

## DESCRIPTION

AMCOM's AM00010037MD-1H is a broadband GaN Power Amplifier module designed for general purpose applications. It operates from 0.05 GHz to 10.0GHz and typically delivers 5 watts (37 dBm) of CW output power and 12 dB small signal gain. The amplifier module has 4 screw slots for mounting to a heat sink. This amplifier module is compact and light weight at 2.2" (L) x 2.2" (W) x 0.65" (H).



## FEATURES

- Wide bandwidth from 0.05 to 10 GHz
- Psat 37 dBm, Gain 12 dB
- Input / Output matched to 50 Ohms
- TTL control
- Temperature monitor
- Thermal Shutdown for Temp > 95°C

## APPLICATIONS

- Radar
- Fixed microwave backhaul
- Instrumentation and measurements
- Military and Aerospace

## TYPICAL PERFORMANCE \* (Quiescent bias is +32V, I<sub>ddq</sub>= 0.4 A)

Parameters	Minimum	Typical **	Maximum
Frequency	0.1 – 9 GHz	0.05 – 10 GHz	
Small Signal Gain	9.5 dB	12 dB	
Gain Ripple		± 2 dB	± 3.5 dB
P <sub>sat</sub>	34 dBm	37 dBm	
P <sub>1dB</sub>		30 dBm	
Current @ P <sub>sat</sub>		0.75 A	
Noise Figure		7 dB	
Input Return Loss		10 dB	
Output Return Loss		6 dB	
Temperature Sensor Output (V)	V <sub>out</sub> =0.45V+(10 <sub>mV</sub> x Temp in Celsius) e.g for (50°C) : V <sub>out</sub> =0.45+.01x50=0.95V		
TTL RF ON/OFF	<1V for OFF , >2.5 V for ON		

\* Notes:

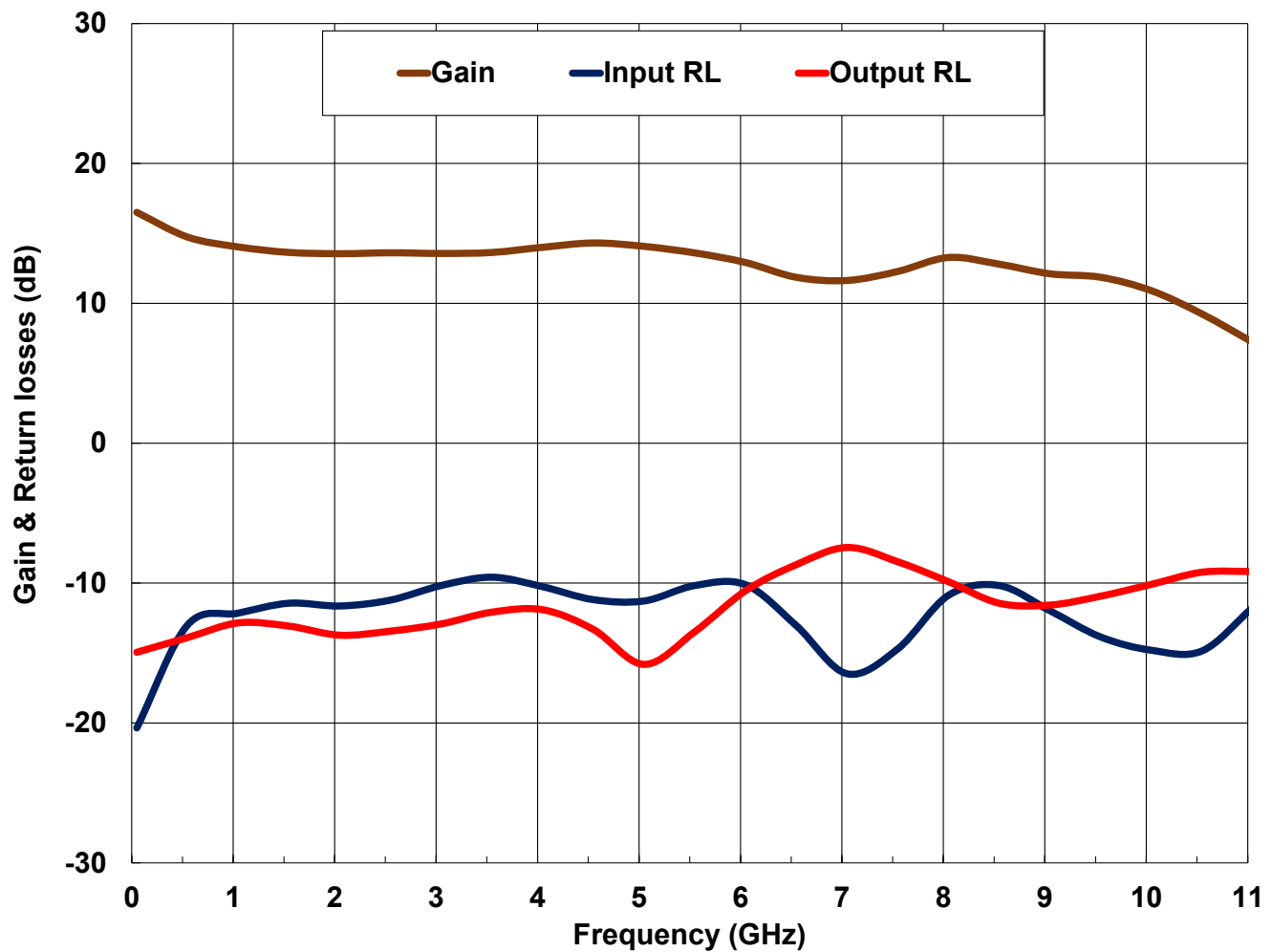
- 1- Specifications are subject to change without notice.
- 2- Proper heat sink should be used to remove heat from bottom of package.

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## ABSOLUTE MAXIMUM RATING

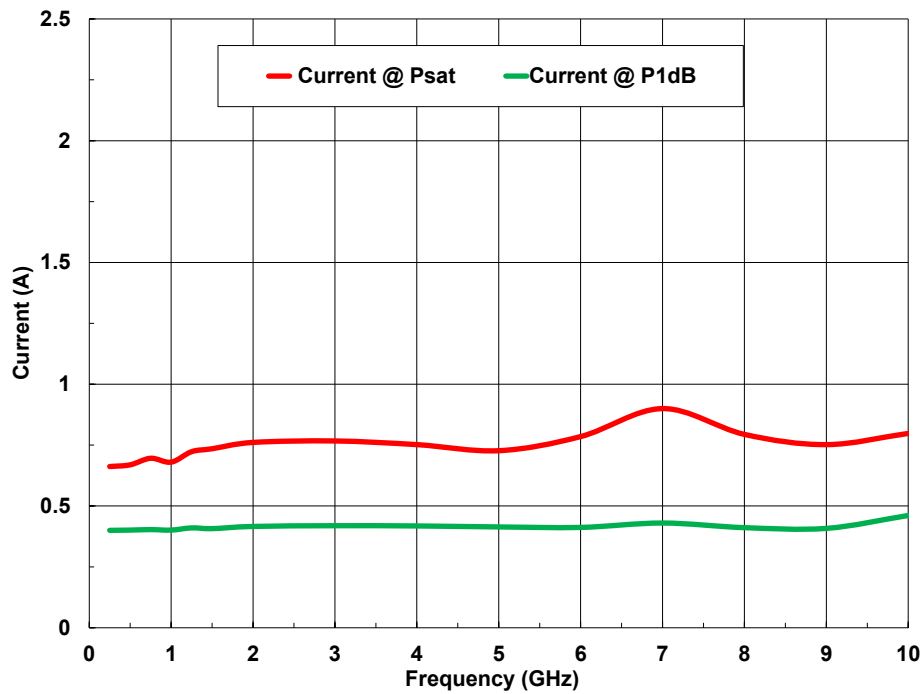
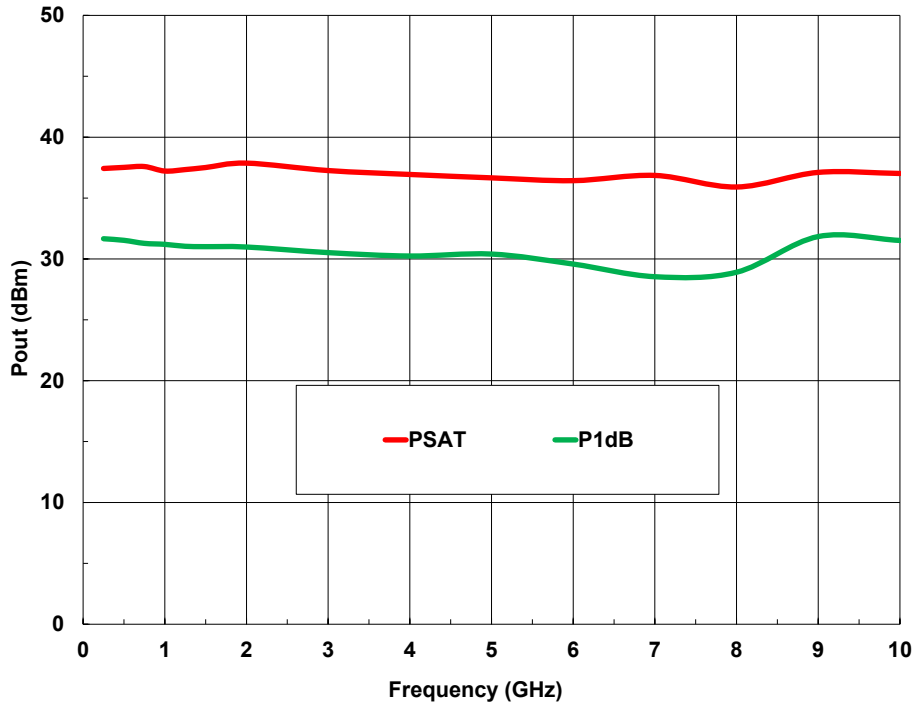
Parameters	Symbol	Rating
Drain source voltage	$V_{dd}$	36 V
Continuous dissipation at 25°C	$P_t$	35 W
Operating temperature	$T_{op}$	-40°C to +85°C
Storage temperature	$T_{sto}$	-55°C to +135°C

## SMALL SIGNAL DATA

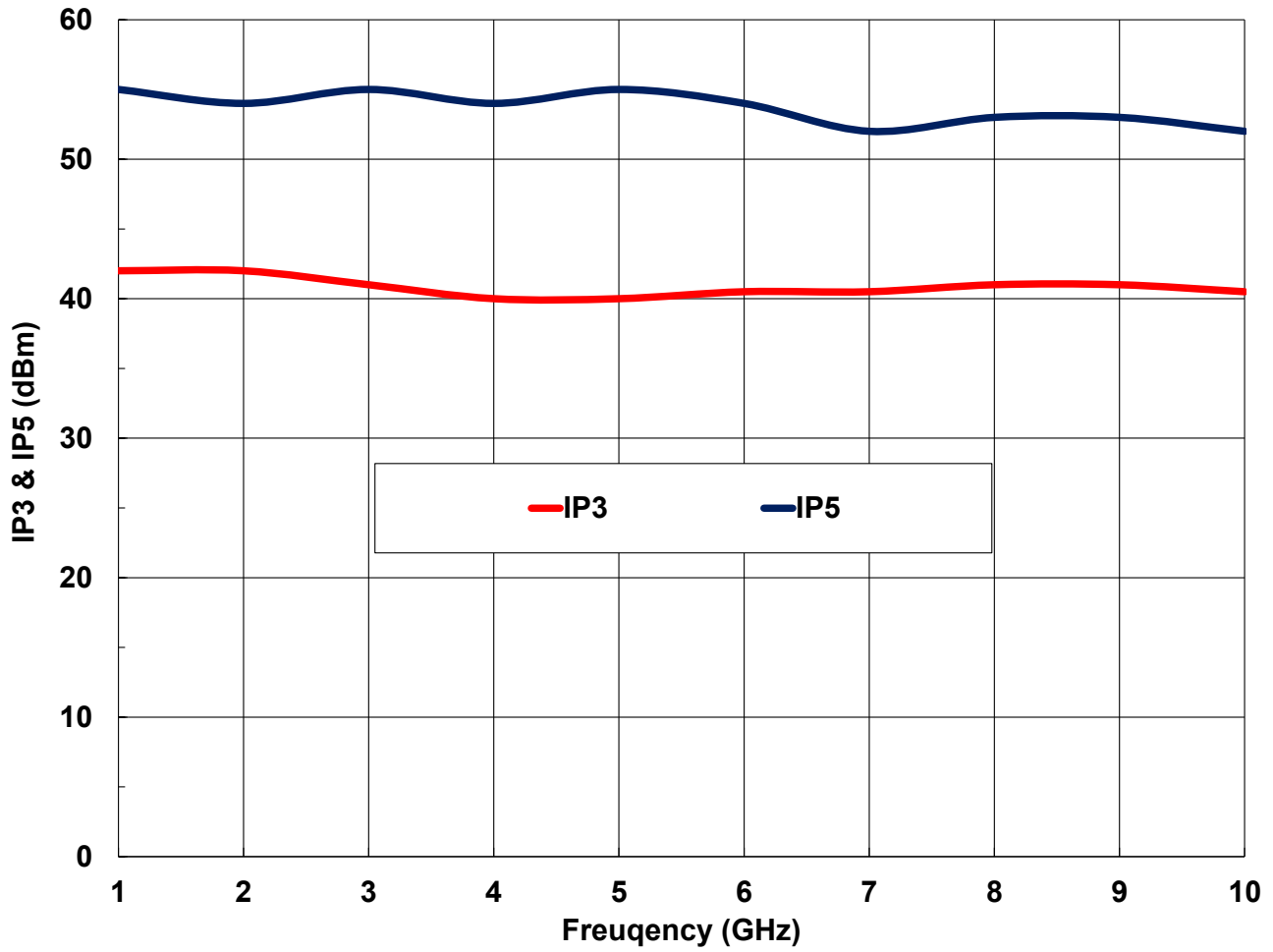


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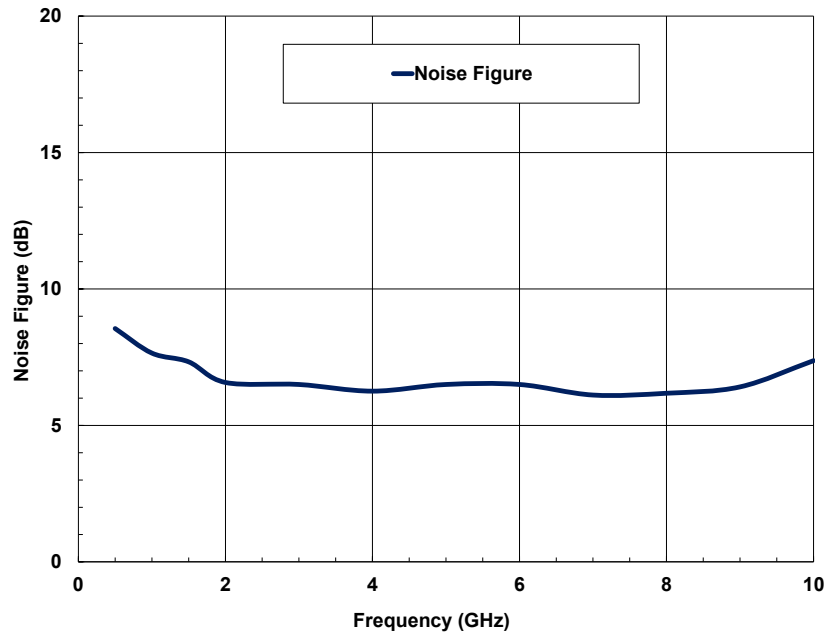
POWER DATA



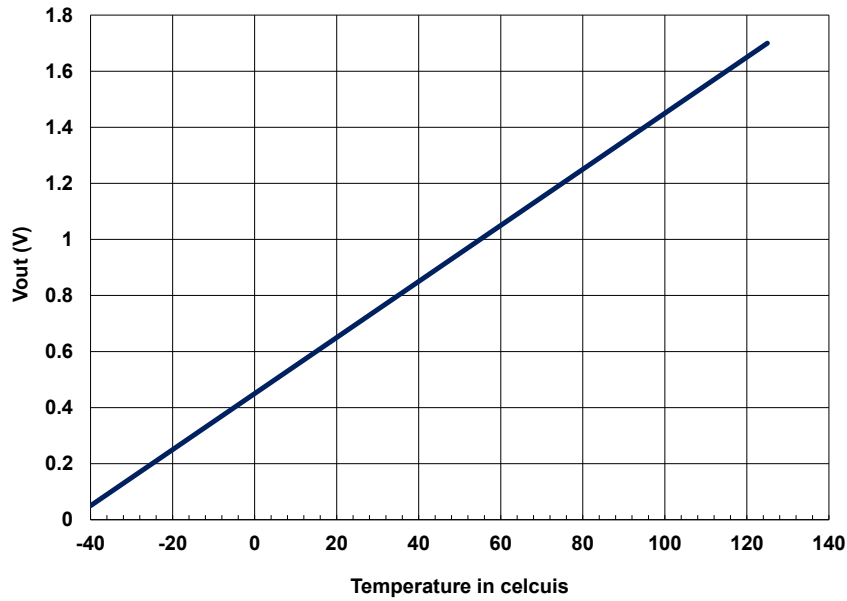
INTERMODULATION DISTORTION



**NOISE FIGURE**



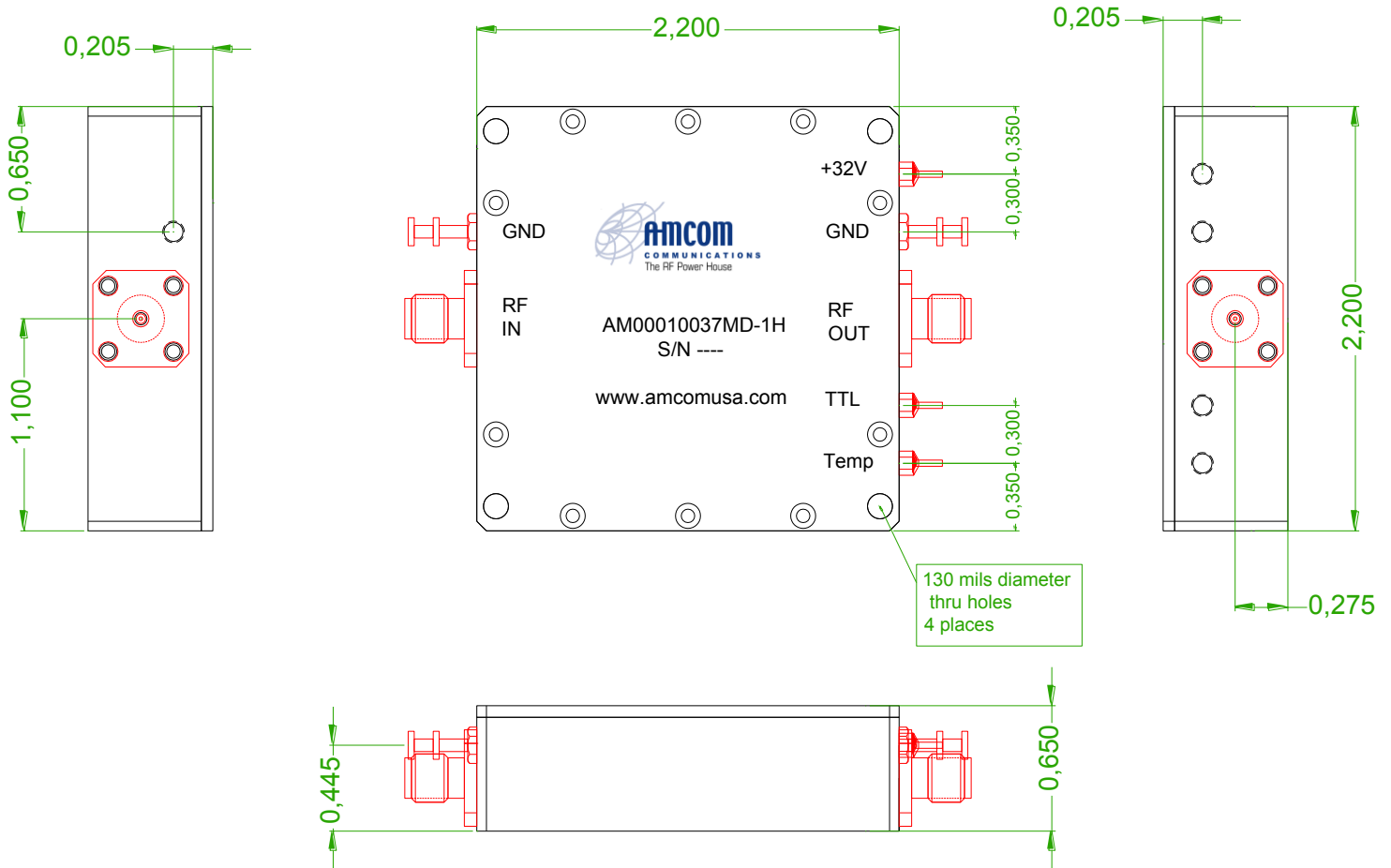
**TEMPERATURE SENSOR**



\*  $V_{out} = 0.45V + (T_{C} \times 10mV)$  , e.g for (50°C) :  $V_{out} = 0.45 + 0.01 \times 50 = 0.95V$ .

\* Thermal shutdown protection for high temperatures > 95°C.

PACKAGE OUTLINE



NOTES:

- 1- Dimensions are in inches.
- 2- Aluminum housing with silver nickel plating.
- 3- Female SMA for RF input and output.
- 4- Use a heat sink to remove heat from the module.