Power Amplifier Module
80MHz – 2.25GHz, 46dB, 55W

AM002247SF-3H
January 2026
Rev 0

DESCRIPTION

AMCOM's AM002247SF-3H is a GaN Solid state power amplifier designed for general purpose applications. It operates from 80 MHz to 2.25 GHz and typically delivers 55 watts (47.5dBm) of CW output power and 46dB small signal gain. The amplifier module has 6 screw slots for mounting to a heat sink. This amplifier module is compact and light weight at 7" (L) x 4" (W) x 0.75" (H).

REPRESENTATION ONLY

FEATURES

- Wide bandwidth from 0.08 to 2.25 GHz
- Psat 47.5 dBm, Gain 46 dB
- Input / Output matched to 50 Ohms
- TTL control & Temperature monitor

APPLICATIONS

- Radar
- Communication systems
- Instrumentation and measurements
- Military and Aerospace

TYPICAL PERFORMANCE * (Quiescent bias is +28V, I_{ddq}= 3A)

Parameters	Minimum	Typical **	Maximum
Frequency	0.1-2 GHz	0.08-2.25 GHz	
Small Signal Gain	43 dB	46 dB	
Gain Ripple		± 2 dB	± 4.0 dB
Psat	44.5 dBm	47.5 dBm	
Current @ Psat		6.1 A	
IP3		52 dBm	
Input Return Loss		10 dB	
Output Return Loss		7 dB	
Switching Time		<5 µS	
TTL RF ON/OFF	<1V for OFF , >2.5 V for ON		
Temperature Sensor Output (V)	V_{out}=0.45V+(10$_{mV}$ x Temp in Celsius) e.g for (50°C) : V_{out}=0.45+0.01x50=0.95V		

* 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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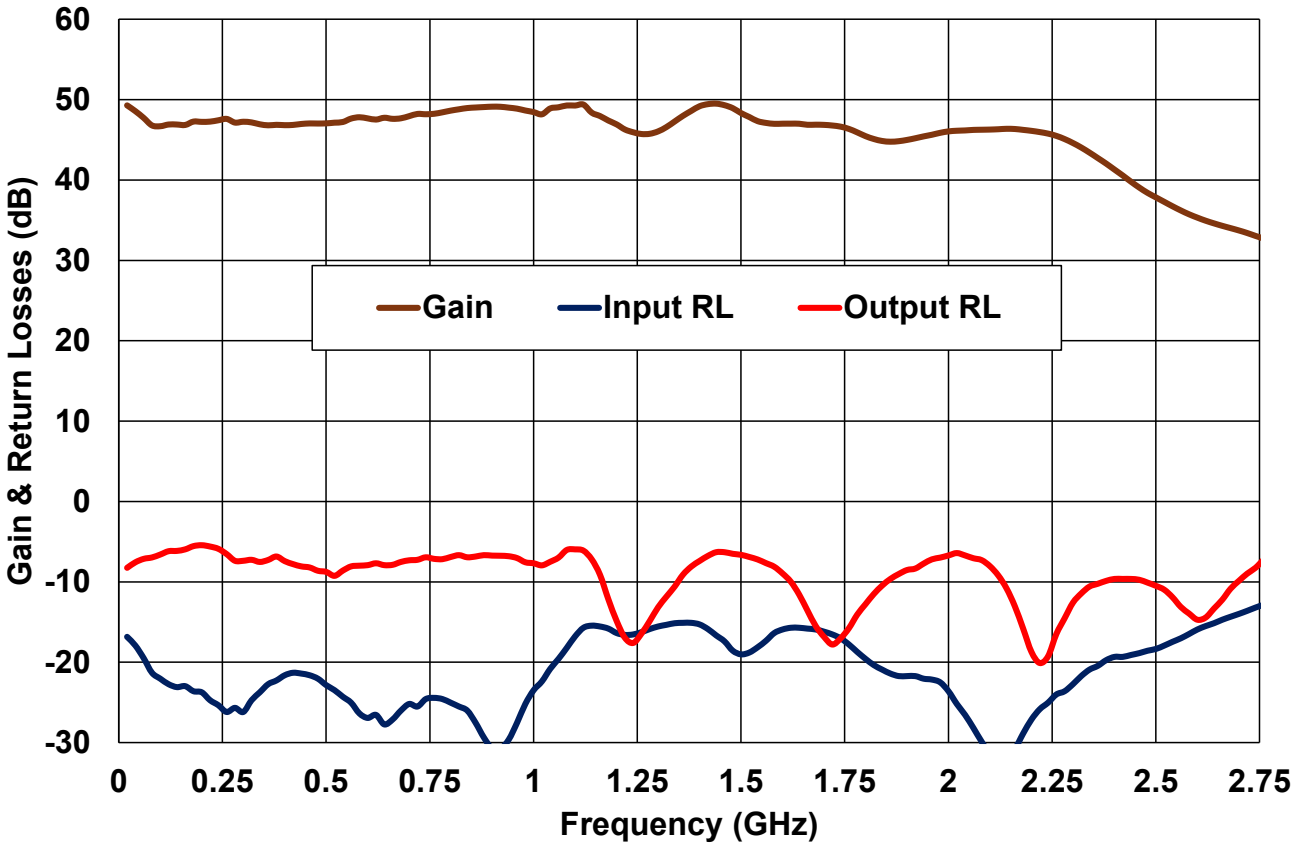
ABSOLUTE MAXIMUM RATING

Parameters	Symbol	Rating
Maximum RF input	RF_{in} Max	+8 dBm
Drain source voltage	V_{dd}	30V
TTL voltage	TTL	+6V
Continuous dissipation at 25ºC	P_t	175W
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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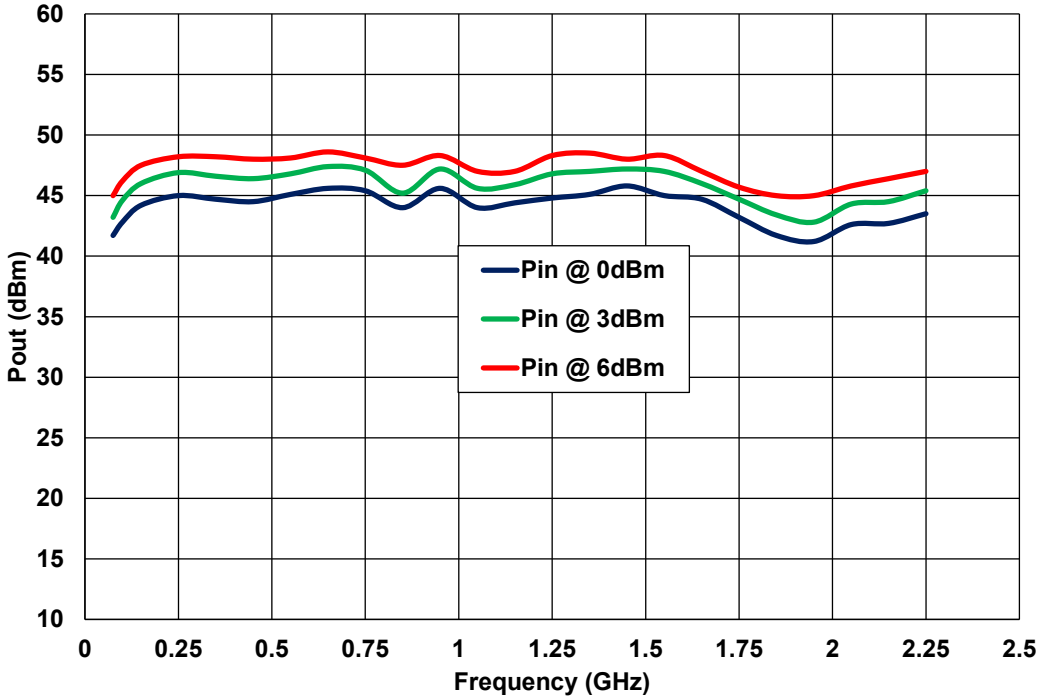
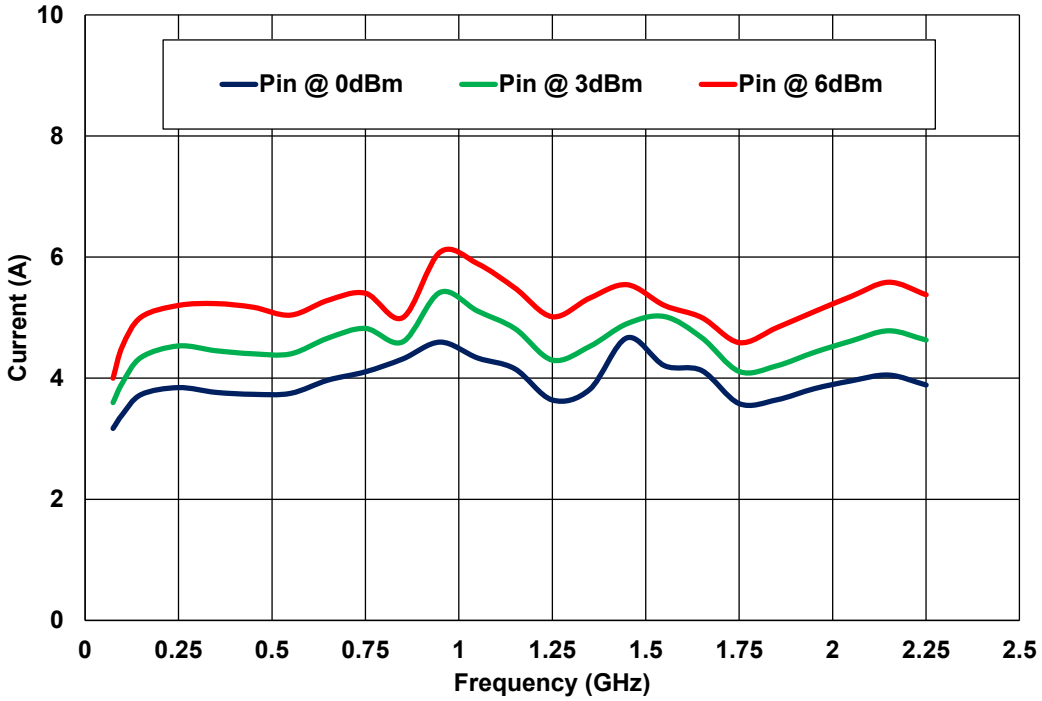
POWER DATA (+28V)





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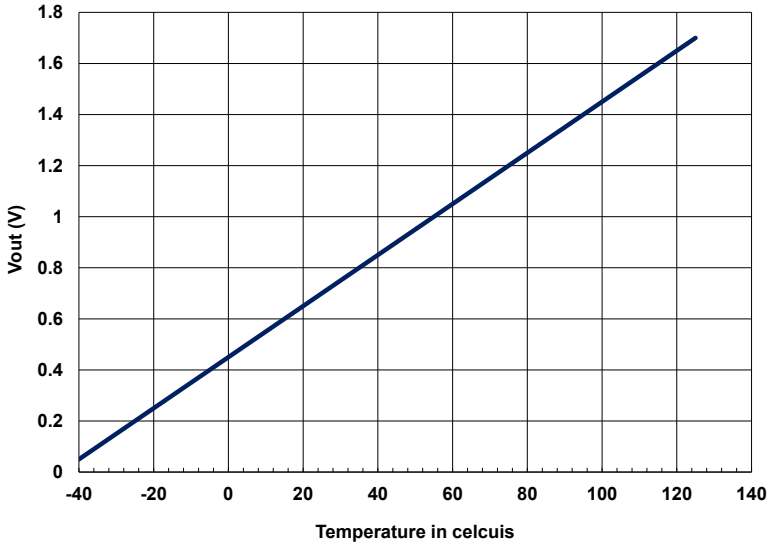
TEMPERATURE SENSOR



* V_{out}= 0.45V + ($T_{°C}$ x 10mV) , e.g for (50°C): V_{out}=0.45+0.01x50=0.95V

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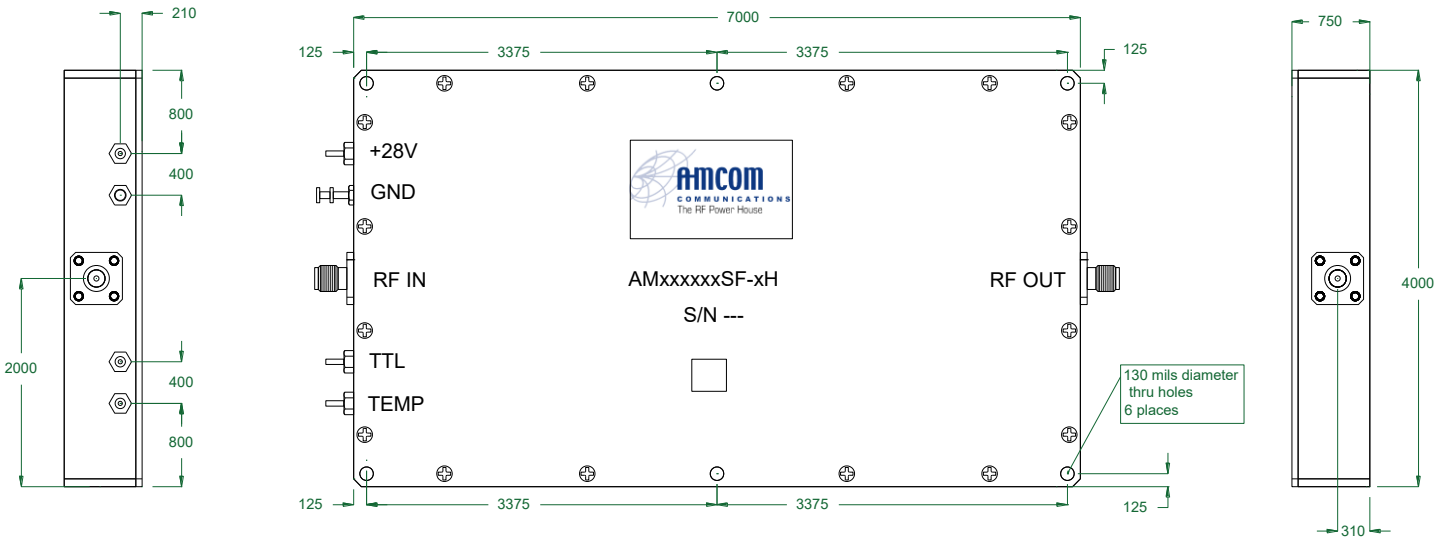
PACKAGE OUTLINE



NOTES:

1- Dimensions are in mils.
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.

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