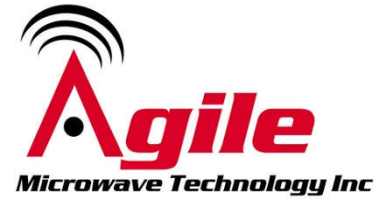


AMT-A0546 12 GHz to 18 GHz Medium Power Amplifier with Flat Gain

Data Sheet



Features

- 12 GHz to 18 GHz Frequency Range
- Gain 16 dB Typical
- Gain Flatness ± 0.3 dB Typical
- 2.8 dB Typical Noise Figure 4 dB max
- VSWR 1.6:1 typical 2:1 max
- P1dB +21 dBm typ
- Internally Regulated
- Operates from Single +12 Supply
- Unconditionally Stable
- Compact Housing



Photo for Illustration only

Description

The AMT-A0546 is a medium power amplifier with flat gain, low NF 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-A0546 is ideal for use as high dynamic range or as gain stage with low noise for test equipment, Communication systems or where amplification and power are required without adding significant noise in a Hi-Rel communications system for Commercial or Military applications

Applications

- Test Equipment
- Driver Amplifier
- High Dynamic range Systems
- Lab Applications
- Gain Block

MAXIMUM RATINGS¹

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T _{MO}	° C	-40	+75
Storage Temperature - Case	T _{MS}	° C	-40	+125
RF Input power (CW)	P _{in}	dBm		+20
Die T _{Junction}	T _J	° C		+150
Positive Supply Voltage	V _{+SS}	V		+15

Appropriate Heat sink must be used

RoHS Compliant

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

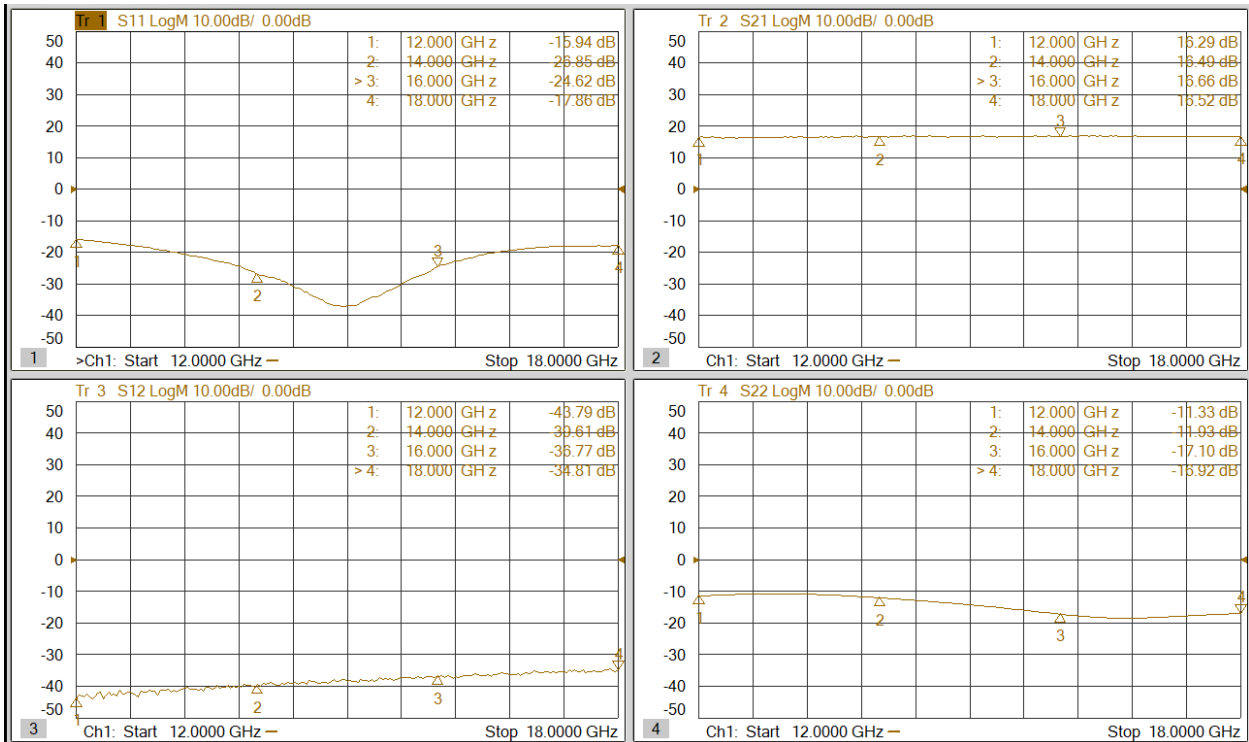
Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		GHz	12		18
Gain	Small Signal	dB	16	16.5	
Gain Flatness		dB		±0.3	±0.5
Noise Figure		dB		2.8	4
Output Power (P1dB)		dBm	+20	+21	
OIP3	OIP3 @ 16 GHz Two tone F1-F2= 10MHz	dB		30	
RF Input Impedance	Reference to 50 ohms VSWR			1.6:1	2.0:1
RF Output Impedance	Reference to 50 ohms VSWR			1.5:1	2.0:1
Supply Voltage Positive:	Small signal	V		+ 12	
Supply Current Positive:		mA		105	150

Notes:

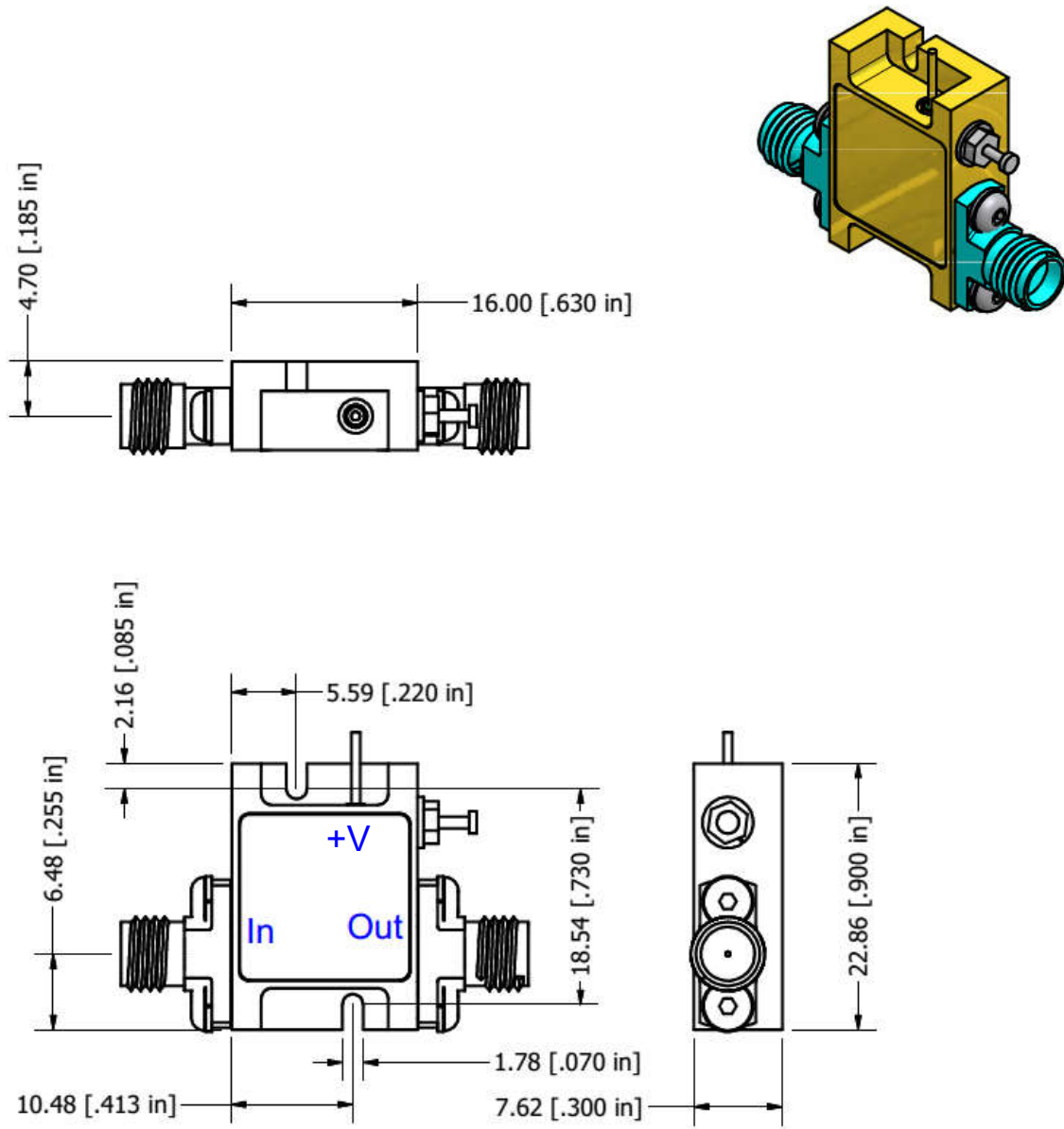
1/ Unconditional Stability

Customized configurations of the above specifications are available

Typical S-Parameters @ 25°C



Package Outline M084: SMA Female Connectors (inches)



Field replaceable SMA Connectors

Note: The unit must be attached to proper heat sink

Model Number	Description	Hermeticity	Package
AMT-A0546	SMA Female	Non-Hermetic	Outline: M084

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

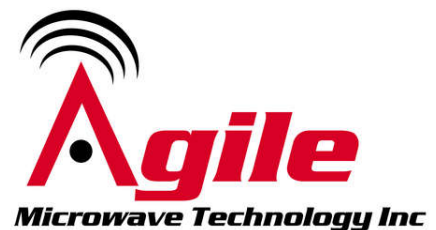
Agile Microwave Technology Inc is the logical choice for all your commercial or military RF/Microwave components/module requirements.

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