

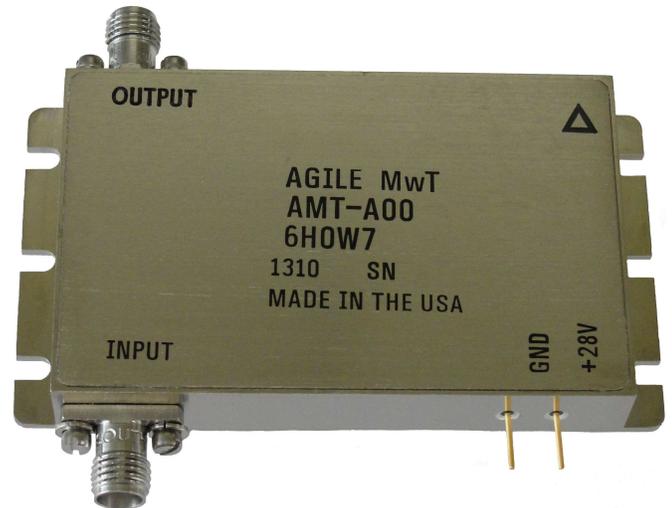
# AMT-A0081 8 GHz to 9 GHz 15W Psat 28dB Gain High Power GaN Amplifier Module

Data Sheet



## Features

- 8 GHz to 9 GHz Frequency Range
- Typical Psat power > +42 dBm (15W)
- Typical P1dB > +39 dBm (8W)
- Gain 28 dB
- High Efficiency > 38% Typical
- Internally Regulated
- Operates from a Single +28V Supply
- Unconditionally Stable
- State-of-the-Art GaN Technology



## Description

The AMT-A0081 is a 8W P1dB power amplifier in a compact size. The performance is achieved through the use of AMTI's proprietary matching technology and latest in GaN technology. The amplifier I/Os are Internally matched to 50 Ohms and are DC blocked. The AMT-A0081 is ideal for use as extending power range of test equipment, EW systems or where broadband amplification and power are required in a Hi-Rel communications system for Commercial or Military applications

## Applications

- Radar
- Test Equipment
- EW Systems
- Lab Applications

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

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T <sub>MO</sub>	° C	-40	+65
Storage Temperature - Case	T <sub>MS</sub>	° C	-55	+150
RF Input power (CW)	P <sub>in</sub>	dBm		+25
Die T <sub>Junction</sub>	T <sub>J</sub>	° C		+150
Positive Supply Voltage	V <sub>+SS</sub>	V	+15	+29

### 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

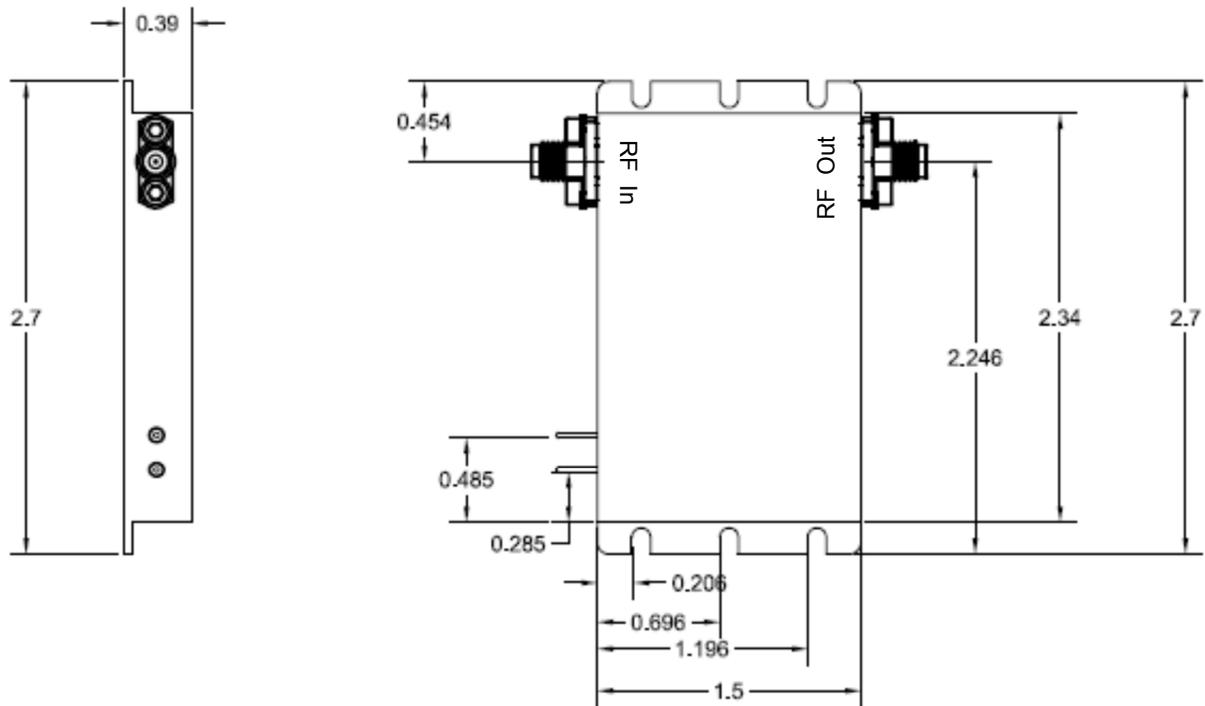
Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		GHz	8		9
Gain	Small Signal	dB	26	28	
Gain Flatness		dB		±2	
Compressed Gain		dB	20	22	
Output Power (Psat)	Saturated Output power	dBm		42	
Output Power (P1dB)		dBm		39	
OIP3	OPI3 measured @ 8.5 GHz Two tone F1-F2=10MHz	dB		45	
Power Added Efficiency	@ Psat	%	30	38	
RF Input Impedance	Reference to 50 ohms RL	dB	5	10	
RF Output Impedance	Reference to 50 ohms RL	dB	5	12	
Supply Voltage Positive:		V		+28	
Supply Current Positive:	Psat	A		1.5	

Notes:

1/ Unconditional Stability

Customized configurations of the above specifications are available

## Package Outline: SMA Connectorized (inches)



### Field replaceable SMA Connectors

**Note:** The unit must be attached to proper heat sink with thermal interface material ( Thermal Pad or Thermal Grease)

Model Number	Description	Hermeticity	Package
AMT-A0081	SMA Female	Non-Hermetic	Outline: M009

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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