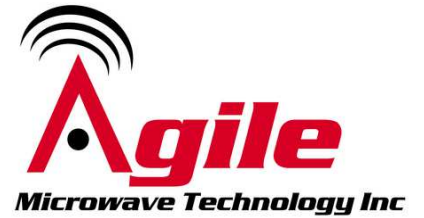


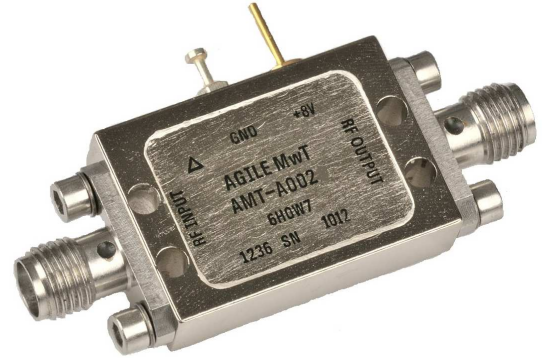
AMT-A0026 800 MHz to 2000 MHz Low Noise Medium power Amplifier

Data Sheet



Features

- 800 MHz to 2000 MHz Frequency Range
- Typical Noise Figure < 1.2 dB
- Gain 33 dB
- Gain Flatness < ± 1.5 dB
- P1dB > +22 dBm
- Internally matched
- Internal DC Regulator
- Operates from a Single +8V Supply
- Unconditionally Stable
- State-of-the-Art GaAs Technology



Description

The AMT-A0026 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 AMT's proprietary technology. The amplifier I/Os are Internally matched to 50 Ohms and are DC blocked. The AMT-A0026 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 RATINGS¹

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		+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	800		2000
Gain	Small Signal	dB	29	33	
Gain Flatness		dB		±1.5	±2
Output Power (P1dB)	1 dB compression point @ 1000 MHz	dBm	+20	+22	
OIP3	OIP3 measured @ 1000 MHz Two tone F1-F2= 10MHz	dB		+31	
Noise Figure		dB		1.2	
RF Input Impedance	Reference to 50 ohms VSWR			1.8:1	2.3:1
RF Output Impedance	Reference to 50 ohms			1:8:1	2.0:1
Stability Factor K	Unconditionally Stable		>1		
Stability Factor B1	Unconditionally Stable		>0		
Supply Voltage Positive:		V		+8V	
Supply Current Positive:		mA		130	145

Notes:

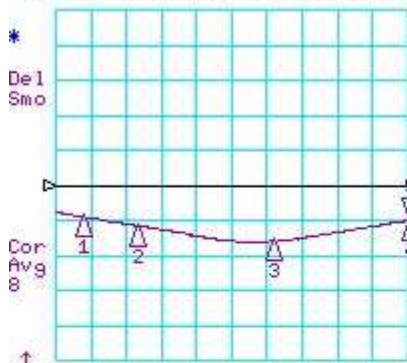
1/ Unconditional Stability: ($K > 1$) and ($B1 > 0$)

Customized configurations of the above specifications are available

Typical Performance @ 23°C

S-Parameters

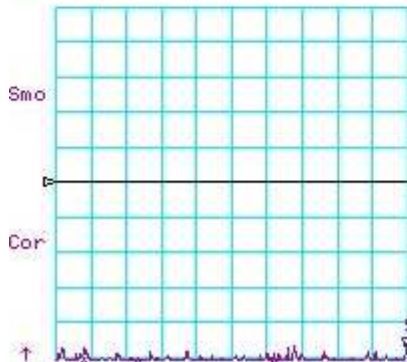
CH1 LOG 10 dB/ REF 0 dB
S11 5: -9.9610 dB 2.000 000 000 GHz



CH1 Markers
1: -8.8770 dB
800.000 MHz
2: -11.428 dB
1.00000 GHz
3: -15.894 dB
1.50000 GHz
4: -9.9610 dB
2.00000 GHz

START 700.000 MHz STOP 2000.000 MHz

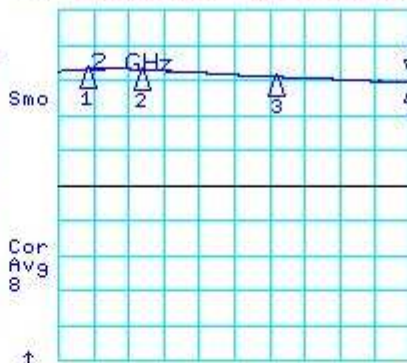
CH3 LOG 10 dB/ REF 0 dB
S12 5: -52.847 dB 2.000 000 000 GHz



CH3 Markers
1: -51.531 dB
800.000 MHz
2: -55.765 dB
1.00000 GHz
3: -55.005 dB
1.50000 GHz
4: -52.847 dB
2.00000 GHz

START 700.000 MHz STOP 2000.000 MHz

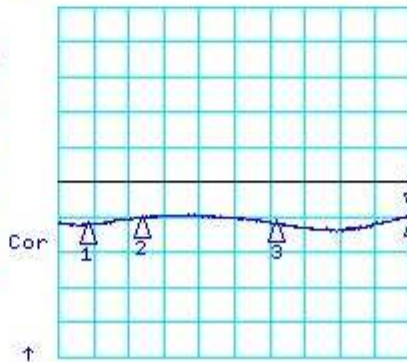
CH2 LOG 10 dB/ REF 0 dB
S21 5: 29.505 dB 2.000 000 000 GHz



CH2 Markers
1: 33.265 dB
800.000 MHz
2: 33.173 dB
1.00000 GHz
3: 31.074 dB
1.50000 GHz
4: 29.505 dB
2.00000 GHz

START 700.000 MHz STOP 2000.000 MHz

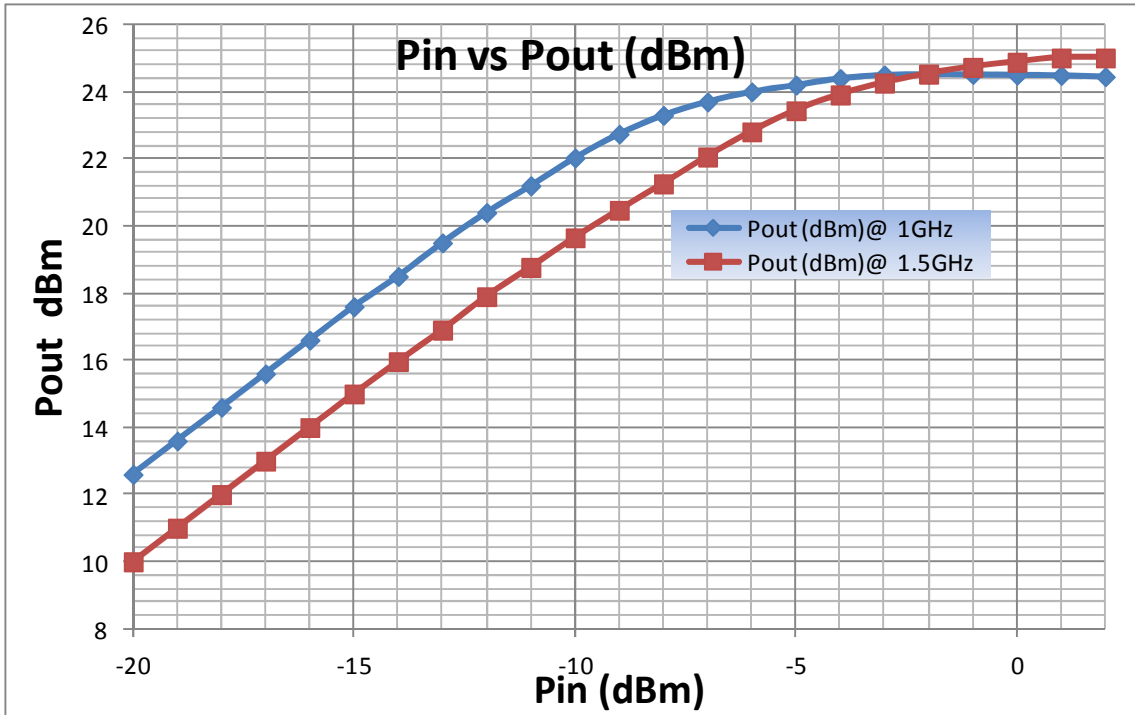
CH4 LOG 10 dB/ REF 0 dB
S22 5: -9.5520 dB 2.000 000 000 GHz



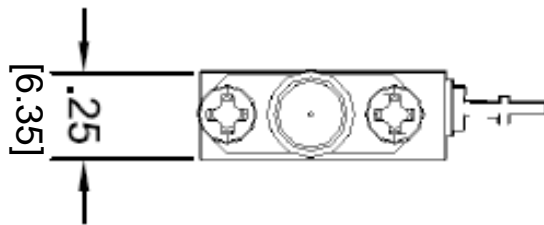
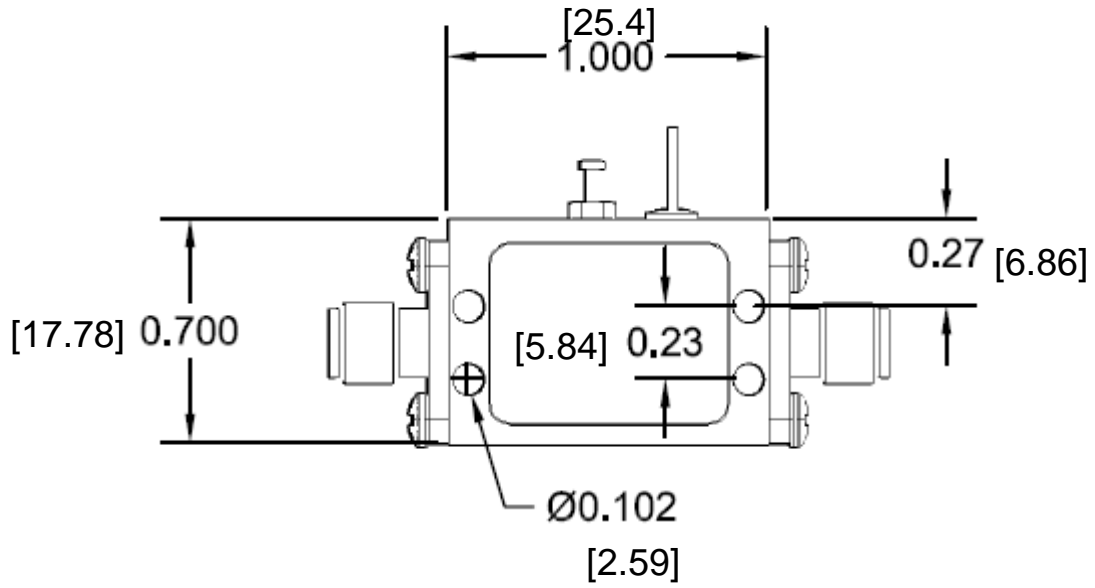
CH4 Markers
1: -11.917 dB
800.000 MHz
2: -10.017 dB
1.00000 GHz
3: -11.458 dB
1.50000 GHz
4: -9.5520 dB
2.00000 GHz

START 700.000 MHz STOP 2000.000 MHz

Typical Performance Power Input / Power Output @ 23C



Package Outline: SMA Connectorized inches [mm]



Model Number	Description	Hermeticity	Package
AMT-A0026	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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