



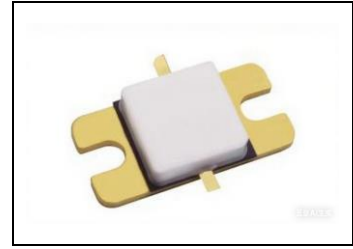
6-8GHz, 40W, GaN Fully matched PA Module

Description

The XMAH6080-40A2T is a 40-watt, single stage integrated Power Amplifier Module, designed Full band application from 6 to 8GHz.

The module is 50 Ω input/output matched and requires minimal external components.

Vgs=-2.6V Idq=200mA, Vds=28V Signal: CW



Freq(MHz)	Pin(dBm)	Psat(dBm)	Pout(W)	IDS(A)	Gain(dB)	Eff(%)	2 nd Harmonic	3 rd Harmonic
5500	39.23	46.40	43.7	2.99	7.17	52.1	-22.6	-48.2
6000	39.25	46.87	48.6	3.61	7.62	48.1	-23.0	-65.0
6500	39.00	46.14	41.1	3.32	7.14	44.2		
7000	39.00	46.23	42.0	3.83	7.23	39.1		
7500	39.01	46.83	48.2	4.29	7.82	40.1		
8000	39.00	46.25	42.2	3.62	7.25	41.6		
8200	39.50	46.00	40.0	3.43	6.50	41.5		

Recommended driver: GMAH2080-10C9

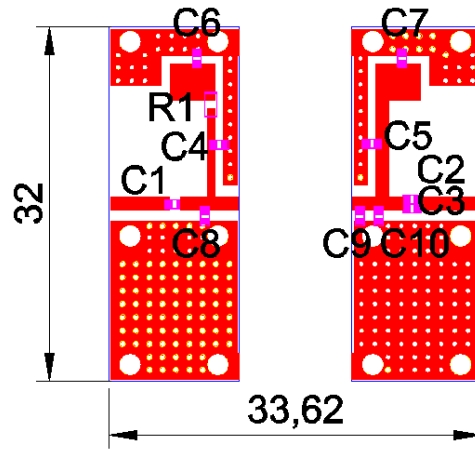
Applications

- Power Amplifiers within C band
- Test Instrumentation
- EMC Amplifier Drivers
- 2-way Radios

Table 1. Maximum Ratings

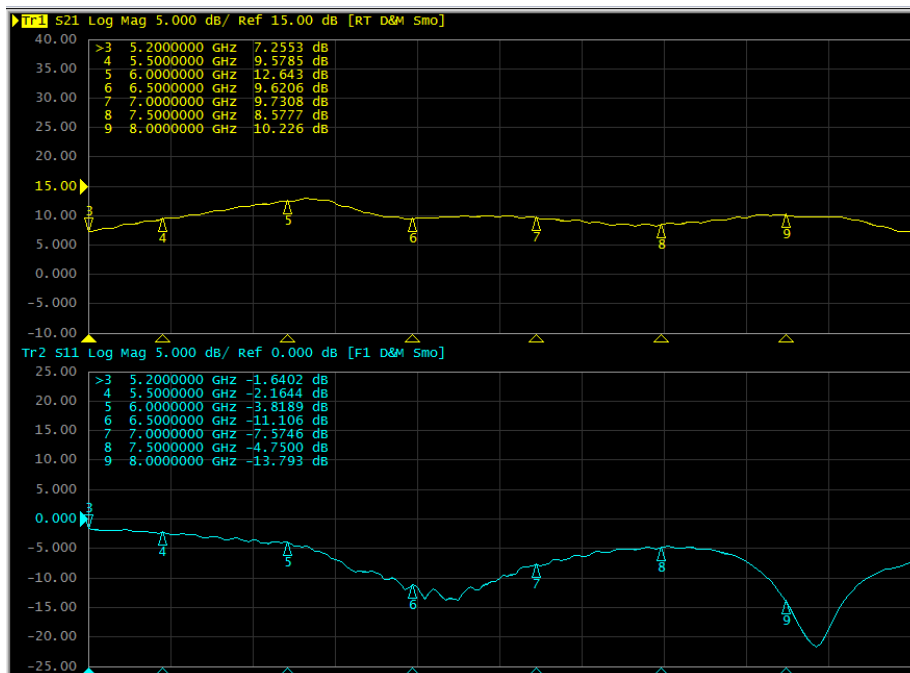
Rating	Symbol	Value	Unit
Drain--Source Voltage	V _{DSS}	150	Vdc
Gate--Source Voltage	V _{GS}	-10 to +2	Vdc
Operating Voltage	V _{DD}	+32	Vdc
Storage Temperature Range	T _{stg}	-65 to +150	°C
Case Operating Temperature	T _c	+150	°C
Operating Junction Temperature	T _J	+225	°C

Typical application circuit



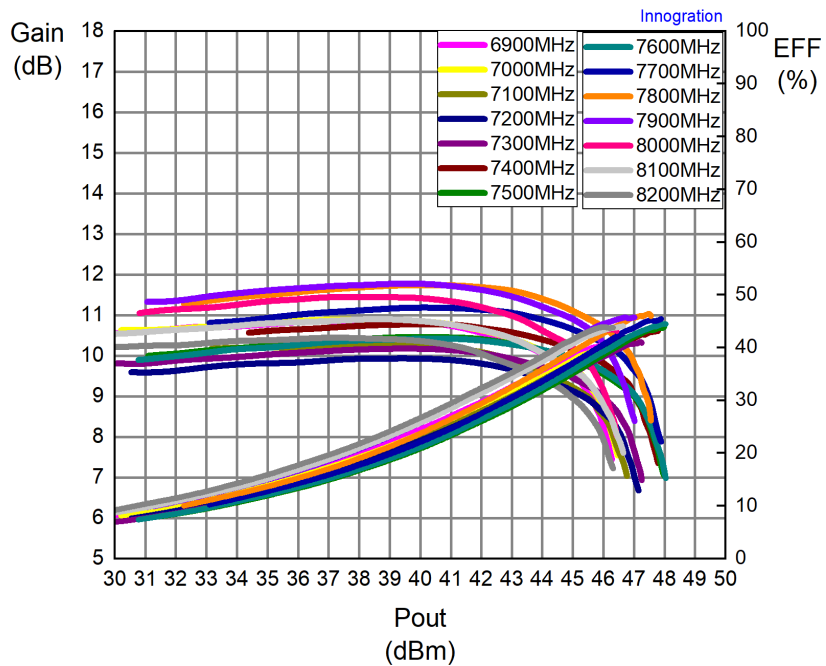
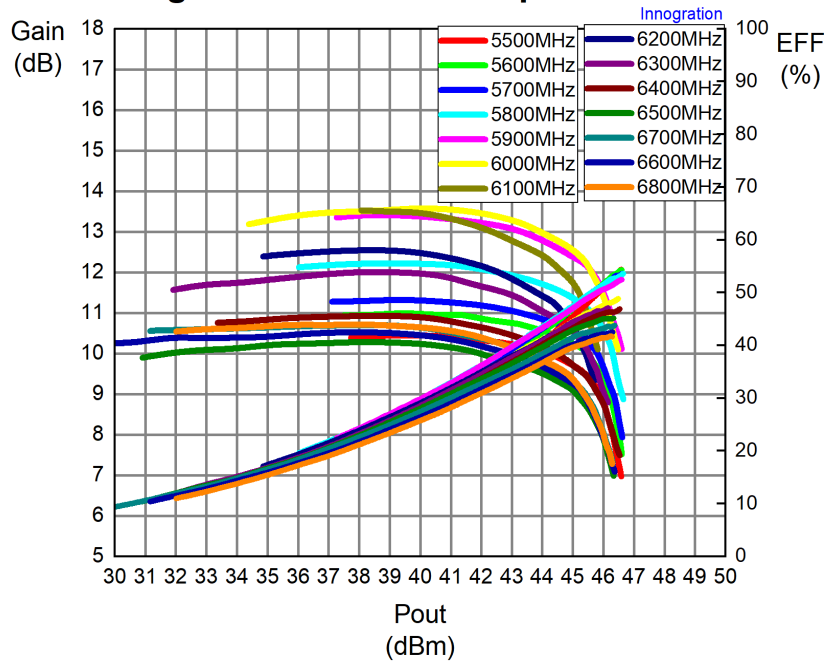
Component	Description	Suggested Manufacturer / Series Number
C1	2.2 pF	
C2 C3	1.3 pF	
C4	56 pF	
C5	100 pF	
C6 C7	1 nF	
C8	0.2 pF	
C9	0.1 pF	
C10	0.2 pF	
R1	10 Ohm	
PCB	20Mil Rogers 4350	Rogers

Typical RF Performance



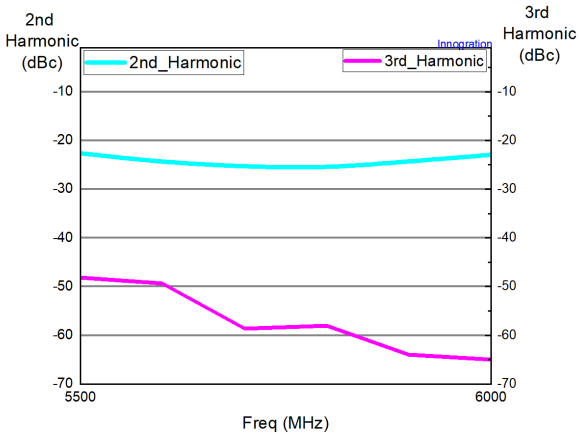
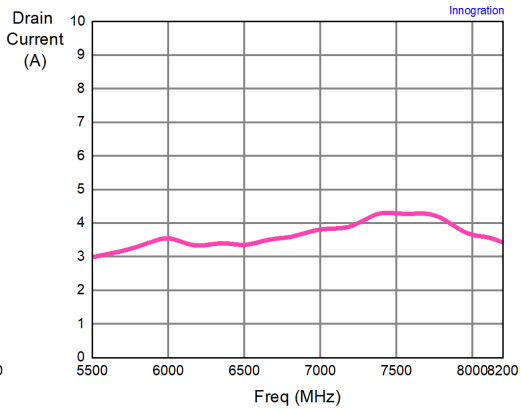
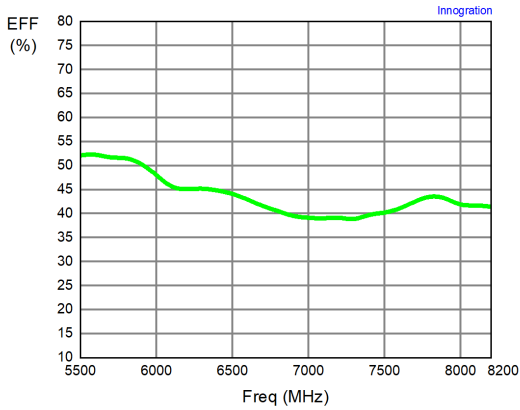
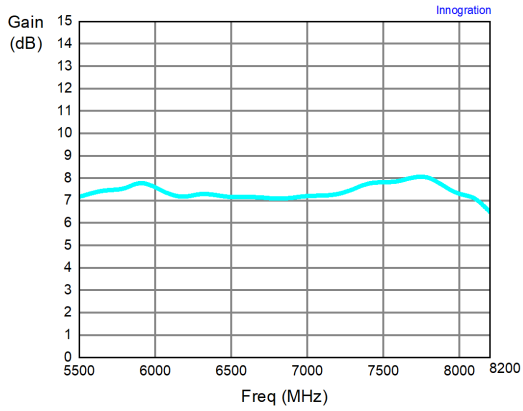
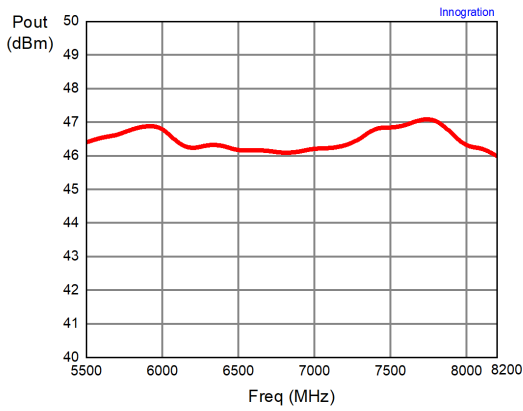


XMAH6080-40A2T_rev10 Pulse 100us 10%
Vgs=-2.6V Vds=28V Idq=200mA



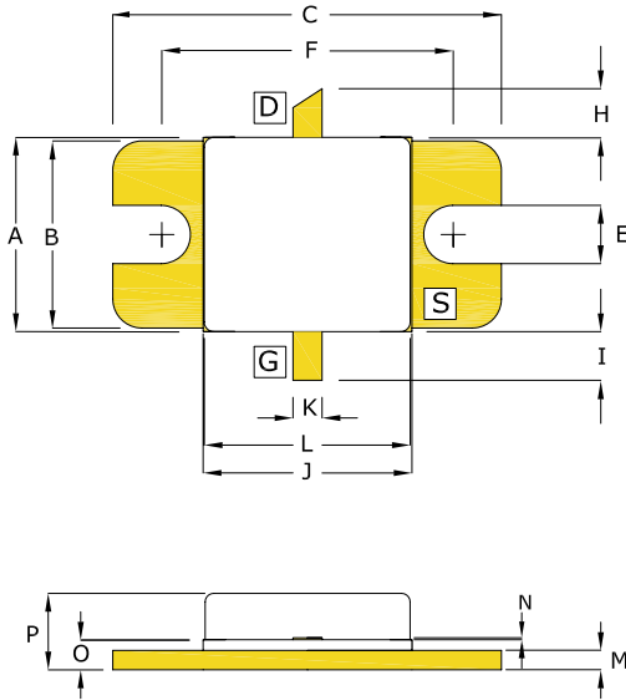


XMAH6080-40A2T_rev10 CW Test
Vgs=-2.6V Vds=28V Idq=200mA





Package Dimensions



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.395	0.405	10.03	10.29
B	0.380	0.390	9.65	9.91
C	0.795	0.805	20.19	20.45
E	0.115	0.125	2.92	3.18
F	0.595	0.605	15.11	15.37
H	0.090	0.110	2.29	2.79
I	0.090	0.110	2.29	2.79
J	0.425	0.435	10.80	11.05
K	0.055	0.065	1.40	1.65
L	0.420	0.428	10.67	10.87
M	0.035	0.045	0.89	1.14
N	0.004	0.007	0.10	0.18
O	0.053	0.067	1.35	1.70
P	0.143	0.179	3.63	4.55

PIN SCHEDULE	
D	DRAIN
S	SOURCE
G	GATE

Revision history

Table 6. Document revision history

Date	Revision	Datasheet Status
2026/1/29	Rev 1.0	Preliminary Datasheet

Application data based on JF-26-07 (Rev5)

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