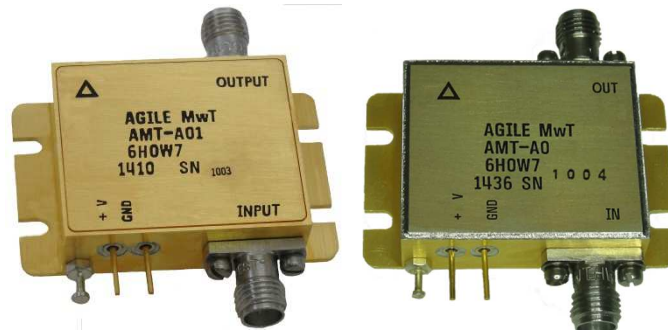


**AMT-A0240 4 GHz to 18 GHz
Broadband LNA with 5W Limiter Protection
Medium Power P1dB > +28 dBm with 46 dB Flat Gain**



Features

- 4 GHz to 18 GHz Frequency Range
- 5W Protection Limiter at RF Input
- Typical P1dB power > +28 dBm
- Gain 46 dB Typical
- Gain Flatness ± 1.2 dB Typical
- 2.7 dB Typical Noise Figure
- Internally Regulated
- Operates from Single +12V Supply
- Unconditionally Stable
- Available in Hermetic Laser sealed version



Laser Sealed Hermetic

Description

The AMT-A0240 is a LNA with 5W Protection Limiter and +28 dBm P1dB Broadband medium power amplifier 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-A0240 is ideal for use as medium power with low noise 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

- Receiver
- Test Equipment
- Driver Amplifier
- EW Systems
- Lab Applications
- Radar

MAXIMUM RATINGS¹

EAR99 NLR

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T _{MO}	° C	-40	+60
Storage Temperature - Case	T _{MS}	° C	-40	+125
RF Input power (CW)	P _{in}	dBm		+20
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	4		18
Gain	Small Signal	dB	42	46	
Gain Flatness		dB		±1.2	±2.5
Noise Figure		dB		2.7	4.5
Output Power (P1dB)	measured @10GHz	dBm	+27	+28.3	
OIP3	OIP3 @ 10 GHz Two tone F1-F2= 10MHz	dB		38	
RF Input Power CW	Survival for short duration	dBm	+37		
RF Input Impedance	Reference to 50 ohms VSWR			1.8:1	2.2:1
RF Output Impedance	Reference to 50 ohms VSWR			1.8:1	2.2:1
Supply Voltage Positive:		V		+12	
Supply Current Positive:	Small signal	mA		600	800

Notes:

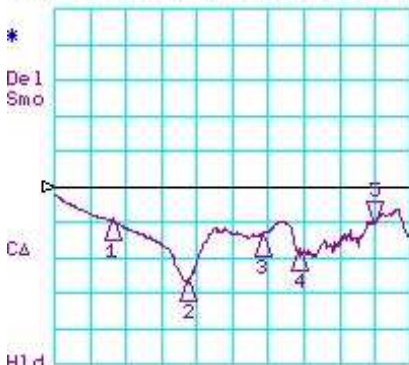
1/ Unconditional Stability

Customized configurations of the above specifications are available

Typical S-Parameters @ 23°C

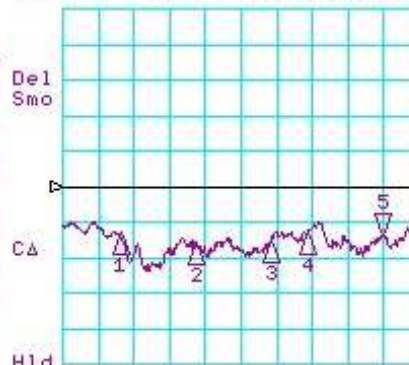
CH1 LOG 10 dB/ REF 0 dB
 S11 5*-10.257 dB 18.000 000 000 GHz

CH3 LOG 10 dB/ REF 0 dB
 S22 5*-14.063 dB 18.000 000 000 GHz



CH1 Markers

- 1:-9.5790 dB
4.00000 GHz
- 2:-26.568 dB
8.00000 GHz
- 3:-13.674 dB
12.0000 GHz
- 4:-17.977 dB
14.0000 GHz



CH3 Markers

- 1:-13.431 dB
4.00000 GHz
- 2:-16.253 dB
8.00000 GHz
- 3:-15.776 dB
12.0000 GHz
- 4:-13.207 dB
14.0000 GHz

START 1000.000 MHz STOP 20000.000 MHz

START 1000.000 MHz STOP 20000.000 MHz

CH2 S21 LOG 5 dB/ REF 40 dB

5: 44.838 dB 18.000 000 000 GHz



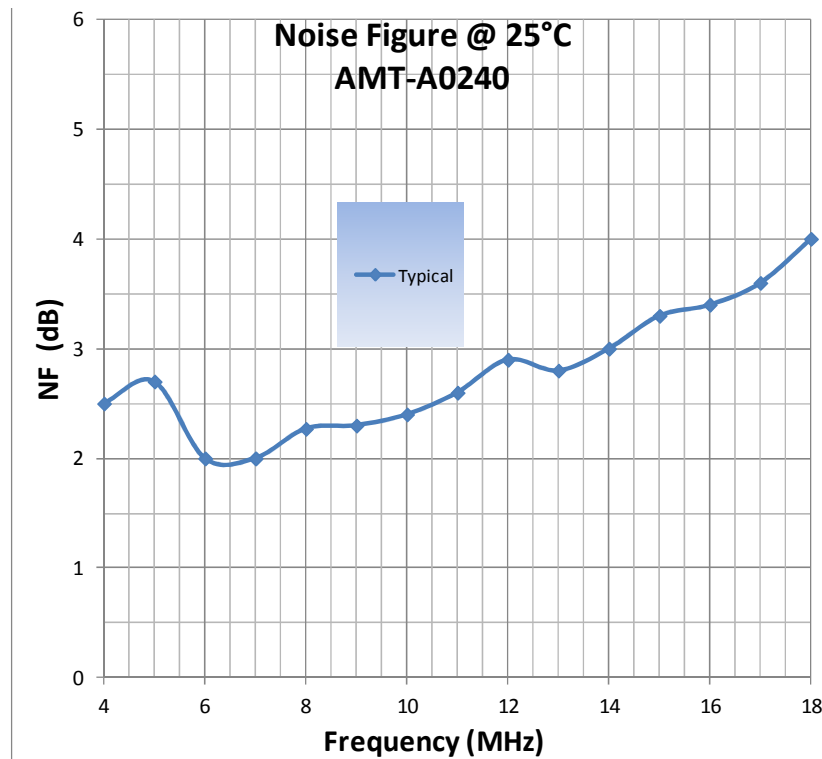
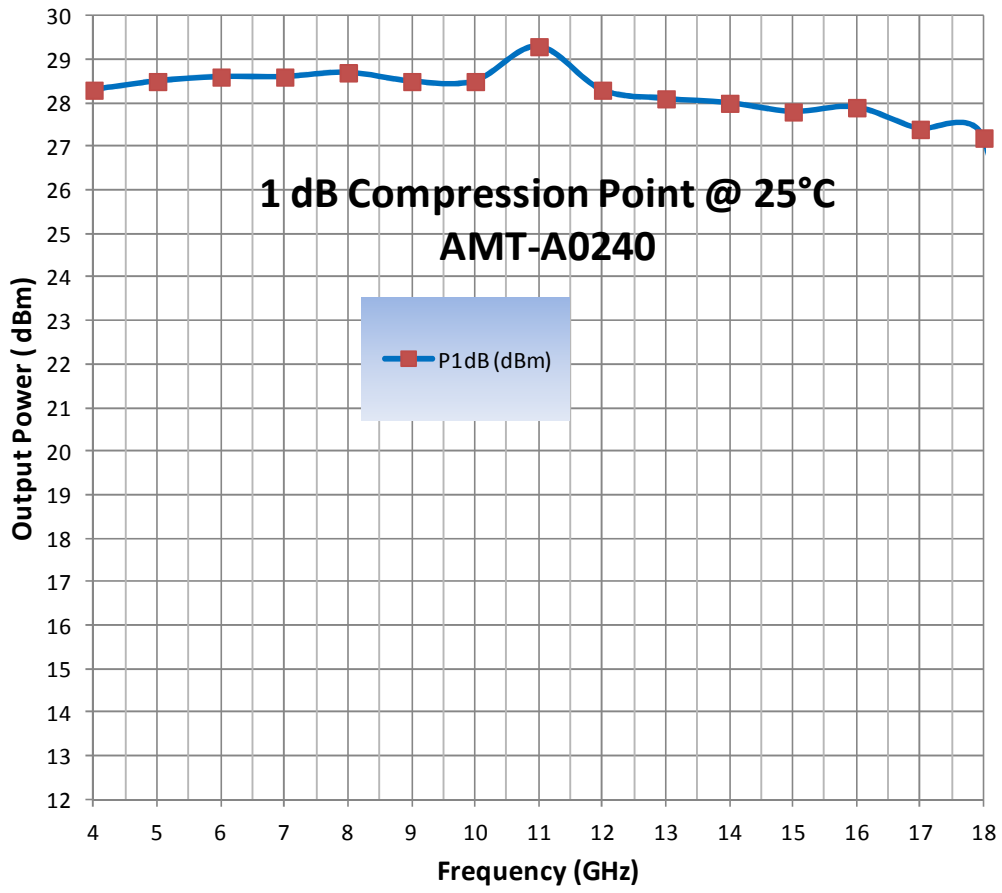
CH2 Markers

- 1: 45.590 dB
4.00000 GHz
- 2: 46.483 dB
8.00000 GHz
- 3: 46.005 dB
12.0000 GHz
- 4: 46.316 dB
14.0000 GHz

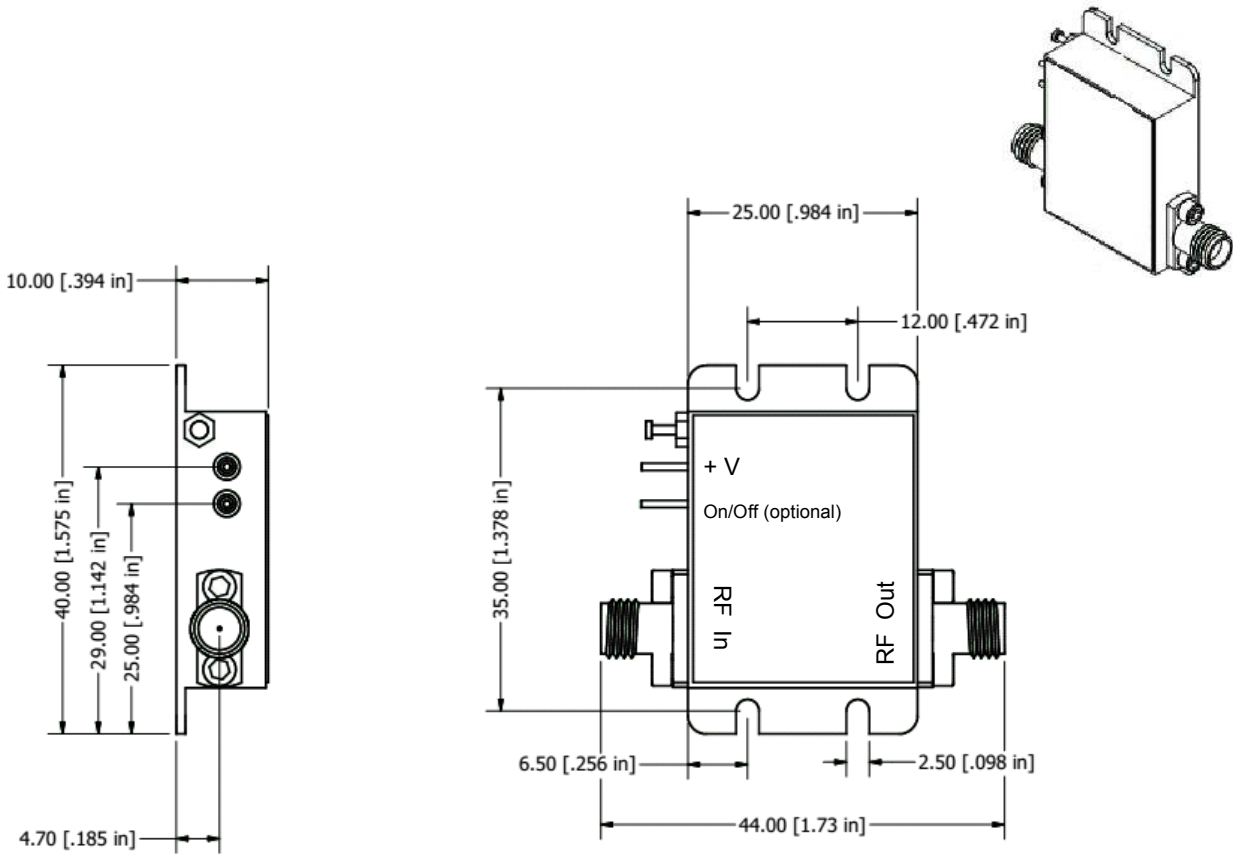
START 1.000 000 000 GHz

STOP 20.000 000 000 GHz

Typical P1dB @ 23°C



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-A0240	SMA Female	Non-Hermetic	Outline: M020
AMT-A0240-H	SMA Female	Hermetic Laser Weld Tested to Leak Rate $<2.0 \times 10^{-8}$	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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Cary, NC 27513**

**ISO 9001:2015
Certified Company**



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