

DESCRIPTION

AMCOM's AM254038UM-2H is a broadband GaAs Power Amplifier module designed for Wireless Internet Access, Wireless Local Loop, and Two Way Radio. It operates from 2.5GHz to 4.0GHz and typically delivers 39dBm (6W) output power and 18 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

- Wide bandwidth from 2.5 to 4.0GHz
- 39dBm of saturated output power
- High gain, 18dB
- Input /Output matched to 50 Ohms

APPLICATIONS

- PCS Pico Cell Base Station
- MMDS
- WiMAX & WLL
- 2-way radio

TYPICAL PERFORMANCE * ($V_{dd1,2} = +12V$, $I_{ddq1} = 0.25A$, $I_{ddq2} = 1.05A$, $V_{gs1,2} = -0.82V$)

Parameters	Minimum	Typical **	Maximum
Frequency	3.2 – 3.8GHz	2.5 – 4.0 GHz	
Small Signal Gain	16 dB	18.0 dB	
Gain Ripple		± 1.0 dB	± 2.0 dB
P _{1dB}	34 dBm	38 dBm	
P _{3dB}	35 dBm	39 dBm	
Efficiency @ P _{1dB}		30%	
Noise Figure		9	12 dB
IP3		40dBm	
Input Return Loss		10 dB	
Output Return Loss		7dB	
Thermal Resistance		6 °C/W	

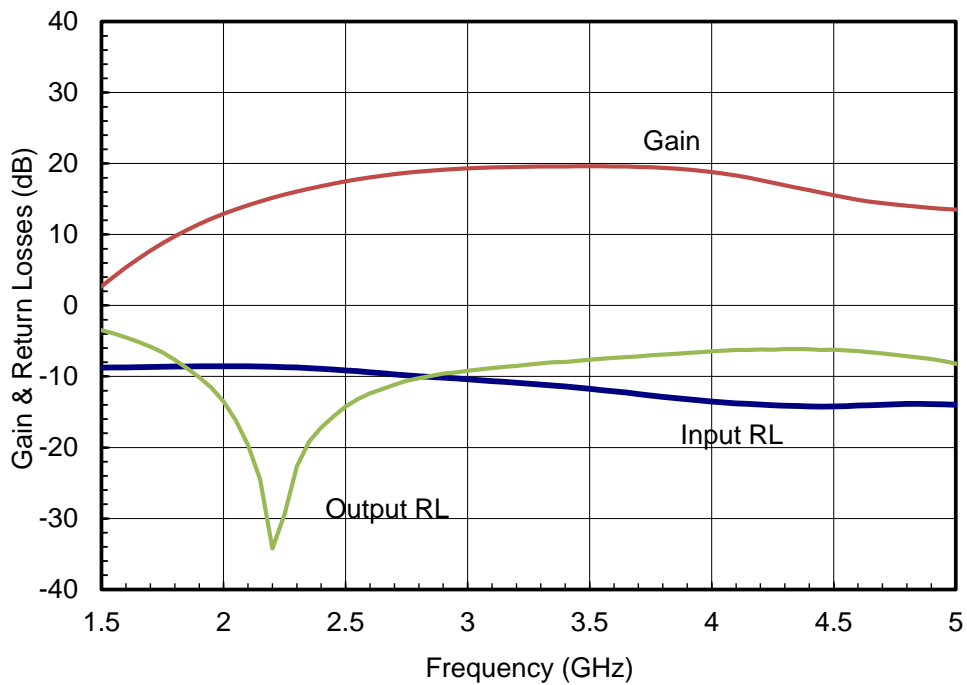
* Notes:

- 1- Specifications are subject to change without notice.
- 2- $V_{gs1,2}$ should be adjusted to -0.82V approximately to get the specified currents, and will vary slightly from one unit to another.

ABSOLUTE MAXIMUM RATING

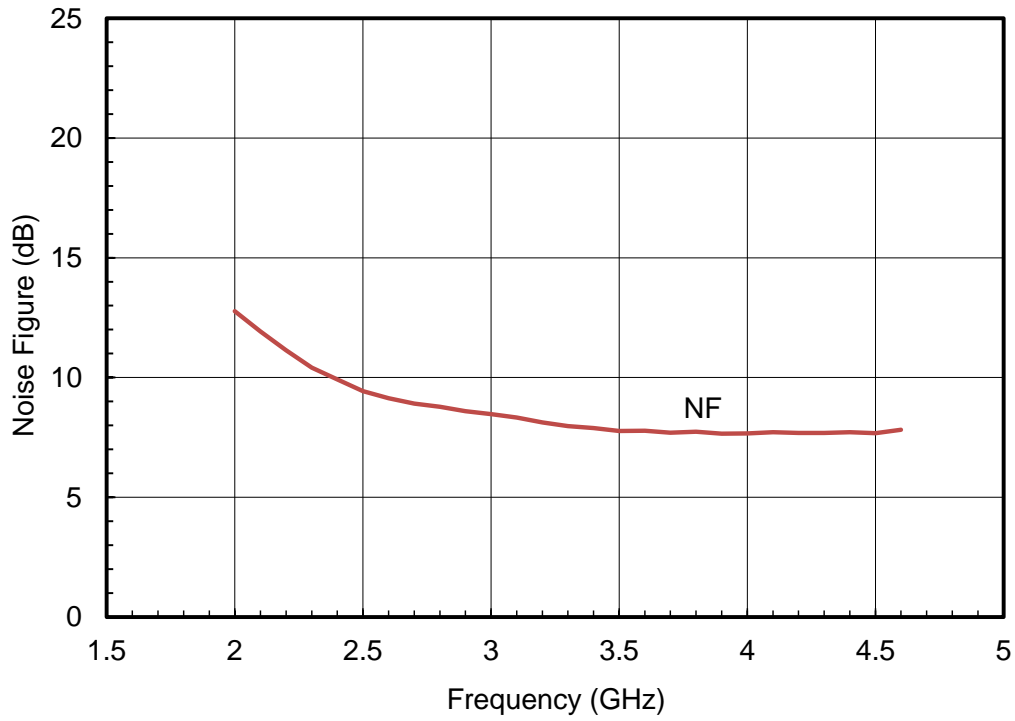
Parameters	Symbol	Rating
Drain source voltage	$V_{dd1,2}$	+13V
Gate source voltage	$V_{gs1,2}$	-5V
Drain source current	I_{ddq1}	0.4A
Drain source current	I_{ddq2}	1.6A
Continuous dissipation at 25°C	P_t	25W
Channel temperature	T_{ch}	175°C
Operating temperature	T_{op}	-40°C to +85°C
Storage temperature	T_{sto}	-55°C to +135°C

SMALL SIGNAL DATA*

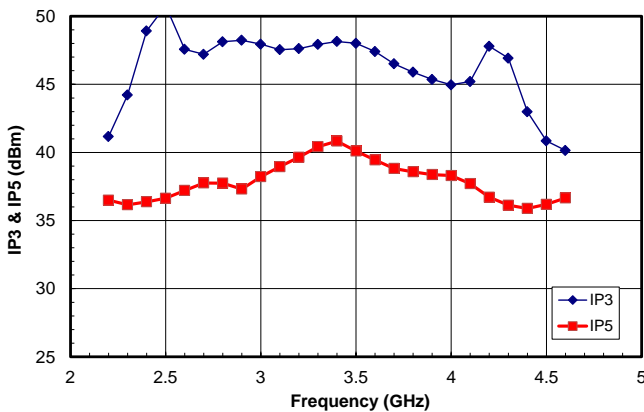
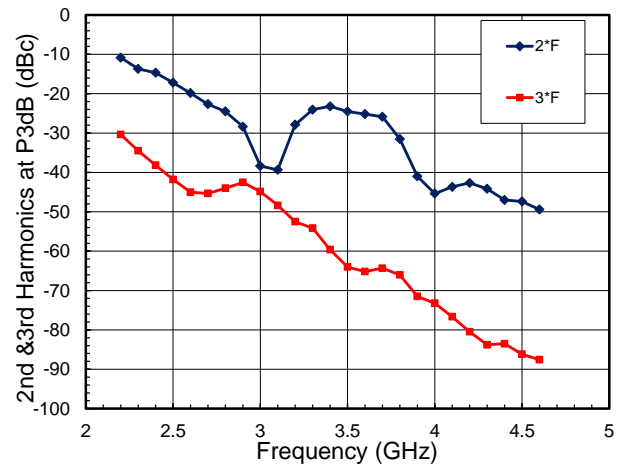
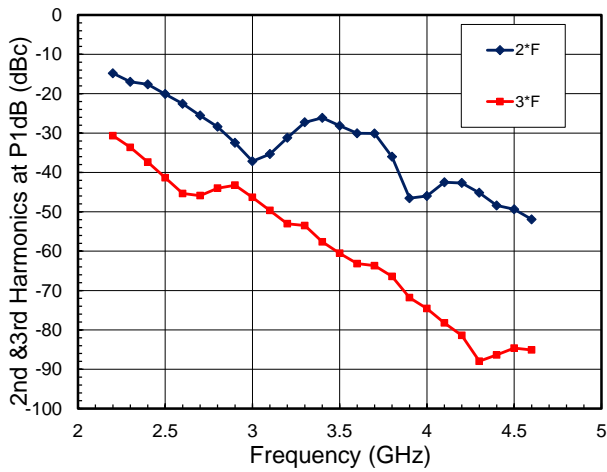
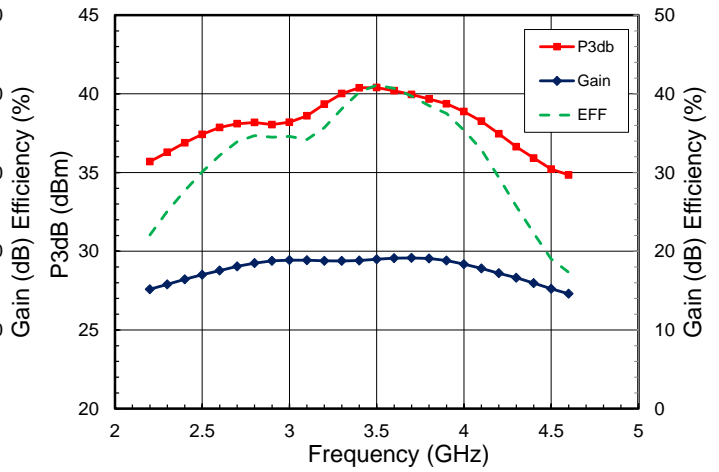
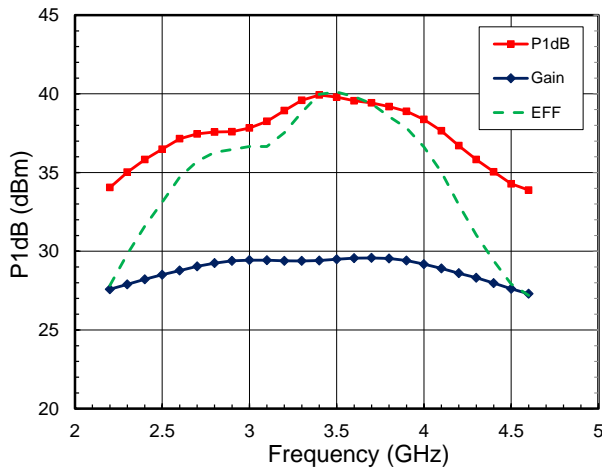


* Data shown is for $V_{dd1,2}=+12V$, $I_{ddq1}=0.25A$, $I_{ddq2}=1.05A$, $V_{gs1,2}=-0.82V$.

NOISE FIGURE DATA

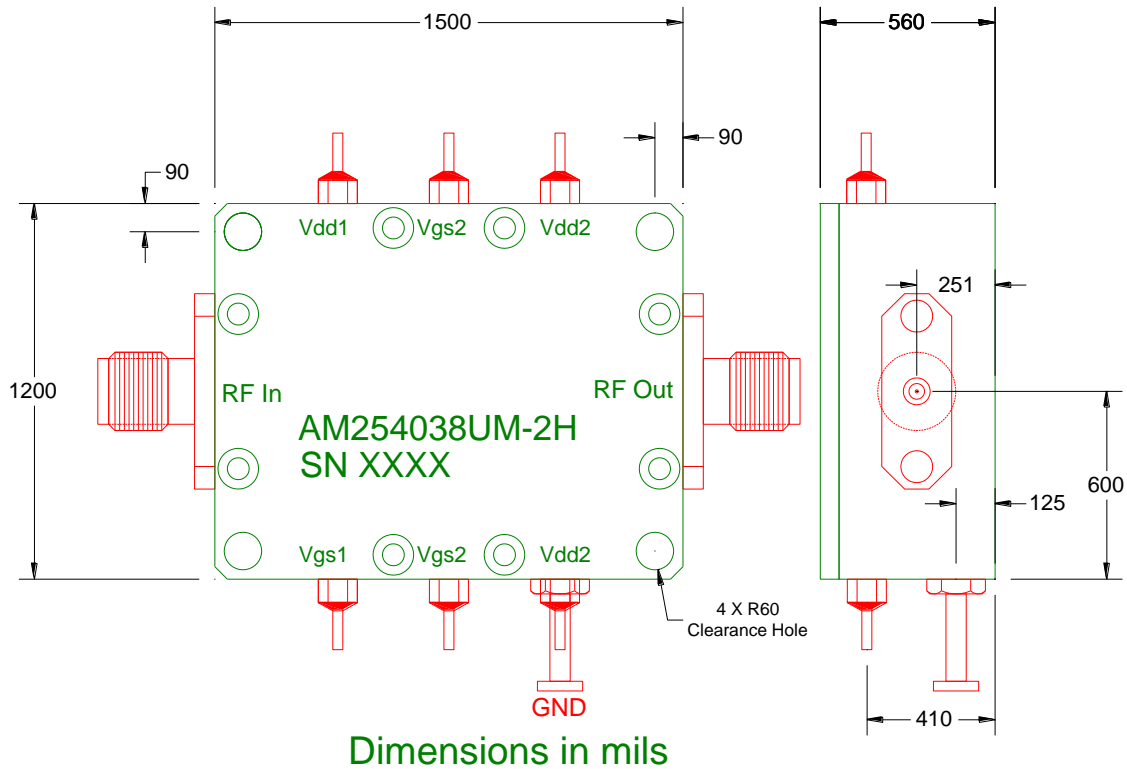


POWER DATA *



* Data shown is for $V_{dd1,2}=+12V$, $I_{ddq1}=0.25A$, $I_{ddq2}=1.05A$, $V_{gs1,2}=-0.82V$.

PACKAGE OUTLINE



Pin No.	Function	Bias
1	V _{gs1}	-0.82V
2	V _{gs2}	-0.82V
3	V _{dd2}	+12V
4	V _{dd2}	+12V
5	V _{gs2}	-0.82V
6	V _{dd1}	+12V

Important Notes:

- 1- Recommended bias currents are bias are: I_{dsq1}=0.25A, I_{dsq2}= 1.05A, for the first stage, and second stage currents respectively.
- 2- Gate V_{gs1,2}, bias of -0.82 are for reference only. V_{gs1,2} could be adjusted to vary the currents going thru the module.
- 3- Do not apply V_{dd1} & V_{dd2} without proper negative voltages.