

AMT-A0527 1 GHz to 18 GHz Broadband Positive Gain Slope Medium Power Amplifier



Data Sheet

Features

- 1 GHz to 18 GHz Frequency Range
- Gain @ 1 GHz 34.5 dB Typical
- Gain @ 18 GHz 48 dB typical
- P1dB typical 26.5 dBm, +25 dBm min
- RF Input Limiter Pin = +25 dBm min
- 12 dB Positive Gain slope
- Operates from Single +12V Supply
- Unconditionally Stable



Description

The AMT-A0527 is a Broadband Medium power amplifier with Positive gain slope in a compact size. The performance is achieved through the use of AMTI's proprietary matching technology. The amplifier I/Os are Internally matched to 50 Ohms and DC Blocked. The AMT-A0527 is ideal for use as I for test equipment, Communication systems or where broadband amplification and power are required with gain compensation in a Hi-Rel communications system.

Applications

- Test Equipment
- Communication Systems
- Lab Applications

MAXIMUM RATINGS¹

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T _{MO}	° C	-40	+85
Storage Temperature - Case	T _{MS}	° C	-55	+125
RF Input power (CW)	P _{in}	dBm		+30
Die T _{Junction}	T _J	° C		+150
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

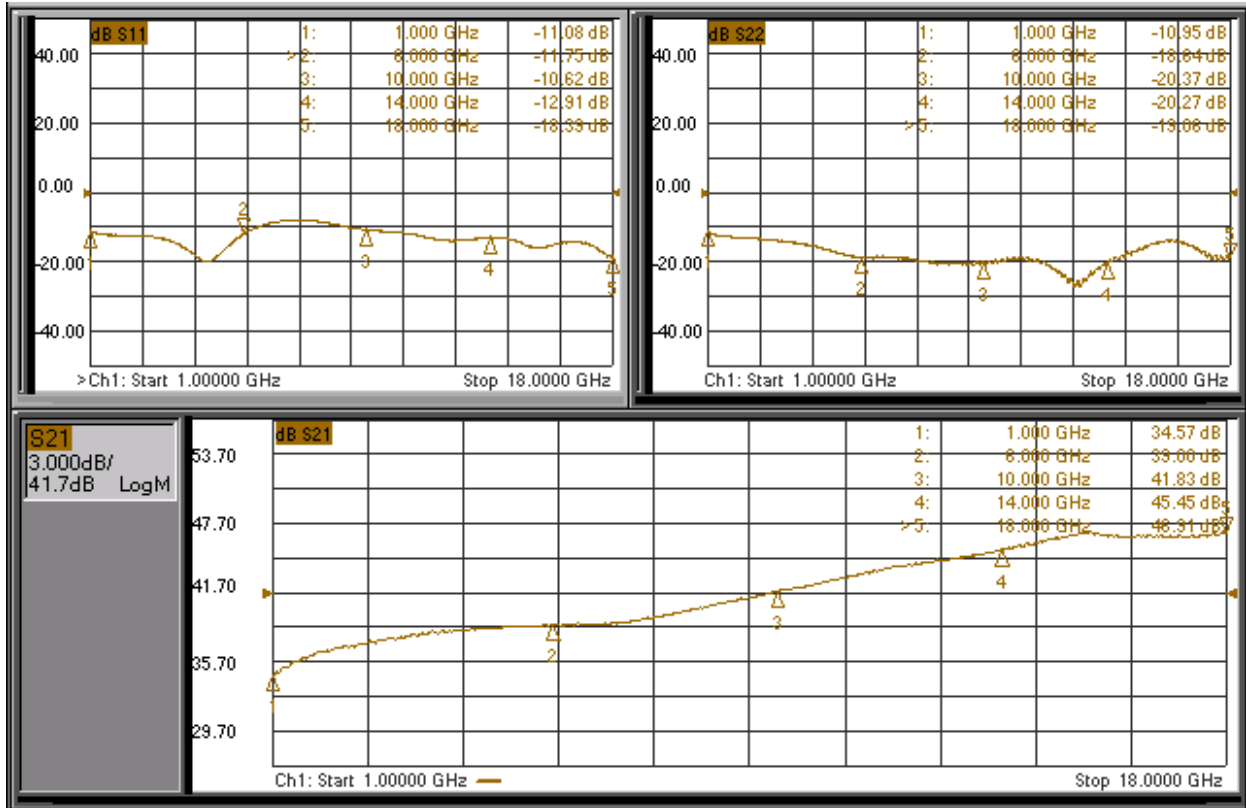
Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		GHz	1		18
Gain @ 1 GHz	Small Signal	dB	33	34.5	36
Gain @ 18 GHz	Small Signal	dB	46	48	49
Noise Figure	1 to 18 GHz GHz	dB		8	10
Output Power (P1dB)	1 to 18 GHz, measured @10GHz	dBm	+25	+26.5	
RF Input Power (P1dB)	Survival without damage	dBm	+25		+30
RF Input Impedance	Reference to 50 ohms VSWR			1.8:1	2.5:1
RF Output Impedance	Reference to 50 ohms VSWR			1.6:1	2.0:1
Supply Voltage Positive:		V		+12	
Supply Current Positive:	Small signal	mA		490	550

Notes:

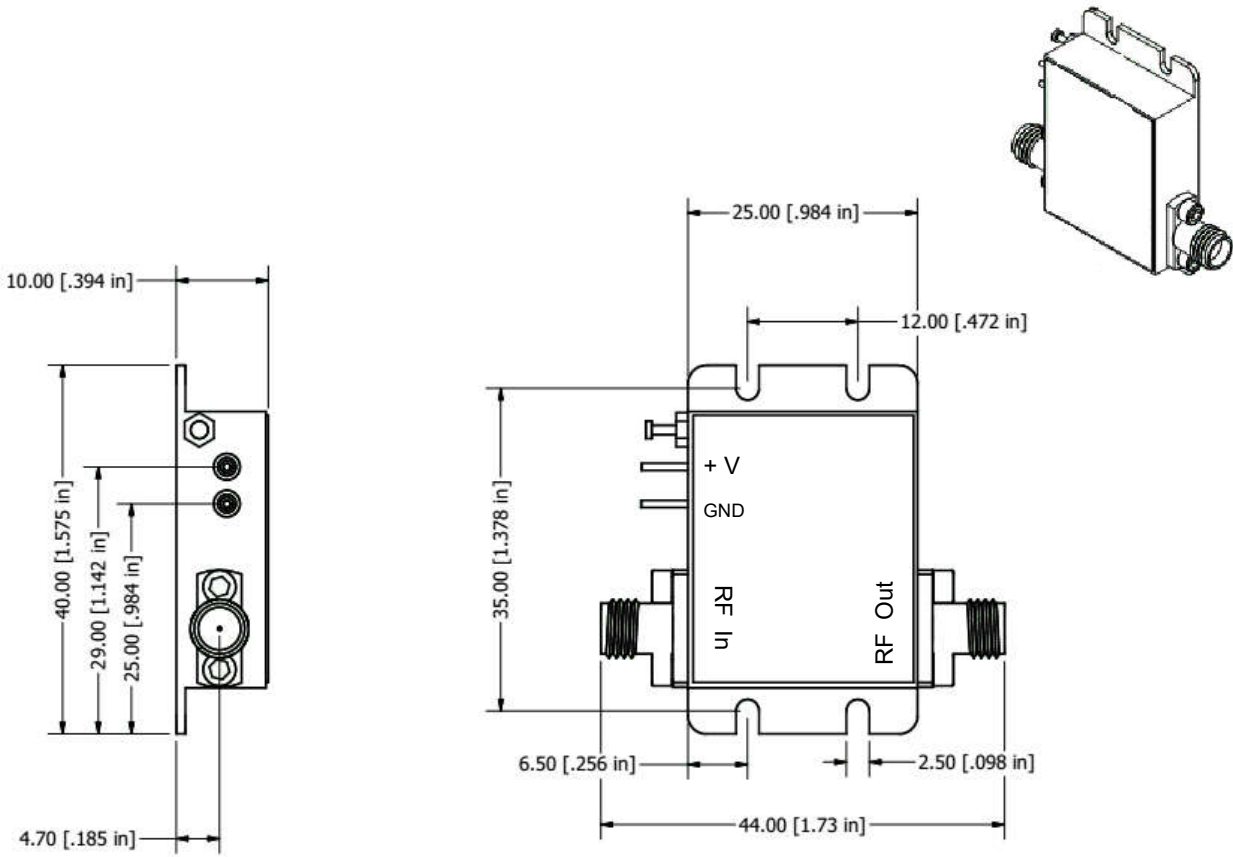
1/ Unconditional Stability

Customized configurations of the above specifications are available

Typical S-Parameter Plot @ 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

Housing: Nickel Plated Aluminum

Model Number	Description	Hermeticity	Package
AMT-A0527	SMA Female	Non-Hermetic	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

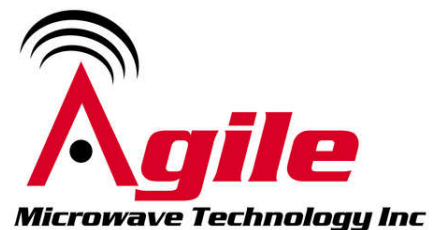
Agile Microwave Technology Inc is the logical choice for all your commercial or military RF/Microwave components/module requirements.

Note: Available options are model dependent, please contact us

Contact Information:

**701 Cascade Pointe Lane
Cary, NC 27513**

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Phone: (984) 228-8001

info@agilemwt.com

www.agilemwt.com

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