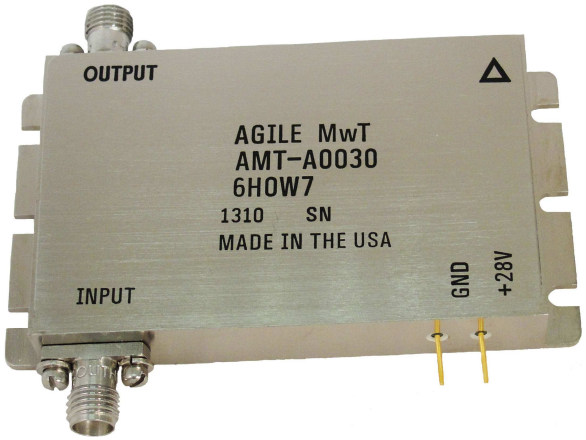
AMT-A0030 2 GHz to 18 GHz 8W 33dB Gain Broadband High Power Amplifier Module

Data Sheet

Features

- 2 GHz to 18 GHz Frequency Range
- Typical Psat power > +39 dBm
- Gain 33 dB
- High Efficiency
- Internally Regulated
- Operates from a Single +28V Supply
- Unconditionally Stable
- Compact Size
- State-of-the-Art GaN Technology



Description

The AMT-A0030 is a Broadband 8 W 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-A0030 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

- Test Equipment
- EW Systems
- Lab Applications

MAXIMUM RATINGS[1]

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T_{MO}	° C	-40	+65
Storage Temperature - Case	T_{MS}	° C	-55	+150
RF Input power (CW)	Pin	dBm		+20
Die $T_{Junction}$	T_J	° C		+150
DC Current		A		1.8
Positive Supply Voltage	V_{+SS}	V	+15	+29

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

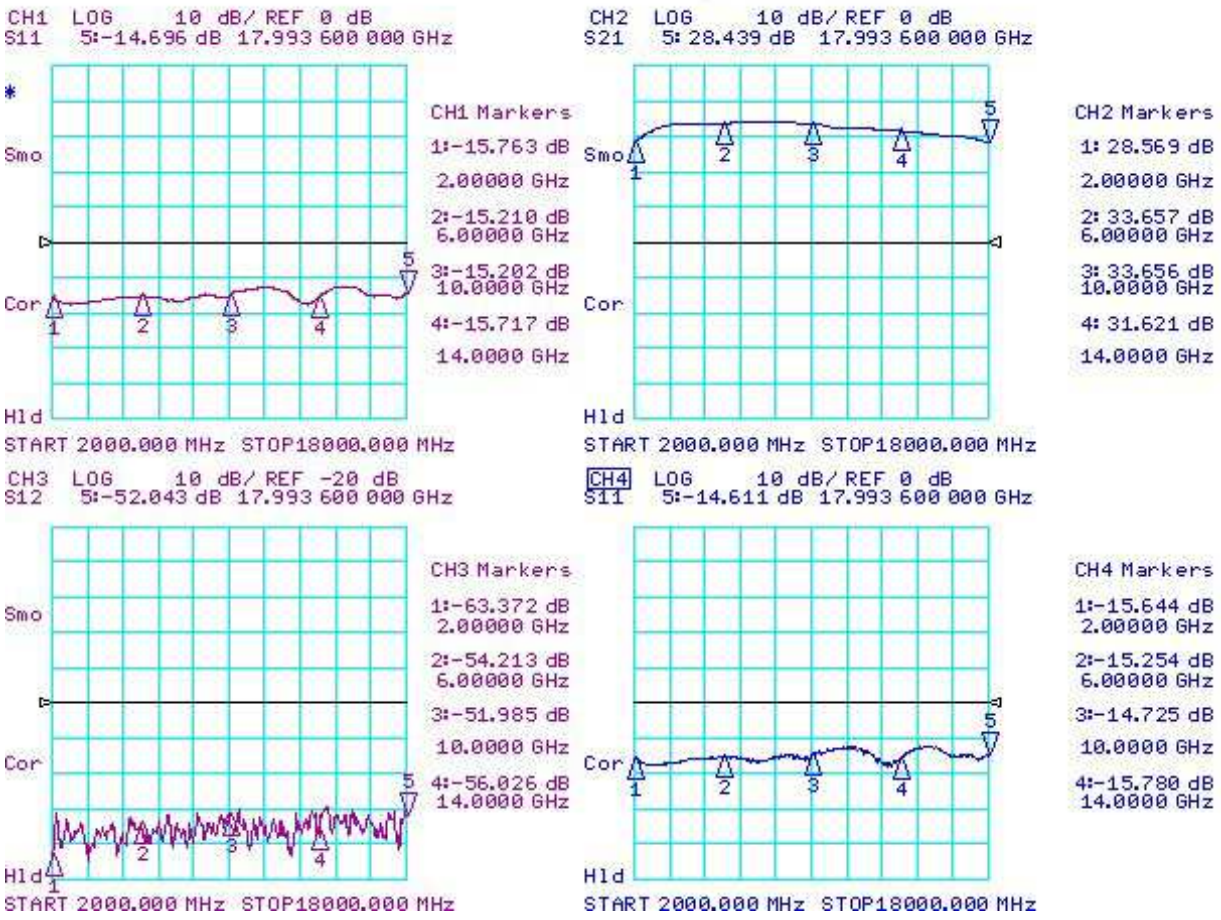
Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		GHz	2		18
Gain	Small Signal	dB	27	33	
Gain Flatness		dB		±3.5	
Output Power (Psat)	Saturated Output power	dBm		39	
OIP3	OPI3 measured @ 8GHz Two tone F1-F2= 10MHz	dB		47	
Noise Figure		dB			8
RF Input Impedance	Reference to 50 ohms	dB		18	
RF Output Impedance	Reference to 50 ohms	dB		17	
Supply Voltage Positive: Supply Current Positive:	Psat	V A		+28 1.4	

Notes:
1/ Unconditional Stability

Customized configurations of the above specifications are available

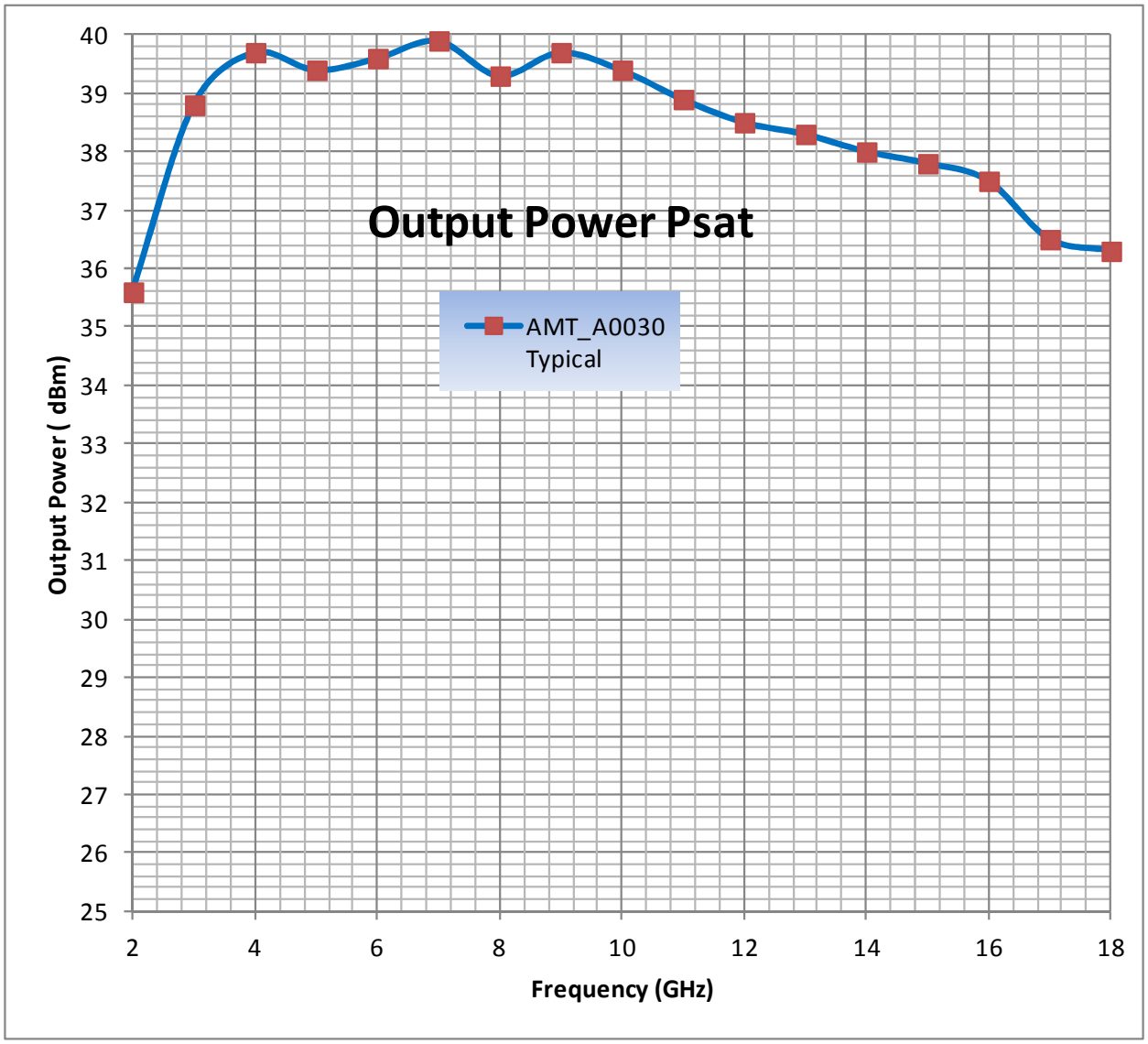
Typical Performance @ 23ºC

S– Parameters

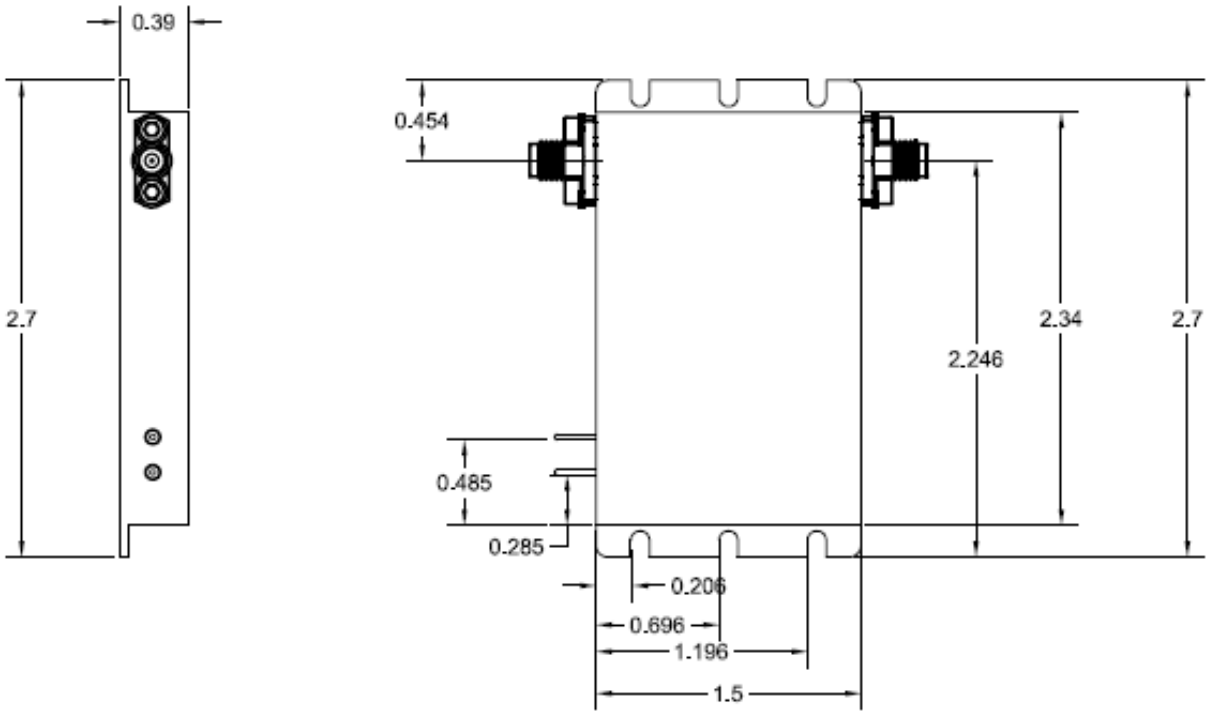


Typical Performance

Output Saturated Power over frequency @ +23°C



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-A0030	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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