



## DESCRIPTION

AMCOM's AM206541UM-3H is a broadband power amplifier. It operates from 2.0GHz to 6.5GHz and typically delivers more than 12 watts (41 dBm) output power with 26 dB small signal gain. The amplifier module has 4 screw slots for mounting to a heat sink. This amplifier module is very small and light weight at 1.5" (L) x 1.2" (W) x 0.56" (H) and 1.6 oz (45g).



## FEATURES

- Broadband from 2.0 to 6.5GHz
- Saturated output power Psat is 41dBm
- High gain, 26dB
- Input & output matched to 50 Ohms

## APPLICATIONS

- Instrumentation
- Commercial telecom transmission equipment
- Fixed microwave backhaul

## TYPICAL PERFORMANCE \*

Parameters	Minimum	Typical **	Maximum
Frequency	2.5 – 6.0GHz	2.0 – 6.5GHz	
Small Signal Gain	22dB	26dB	30dB
Gain Ripple		± 2dB	± 5.0dB
P1dB	36dBm	38dBm	
Psat	39dBm	41dBm	
Psat Efficiency		20%	
Noise Figure		TBD	
IP3		TBD	
Input Return Loss	10dB	>17dB	
Output Return Loss	5dB	>7dB	
Thermal Resistance		TBD	

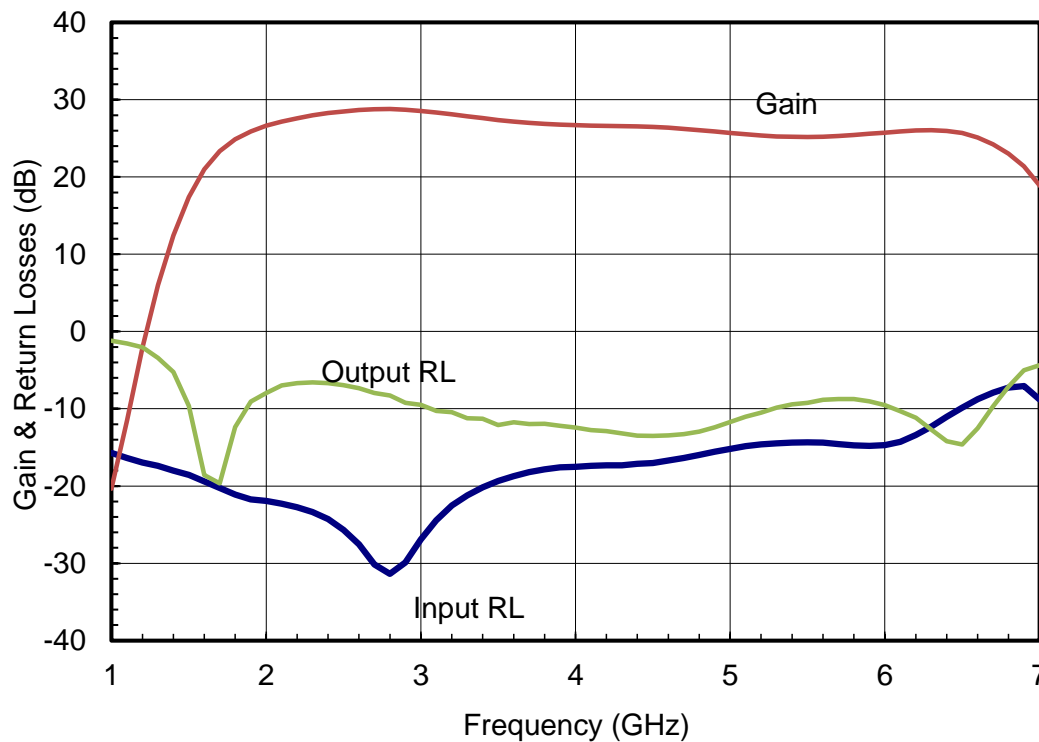
\* Specifications subject to change without notice.

\*\* Bias Conditions\*\*:  $V_{ds1} = V_{ds2} = +28V$ ,  $I_{dsq1} + I_{dsq2} = 0.54A$ ,  $V_{ds3} = +28V$ ,  $I_{dsq3} = 0.9A$ ,  $V_{gs1}$ ,  $V_{gs2}$  &  $V_{gs3} = -2.3V$

**ABSOLUTE MAXIMUM RATING**

Parameters	Symbol	Rating
First & second stage drain voltages	$V_{ds1}, V_{ds2}$	40V
Second stage drain voltage	$V_{ds3}$	40V
Gate source voltage	$V_{gs1} \& V_{gs2}$	-6V
Drain source current	$I_{dsq1} + I_{dsq2}$	0.9A
Drain source current	$I_{dsq3}$	1.5A
Continuous dissipation at 25°C	$P_t$	80W
Channel temperature	$T_{ch}$	200°C
Operating temperature	$T_{op}$	-55°C to +85°C
Storage temperature	$T_{sto}$	-55°C to +135°C

**SMALL SIGNAL DATA\***

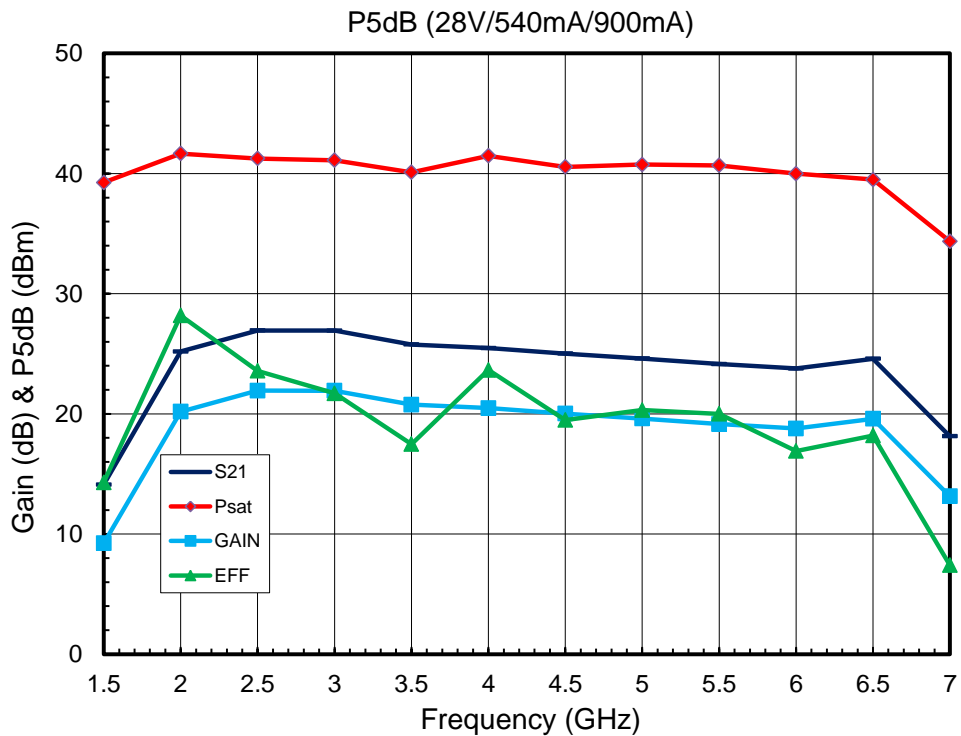
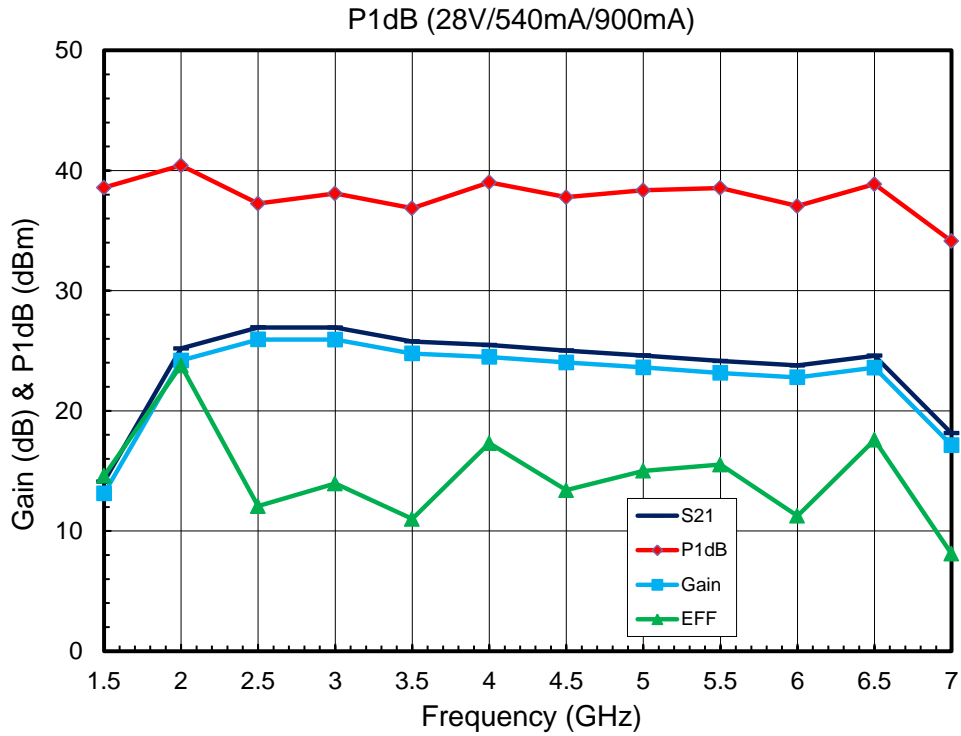


\* S-Parameters measured using test fixture. Bias is  $V_{ds1} = V_{ds2} = V_{ds3} = 28V$ ,  $I_{ds1} = 180mA$ ,  $I_{ds2} = 360mA$ ,  $I_{ds3} = 900mA$ ,  $V_{gs1} = V_{gs2} = V_{gs3} = -2.3V$ .

**NOISE DATA**

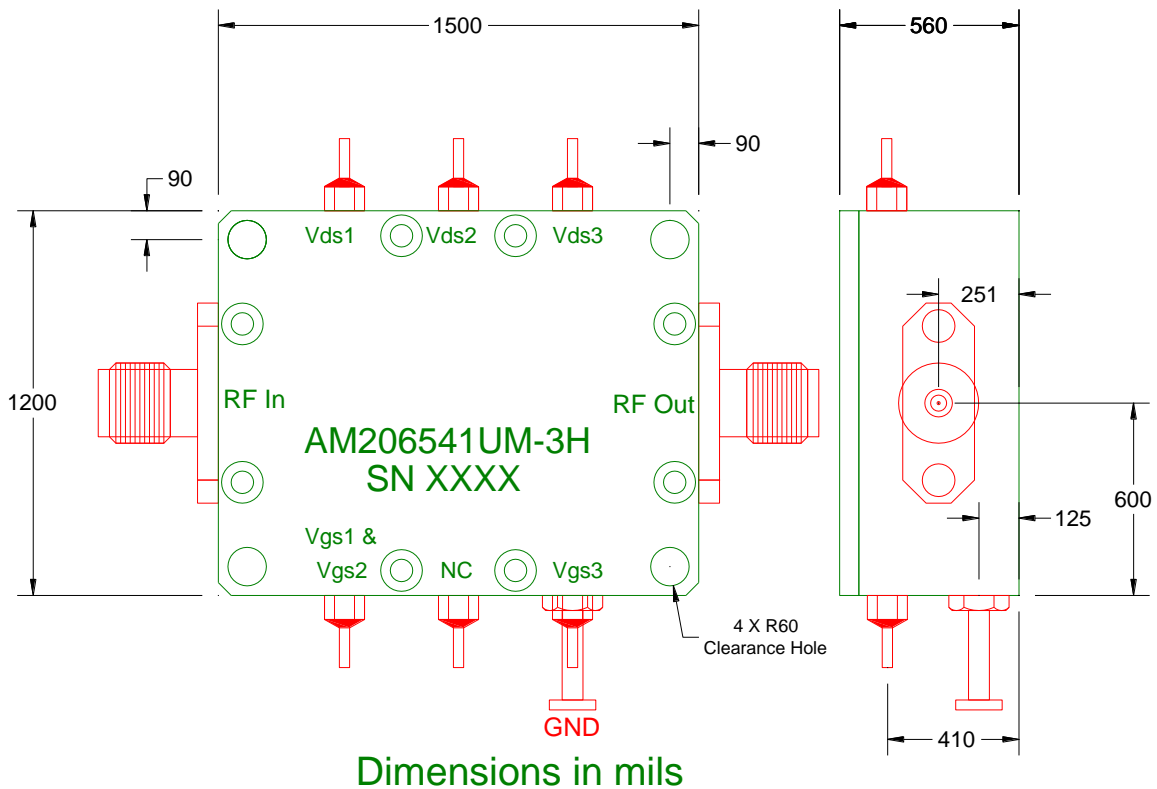
(TBD)

POWER DATA\*\*



\*\* Power measured using test fixture. Bias is  $V_{ds1} = V_{ds2} = V_{ds3} = 28V$ ,  $I_{ds1} = 180mA$ ,  $I_{ds2} = 360mA$ ,  $I_{ds3} = 900mA$ ,  $V_{gs1} = V_{gs2} = V_{gs3} = -2.3V$ . Gain in the two graphs is the compressed gain at 1dB and 5dB compression respectively.

**PACKAGE OUTLINE**



Pin No.	Function	Bias
1	$V_{gs1}$ & $V_{gs2}$	-2.3V
2	NC	-
3	$V_{gs3}$	-2.3V
4	$V_{ds3}$	+28V
5	$V_{ds2}$	+28V
6	$V_{ds1}$	+28V

**Important Notes:**

- 1- Recommended current biases are 180mA, 360mA & 900mA for the first, second and third stages respectively.
- 2- Do not apply  $V_{ds1}$ ,  $V_{ds2}$  &  $V_{ds3}$  without proper negative voltages on  $V_{gs1}$ ,  $V_{gs2}$  &  $V_{gs3}$ . Always apply negative bias before positive bias during turn-on and always remove positive bias before negative bias during turn-off.