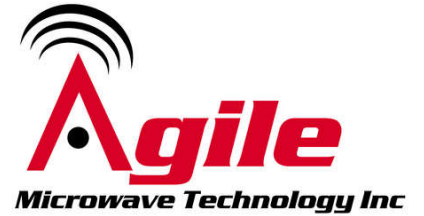


AMT-A0482 8.8 GHz to 9 GHz Low Noise Amplifier , Medium Power, Flat Gain

Data Sheet



Features

- 8.8 GHz to 10 GHz Frequency Range
- Typical Gain 38 dB
- **Gain Flatness $\lt; \pm 0.2 \text{ dB Typ } 0.5 \text{ dB max}$**
- Typical Noise Figure 2.5 dB
- **P1dB +21 dBm Typical, +20 dBm min**
- Internally Regulated
- Operates from a Single +12V Supply
- Unconditionally Stable



Description

The AMT-A0482 is a Broadband Low Noise amplifier with very flat gain and low noise figure, Medium Power 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-A0482 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,
- Radar
- 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	-55	+125
RF Input power (CW)	Pin	dBm		+10
Die $T_{Junction}$	T_J	° C		+150
Positive Supply Voltage	V_{+SS}	V		+16

Do NOT apply DC to RF Input

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	8.8		9
Gain	Small Signal	dB	36	38	39
Gain Flatness		dB		± 0.2	± 0.5
Output Power (P1dB)	1 dB compression point @ 9 GHz	dBm	+20	+21	
OIP3	OIP3 measured @ 9 GHz Two tone F1-F2= 10MHz	dB		30	
Noise Figure		dB		2.8	4
RF Input Impedance	Reference to 50 ohms VSWR			1.8:1	2.0:1
RF Output Impedance	Reference to 50 ohms			1:5:1	2.0:1
Supply Voltage Positive:		V		+12	
Supply Current Positive:		mA		160	200

Notes:

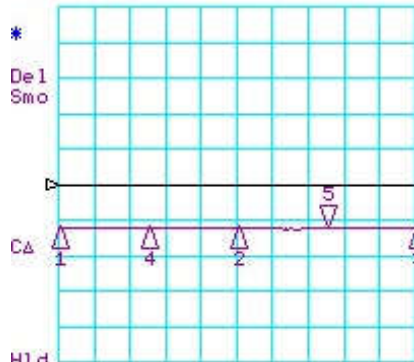
1/ Unconditional Stability

Customized configurations of the above specifications are available

Typical Performance

S-Parameters @ 23C

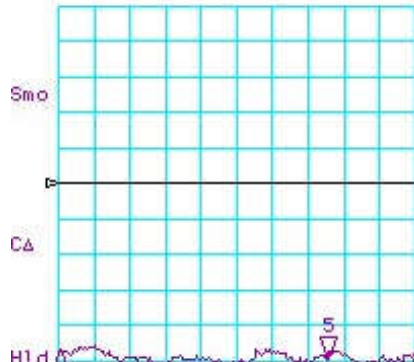
CH1 LOG 10 dB/ REF 0 dB
S11 5: -12.306 dB 8.950 000 000 GHz



CH1 Markers
1: -12.359 dB
8.80000 GHz
2: -12.060 dB
8.90000 GHz
3: -12.063 dB
9.00000 GHz
4: -12.218 dB
8.85000 GHz

H1d
START 8800.000 MHz STOP 9000.000 MHz

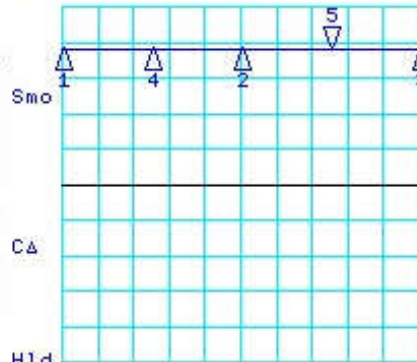
CH3 LOG 10 dB/ REF 0 dB
S12 5: -49.481 dB 8.950 000 000 GHz



CH3 Markers
1: -47.225 dB
8.80000 GHz
2: -52.878 dB
8.90000 GHz
3: -47.942 dB
9.00000 GHz
4: -49.700 dB
8.85000 GHz

H1d
START 8800.000 MHz STOP 9000.000 MHz

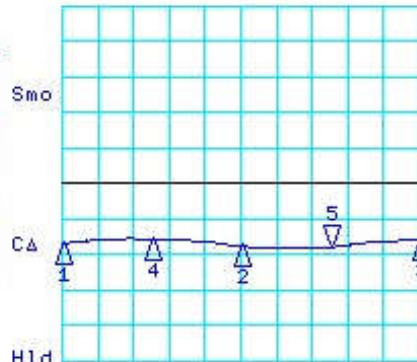
CH2 LOG 10 dB/ REF 0 dB
S21 5: 38.115 dB 8.950 000 000 GHz



CH2 Markers
1: 38.042 dB
8.80000 GHz
2: 38.143 dB
8.90000 GHz
3: 38.063 dB
9.00000 GHz
4: 38.073 dB
8.85000 GHz

H1d
START 8800.000 MHz STOP 9000.000 MHz

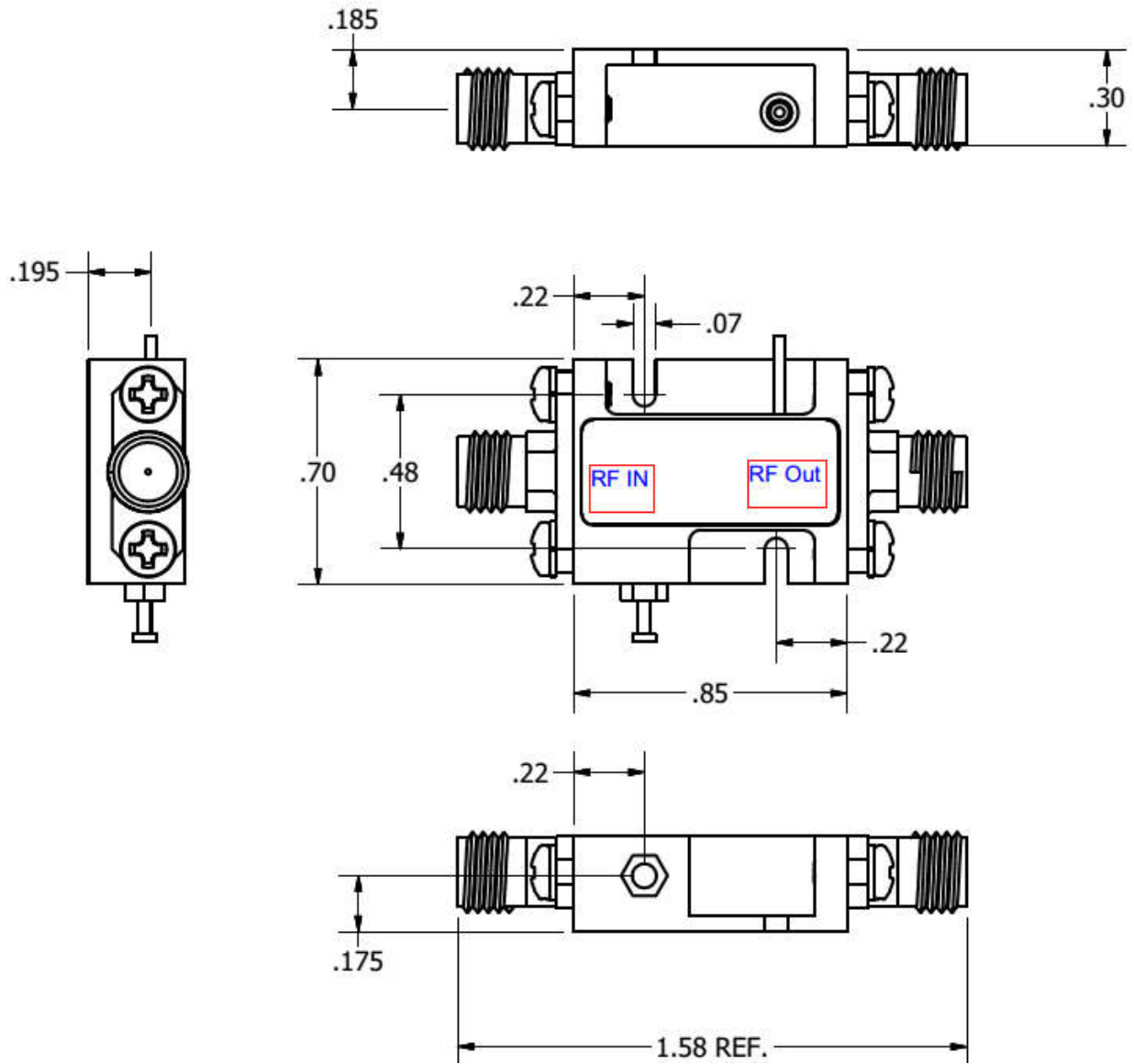
CH4 LOG 10 dB/ REF 0 dB
S22 5: -17.889 dB 8.950 000 000 GHz



CH4 Markers
1: -16.983 dB
8.80000 GHz
2: -17.620 dB
8.90000 GHz
3: -15.570 dB
9.00000 GHz
4: -15.560 dB
8.85000 GHz

H1d
START 8800.000 MHz STOP 9000.000 MHz

Package Outline: M110 SMA Connectorized (inches)



Housing: Aluminum Gold over Nickel plated
Removable SMA and Ground Slug

Model Number	Description	Hermeticity	Package
AMT-A0482	SMA Female	Non-Hermetic	Outline: M110

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.

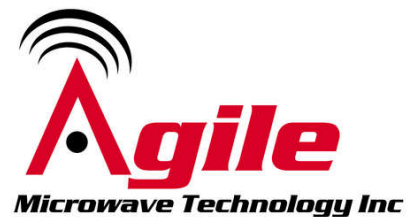
- Add additional functionality: Input limiter, Temperature compensation, Amplitude/Phase matching, Amplitude/Phase Tracking, Automatic Gain control, Gain sloping, Bypass path, Specific supply voltage, Regulation, Power detector, Health status, and others
- Integrated: Filters, Switches, Limiter, Digital 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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Registered
Company**



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