AMT-A0394 8 GHz to 18 GHz
Low Noise Amplifier

Data Sheet

Agile Microwave Technology Inc

Features

- 8 GHz to 18 GHz Frequency Range
- Typical Gain 18 dB,
- Gain Flatness < ± 0.8 dB Typical
- Typical Noise Figure < 1.9 dB
- Typical P1dB > +12 dBm
- Internally Regulated
- Operates from a Single +8V Supply
- Unconditionally Stable
- State-of-the-Art GaAs Technology

Description

The AMT-A0394 is a Broadband Low Noise amplifier with Low noise 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 DC blocked. The AMT-A0394 is ideal for use as gain block of receiver system, or where broadband amplification is required without adding lot of noise in a Hi-Rel communications system for Commercial or Military applications

Applications

- Receiver Input
- Radar
- 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		+10
Die $T_{Junction}$	T_J	° C		+150
Positive Supply Voltage	V_{+SS}	V		+15

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.

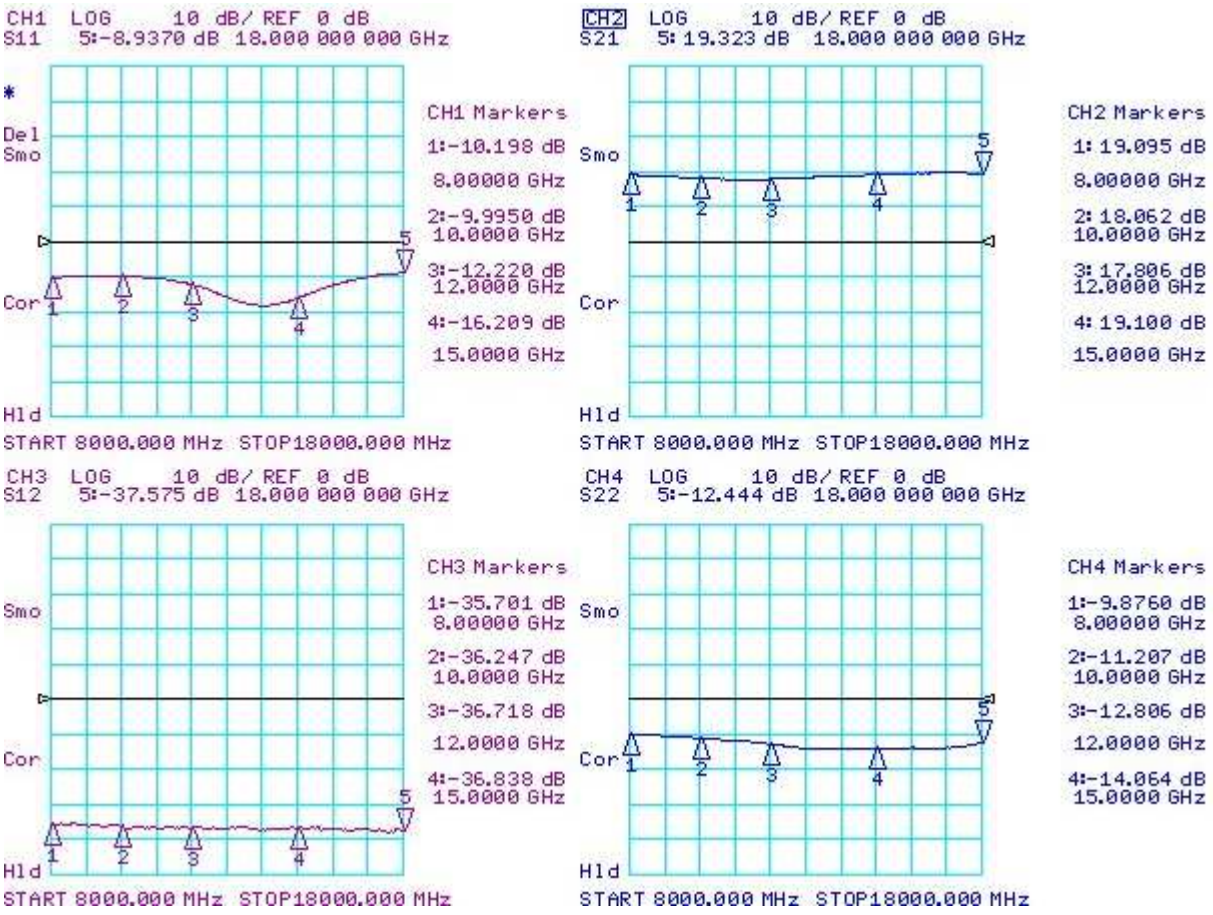
ELECTRICAL SPECIFICATIONS @ 23ºC

Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		GHz	8		18
Gain	Small Signal	dB	16	18	
Gain Flatness[2]		dB		±0.7	±1.2
Output Power (P1dB)	1 dB compression point @ 14 GHz	dBm	+12	+14	
OIP3	OPI3 measured@ 14 GHz Two tone F1-F2= 10MHz	dB		22	
Noise Figure[2]		dB		1.8	2.1
RF Input Impedance[2]	Reference to 50 ohms VSWR			1.8:1	2.3:1
RF Output Impedance	Reference to 50 ohms			1:5:1	2.3:1
Supply Voltage Positive: Supply Current Positive:	Small signal current	V mA		+8 80	 100

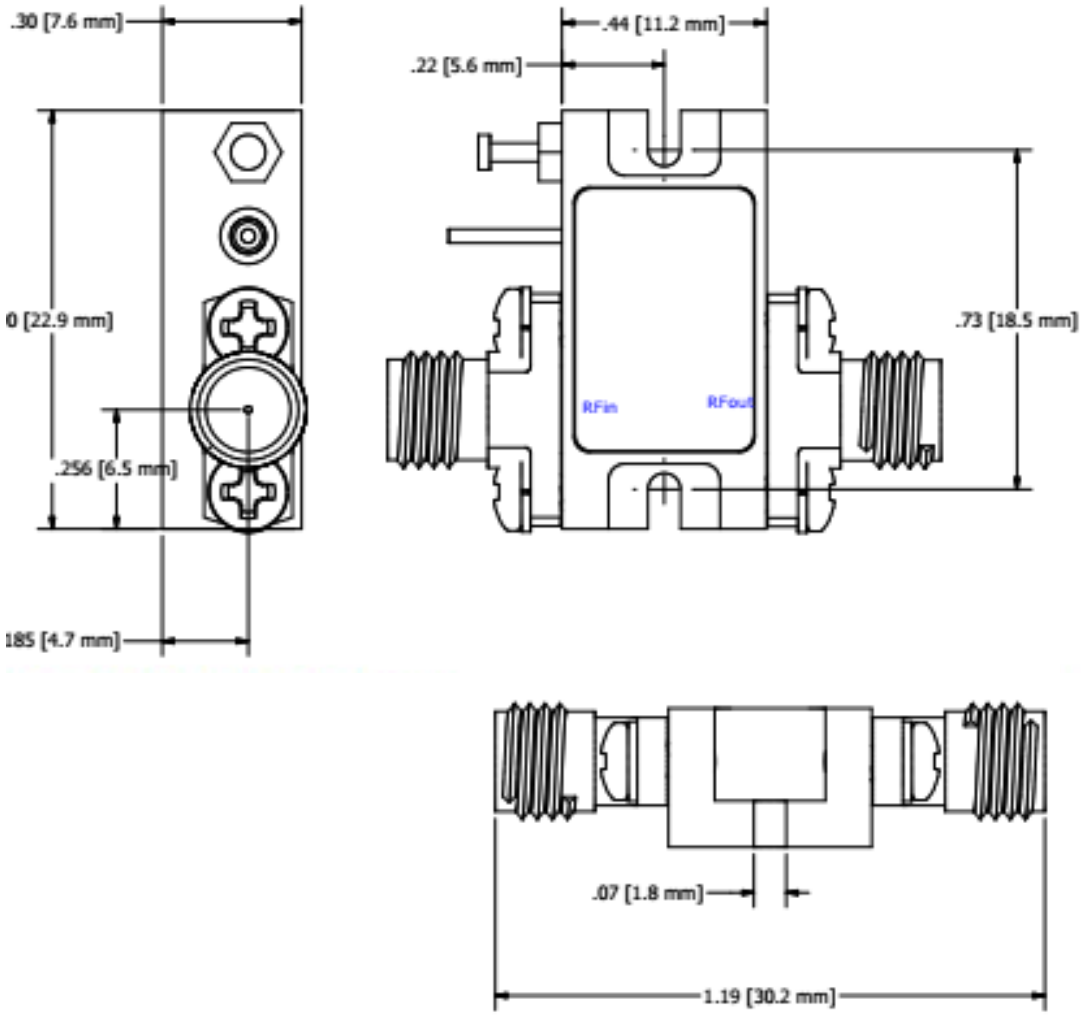
Notes:
1/ Unconditional Stability:
2/ Measured with Agilent/HP Equipment, manufacturers uncertainty apply

Customized configurations of the above specifications are available

Typical S-Parameters 25C



Package Outline: M120 SMA Connectorized (inches)



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

Model Number	Description	Hermeticity	Package
AMT-A0394	SMA Female	Non-Hermetic	Outline: M120

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:

701 Cascade Pointe Lane
Cary, NC 27513

ISO 9001:2015
Certified Company

Agile
Microwave Technology Inc

Phone: (984) 228-8001 **info@agilemwt.com** **www.agilemwt.com**