

## DESCRIPTION

AMCOM's AM206042SF-4H is a broadband GaN Power Amplifier module. AM206042SF-4H is a wideband power amplifier designed for general purpose applications. It operates from 1.8GHz to 6.5GHz and typically delivers 15 watts (42dBm) of CW output power and 45dB 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 1.8 to 6.5GHz
- 42dBm of saturated CW output power
- High gain, 45dB
- Input / Output matched to 50 Ohms

## APPLICATIONS

- Radar
- Fixed microwave backhaul
- Instrumentation and measurements

## TYPICAL PERFORMANCE \* (Quiescent bias is +32V, I<sub>ddq</sub>= 2A)

Parameters	Minimum	Typical **	Maximum
Frequency	2.0 –6.0GHz	1.8 – 6.5 GHz	
Small Signal Gain	43 dB	45 dB	47 dB
Gain Ripple		± 2.0 dB	± 3.0 dB
P <sub>1dB</sub>		36 dBm	
P <sub>5dB</sub>	40 dBm	42 dBm	
Current @ P <sub>5dB</sub>		< 2.7A	
Noise Figure		< 8 dB	
IP3		44dBm	
Input Return Loss		> 10 dB	
Output Return Loss		> 6 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	

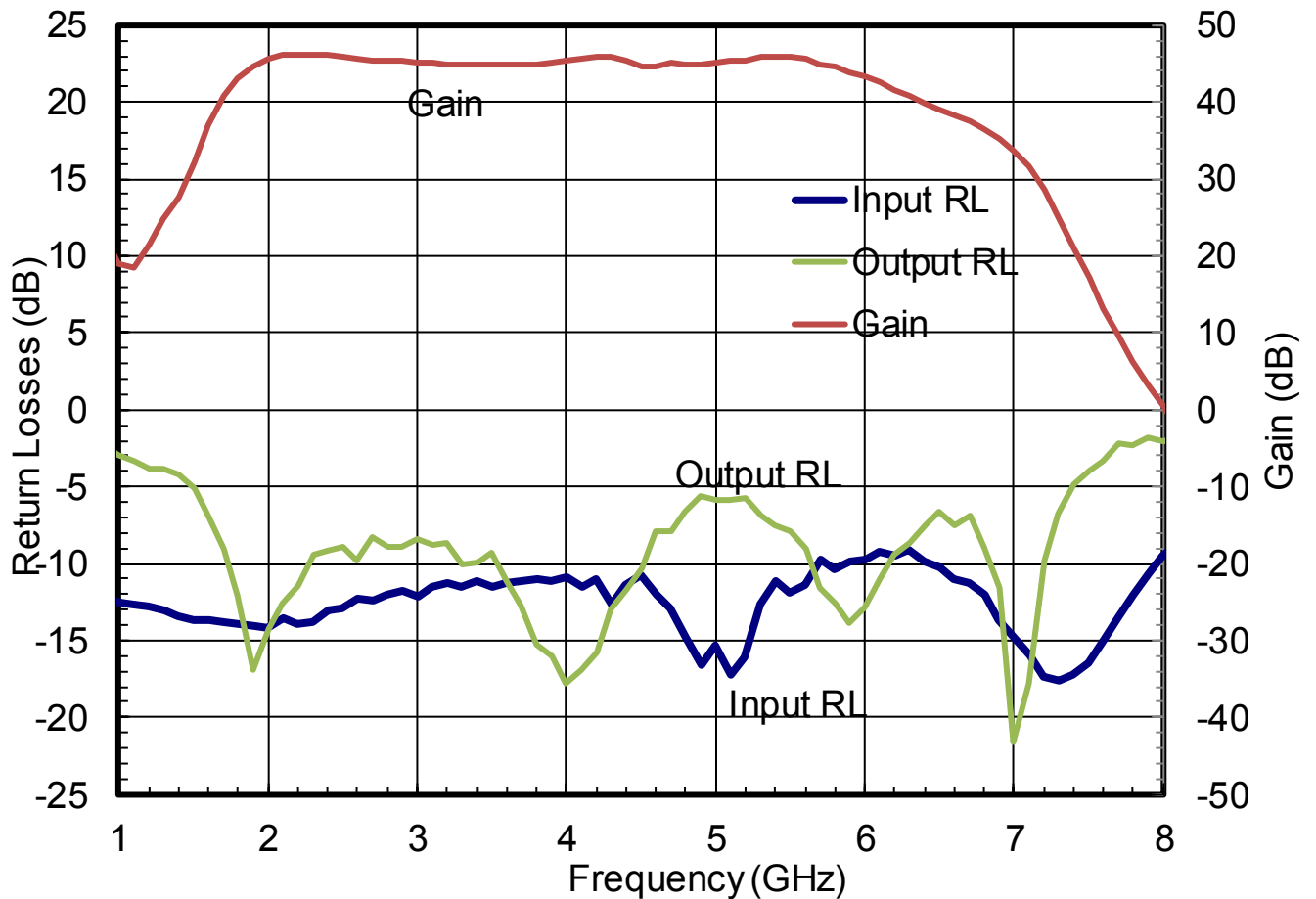
\* Notes:

- 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<sub>out</sub>< 30dBm and consists of a simple resistor divider. (i.e. VSWR sensitive)

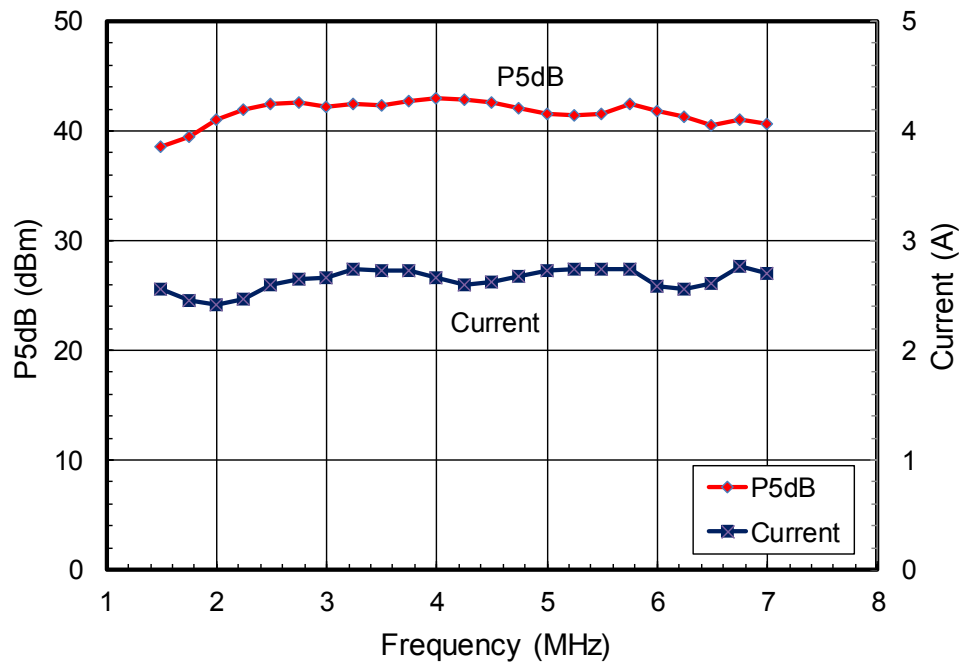
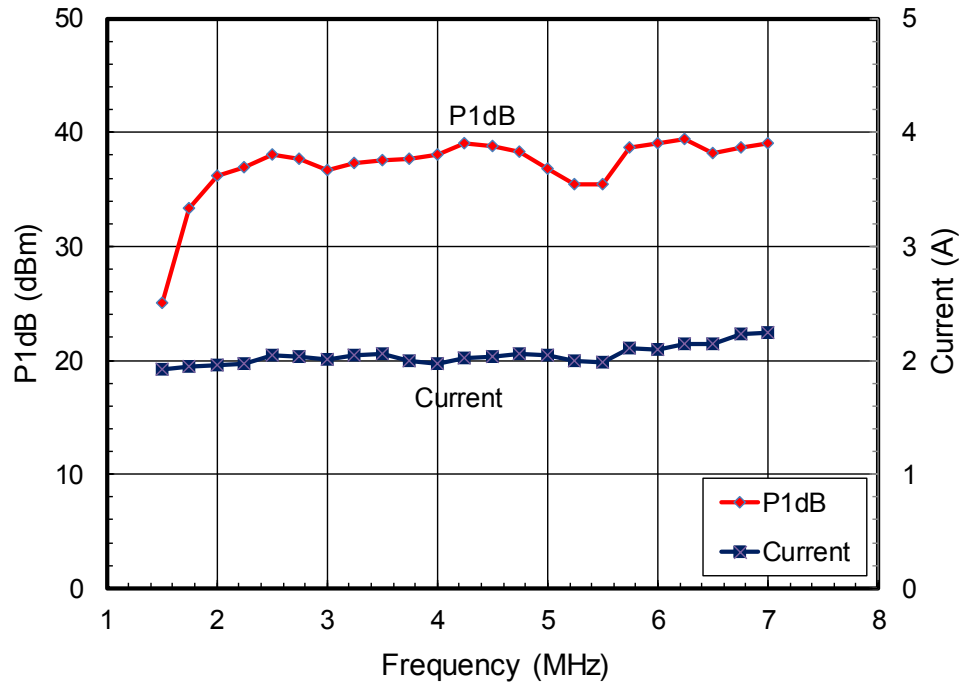
**ABSOLUTE MAXIMUM RATING**

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**

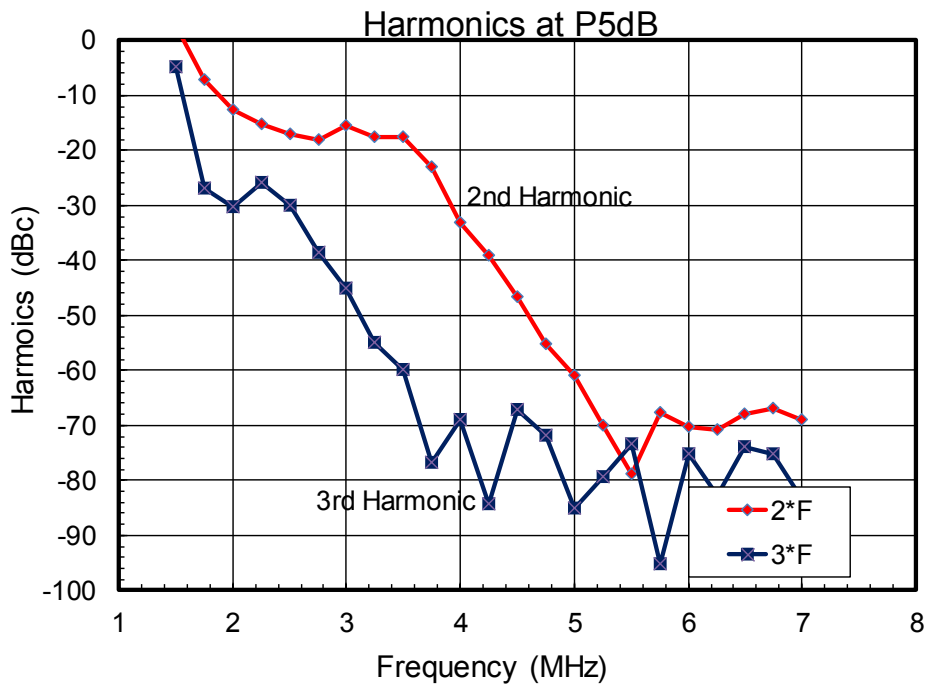
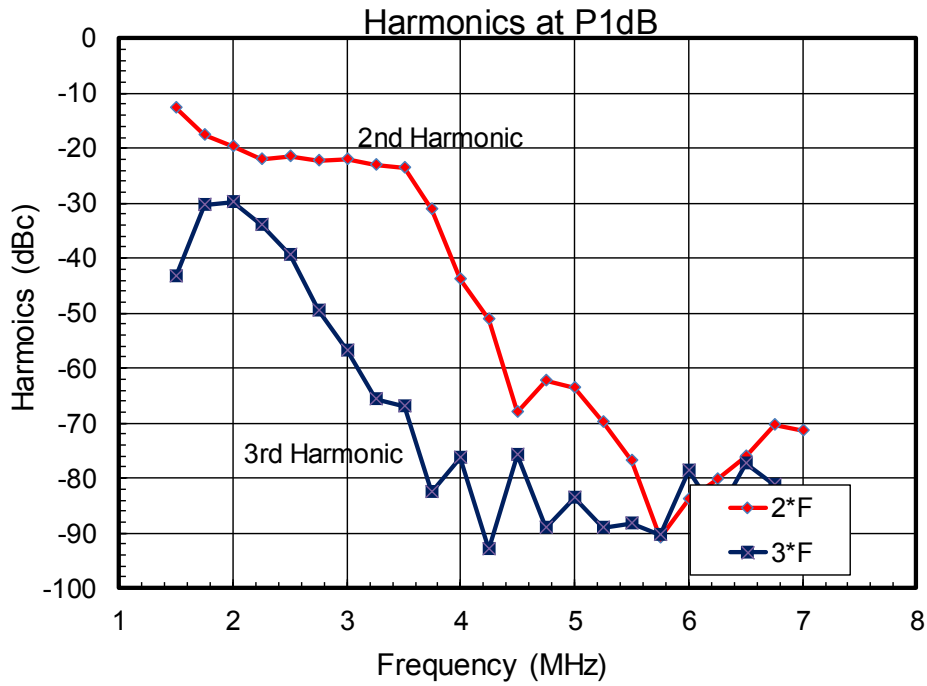


POWER DATA \*

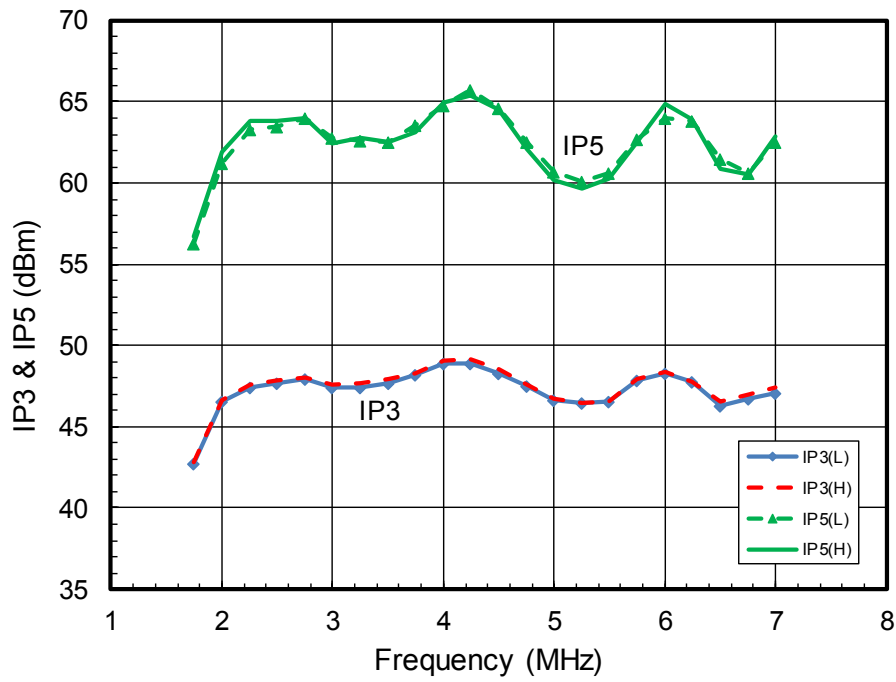


\* Data shown is for  $V_{dd}=+32V$ ,  $I_{ddq}=2.5A$

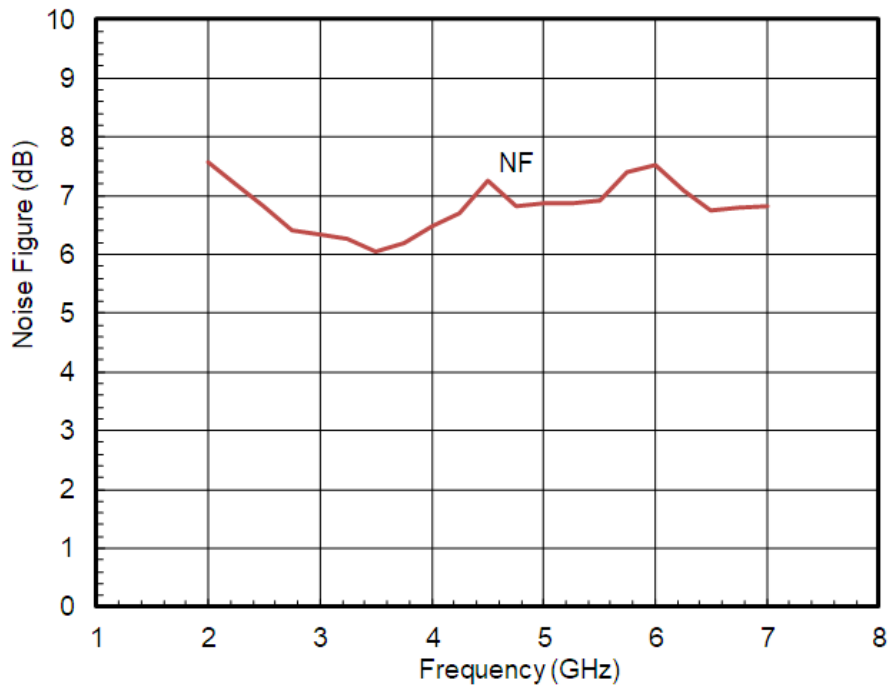
HARMONICS



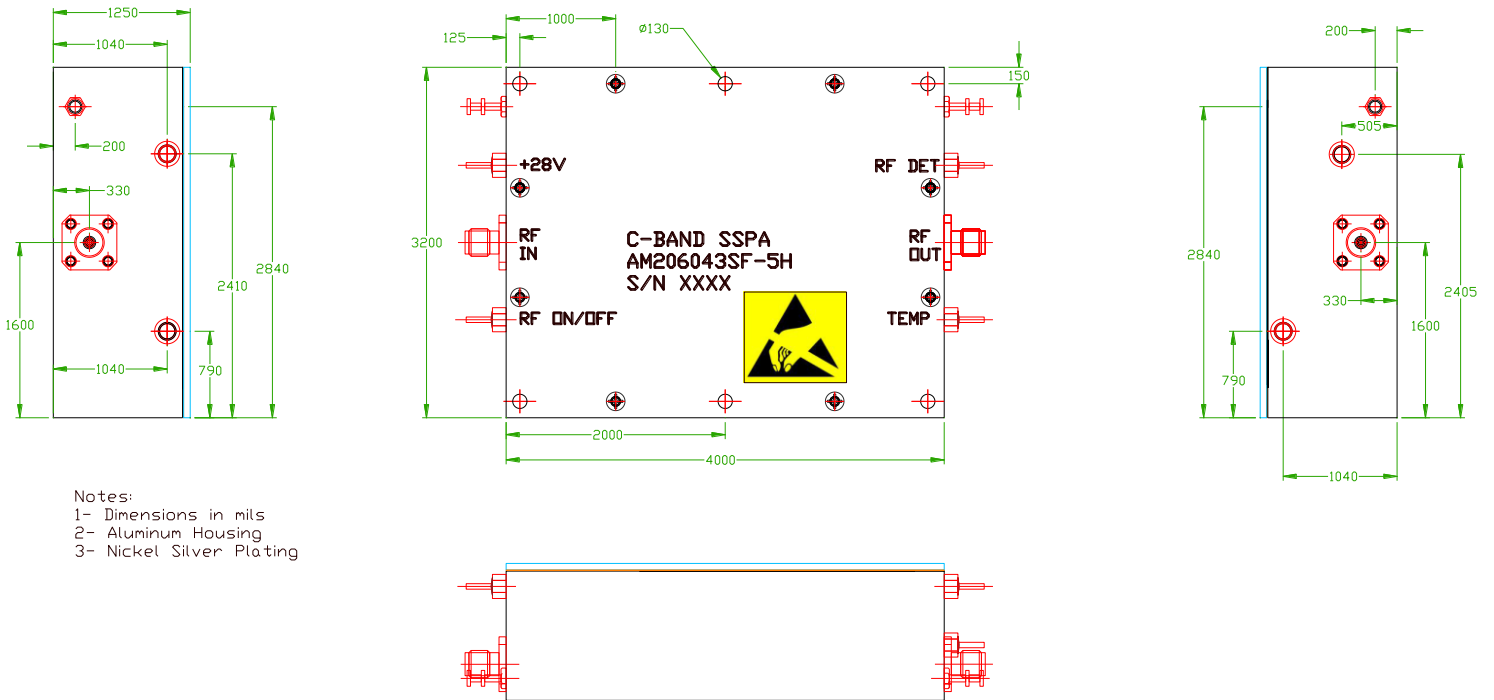
INTERMODULATION DISTORTION



NOISE FIGURE



PACKAGE OUTLINE



- Notes:  
 1- Dimensions in mils  
 2- Aluminum Housing  
 3- Nickel Silver Plating

NOTES:

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