

AMT-A0422 35 GHz to 40 GHz Low Noise Amplifier



Data Sheet

Features

- 35 GHz to 40 GHz Frequency Range
- Gain 34 dB Typical , 30 dB min
- Gain Flatness ± 1 dB typ ± 2 dB max
- 3 dB Typical Noise Figure
- VSWR 1.8:1 typical
- P1dB +10 dBm typical
- Internally Regulated
- Operates from Single +8V Supply
- Unconditionally Stable
- Compact Housing



Photo for Illustration only

Description

The AMT-A0422 is a Broadband 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-A0422 is ideal for use as gain stage with low noise for test equipment, Communication systems or where broadband amplification and power are required without adding significant noise in a Hi-Rel communications system for Commercial or Military applications

Applications

- Test Equipment
- 5G
- Receiver
- Lab Applications
- Wideband Gain Block

MAXIMUM RATINGS¹

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T_{MO}	$^{\circ}C$	-20	+85
Storage Temperature - Case	T_{MS}	$^{\circ}C$	-40	+125
RF Input power (CW)	P_{in}	dBm		+15
Die $T_{Junction}$	T_J	$^{\circ}C$		+150
Positive Supply Voltage	V_{+SS}	V		+12

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

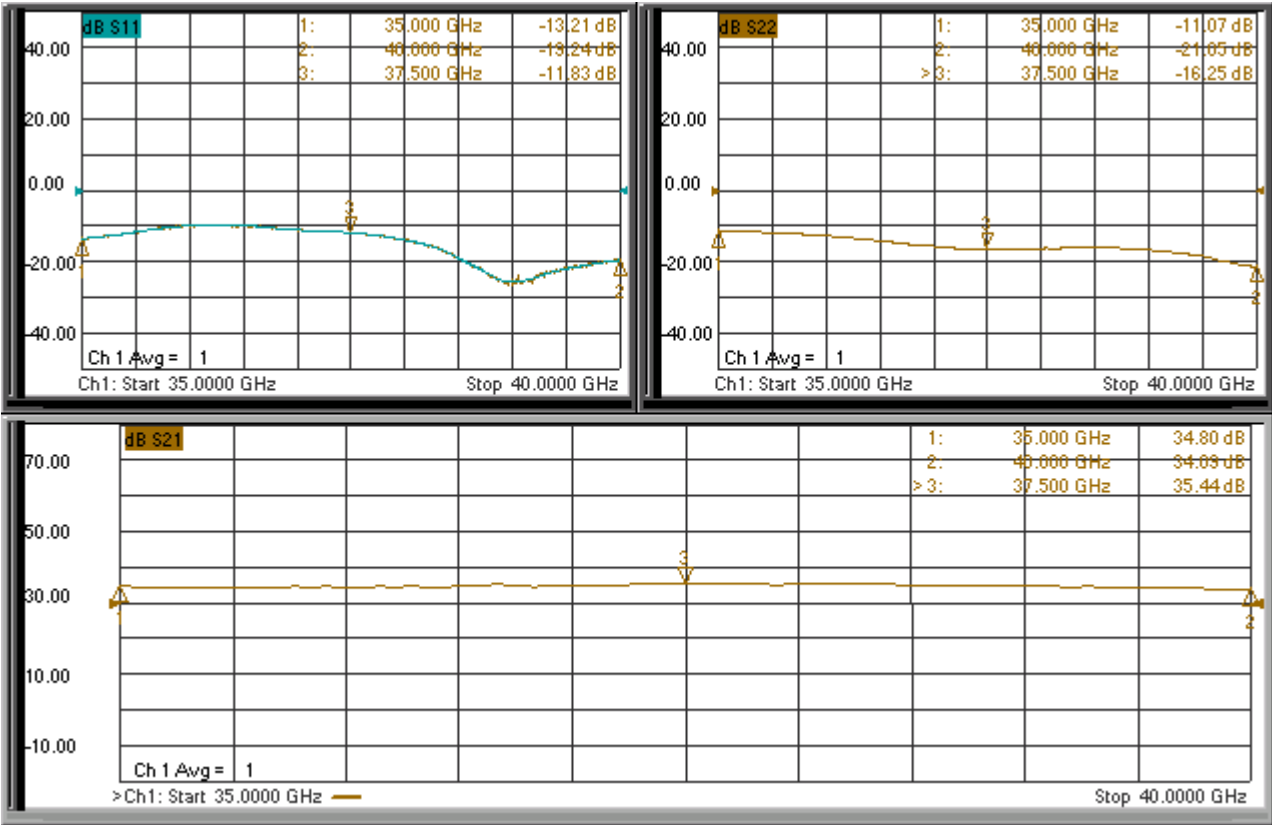
Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		GHz	35		40
Gain	Small Signal	dB	30	34	
Gain Flatness		dB		±1	±2
Noise Figure		dB		3	4
Output Power (P1dB)	@ 37 GHz	dBm	+8	+10	
OIP3	OIP3 @ 37 GHz Two tone F1-F2= 10MHz	dB	+16		
RF Input Impedance	Reference to 50 ohms VSWR			1.8:1	2.2:1
RF Output Impedance	Reference to 50 ohms VSWR			1.8:1	2.2:1
Supply Voltage Positive:		V		+ 8	
Supply Current Positive:	Small signal	mA		80	100

Notes:

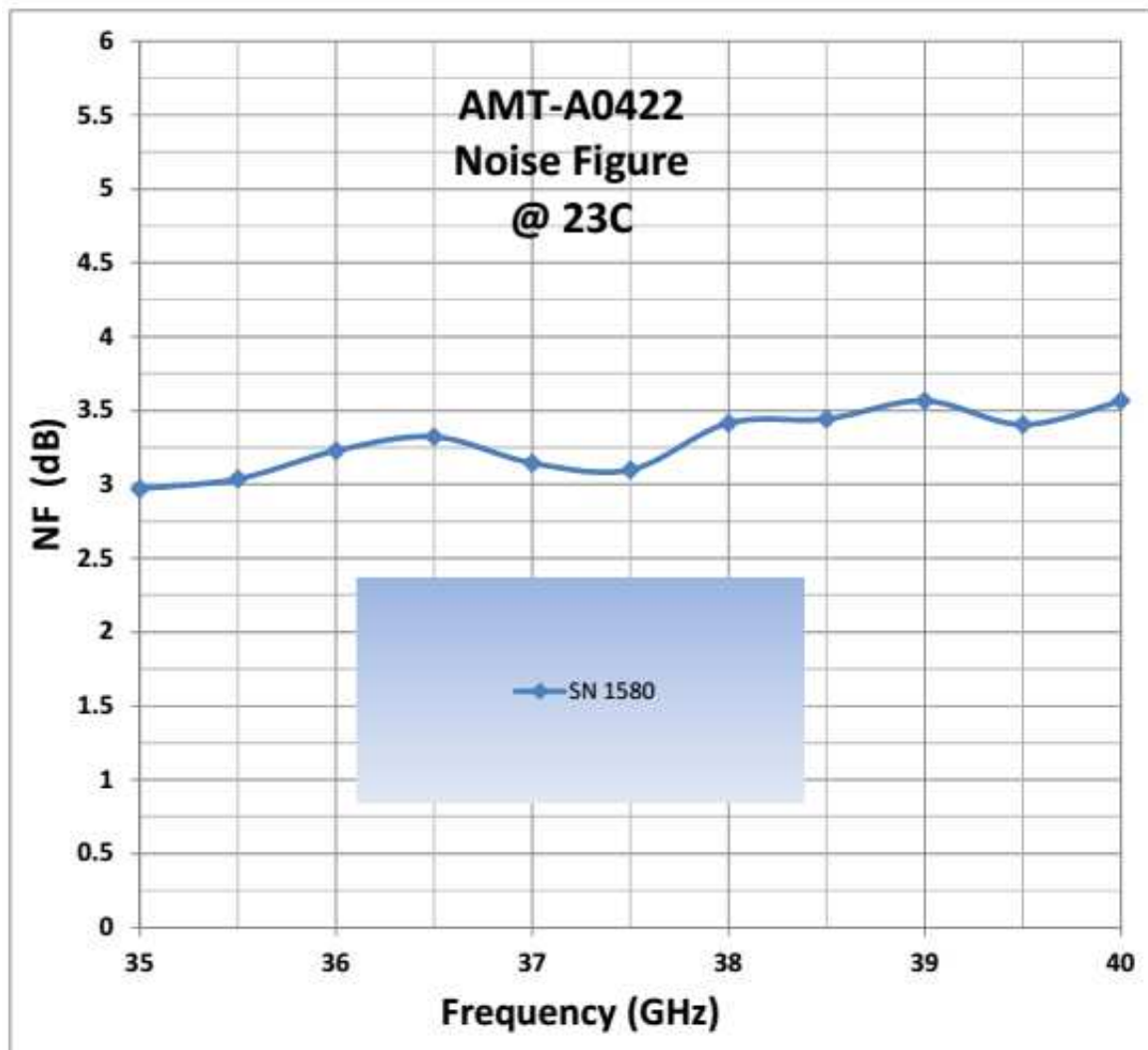
1/ Unconditional Stability

Customized configurations of the above specifications are available

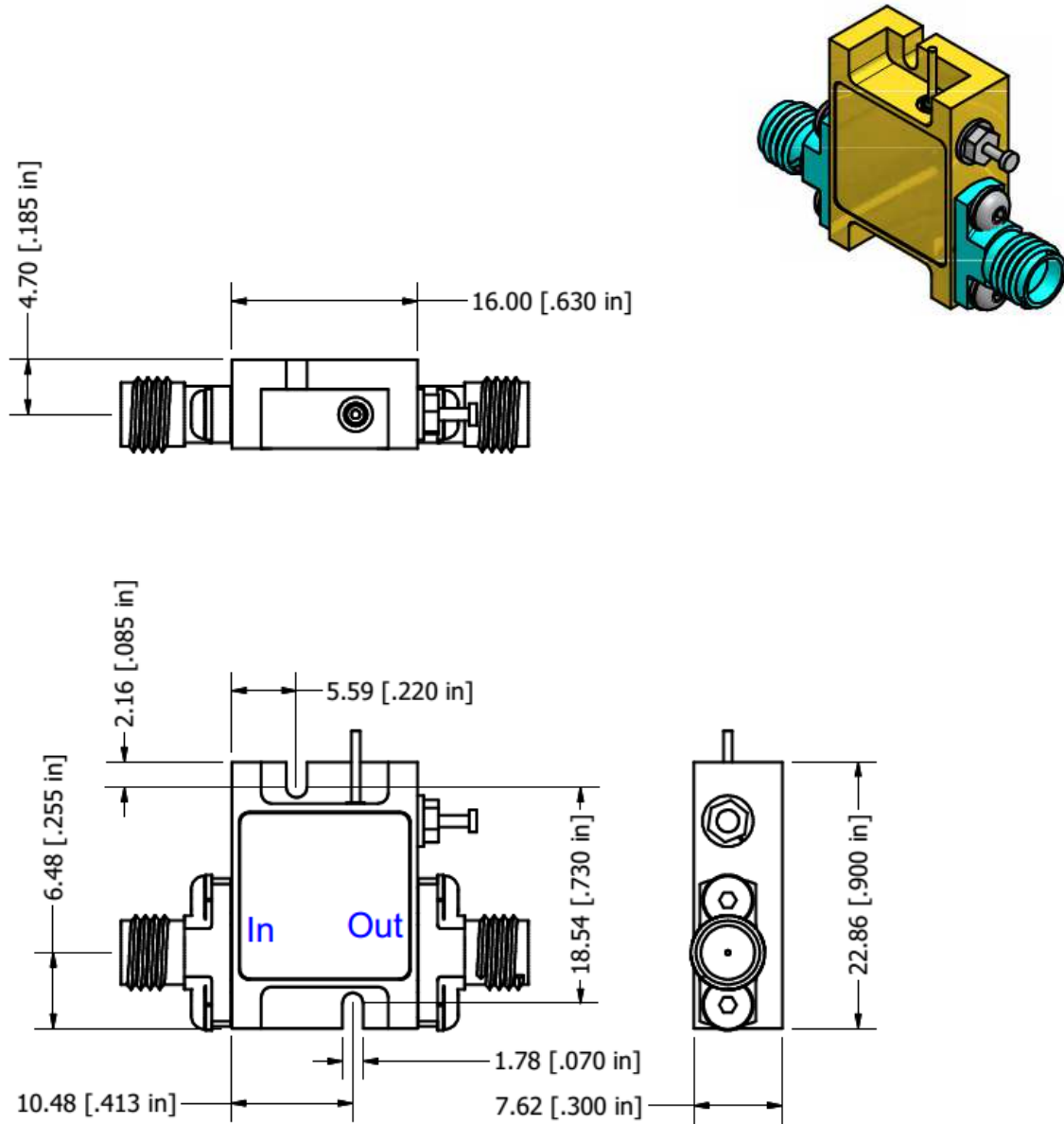
SN 1580 S-PARAMETERS



SN 1580 Noise Figure



Package Outline M084: 2.92 mm Female Connectors (inches)



Field replaceable SMA Connectors

Note: The unit must be attached to proper heat sink

Model Number	Description	Hermeticity	Package
AMT-A0422	2.92 mm 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.

Contact Information:

**ISO 9001:2015
CERTIFIED**

**701 Cascade Pointe Lane
Cary, NC 27513
Phone: (984) 228-8001**

info@agilemwt.com



www.agilemwt.com

AMTI reserves the right to change at any time without notice the design, specifications, function/form or availability of its products described herein. The buyer/customer has the responsibility to validate the performance for their applications. No liability is assumed as result of use of this datasheet or product and no patent licenses are implied. AMTI reserves all rights .