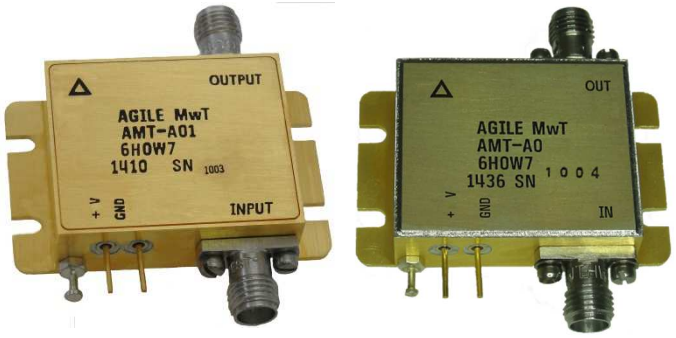
AMT-A0246 4 GHz to 8 GHz
Broadband LNA with 5 W Protection Limiter

Data Sheet

Features

- 4 GHz to 8 GHz Frequency Range
- +37 dBm (5W) CW Pin survival
- Gain 28 dB Typical
- Gain Flatness ± 0.6 dB Typical
- 2.2 dB Typical Noise Figure
- Typical P1dB power > +17 dBm
- Internally Regulated
- Operates from Single +12V Supply
- Unconditionally Stable



Laser Sealed Hermetic

Description

The AMT-A0246 is a Low Noise Amplifier with Integrated 5W of Input power protection limiter . 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-A0246 is ideal for use as LNA with ability to survive RF input power condition up to 5W (+37 dBm) for test equipment, Communication systems or where broadband amplification without adding significant noise in a Hi-Rel communications system for Commercial or Military applications

Applications

- Test Equipment
- LNA for Receiver
- EW Systems
- Lab Applications
- Radar

MAXIMUM RATINGS[1] **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)	Pin	dBm		+37
Die $T_{Junction}$	T_J	° C		+150
Positive Supply Voltage	V_{+SS}	V		+15

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.

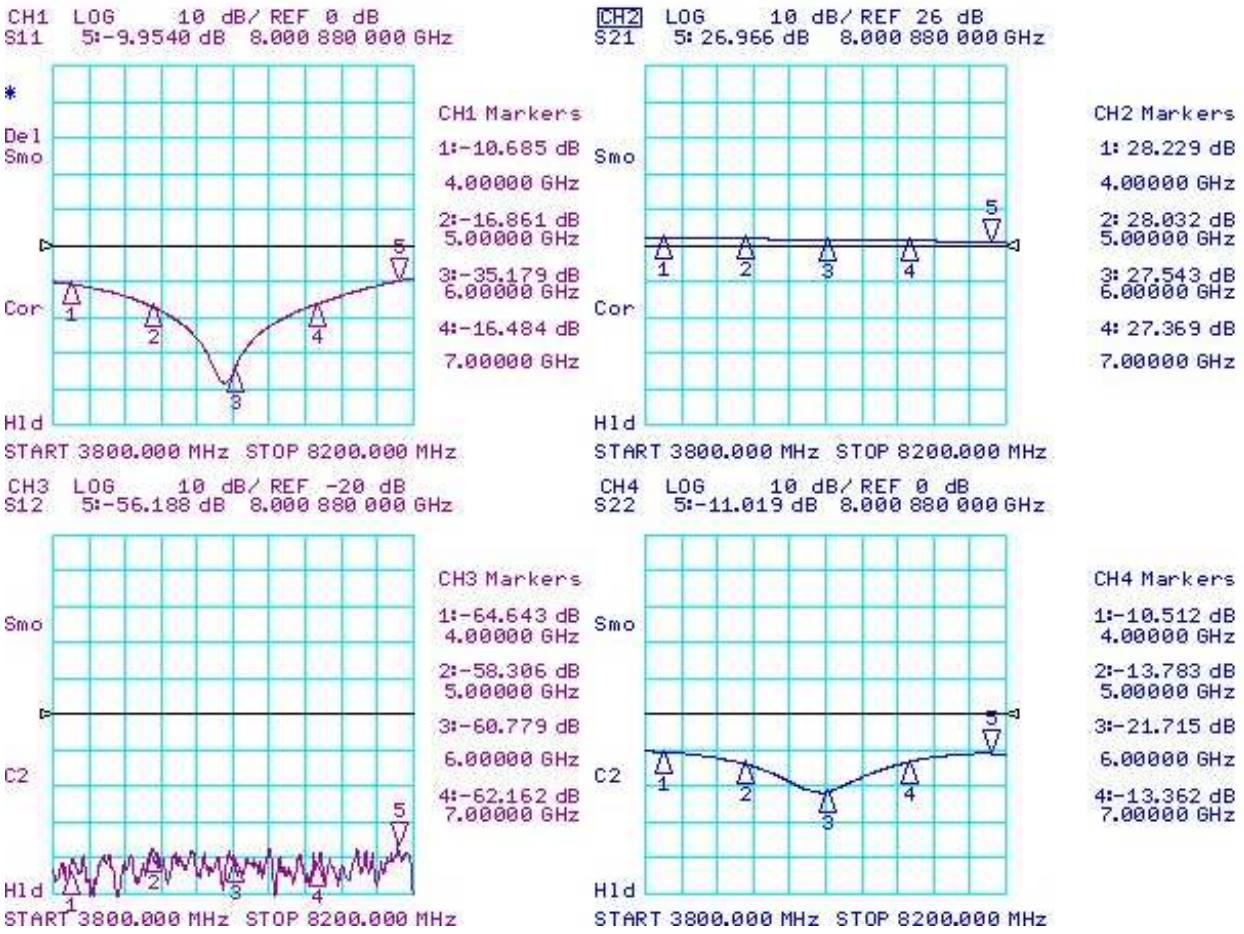
ELECTRICAL SPECIFICATIONS @ 23ºC

Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		GHz	4		8
Gain	Small Signal	dB	26	28	
Gain Flatness		dB		±0.6	±1
RF Input Power (Survival)	Input Power CW Survivability	dBm	+37		
Noise Figure		dB		2.2	2.8
Output Power (P1dB)	measured @10GHz	dBm	+15	+18	
OIP3	OPI3 @ 6 GHz Two tone F1-F2= 10MHz	dB		25	
RF Input Impedance	Reference to 50 ohms VSWR			1.8:1	2.0:1
RF Output Impedance	Reference to 50 ohms VSWR			1.8:1	2.0:1
Supply Voltage Positive: Supply Current Positive:	 Small signal	V mA		+12 160	 200

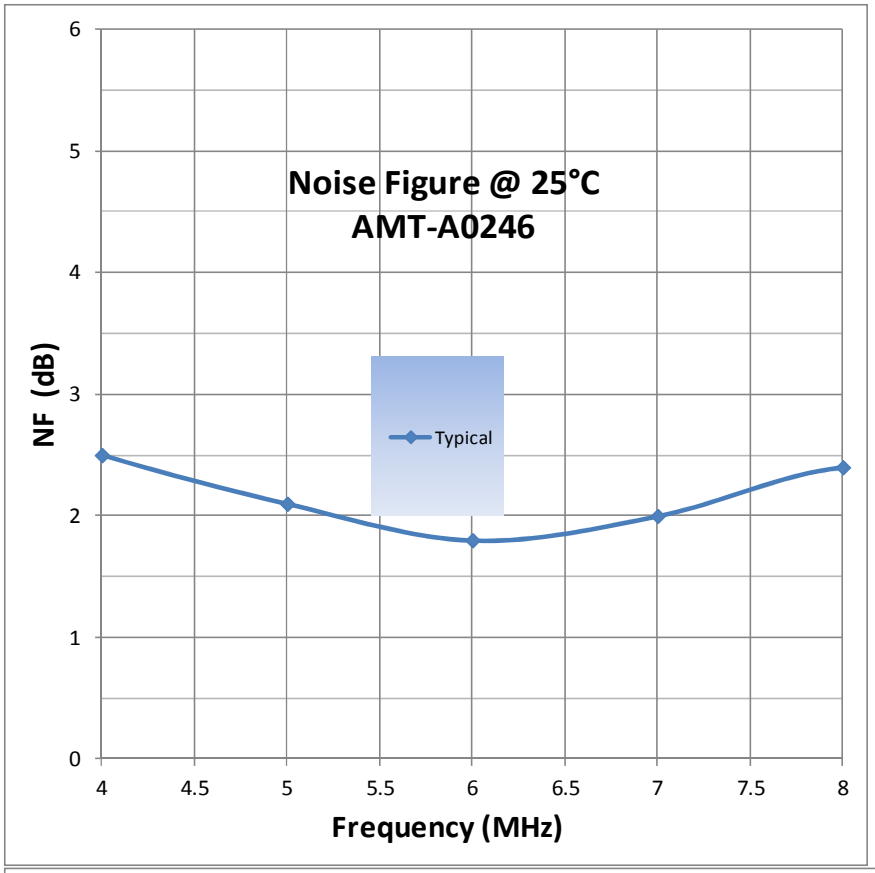
Notes:
1/ Unconditional Stability

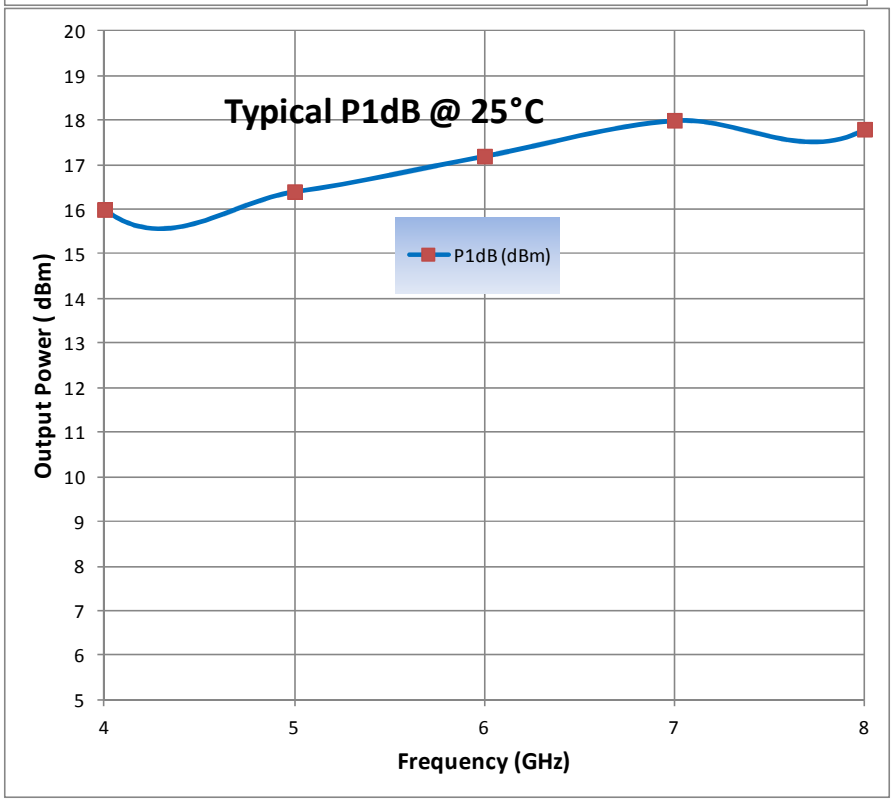
Customized configurations of the above specifications are available

Typical S-Parameters @ 23ºC

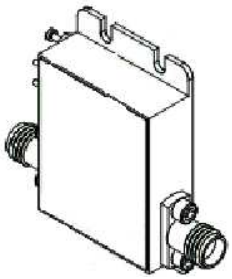


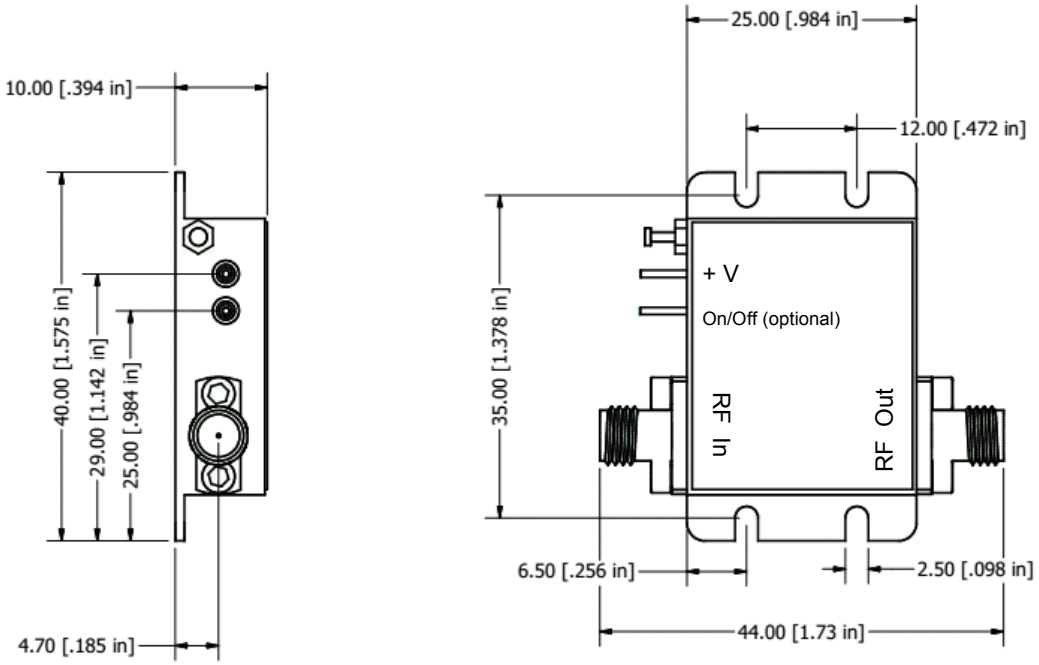
Typical P1dB @ 23ºC





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-A0246	SMA Female	Non-Hermetic	Outline: M020
AMT-A0246-H	SMA Female	Hermetic Laser Weld Tested to Leak Rate $<2.0x10^{-8}$	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.

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