

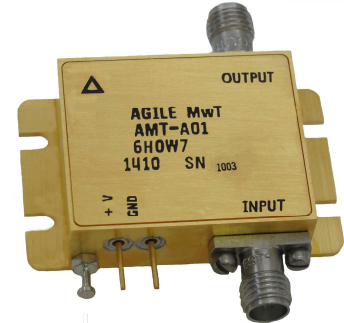
AMT-A0393 2 GHz to 18 GHz Broadband Low Noise



Data Sheet

Features

- 2 GHz to 18 GHz Frequency Range
- Gain 32 dB Typical
- Gain Flatness ± 1.2 dB Typical
- 2.5 dB Typical Noise Figure
- Typical P1dB power > +16 dBm
- Internally Regulated
- Operates from Single +12V Supply
- Unconditionally Stable



Description

The AMT-A0393 is a Broadband Medium Power Low Noise amplifier with in a compact size. The performance is achieved through the use of AMTI's proprietary matching technology and latest in GaAs technology. The amplifier I/Os are Internally matched to 50 Ohms and DC Blocked. The AMT-A0393 is ideal for use as low noise amplifier for test equipment, Communication systems or where broadband amplification and power are required without adding significant noise in a Hi-Rel communications system for Commercial or Military applications

Applications

- Test Equipment
- Communication Systems
- EW Systems
- Lab Applications
- Radar

MAXIMUM RATINGS¹

EAR99 NLR

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)	P _{in}	dBm		+12
Die T _{Junction}	T _J	° C		+150
Positive Supply Voltage	V _{+SS}	V		+13

Appropriate Heat sink must be used,

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	2		18
Gain	Small Signal	dB	29	32	
Gain Flatness		dB		±1.2	±3
Input Power Survival (CW)	CW	dBm	+12		
Noise Figure	2 to 18 GH	dB		2.5	4.5
Output Power (P1dB)	measured @14 GHz	dBm	+12	+16	
OIP3	OPI3 @ 14 GHz Two tone F1-F2= 10MHz	dB		22	
RF Input Impedance	Reference to 50 ohms VSWR			1.8:1	2.3:1
RF Output Impedance	Reference to 50 ohms VSWR			1.8:1	2.3:1
Supply Voltage Positive:		V		+12	
Supply Current Positive:	Small signal	mA		175	200

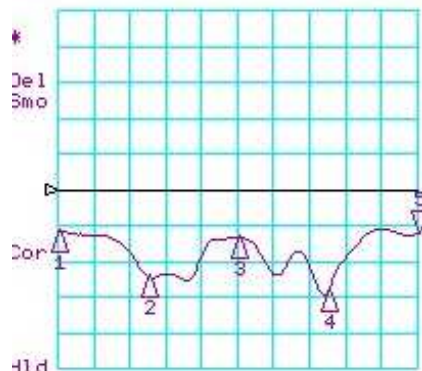
Notes:

1/ Unconditional Stability

Customized configurations of the above specifications are available

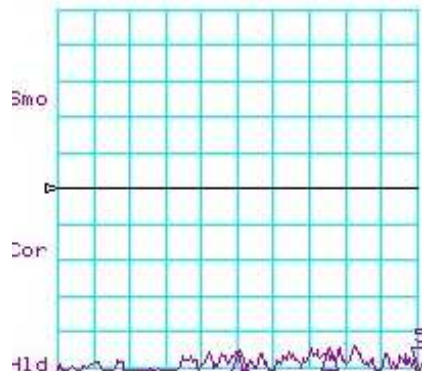
Typical S-Parameters @ 25C

CH1 LOG 10 dB/ REF 0 dB
S11 5: -12.237 dB 18.000 000 000 GHz



CH1 Markers
1: -11.399 dB
2.00000 GHz
2: -23.915 dB
6.00000 GHz
3: -13.073 dB
10.0000 GHz
4: -28.347 dB
14.0000 GHz

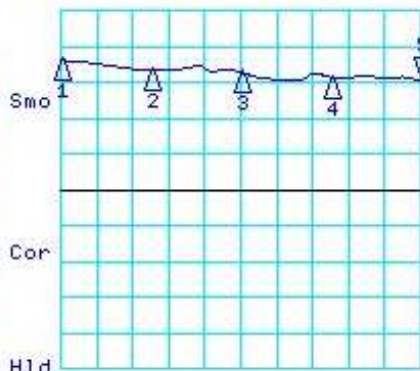
H1d
START 2000.000 MHz STOP 18000.000 MHz
CH3 LOG 10 dB/ REF 0 dB
S12 5: -50.774 dB 18.000 000 000 GHz



CH3 Markers
1: -49.540 dB
2.00000 GHz
2: -51.500 dB
6.00000 GHz
3: -45.620 dB
10.0000 GHz
4: -45.165 dB
14.0000 GHz

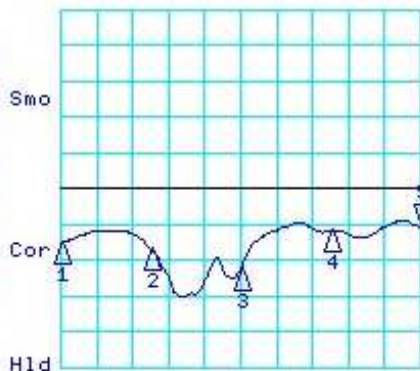
H1d
START 2000.000 MHz STOP 18000.000 MHz

CH2 LOG 10 dB/ REF 0 dB
S21 5: 30.943 dB 18.000 000 000 GHz



CH2 Markers
1: 36.177 dB
2.00000 GHz
2: 33.433 dB
6.00000 GHz
3: 32.844 dB
10.0000 GHz
4: 31.592 dB
14.0000 GHz

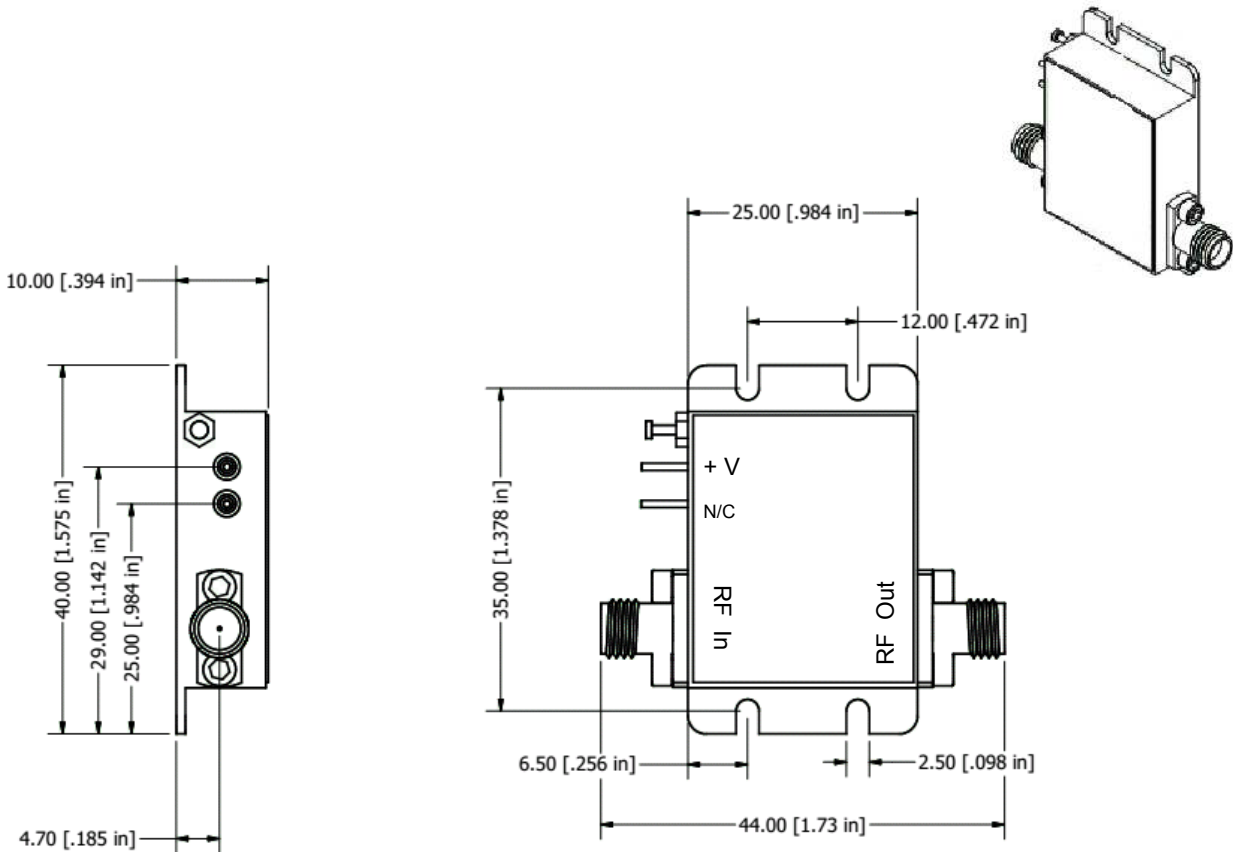
H1d
START 2000.000 MHz STOP 18000.000 MHz
CH4 LOG 10 dB/ REF 0 dB
S22 5: -10.741 dB 18.000 000 000 GHz



CH4 Markers
1: -15.157 dB
2.00000 GHz
2: -16.813 dB
6.00000 GHz
3: -22.469 dB
10.0000 GHz
4: -11.723 dB
14.0000 GHz

H1d
START 2000.000 MHz STOP 18000.000 MHz

Package Outline M020: SMA Connectorized mm(inches)



Field replaceable SMA Connectors, Removable Ground slug

Note: The unit must be attached to proper heat sink

Model Number	Description	Hermeticity	Package
AMT-A0393	SMA Female	Non-Hermetic	Outline: M020

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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**ISO 9001:2015
Certified Company**



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