

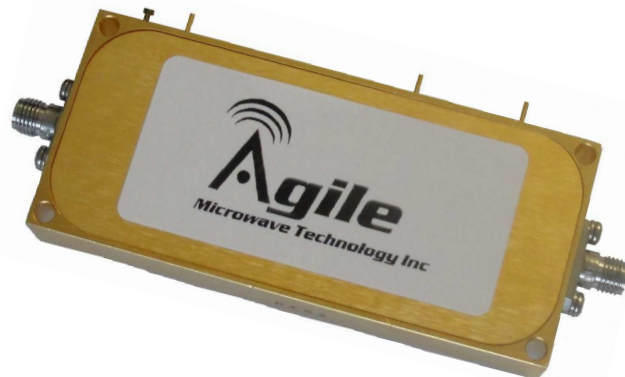
# AMT-A0161 500 MHz to 2000 MHz Broadband High Power Linear Amplifier 2W

## Data Sheet



## Features

- 500 MHz to 2000 MHz Frequency Range
- P1dB > +34 dBm
- Gain 45 dB
- Gain Flatness <  $\pm 1$  dB
- Fast Power Detector
- Internally Regulated
- Operates from +15V , -6V Supply
- Unconditionally Stable
- State-of-the-Art GaAs Technology



## Description

The AMT-A0161 is a High power amplifier with high linearity 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 are DC blocked. The AMT-A0161 is ideal for use as driver amplifier , or power amplifier in a Hi-Rel communications system for Commercial or Military applications

## Applications

- Driver Amplifier
- Communication systems
- Microwave Radio systems
- Test Equipment

## MAXIMUM RATINGS<sup>1</sup>

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T <sub>MO</sub>	° C	-40	+75
Storage Temperature - Case	T <sub>MS</sub>	° C	-40	+125
RF Input power (CW)	P <sub>in</sub>	dBm		+20
Die T <sub>Junction</sub>	T <sub>J</sub>	° C		+150
Positive Supply Voltage	V <sub>+SS</sub>	V		+16V

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		MHz	500		2000
Gain	Small Signal	dB	43	45	
Gain Flatness		dB		±1	±2
Output Power (P1dB)	1 dB compression point	dBm	+33	+34	
OIP3	OIP3 measured @ 1200 MHz Two tone F1-F2=10MHz	dBm	+40	+43	
Noise Figure		dB		3.5	4
RF Input Impedance	Reference to 50 ohms VSWR			1.5:1	2.2:1
RF Output Impedance	Reference to 50 ohms			1:5:1	2.0:1
Power Detector	Fast Response time less than 300nS	TTL "1" Pout>+28 dBm TTL "0" Pout<+28 dBm			
Supply Voltage Positive: Negative		V		+15V -6V	
Supply Current Positive: Negative:		mA		980 20	

Notes:

1/ Unconditional Stability:

Customized configurations of the above specifications are available

# Typical S- Parameters @ 23°C

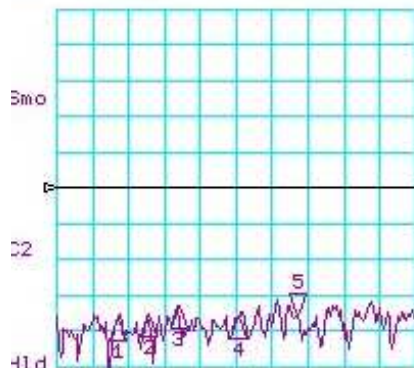
CH1 LOG 10 dB/ REF 0 dB  
S11 5:-18.686 dB 2 000.000 000 MHz



CH1 Markers  
1:-9.0192 dB  
500.505 MHz  
2:-14.708 dB  
750.000 MHz  
3:-21.798 dB  
1.00000 GHz  
4:-22.137 dB  
1.50000 GHz

START .030 MHz STOP 3000.000 MHz

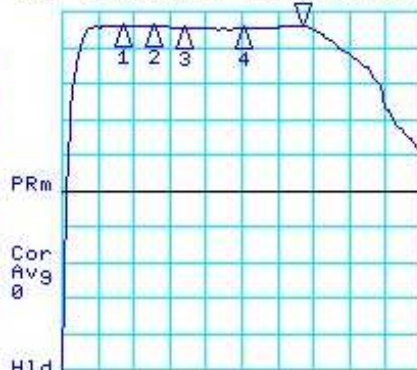
CH3 LOG 10 dB/ REF -20 dB  
S12 5:-55.612 dB 2 000.000 000 MHz



CH3 Markers  
1:-56.706 dB  
500.505 MHz  
2:-55.545 dB  
750.000 MHz  
3:-53.529 dB  
1.00000 GHz  
4:-56.522 dB  
1.50000 GHz

START .030 MHz STOP 3000.000 MHz

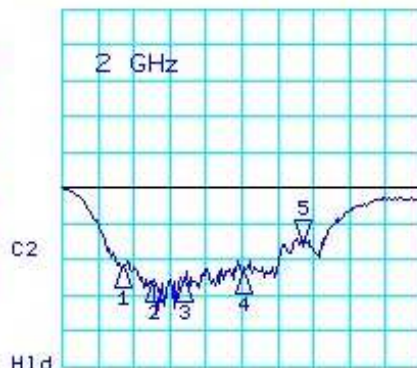
CH2 LOG 10 dB/ REF 0 dB  
S21 5: 46.057 dB 2 000.000 000 MHz



CH2 Markers  
1: 46.185 dB  
500.505 MHz  
2: 46.121 dB  
750.000 MHz  
3: 45.614 dB  
1.00000 GHz  
4: 45.321 dB  
1.50000 GHz

START .030 MHz STOP 3000.000 MHz

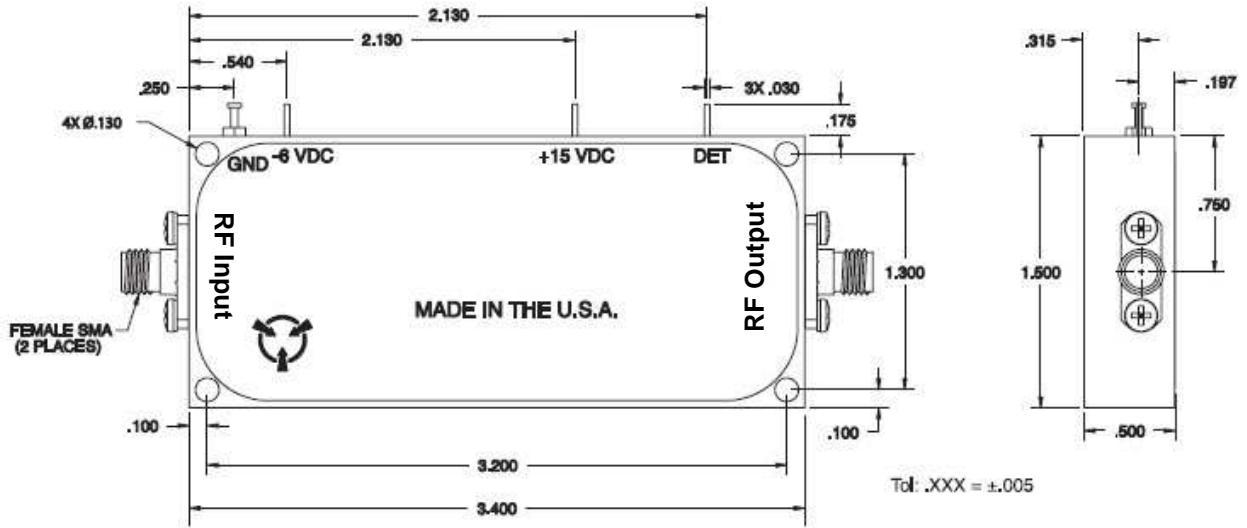
CH4 LOG 10 dB/ REF 0 dB  
S22 5:-15.190 dB 2 000.000 000 MHz



CH4 Markers  
1:-22.405 dB  
500.505 MHz  
2:-25.979 dB  
750.000 MHz  
3:-25.902 dB  
1.00000 GHz  
4:-23.588 dB  
1.50000 GHz

START .030 MHz STOP 3000.000 MHz

## Package Outline: SMA Connectorized (inches)



**Note:** The unit must be attached to proper heat sink with thermal interface material

Model Number	Description	Hermeticity	Package
AMT-A0161	SMA Female	Non-Hermetic	Outline: M009

Contact us for custom configurations and special requirements.

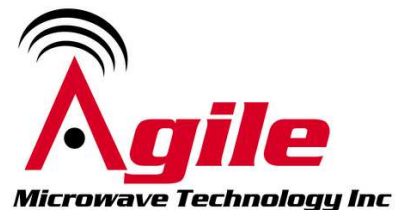
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- Add additional functionality: Input limiter, Temperature compensation, Amplitude/Phase matching, Amplitude/Phase Tracking, Automatic Gain control, Gain sloping, Bypass path, Specific supply voltage, Regulation, Power detector, Health status, and 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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