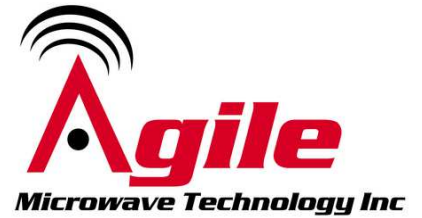


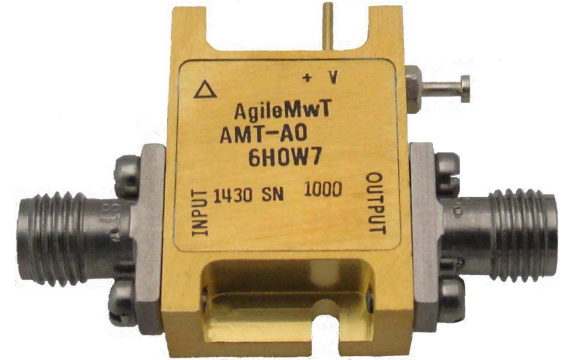
# AMT-A0266 9.9 GHz to 18.7 GHz Low Noise with Medium Power Amplifier

Data Sheet



## Features

- 9.9 GHz to 18.7GHz Frequency Range
- Typical Gain 27 dB
- Gain Flatness  $< \pm 1.2$  dB
- P1dB +18 dBm Typical
- Typical Noise Figure 2.3 dB
- Internally Regulated
- Operates from a Single Supply +12V
- Unconditionally Stable
- State-of-the-Art GaAs Technology



## Description

The AMT-A0266 is a Medium Power Low Noise amplifier with flat gain over the full frequency range. The performance is achieved through the use of AMTI's proprietary technology. The amplifier I/Os are Internally matched to 50 Ohms and DC Blocked. The AMT-A0266 is ideal for use as Front End of receiver system, or where amplification is required without adding excessive noise in a Hi-Rel communications system for Commercial or Military applications.

## Applications

- Receiver front end,
- Radar
- Communication systems
- Microwave Radio systems
- Test Equipment

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

EAR99 NLR

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	$T_{MO}$	° C	-40	+85
Storage Temperature - Case	$T_{MS}$	° C	-40	+125
RF Input power (CW)	$P_{in}$	dBm		+0
Die $T_{Junction}$	$T_J$	° C		+150
Positive Supply Voltage	$V_{+SS}$	V		+15.5

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	9.9		18.7
Gain	Small Signal	dB	25	27	28
Gain Flatness		dB		±1.2	± 2
Input Power Survival	CW short period, without damage	dBm	0		
Output Power (P1dB)	1 dB compression point @ 16 GHz	dBm	15	18	
OIP3	OPI3 measured @ 16 GHz Two tone F1-F2= 10MHz	dB		25	
Noise Figure		dB		2.3	3
RF Input Impedance	Reference to 50 ohms VSWR			1.6:1	2.2:1
RF Output Impedance	Reference to 50 ohms			1:8:1	2.2:1
Supply Voltage Positive:		V		+12	
Supply Current Positive:		mA		230	260

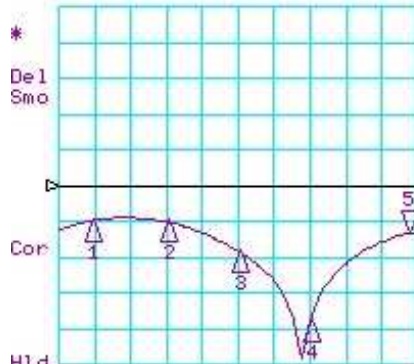
Notes:

- 1/ Unconditional Stability
- 2/ All min and max parameters are guaranteed by design

Customized configurations of the above specifications are available

# ELECTRICAL SPECIFICATIONS @ 23°C

CH1 LOG 10 dB/ REF 0 dB  
S11 5:-13.511 dB 18.700 000 000 GHz

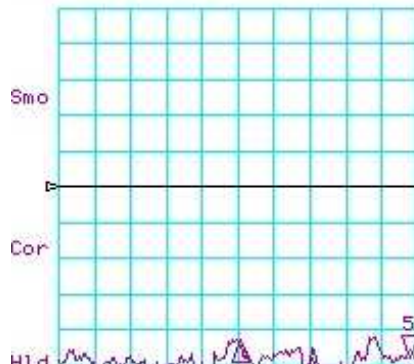


CH1 Markers

- 1:-9.7810 dB  
9.90000 GHz
- 2:-10.110 dB  
12.0000 GHz
- 3:-18.378 dB  
14.0000 GHz
- 4:-37.734 dB  
16.0000 GHz
- 5

H1d  
START 9000.000 MHz STOP19000.000 MHz

CH3 LOG 10 dB/ REF -10 dB  
S12 5:-57.756 dB 18.700 000 000 GHz

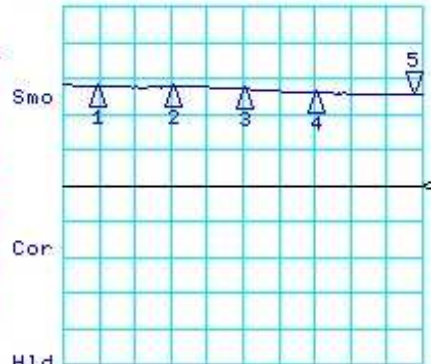


CH3 Markers

- 1:-59.409 dB  
9.90000 GHz
- 2:-61.339 dB  
12.0000 GHz
- 3:-53.306 dB  
14.0000 GHz
- 4:-58.425 dB  
16.0000 GHz
- 5

H1d  
START 9000.000 MHz STOP19000.000 MHz

CH2 LOG 10 dB/ REF 0 dB  
S21 5: 25.688 dB 18.700 000 000 GHz

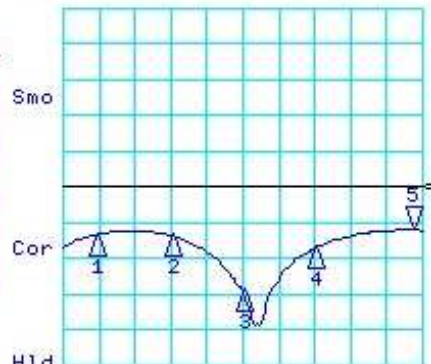


CH2 Markers

- 1: 27.828 dB  
9.90000 GHz
- 2: 27.672 dB  
12.0000 GHz
- 3: 27.068 dB  
14.0000 GHz
- 4: 25.911 dB  
16.0000 GHz
- 5

H1d  
START 9000.000 MHz STOP19000.000 MHz

CH4 LOG 10 dB/ REF 0 dB  
S22 5:-12.061 dB 18.700 000 000 GHz

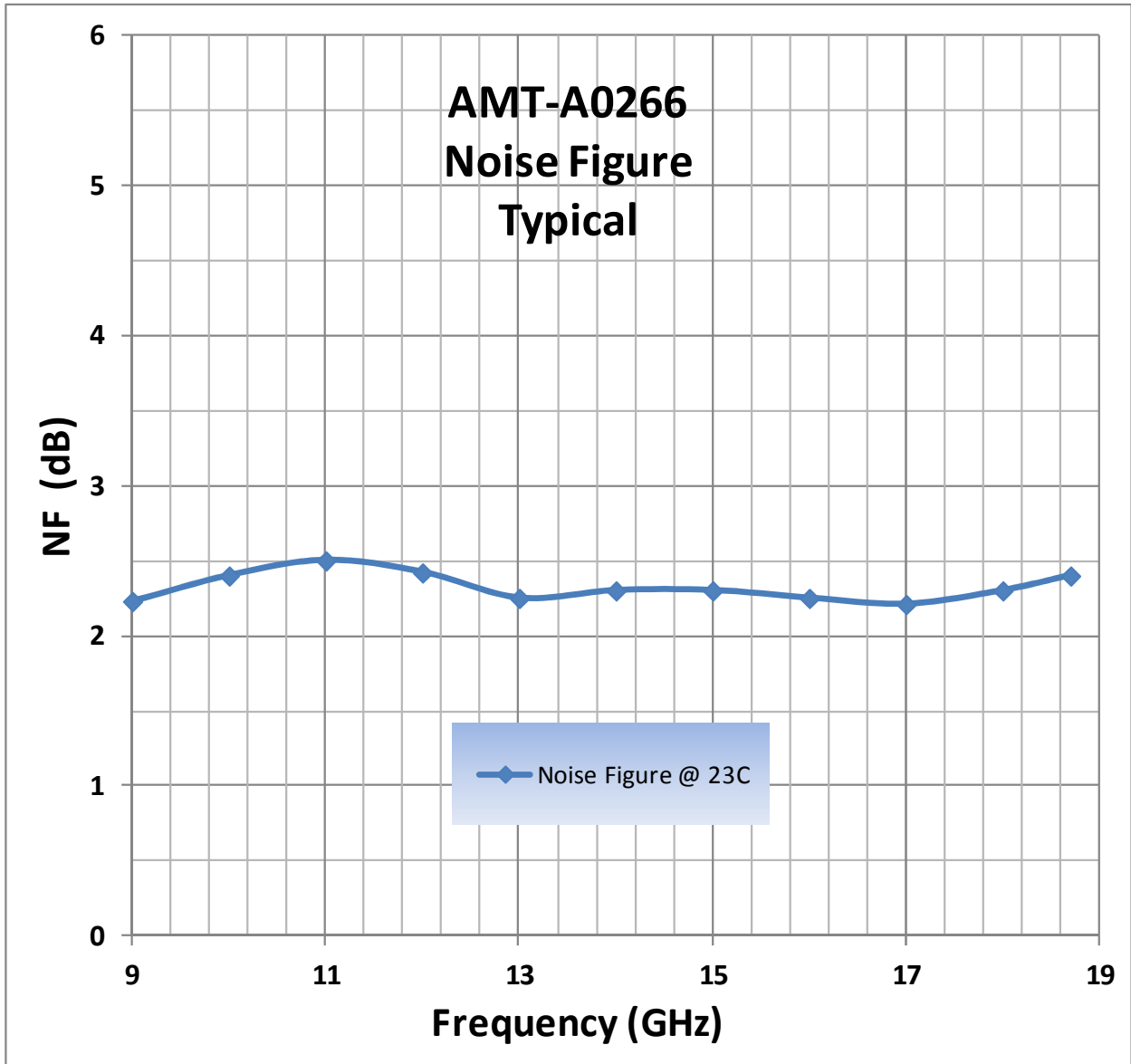


CH4 Markers

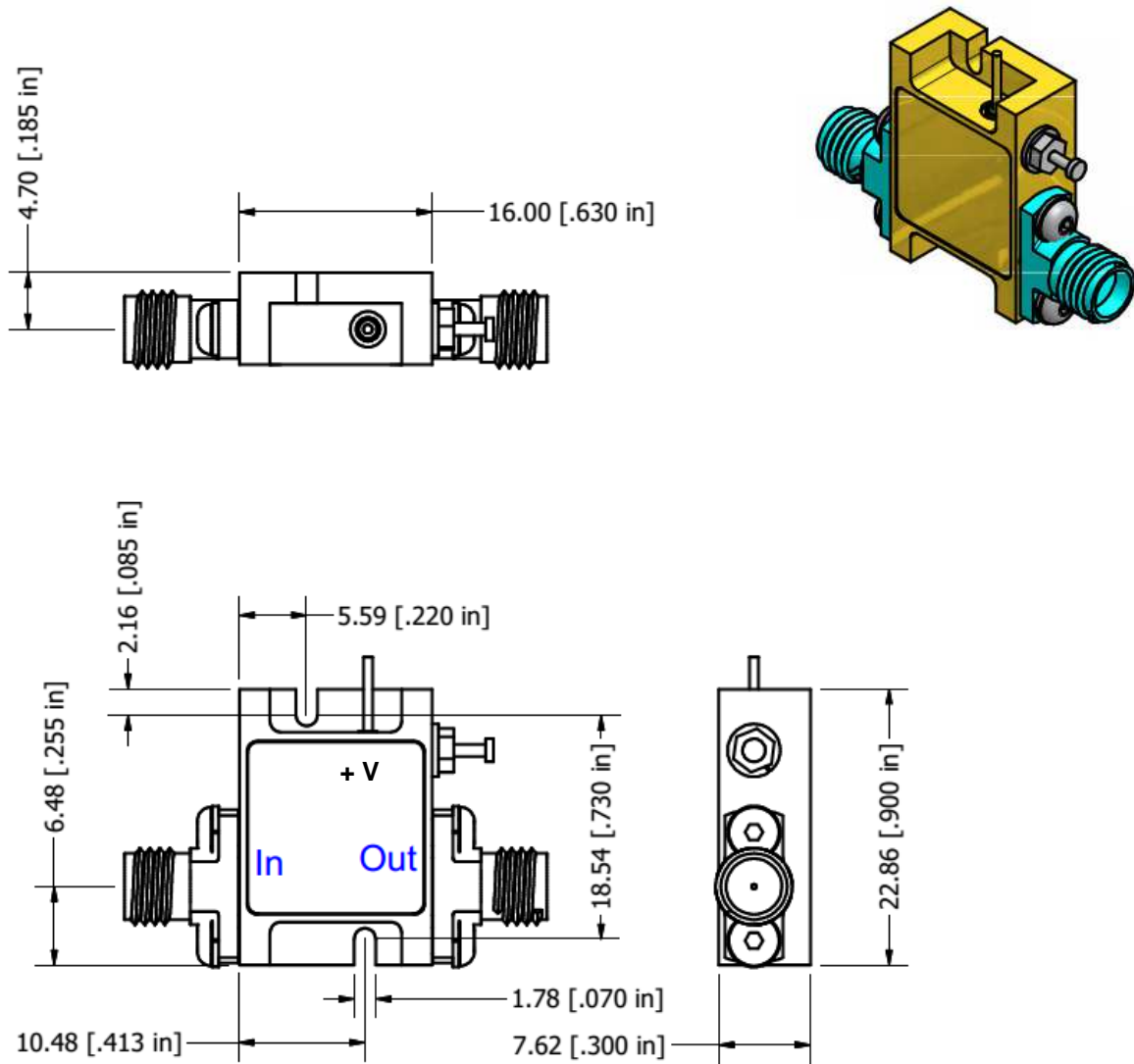
- 1:-13.408 dB  
9.90000 GHz
- 2:-13.560 dB  
12.0000 GHz
- 3:-29.232 dB  
14.0000 GHz
- 4:-17.158 dB  
16.0000 GHz
- 5

H1d  
START 9000.000 MHz STOP19000.000 MHz

Noise Figure @ 23°C



## Package Outline M084: SMA Connectorized mm(inches)



Field replaceable SMA Connectors, Removable Ground Slug

Note: The unit must be attached to proper heat sink

Model Number	Description	Hermeticity	Package
AMT-A0266	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.

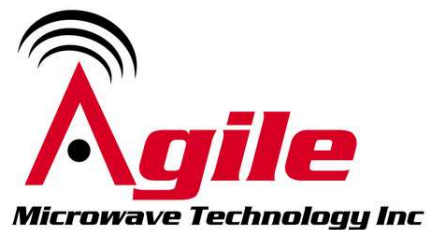
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