

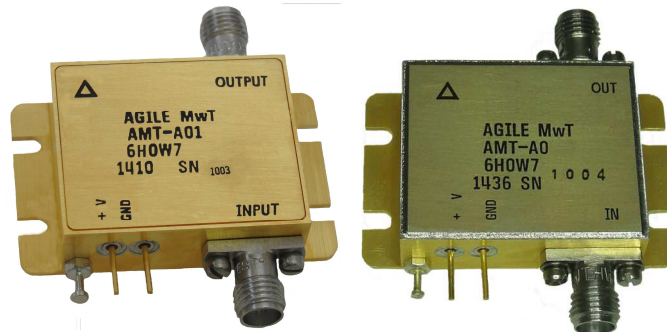
AMT-A0261 2 GHz to 18 GHz Broadband LNA with P1dB +25 dBm

Data Sheet



Features

- 2 GHz to 18 GHz Frequency Range
- Typical P1dB power > +25 dBm
- Gain 35 dB Typical
- Gain Flatness ± 1.5 dB Typical
- 3 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-A0261 is a +25 dBm P1dB Broadband medium power amplifier with Low Noise Figure 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-A0261 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

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

MAXIMUM RATINGS¹

EAR99 NLR

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T_{MO}	$^{\circ}C$	-40	+85
Storage Temperature - Case	T_{MS}	$^{\circ}C$	-40	+125
RF Input power (CW)	P_{in}	dBm		+15
Die $T_{Junction}$	T_J	$^{\circ}C$		+150
RF Output Power in to VSWR				6:1
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	28	35	
Gain Flatness		dB		±1.5	±2
Noise Figure	2 to 18 GHz	dB		3	4.5
Output Power (P1dB) ²		dBm	+23	+25	
OIP3	OIP3 @ 10 GHz Two tone F1-F2= 10MHz	dB		31	
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		490	550

Notes:

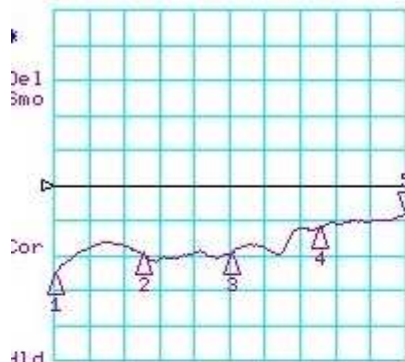
1/ Unconditional Stability

2/ Maybe slightly lower at 17-18 GHz

Customized configurations of the above specifications are available

Typical S-Parameters @ 25°C

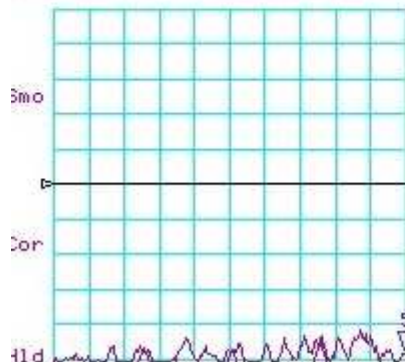
CH1 LOG 10 dB/ REF 0 dB
 S11 5: -8.2660 dB 17.960 000 000 GHz



CH1 Markers
 1: -25.509 dB
 2.00000 GHz
 2: -19.331 dB
 6.00000 GHz
 3: -19.324 dB
 10.00000 GHz
 4: -12.391 dB
 14.00000 GHz

START 2000.000 MHz STOP 18000.000 MHz

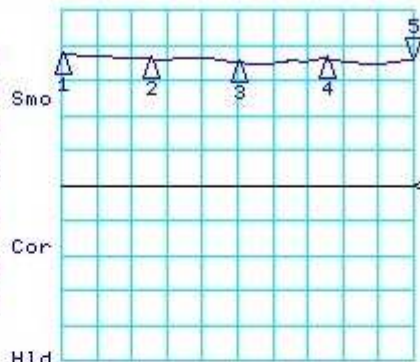
CH3 LOG 10 dB/ REF 0 dB
 S12 5: -48.597 dB 17.960 000 000 GHz



CH3 Markers
 1: -49.865 dB
 2.00000 GHz
 2: -47.377 dB
 6.00000 GHz
 3: -47.948 dB
 10.00000 GHz
 4: -46.072 dB
 14.00000 GHz

START 2000.000 MHz STOP 18000.000 MHz

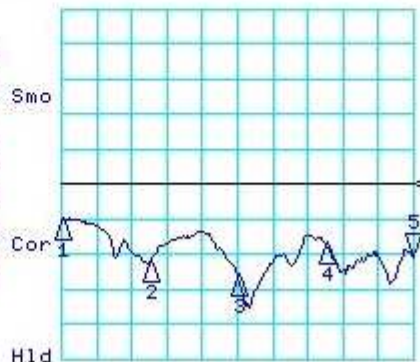
CH2 LOG 10 dB/ REF 0 dB
 S21 5: 35.756 dB 17.960 000 000 GHz



CH2 Markers
 1: 37.775 dB
 2.00000 GHz
 2: 36.136 dB
 6.00000 GHz
 3: 35.174 dB
 10.00000 GHz
 4: 36.115 dB
 14.00000 GHz

START 2000.000 MHz STOP 18000.000 MHz

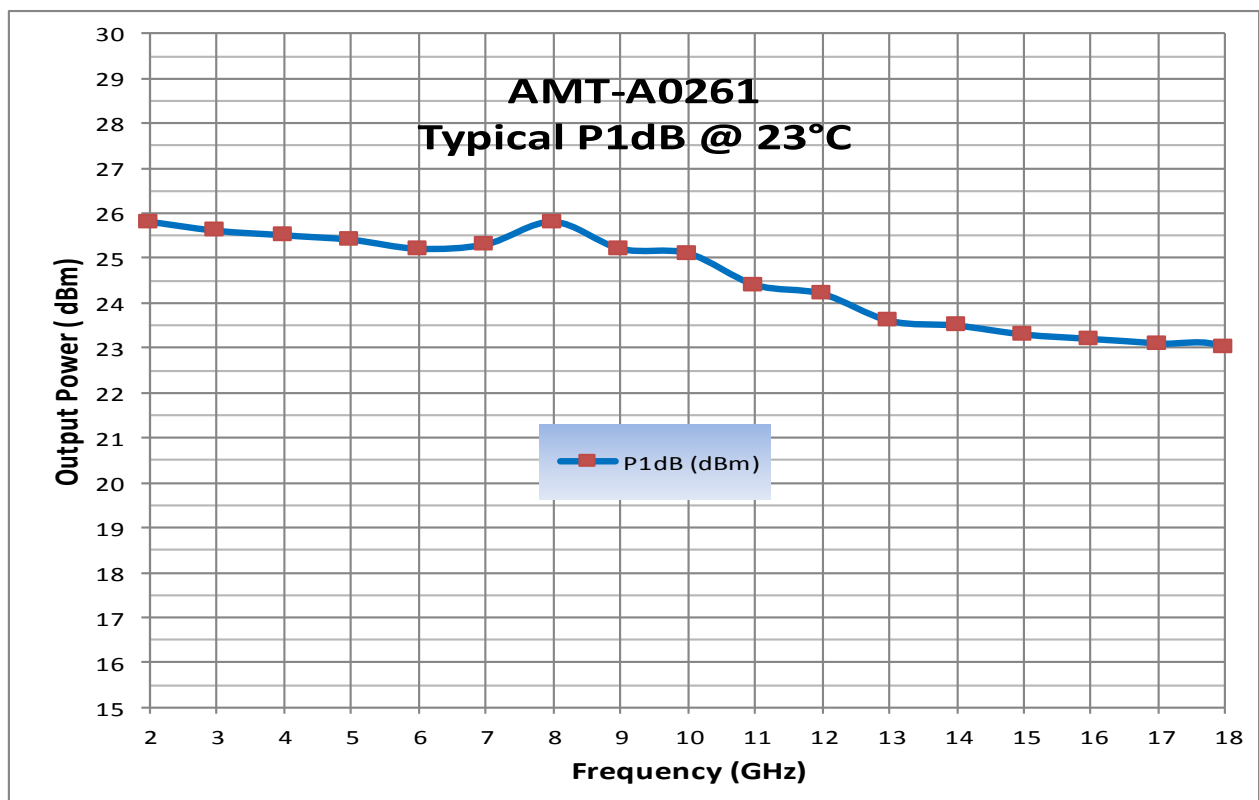
CH4 LOG 10 dB/ REF 0 dB
 S22 5: -20.407 dB 17.960 000 000 GHz



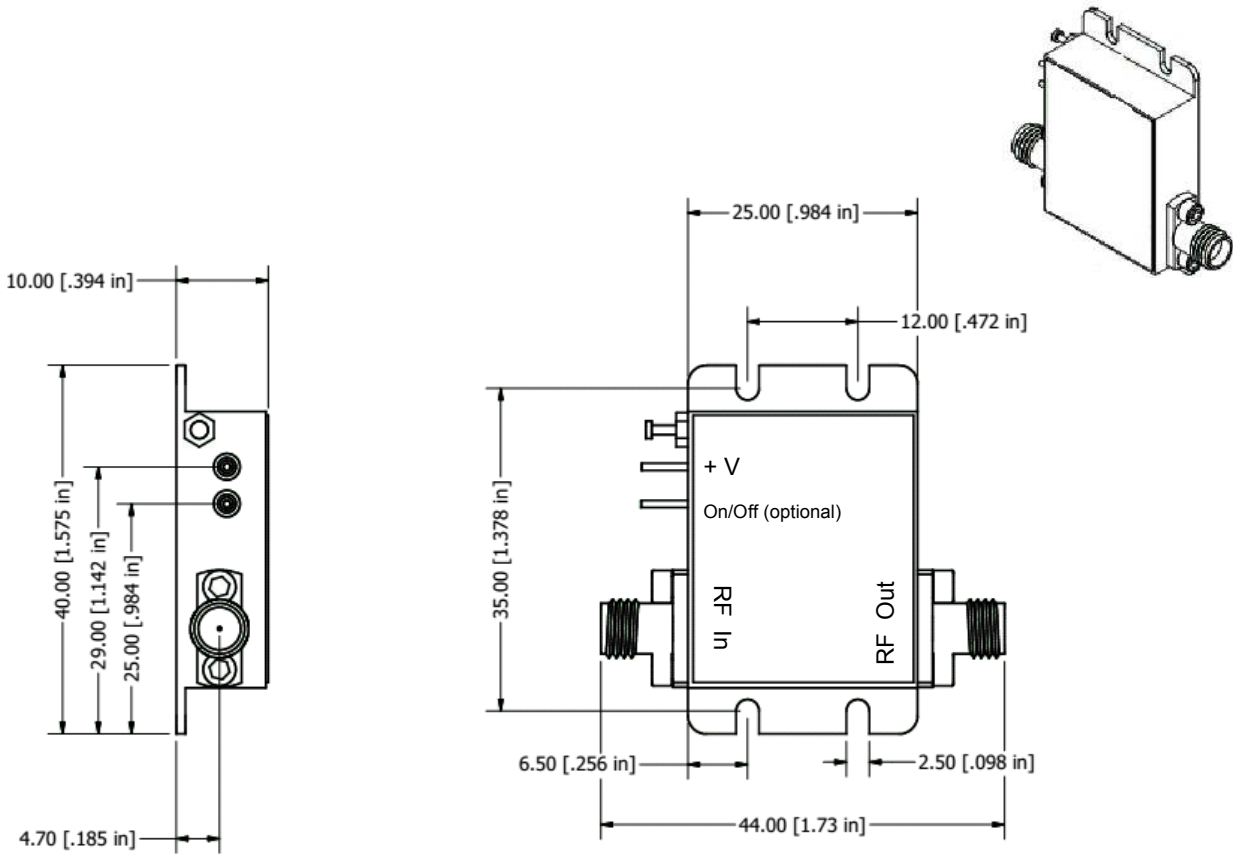
CH4 Markers
 1: -10.135 dB
 2.00000 GHz
 2: -22.130 dB
 6.00000 GHz
 3: -25.992 dB
 10.00000 GHz
 4: -16.956 dB
 14.00000 GHz

START 2000.000 MHz STOP 18000.000 MHz

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-A0261	SMA Female	Non-Hermetic	Outline: M020
AMT-A0261-H	SMA Female	Hermetic Laser Weld Tested to Leak Rate 2.0×10^{-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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**ISO 9001:2015
Certified Company**



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