

AMT-A0331 6400 MHz to 7200 MHz 4W P1dB High Linearity Power Amplifier

Data Sheet



Features

- 6400 MHz to 7200 MHz Frequency Range
- OIP3 > +48dBm Typical
- P1dB > +36 dBm
- Gain 40dB Typical, 35 dB min
- Gain Flatness < ± 1 dB Typical
- NF 2.8 dB typical, 4 dB Max
- Return Loss In/Out Typ > 20 dB
- Internally Regulated
- Operates from Single +15V Supply



Description

The AMT-A0331 is a High power amplifier with +36 dBm P1dB 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 are DC blocked. The AMT-A0331 is ideal for use as driver amplifier, or high power amplifier in a Hi-Rel communications system for Commercial or Military applications

Applications

- Driver Amplifier
- High power output amplifier
- SATCOM
- Communication systems
- Microwave Radio systems
- Lab Use

MAXIMUM RATINGS¹

EAR99 NLR

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T _{MO}	° C	-20	+65
Storage Temperature - Case	T _{MS}	° C	-40	+125
RF Input power (CW)	P _{in}	dBm		+15
Die T _{Junction}	T _J	° C		+150
Positive Supply Voltage	V _{+SS}	V		+16V

The HPA must be attached to proper heat sink

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

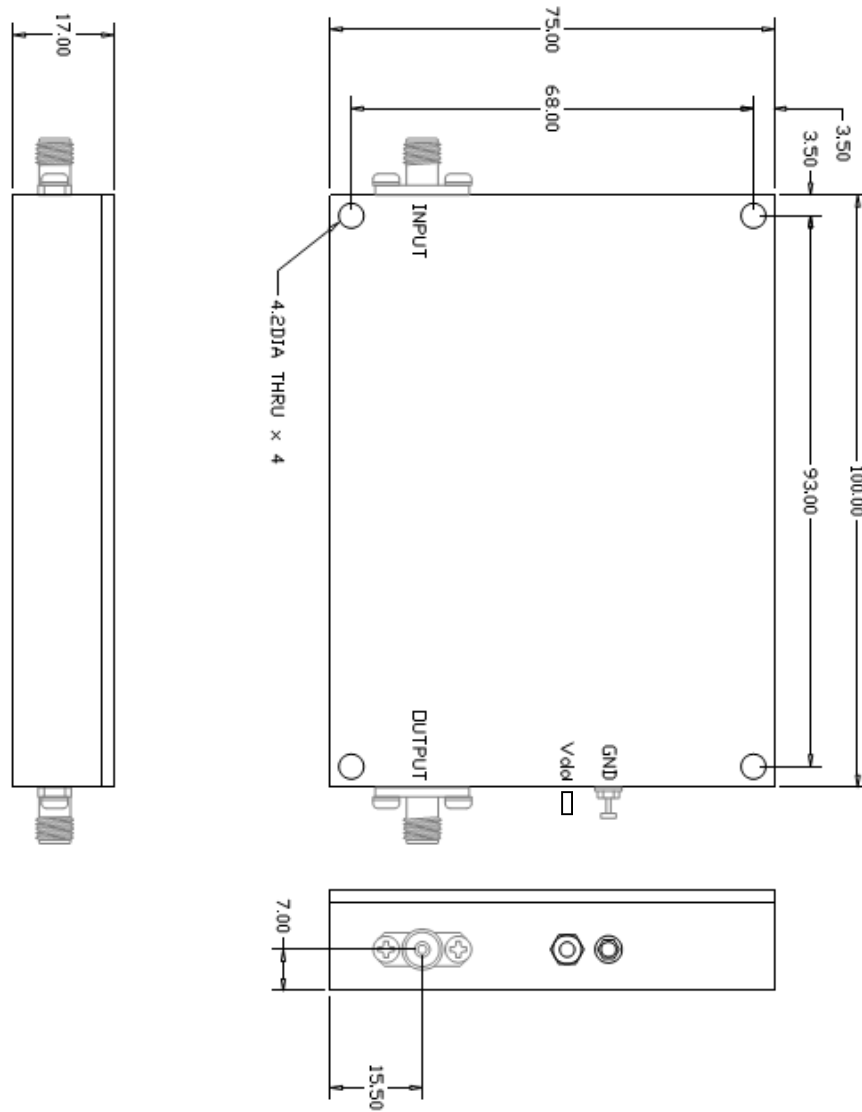
Parameter	Conditions	Units	MIN	Typical	MAX
Frequency Range		MHz	6400		7200
Gain	Small Signal	dB	35	40	
Gain Flatness		dB		±1.2	
Output Power (P1dB)	1 dB compression point	dBm	+35	+36	
OIP3	OIP3 measured @ 7000 MHz Two tone F1-F2=10MHz	dBm	47	48	
Noise Figure		dB		2.8	4
RF Input Impedance	Reference to 50 ohms VSWR			1.4:1	2.:1
RF Output Impedance	Reference to 50 ohms			1:4:1	1.5:1
Supply Voltage Positive: Negative:		V		+15V	
Supply Current Positive: Negative:		A		2	

Notes:

1/ Unconditional Stability:

Customized configurations of the above specifications are available

Package Outline: AL7700-8500-39 SMA Connectorized (mm)



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-A0331	SMA Female	Non-Hermetic	Outline: AL7700-8500-39

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.

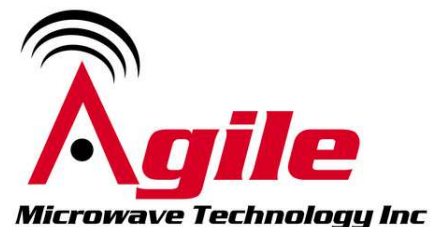
- Add additional functionality: Input limiter, Temperature compensation, Amplitude/Phase matching, Amplitude/Phase Tracking, Automatic Gain control, Gain sloping, Bypass path, Specific supply voltage, Regulation, Power detector, Health status, and others
- Integrated: Filters, Switches, Limiter, Digital 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:

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

**ISO 9001:2015
Certified Company**



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.