

DESCRIPTION

AMCOM's AM02016044SF-5H is a broadband GaN Solid state power amplifier designed for general purpose applications. It operates from 2 GHz to 16 GHz and typically delivers 25 watts (44dBm) of CW output power and 50dB 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 6" (L) x 4" (W) x 0.75" (H).



FEATURES

- Wide bandwidth from 2 to 16 GHz
- Psat 44 dBm, Gain 50 dB
- Input / Output matched to 50 Ohms
- TTL control & Temperature monitor

APPLICATIONS

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

TYPICAL PERFORMANCE * (Quiescent bias is +28V, I_{ddq} = 4.7A)

Parameters	Minimum	Typical **	Maximum
Frequency	3-15 GHz	2-16 GHz	
Small Signal Gain	42 dB	50 dB	
Gain Ripple		± 4 dB	± 5 dB
Psat @ 24V	41 dBm	43.5 dBm	
Psat @ 28V	41.5 dBm	44 dBm	
Current @ Psat		8.5 A	
Noise Figure		4 dB	
IP3		48 dBm	
Input Return Loss		10 dB	
Output Return Loss		7 dB	
Switching Time		<5 μ S	
TTL RF ON/OFF	<1V for OFF , >2.5 V for ON		
Temperature Sensor Output (V)	$V_{out}=0.45V+(10_{mV} \times \text{Temp in Celsius})$ e.g for (50°C) : $V_{out}=0.45+0.01 \times 50=0.95V$		

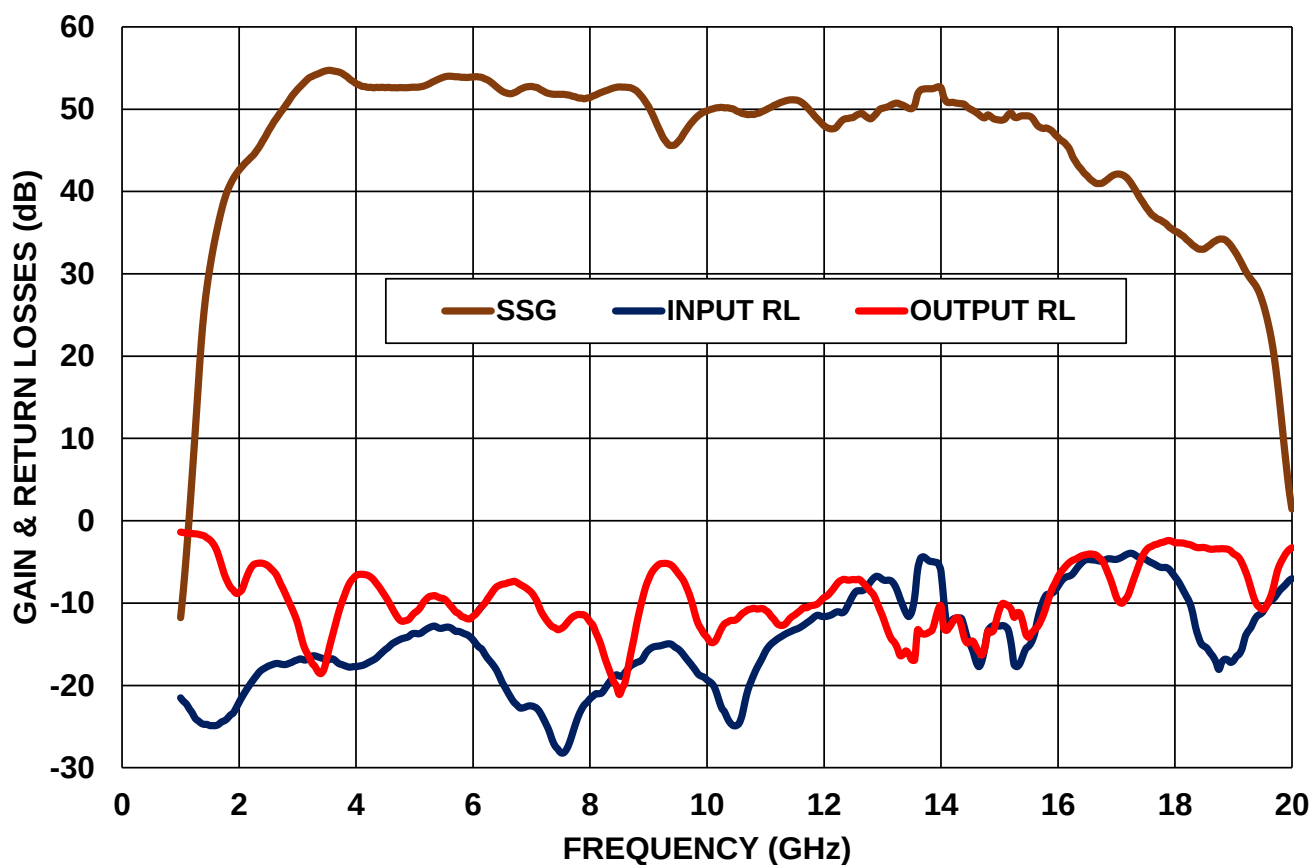
* Notes:

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

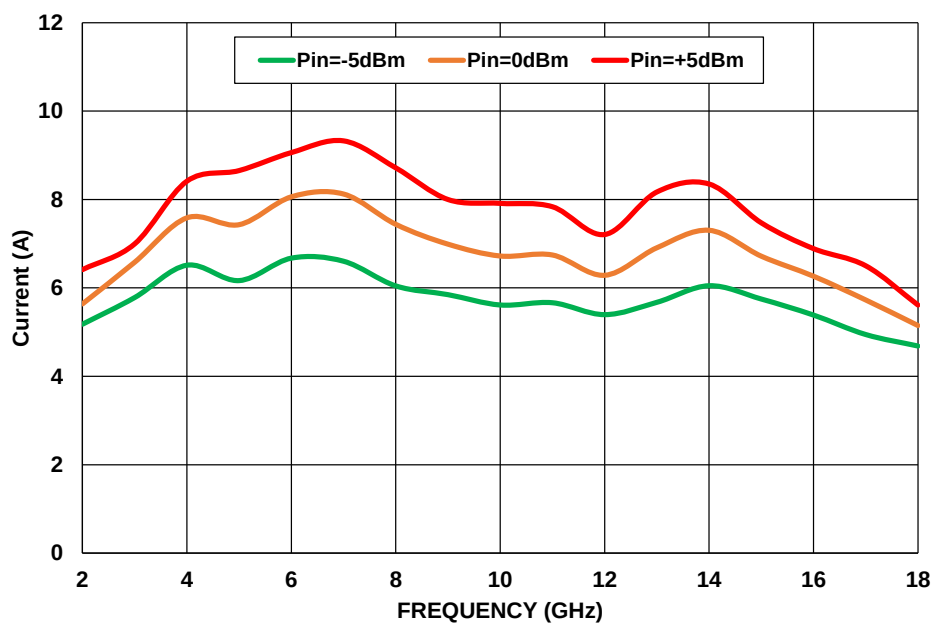
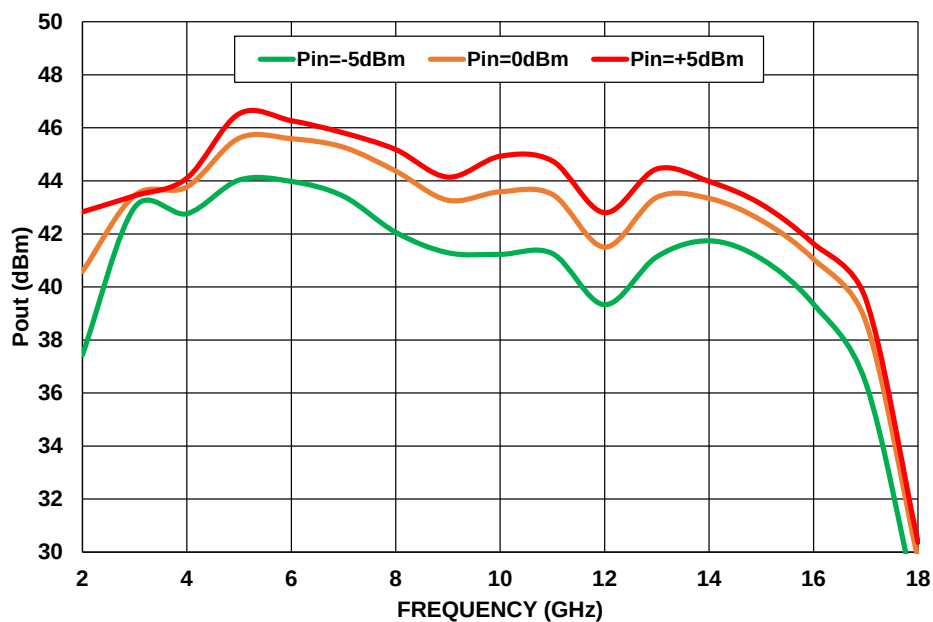
ABSOLUTE MAXIMUM RATING

Parameters	Symbol	Rating
Maximum RF input	$RF_{in\ Max}$	+6 dBm
Drain source voltage	V_{dd}	30V
TTL voltage	TTL	+6V
Continuous dissipation at 25°C	P_t	270W
Operating temperature	T_{op}	-40°C to +85°C
Storage temperature	T_{sto}	-55°C to +135°C

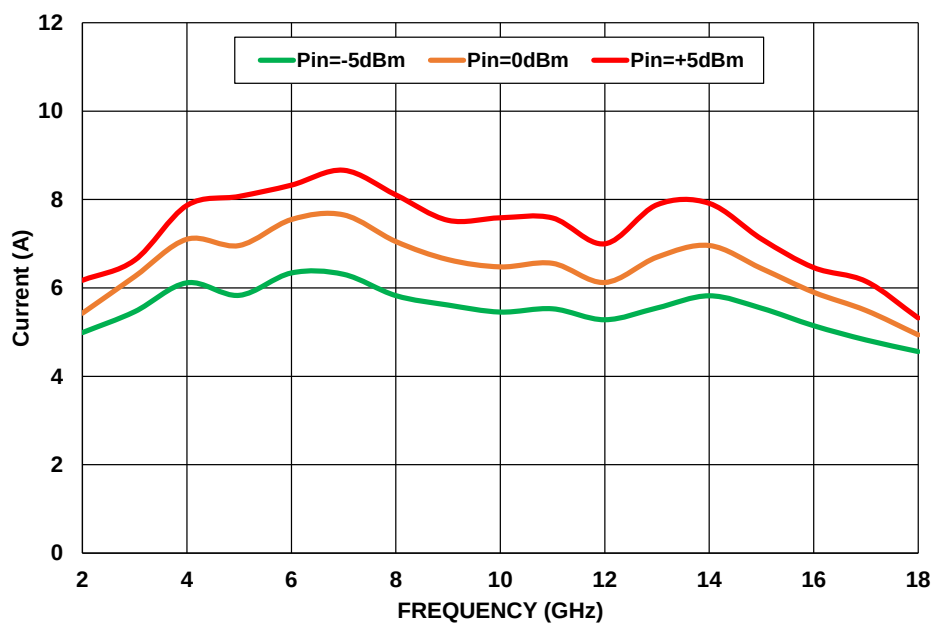
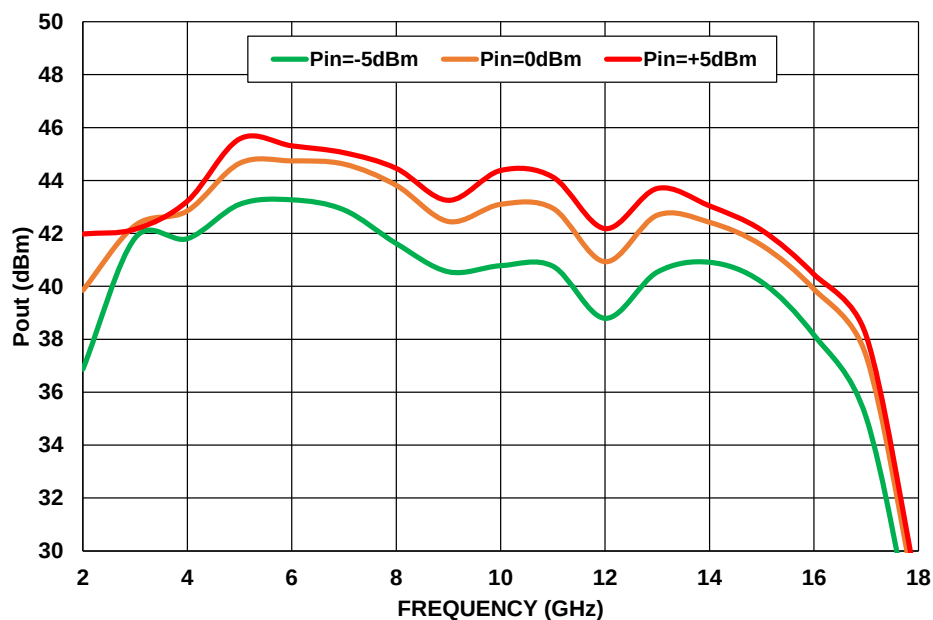
SMALL SIGNAL DATA



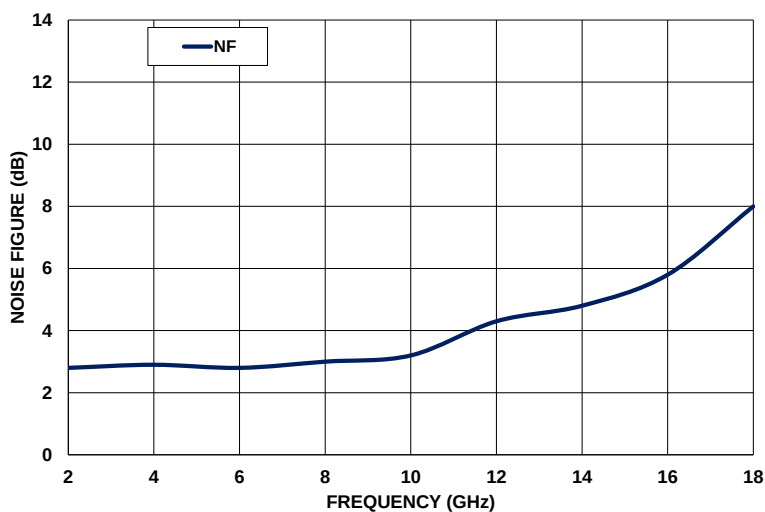
POWER DATA (+28V)



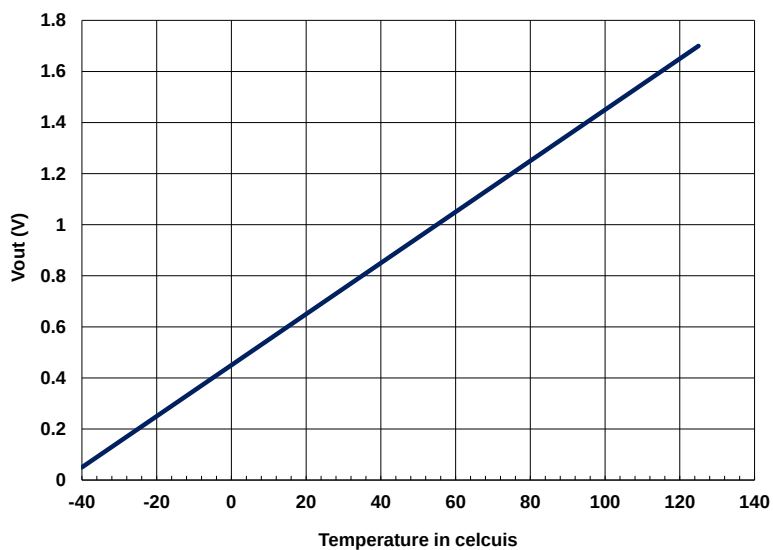
POWER DATA (+24V)



NOISE FIGURE

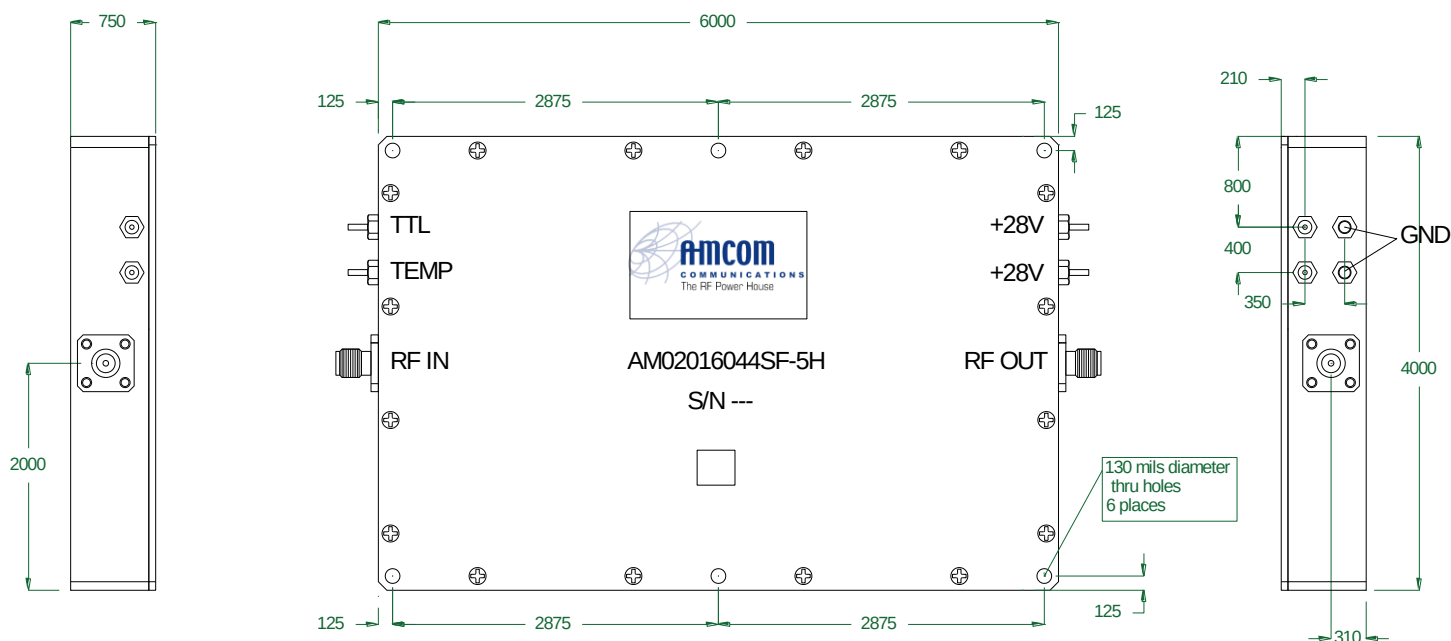


TEMPERATURE SENSOR



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

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.