AMT-A0089 14 GHz to 18 GHz
Broadband High Power Amplifier Module

Data Sheet

Features

- 14 GHz to 18 GHz Frequency Range
- Typical P1dB power > +35 dBm (3W)
- Typical Psat power > +37 dBm (5W)
- Gain 30 dB Typical
- Gain Flatness ± 2 dB Typical
- Low Spurious <-80 dBc typical
- Internally Regulated
- Operates from +9V and –5V Supply
- Unconditionally Stable

Description

The AMT-A0089 is a +35 dBm P1dB Broadband power amplifier 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 are DC blocked. The AMT-A0089 is ideal for use as output power amplifier in a EW systems or where broadband amplification and power are required in a Hi-Rel communications system for Commercial or Military applications

Applications

- Radar
- EW Systems
- Lab Applications
- Test Equipment

MAXIMUM RATINGS[1]

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T_{MO}	° C	0	+60
Storage Temperature - Case	T_{MS}	° C	-20	+85
RF Input power (CW)	Pin	dBm		+23
Die $T_{Junction}$	T_J	° 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.

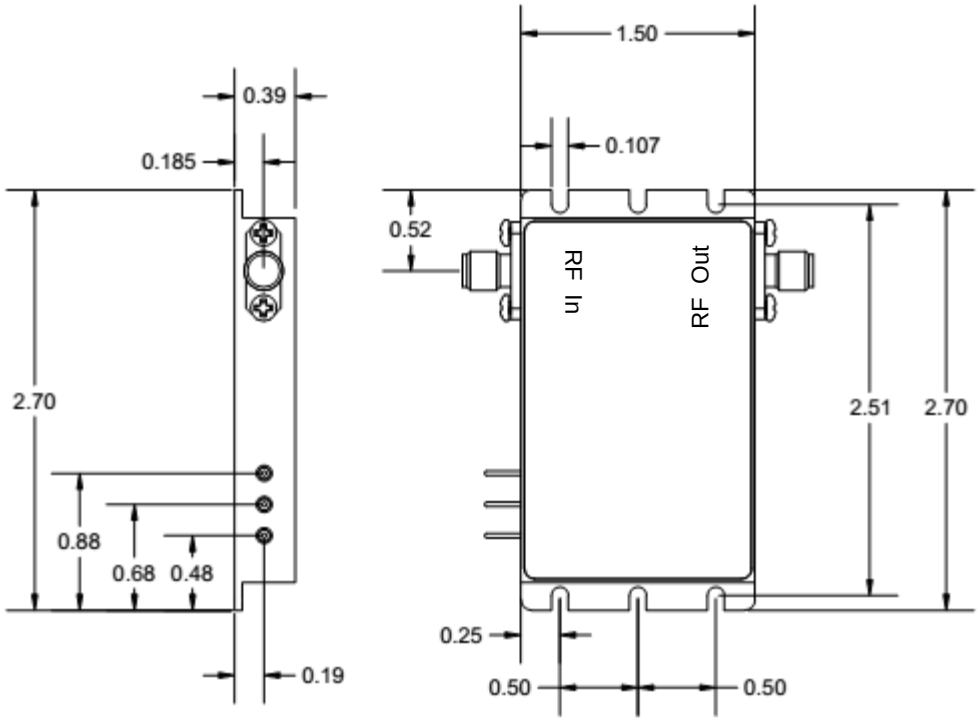
ELECTRICAL SPECIFICATIONS @ 23ºC

Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		GHz	14		18
Gain	Small Signal	dB	26	30	
Gain Flatness		dB		±2	±2.5
Noise Figure		dB		5	
Output Power (Psat)	Saturated Output power	dBm		37	
Output Power (P1dB)		dBm		35	
OIP3	OPI3 measured @ 16 GHz Two tone F1-F2= 10MHz	dB		43	
Spurious	Measured with input terminated Output connected to spectrum analyzer and BW adjusted to achieve dynamic range required		-75	-80	
RF Input Impedance	Reference to 50 ohms VSWR			1.4:1	1.9:1
RF Output Impedance	Reference to 50 ohms VSWR			1.6:1	2.2:1
Supply Voltage Positive: Negative Supply Current Positive: Negative		 V A mA		 +9 -5 2.8	 3.2 40

Notes:
1/ Unconditional Stability

Tested Parameter @ 23C Gain, Gain Flatness, NF, P1dB @ 16.5 GHz, Spurious, VSWR, Current
Tested Parameters @ 0C & +60C Gain, Gain Flatness, current

Package Outline M055: 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-A0089	SMA Female	Non-Hermetic	Outline: M055

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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