

DESCRIPTION

AMCOM's AM408041SF-4H is a broadband GaN Power Amplifier module. AM408041F-4H is a wideband power amplifier designed for general purpose applications. It operates from 3.5GHz to 8.5GHz and typically delivers 15 watts (42dBm) of CW output power and 47dB 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 4" (L) x 3.2" (W) x 1.25" (H) and 1.25 lb (570g).



FEATURES

- Wide bandwidth from 3.5 to 8.5GHz
- 41dBm of saturated CW output power
- High gain, 47dB
- Input / Output matched to 50 Ohms

APPLICATIONS

- Radar
- Fixed microwave backhaul
- Instrumentation and measurements

TYPICAL PERFORMANCE * (Quiescent bias is +32V, I_{ddq} = 2A)

Parameters	Minimum	Typical **	Maximum
Frequency	4.0 –8.0GHz	3.5 – 8.5 GHz	
Small Signal Gain	43 dB	47 dB	49 dB
Gain Ripple		± 1.5 dB	± 3.0 dB
P_{3dB}		40 dBm	
P_{5dB}	40 dBm	42 dBm	
Current @ P_{5dB}		< 2.7A	
Noise Figure		< 8 dB	
IP3		44dBm	
Input Return Loss		> 10 dB	
Output Return Loss		> 5 dB	
Thermal Resistance		1.5 °C/W	
Heat Sensor Output (V)		T(Celsius) x 10mV/°C	
RF Detector Output (V)*		40mV/dBm	
TTL RF ON/OFF		0 for OFF 1 for ON	

* Notes:

1- Specifications are subject to change without notice.

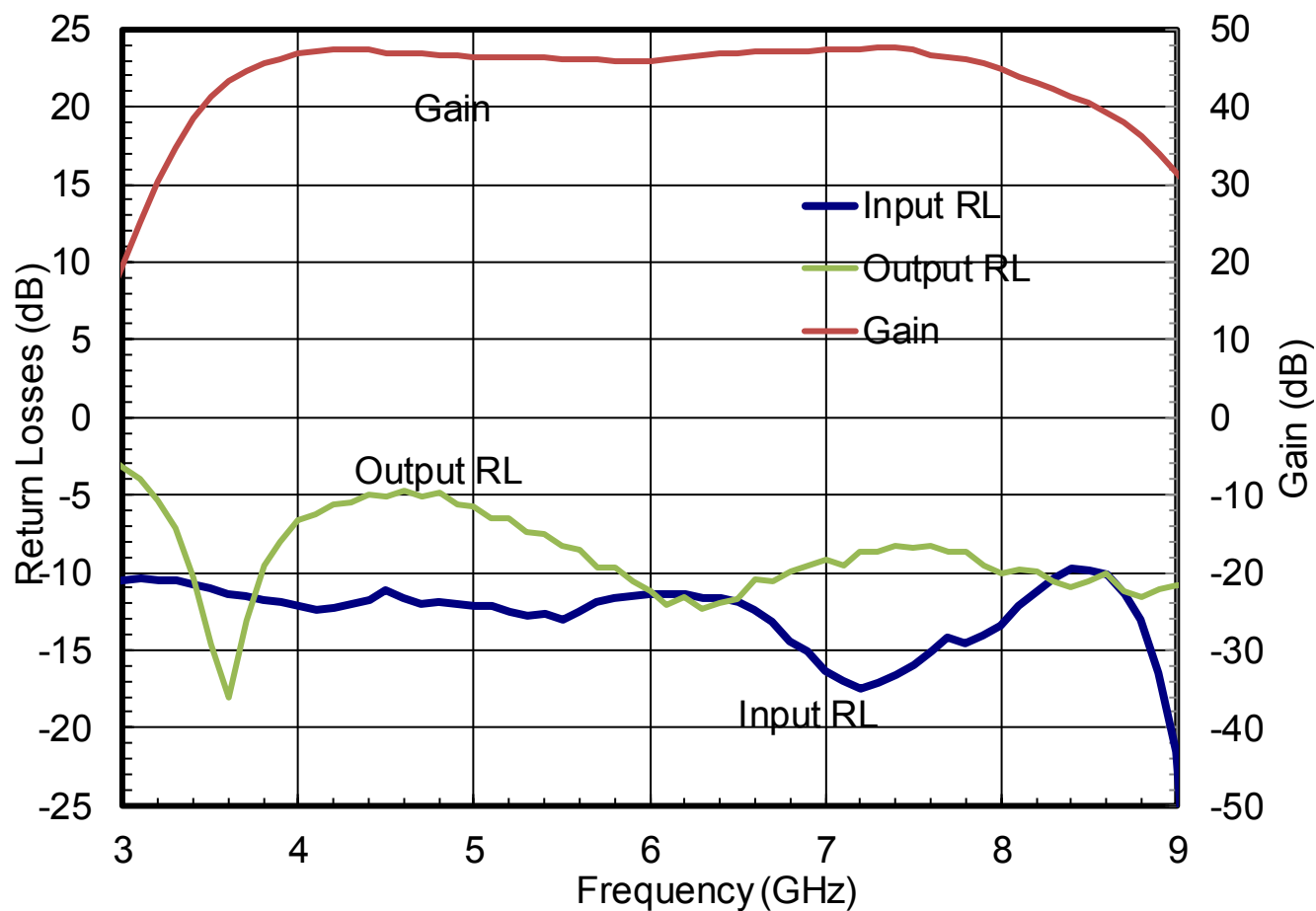
2- Proper heat sink should be used to remove heat from bottom of package

3- Detector is a log detector at P_{out} < 30dBm and consists of a simple resistor divider. (i.e. VSWR sensitive)

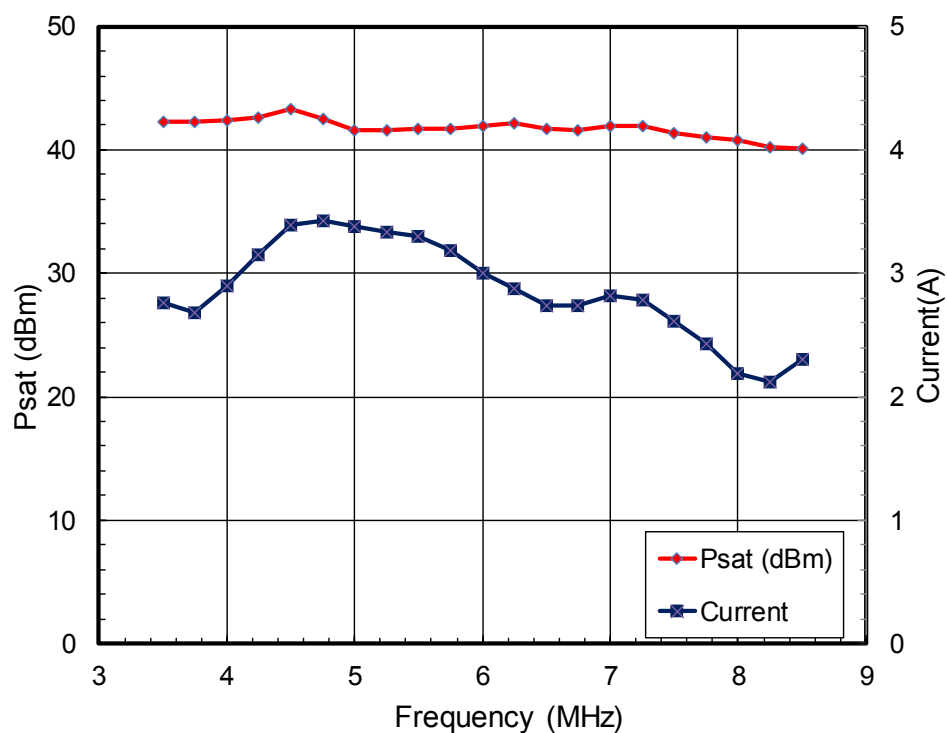
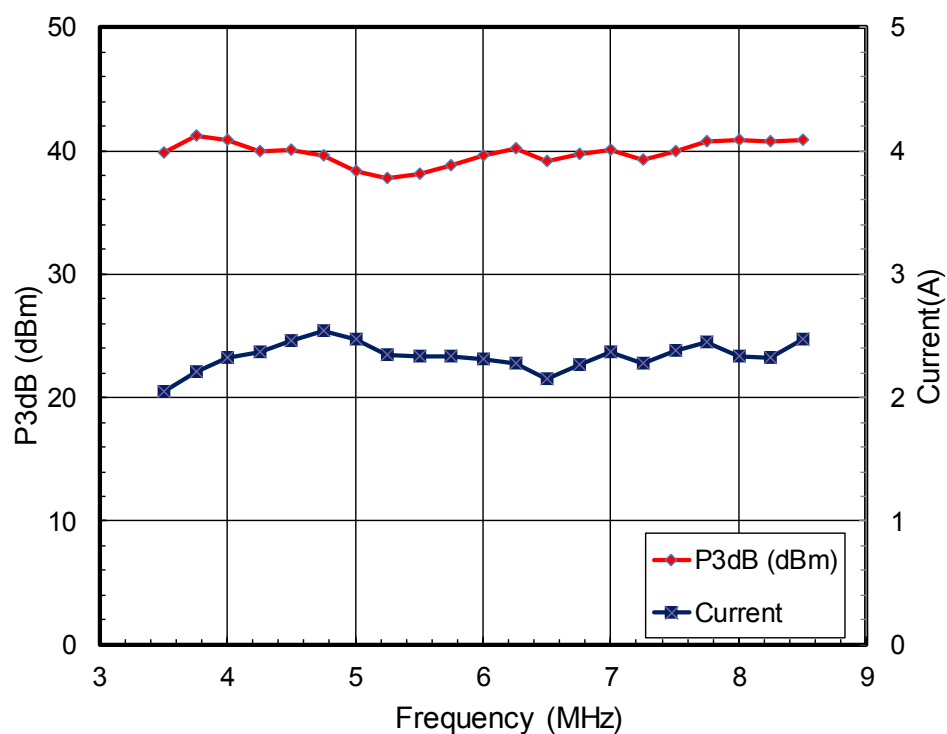
ABSOLUTE MAXIMUM RATING

Parameters	Symbol	Rating
Drain source voltage	$V_{dd1,2}$	40V
Continuous dissipation at 25°C	P_t	120W
Operating temperature	T_{op}	-40°C to +85°C
Storage temperature	T_{sto}	-55°C to +135°C

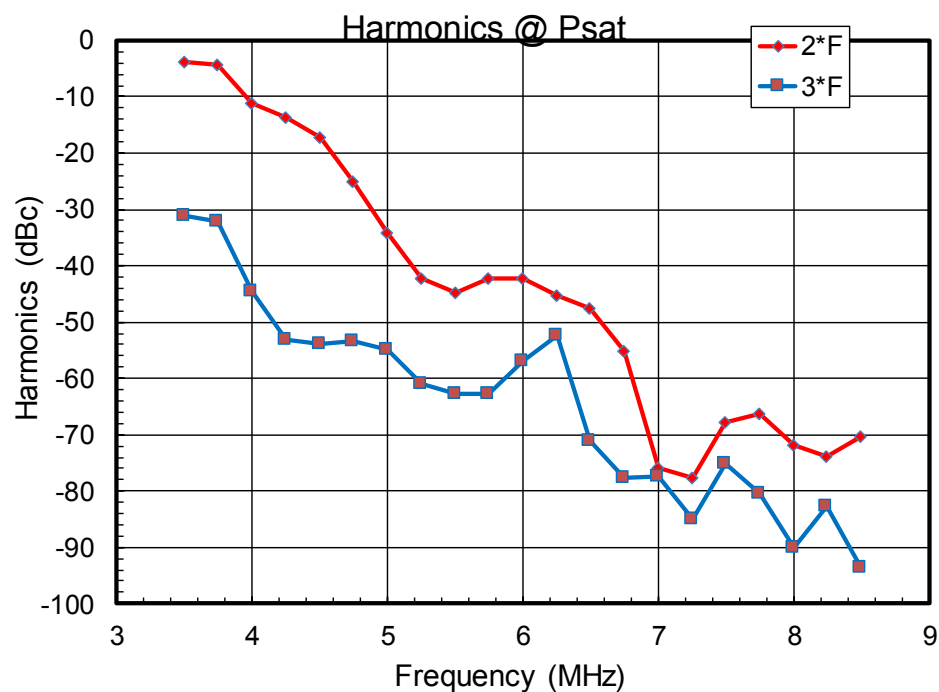
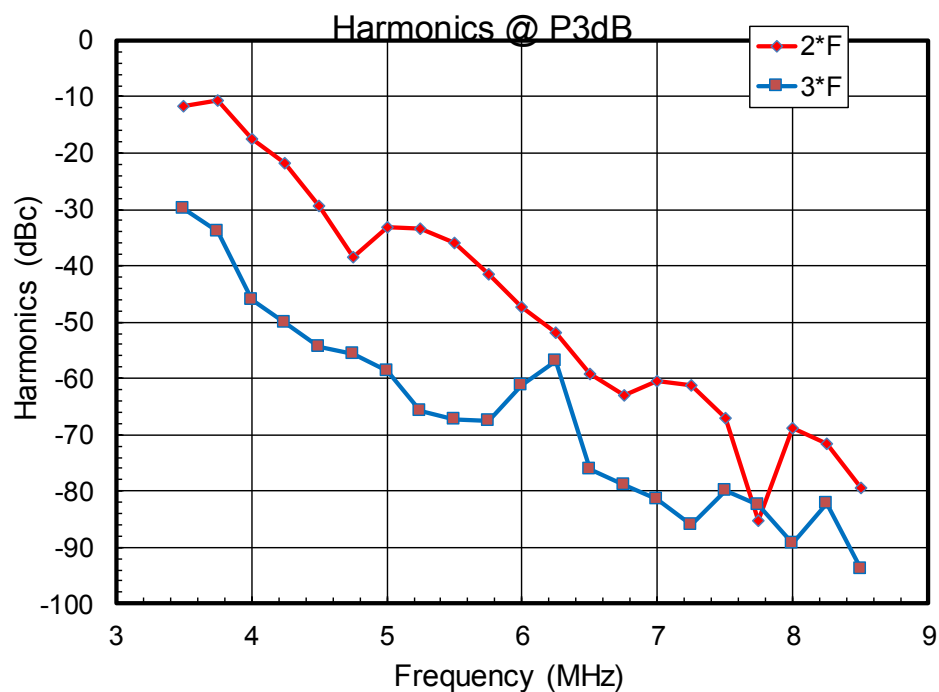
SMALL SIGNAL DATA



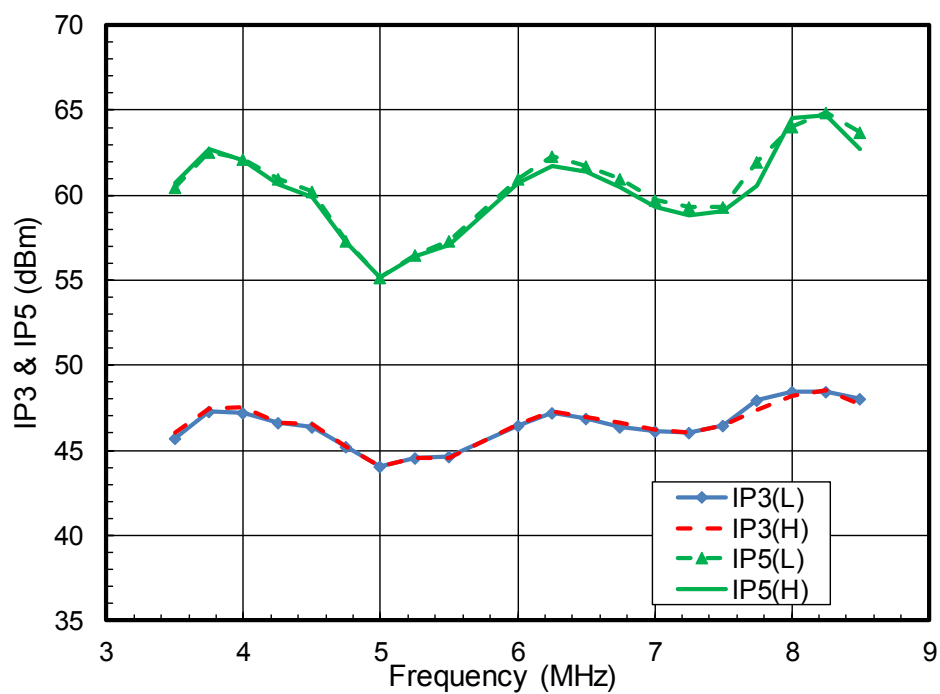
POWER DATA



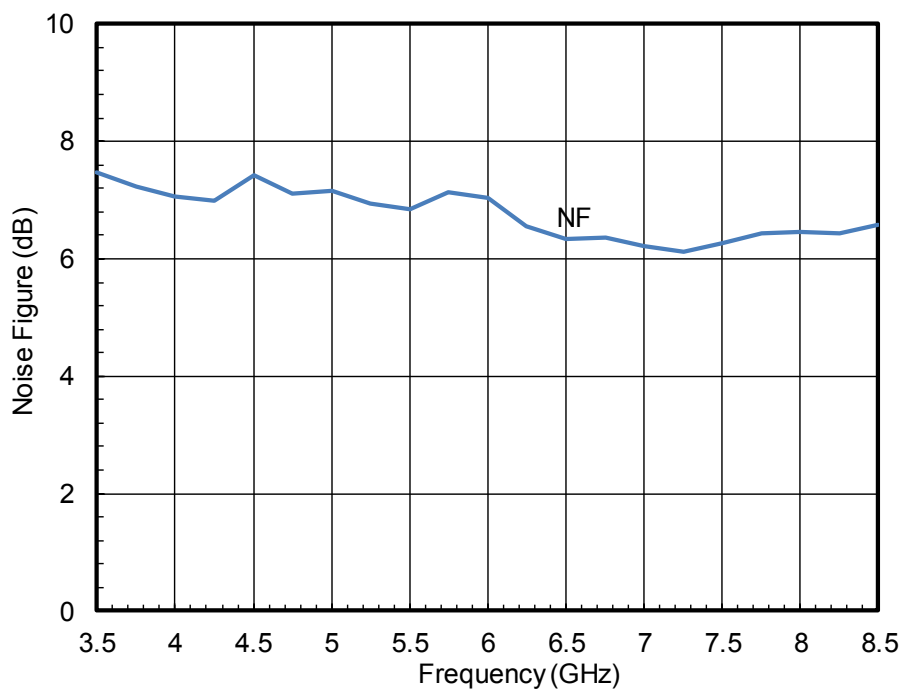
HARMONICS



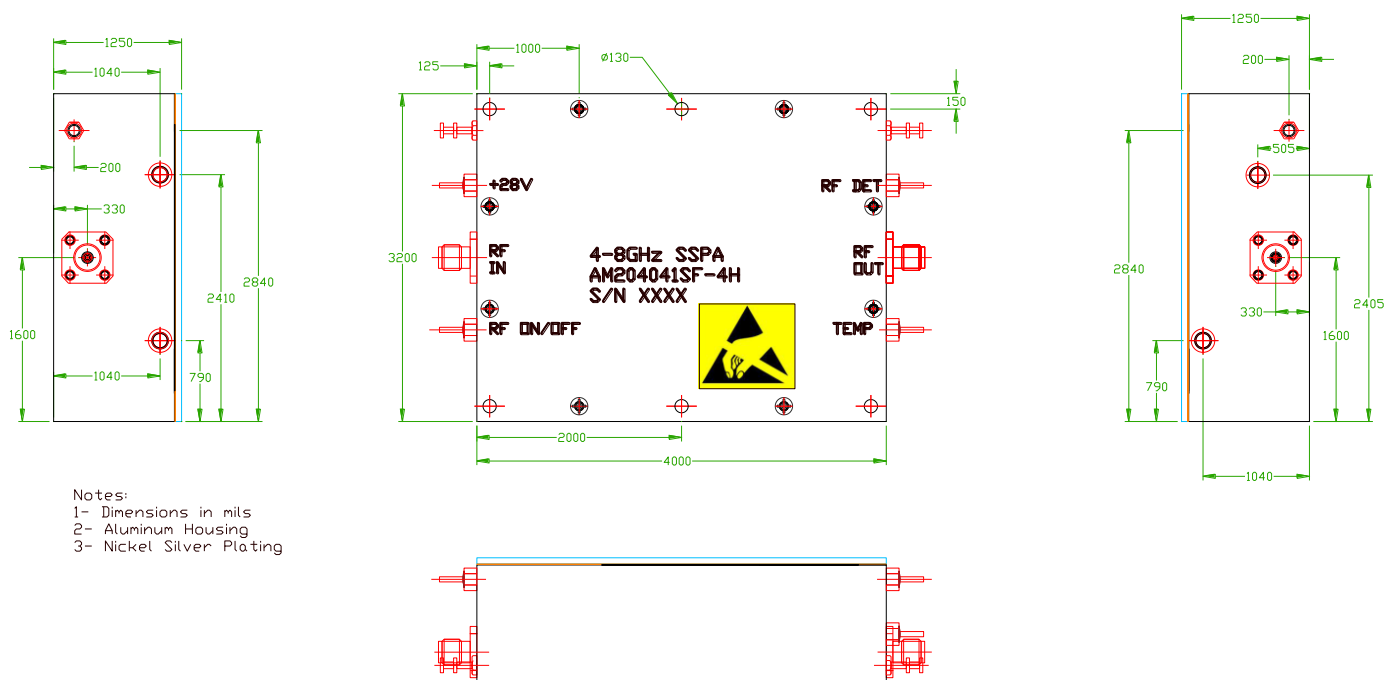
INTERMODULATION DISTORTION



NOISE FIGURE



PACKAGE OUTLINE



NOTES:

- 1- Use a heat sink to remove heat from the package
- 2- Female SMA for RF input and output