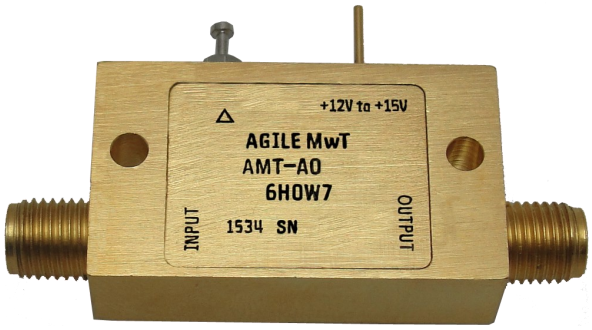
AMT-A0471 0.2 GHz to 10 GHz
Broadband Low Noise Amplifier with EMI sheilding

Data Sheet

Microwave Technology Inc

Features



- 0.2 GHz to 10 GHz Frequency Range
- Gain 30 dB typ
- Gain Flatness < ± 1.5 dB typ ± 2.6 db max
- Typical Noise Figure < 1.5 dB 2.3 dB max
- +14 dBm P1dB Typical, +10 dBm min
- Internally Regulated
- High EMI performance
  DC to RF leakage –90 dBc typ –70 dBc max
- Operates from a Single +12V to +15V Supply
- Unconditionally Stable
- State-of-the-Art GaAs Technology

Description

The AMT-A0471 is a Broadband Low Noise amplifier with low EMI leakage 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 . The AMT-A0471 is ideal for use in communication system, or where amplification is required without adding excessive noise in a Hi-Rel communications system for Com-

Applications

- Communication systems
- Microwave Radio systems
- Test Equipment
- Point to Point Radios

MAXIMUM RATINGS[1]

Do NOT apply DC to RF Input

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T_{MO}	° C	-40	+85
Storage Temperature - Case	T_{MS}	° C	-54	+95
RF Input power (CW)	Pin	dBm		+12
Die $T_{Junction}$	T_J	° C		+150
Positive Supply Voltage	V_{+SS}	V		+16

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.

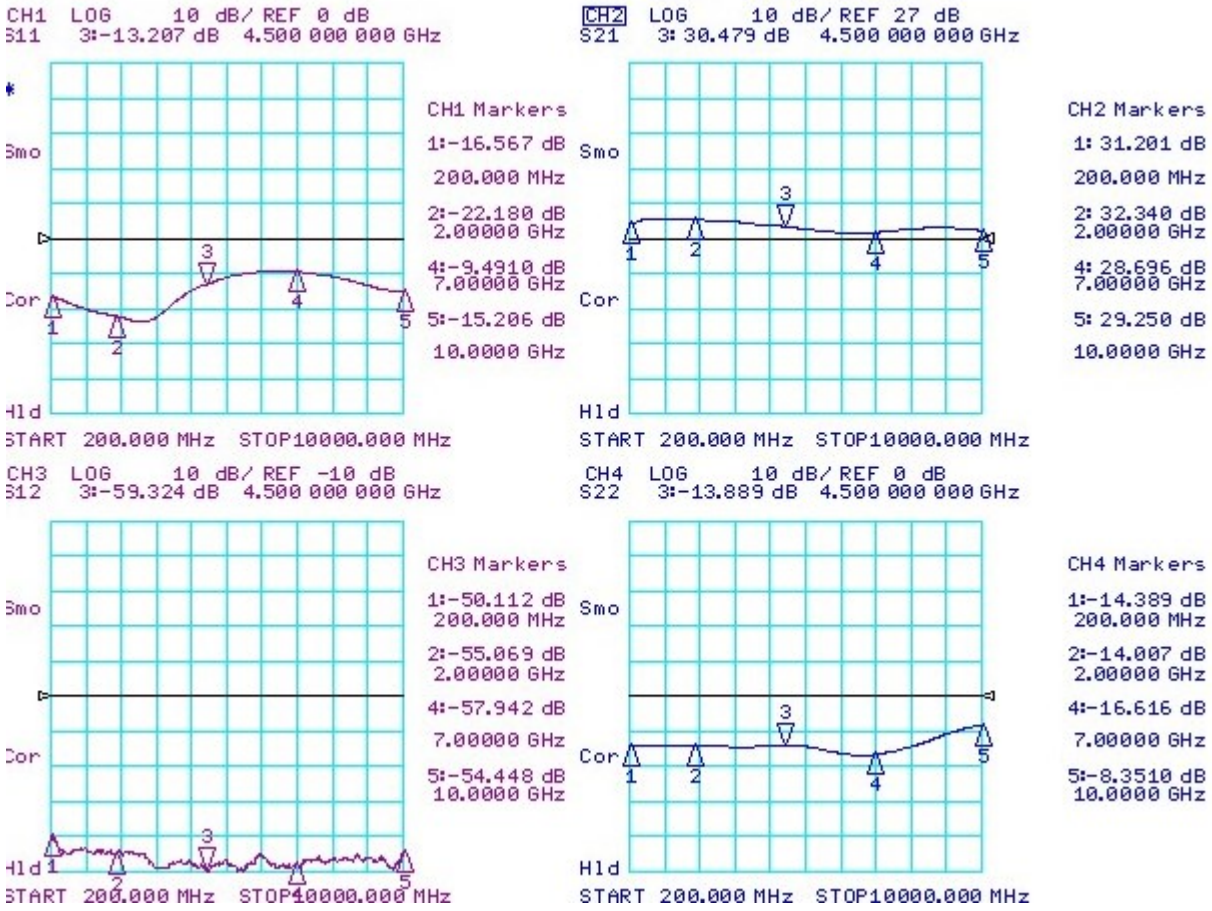
ELECTRICAL SPECIFICATIONS @ 23ºC

Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		GHz	0.2		10
Gain	Small Signal	dB	28	30	33
Gain Flatness		dB		±1.5	±2.6
Input Power	CW, without damage	dBm	+12		
Output Power (P1dB)	1 dB compression point @ 4 GHz	dBm	10	14	
Noise Figure	Above 500 MHz	dB		1.5	2.3
RF Input Impedance	Reference to 50 ohms VSWR			1.8:1	2.3:1
RF Output Impedance	Reference to 50 ohms			1:8:1	2.4:1
EMI Leakage	DC supply pin to RFout	dBc	-70	-90	
Supply Voltage Positive: Supply Current Positive:		V mA		+15 107	190

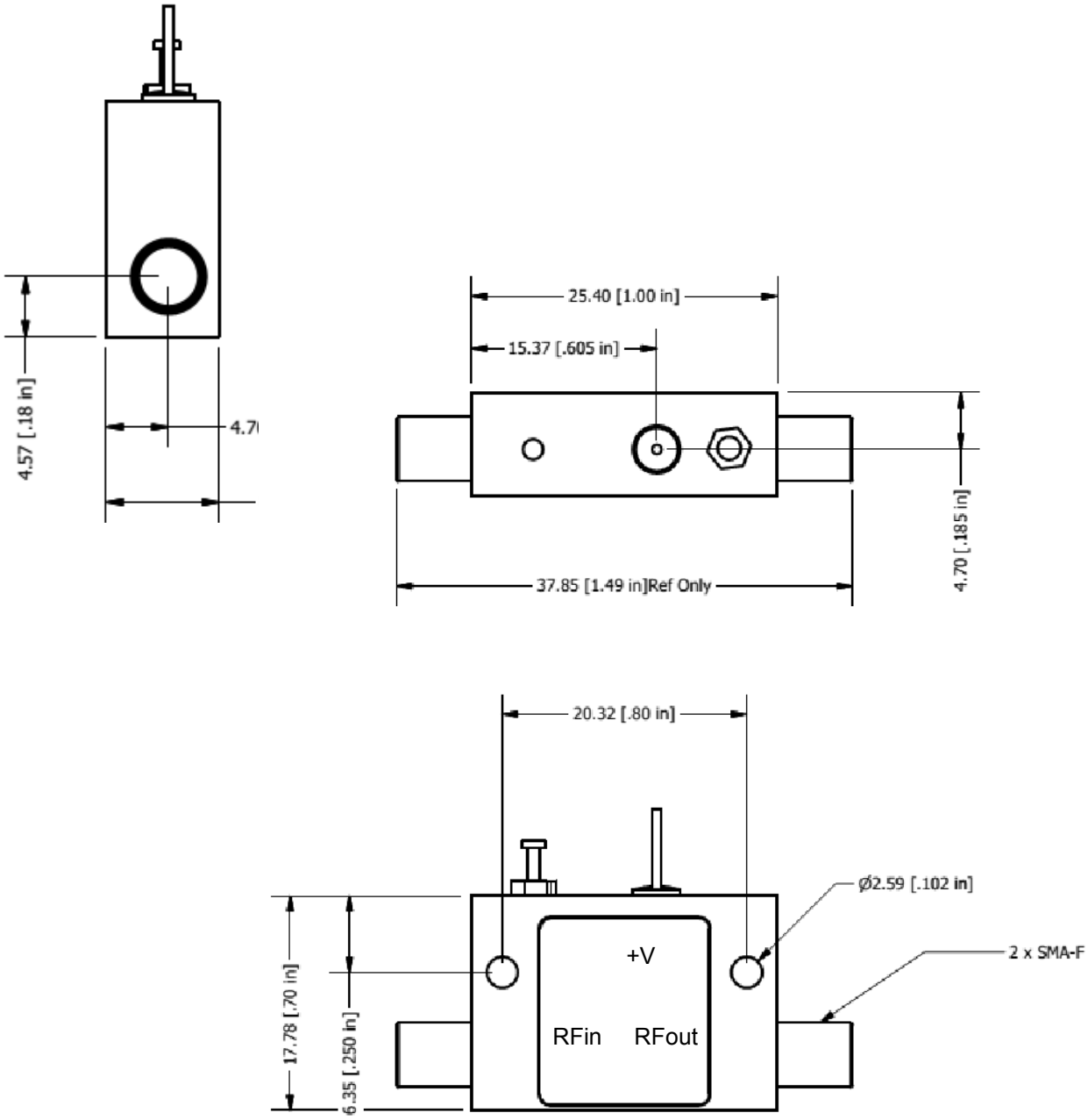
Notes:
1/ Unconditional Stability
2/ P1dB maybe +9 dBm below 1 GHz
Measured NF has standard (Agilent/HP equipment) uncertainty of 0.15 dB
High EMI shielding

Customized configurations of the above specifications are available

Typical S-Parameters @ 25C



Package Outline: SMA-F Connectorized mm [Inches]



Model Number	Description	Hermeticity	Package
AMT-A0471	SMA Female Non-removable	Non-Hermetic	Outline: M101

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:

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ISO9001:2015 CERTIFIED

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