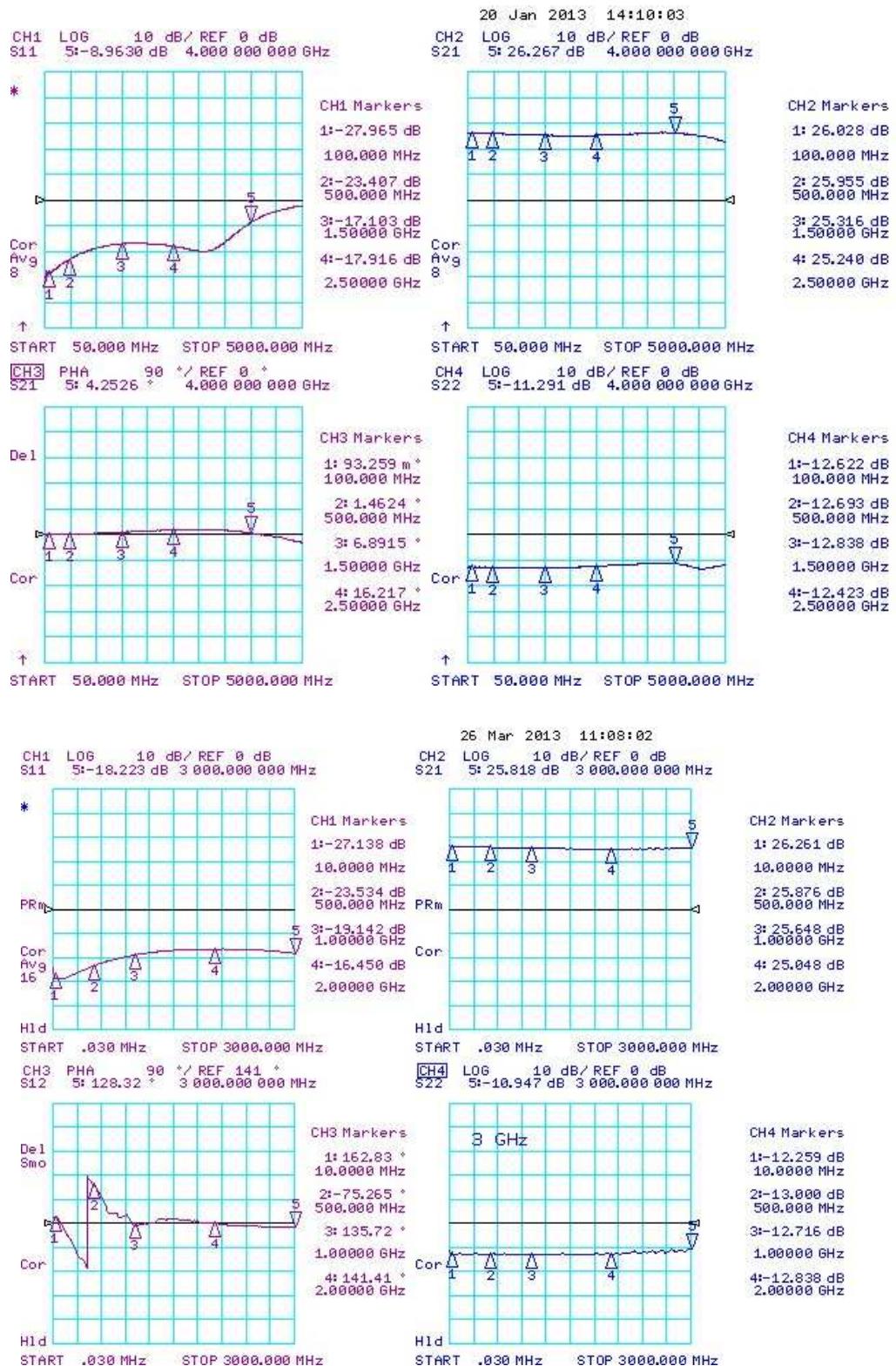
Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		MHz	10		4000
Gain	Small Signal	dB	25	26	
Gain Flatness		dB		±0.4	±0.8
Output Power (P1dB)	1 dB compression point @2 GHz	dBm	+7	+8	
OIP3	OIP3 measured @ 2 GHz Two tone F1-F2= 10MHz	dB		+18	
RF Input Impedance	10 MHz to 3000 MHz Reference to 50 ohms VSWR			1.3:1	1.8
RF Input Impedance	Reference to 50 ohms VSWR			1.8:1	2.4:1
RF Output Impedance	Reference to 50 ohms VSWR			1:7:1	2.0:1
Stability Factor K	Unconditionally Stable		>1		
Stability Factor B1	Unconditionally Stable		>0		
Supply Voltage Positive: Supply Current Positive:		V mA		+8V 50	65

Notes:

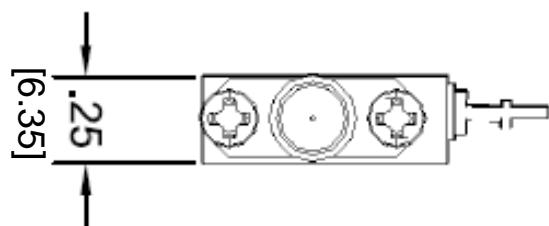
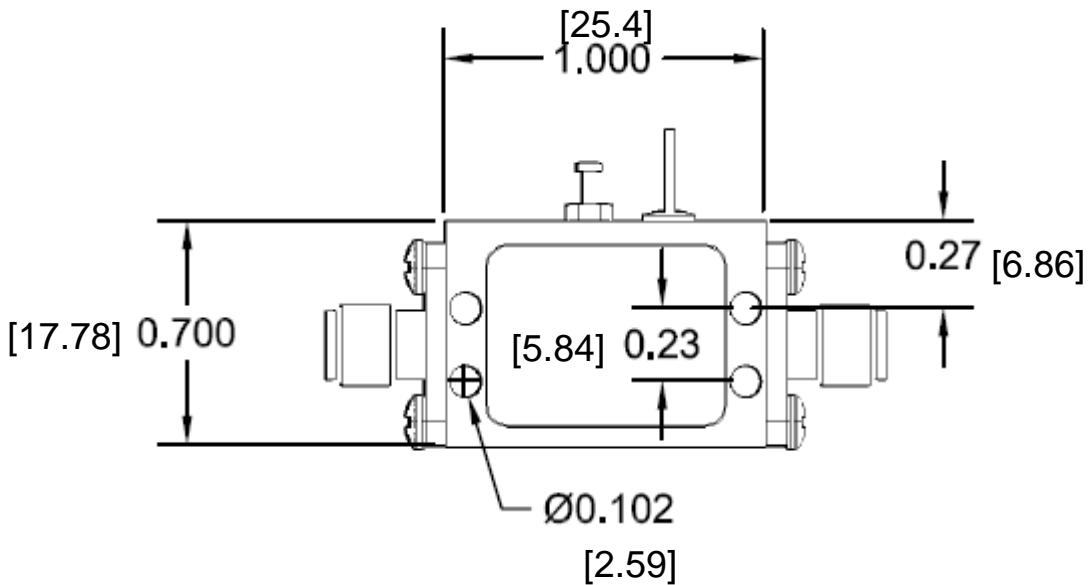
1/ Unconditional Stability: (K > 1) and (B1 > 0)

Custom configurations of the above specifications are available

Typical Performance @ 23°C S- Parameters



Package Outline: M007 SMA Connectorized inches [mm]



Model Number	Description	Hermeticity	Package
AMT-A0031	SMA Female	Non-Hermetic	Outline: M007

Contact us for custom configurations and special requirements.

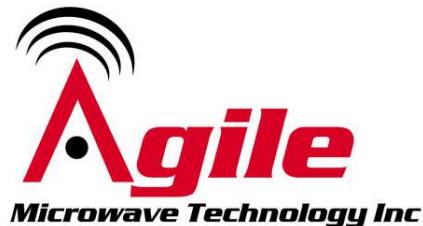
Our highly experienced team of engineers can quickly identify and implement innovative solutions using latest technology to improve performance and reduce cost.

- 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.

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