

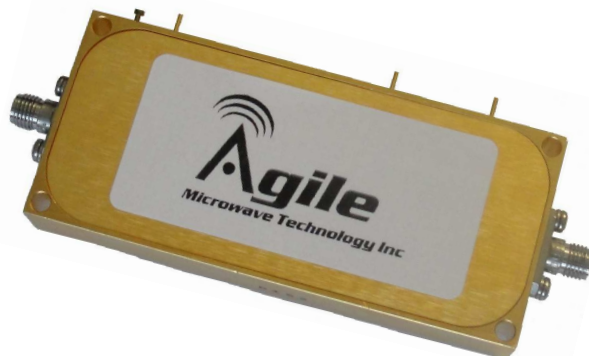
AMT-A0046 2000 MHz to 6000 MHz Broadband High Power GaN Amplifier

Data Sheet



Features

- 2000 MHz to 6000 MHz Frequency Range
- Psat > +42 dBm
- P1dB > +39 dBm
- Small Signal Gain 45 dB
- Gain Flatness < ± 3 dB
- TTL On/Off
- Internally Regulated
- Operates from Single +40V Supply
- Unconditionally Stable



Description

The AMT-A0046 is a High power GaN amplifier with high output power 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-A0046 is ideal for use as driver amplifier, or power amplifier in a Hi-Rel communications system for Commercial or Military applications

Applications

- Power Amplifier
- Driver Amplifier
- Tx systems
- Microwave Radio systems
- Test Equipment

MAXIMUM RATINGS¹

Parameter	Symbol	Units	MIN	MAX
Operating Temperature – Case	T _{MO}	° C	-20	+75
Storage Temperature - Case	T _{MS}	° C	-40	+125
RF Input power (CW)	P _{in}	dBm		+20
Die T _{Junction}	T _J	° C		+150
Positive Supply Voltage	V _{+SS}	V		+41V

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	2000		6000
Gain	Small Signal	dB	40	45	
Gain Flatness		dB		±3	
Output Power (P1dB)	1 dB compression point	dBm	+39	+40	
Output Power (Psat)	Output power saturated	dBm	+42	+43	
OIP3	OIP3 measured @ 4000 MHz Two tone F1-F2= 10MHz	dBm	+45		
Noise Figure		dB			10
RF Input Impedance	Reference to 50 ohms VSWR			1.5:1	2.0:1
RF Output Impedance	Reference to 50 ohms			1:8:1	2.5:1
Stability Factor K	Unconditionally Stable		1		
Stability Factor K	Unconditionally Stable		0		
On / Off TTL	TTL Levels On = +3-5V Off = 0.8-0V	V			
Supply Voltage Positive: Negative:		V		+40V	
Supply Current Positive: Negative:		mA			2.5A

Notes:

1/ Unconditional Stability: ($K > 1$) and ($B1 > 0$)

Customized configurations of the above specifications are available

Package Outline: SMA Connectorized (inches)

Outline: TBD
(3" x 2.5" x 0.5" or smaller)

Note: Detect is for - D only

Model Number	Description	Hermeticity	Package
AMT-A0046	SMA Female	Non-Hermetic	Outline: M008
AMT-A0046-D	SMA Female	Non-Hermetic	Outline: M008

Contact us for custom configurations and special requirements.

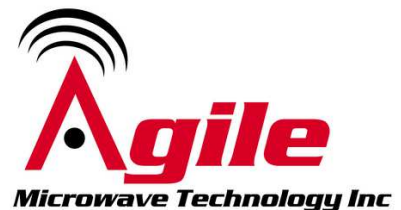
Our highly experienced team of engineers can quickly identify and implement innovative solutions using latest technology to improve performance and reduce cost.

- 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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