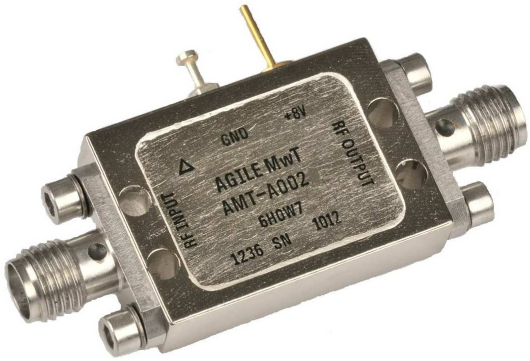
AMT-A0025 700 MHz to 1100 MHz
Low Noise Medium power Amplifier

Data Sheet

Features

- 700 MHz to 1100 MHz Frequency Range
- Typical Noise Figure < 0.4 dB
- Gain 44 dB
- Gain Flatness < ± 1.5 dB
- P1dB > +21 dBm
- Internally matched
- Internal DC Regulator
- Operates from a Single +8V Supply
- Unconditionally Stable
- State-of-the-Art GaAs Technology



Description

The AMT-A0025 is a Low Noise with Medium Power 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-A0025 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[1]

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)	Pin	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 @ 23ºC

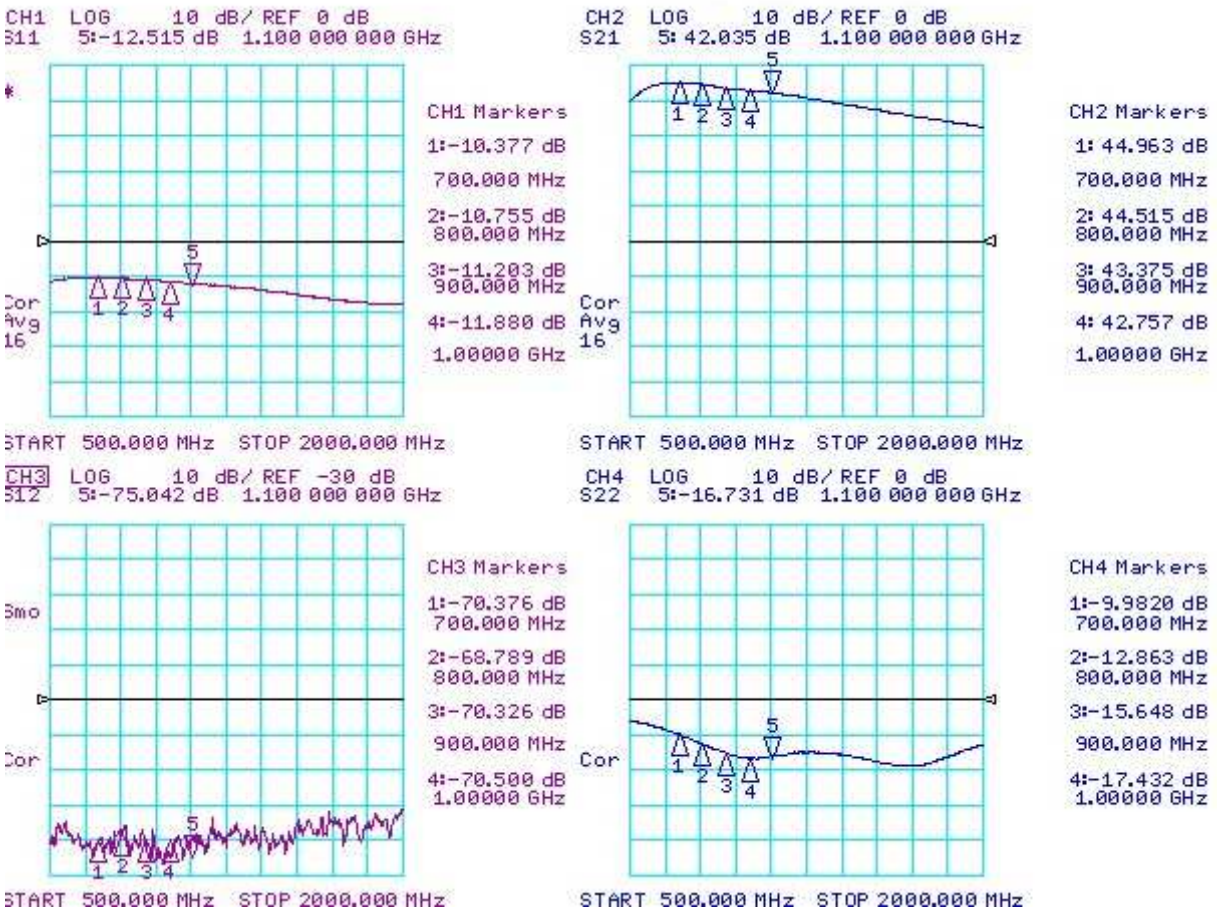
Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		MHz	700		1100
Gain	Small Signal	dB	40	44	
Gain Flatness		dB		±1	±1.8
Output Power (P1dB)	1 dB compression point @950 MHz	dBm	+20	+21	
OIP3	OPI3 measured @ 950 MHz Two tone F1-F2= 10MHz	dB		+31	
Noise Figure		dB		0.4	0.5
RF Input Impedance[2]	Reference to 50 ohms VSWR			1.8:1	2.3:1
RF Output Impedance[2]	Reference to 50 ohms			1:8:1	2.3:1
Stability Factor K	Unconditionally Stable		>1		
Stability Factor B1	Unconditionally Stable		>0		
Supply Voltage Positive: Supply Current Positive:		V mA		+8V 150	 165

Notes:
1/ Unconditional Stability: (K > 1) and (B1 > 0)
2/ May be higher at near 700 MHz

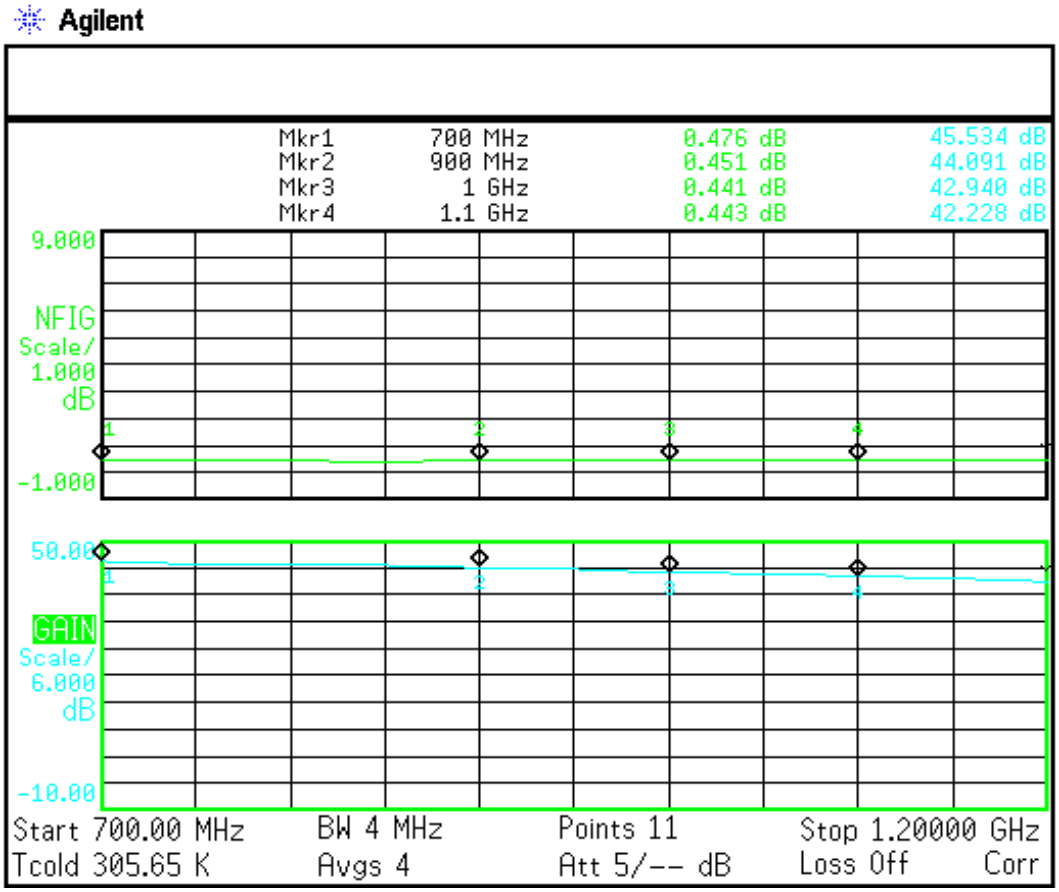
Customized configurations of the above specifications are available

Typical Performance @ 23ºC

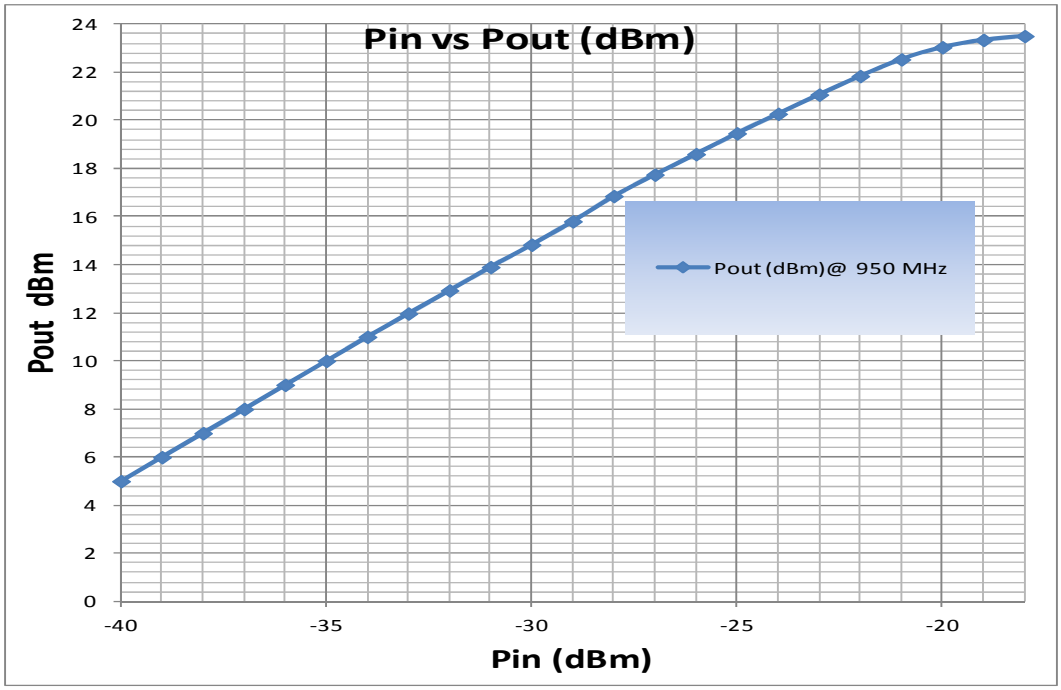
S– Parameters



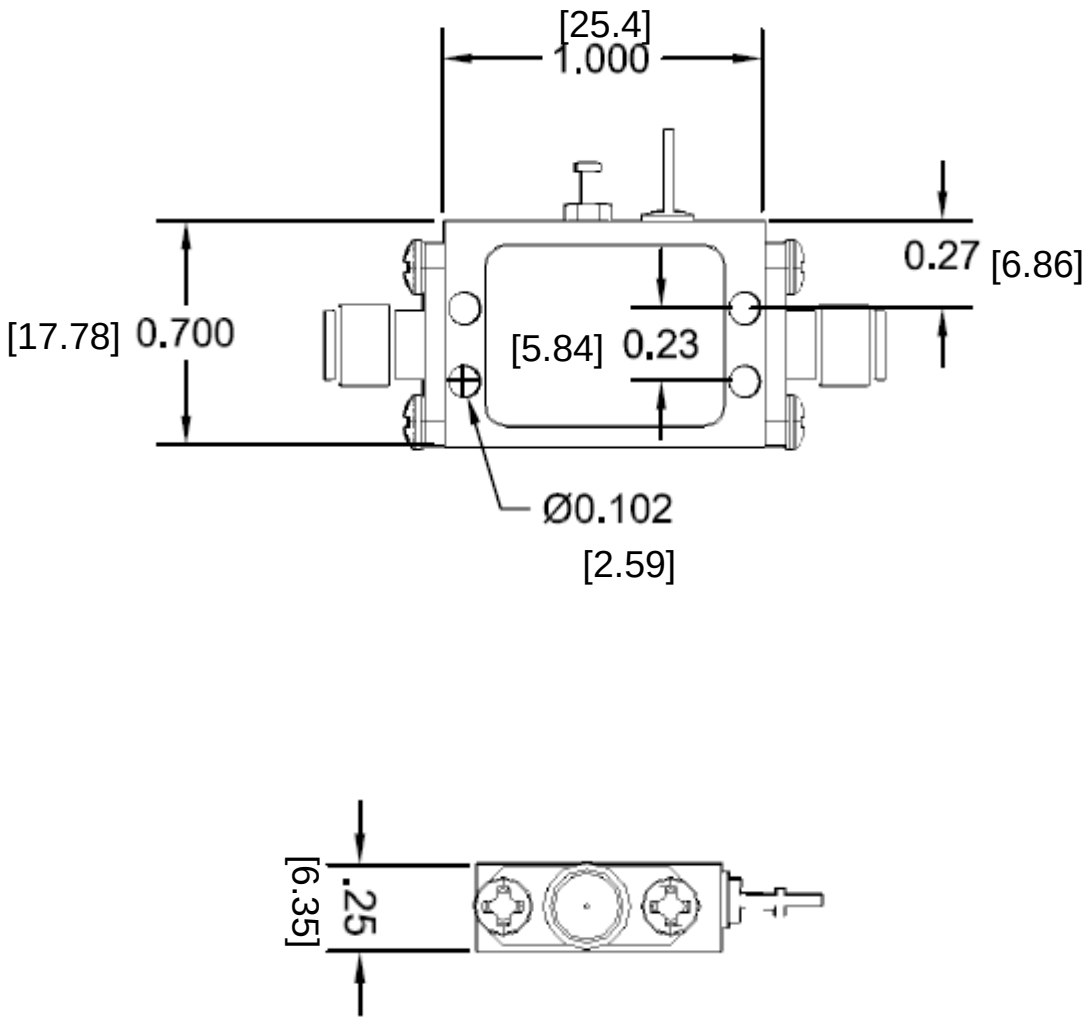
Typical Performance **Noise Figure @ 23C**



Typical Performance Power Input / Power Output @ 23C



Package Outline: SMA Connectorized inches [mm]



Model Number	Description	Hermeticity	Package
AMT-A0025	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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