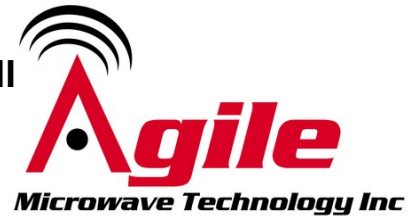


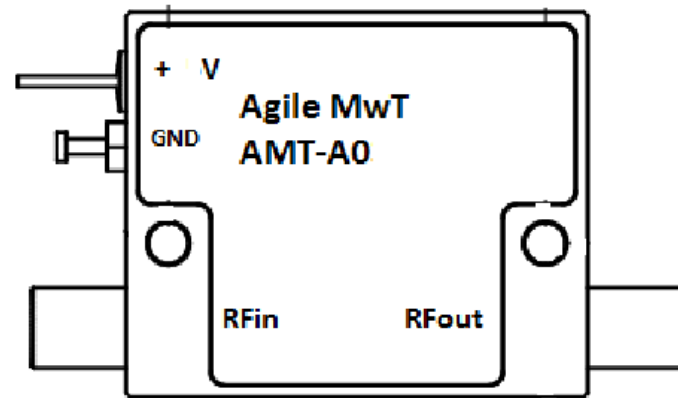
AMT-A0472 0.2 GHz to 10 GHz Positive Gain Slope Amplifier w/ Medium Power & EMI



Data Sheet

Features

- 0.2 GHz to 10 GHz Frequency Range
- Gain 18-22 dB @ 200 MHz
- Gain 33-37 dB @ 10 GHz
- Flatness $< \pm 2$ dB typ ± 3.5 dB max
- +21 dBm P1dB Typical
- Internally Regulated
- High EMI performance
DC to RF leakage -90 dBc typ -70 dBc max
- Operates from a Single +15V Supply
- Unconditionally Stable
- State-of-the-Art GaAs Technology



Description

The AMT-A0472 is a Broadband Low Noise amplifier with medium power, Positive Gain Slope and 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-A0472 is ideal for use in communication system, or where amplification is required without adding excessive noise in a Hi-Rel

Applications

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

MAXIMUM RATINGS¹

Do NOT apply DC to RF Input

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T_{MO}	$^{\circ}C$	-40	+85
Storage Temperature - Case	T_{MS}	$^{\circ}C$	-54	+95
RF Input power (CW)	P_{in}	dBm		+12
Die $T_{Junction}$	T_J	$^{\circ}C$		+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 @ 23°C

Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		GHz	0.2		10
Gain @ 200 MHz	Small Signal	dB	18		22
Gain @ 10 GHz	Small signal	dB	33		37
Gain Flatness from slope	Variation from linear	dB		±1.5	±3.5
Input Power	CW, without damage	dBm	+12		
Output Power (P1dB)	1 dB compression point @ 6 GHz	dBm	20	21	
Noise Figure	Above 500 MHz	dB		5	8
RF Input Impedance	Reference to 50 ohms VSWR			1.8:1	2.4:1
RF Output Impedance	Reference to 50 ohms			1:8:1	2.4:1
EMI Leakage	DC supply pin to RFout	dBc	-70		
Supply Voltage Positive:		V		+15	
Supply Current Positive:		mA		170	250

Notes:

1/ Unconditional Stability

2/ P1dB maybe +23.5 dBm below 1 GHz

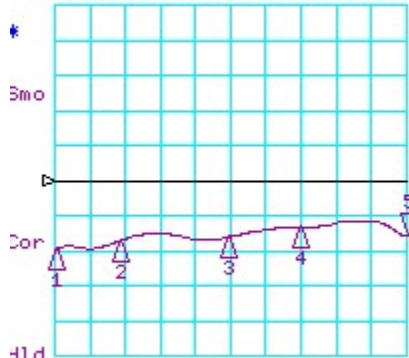
High EMI shielding

Measured NF has standard (Agilent/HP equipment) uncertainty of 0.15 dB

Customized configurations of the above specifications are available

Typical S-Parameters @ 25C

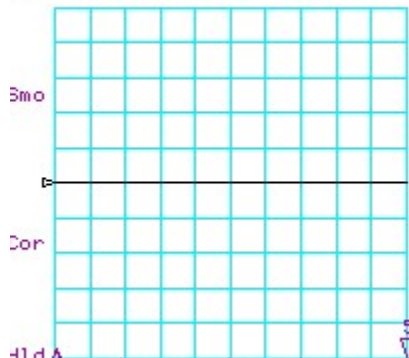
CH1 LOG 10 dB/ REF 0 dB
S11 5:-15.873 dB 10.000 000 000 GHz



CH1 Markers
1:-19.755 dB
200.000 MHz
2:-17.079 dB
2.00000 GHz
3:-16.158 dB
5.00000 GHz
4:-13.321 dB
7.00196 GHz

START 200.000 MHz STOP10000.000 MHz

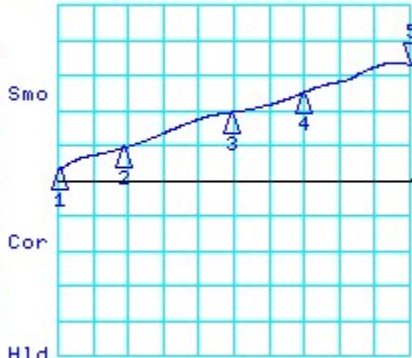
CH3 LOG 10 dB/ REF 0 dB
S12 5:-50.928 dB 10.000 000 000 GHz



CH3 Markers
1:-47.651 dB
200.000 MHz
2:-52.271 dB
2.00000 GHz
3:-57.069 dB
5.00000 GHz
4:-56.594 dB
7.00196 GHz

START 200.000 MHz STOP10000.000 MHz

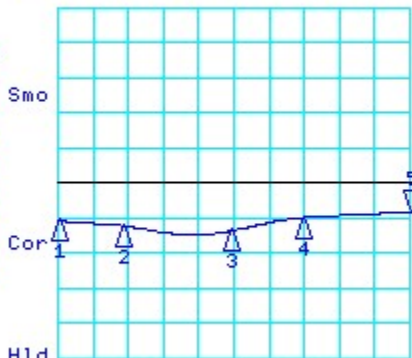
CH2 LOG 5 dB/ REF 18 dB
S21 5: 34.534 dB 10.000 000 000 GHz



CH2 Markers
1: 19.581 dB
200.000 MHz
2: 22.651 dB
2.00000 GHz
3: 27.791 dB
5.00000 GHz
4: 30.470 dB
7.00196 GHz

START 200.000 MHz STOP10000.000 MHz

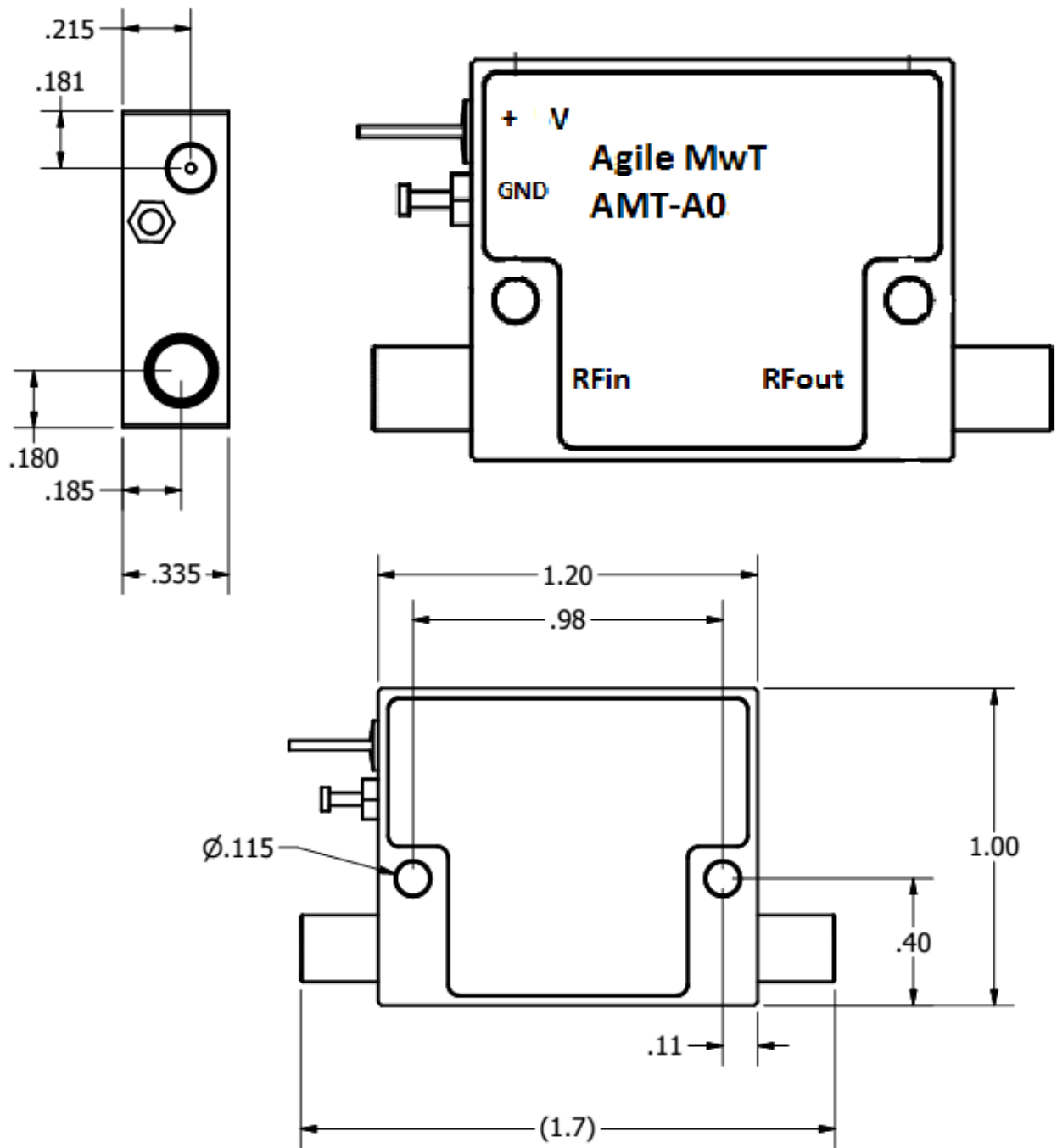
CH4 LOG 10 dB/ REF 0 dB
S22 5:-8.3020 dB 10.000 000 000 GHz



CH4 Markers
1:-10.934 dB
200.000 MHz
2:-12.216 dB
2.00000 GHz
3:-13.673 dB
5.00000 GHz
4:-9.8440 dB
7.00196 GHz

START 200.000 MHz STOP10000.000 MHz

Package Outline: SMA-F Connectorized (Inches)



Model Number	Description	Hermeticity	Package
AMT-A0472	SMA Female Non-removable	Non-Hermetic	Outline: M131

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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Cary, NC 27513**

**ISO9001:2015
CERTIFIED**



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