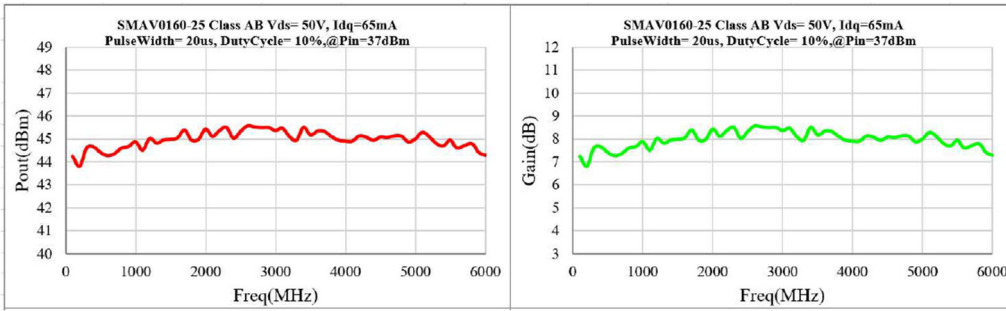




Innegration (Suzhou) Co., Ltd.

0.1-6GHz, 25W, 50V GaN Fully matched PA Module

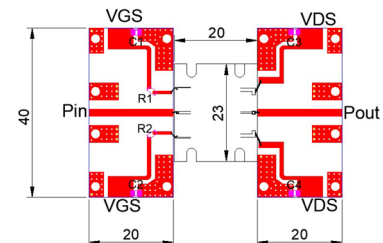


2.0-6.0GHz, 300W, GaN Fully matched PA iModule



Typical Pulsed CW performance within 2-6GHz with device soldered: Vds=50V, Idq=200mA, 100us, 10%

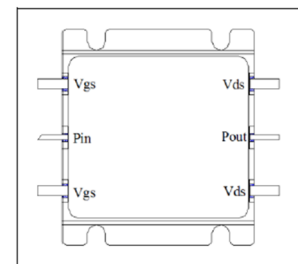
Freq(MHz)	Pin(dBm)	Psat(dBm)	Psat(W)	Ids(A)	Gain(dB)	Eff(%)
2000	47.237	54.8	302.0	1.13	7.563	53.5
2100	47.384	54.8	302.0	1.16	7.416	52.1
2200	47.274	54.8	302.0	1.2	7.526	50.3
2300	47.067	54.8	302.0	1.56	7.733	38.7
2400	47.05	54.8	302.0	1.49	7.75	40.5
2500	45.972	54.8	302.0	1.49	8.828	40.5
2600	47.874	54.8	302.0	1.46	6.926	41.4
2700	47.255	54.8	302.0	1.41	7.545	42.8
2800	46.287	54.8	302.0	1.49	8.513	40.5
2900	46.504	54.8	302.0	1.63	8.296	37.1
3000	46.309	54.8	302.0	2.03	8.491	29.8
3100	46.156	54.8	302.0	1.84	8.644	32.8
3200	46.548	54.8	302.0	1.85	8.252	32.6
3300	47.814	54.8	302.0	1.87	6.986	32.3
3400	47.655	54.8	302.0	1.94	7.145	31.1
3500	46.659	54.8	302.0	1.86	8.141	32.5
3600	47.518	54.8	302.0	1.84	7.282	32.8
3700	47.729	54.8	302.0	1.88	7.071	32.1
3800	47.516	54.8	302.0	1.87	7.284	32.3
3900	48.143	54.8	302.0	1.88	6.657	32.1
4000	47.668	54.8	302.0	1.88	7.132	32.1
4100	46.969	54.8	302.0	1.83	7.831	33.0
4200	46.968	54.8	302.0	1.83	7.832	33.0
4300	46.245	54.8	302.0	1.79	8.555	33.7



2.0-6.0GHz, 100W, GaN Fully matched PA Module

Pout at 28V and fixed input power, CW

Freq (MHz)	Pin (dBm)	Pout (dBm)	Pout (W)	IDS (A)	Gain (dB)	Eff (%)
2000	42.30	49.97	99.4	5.86	7.67	60.6
2500	42.30	50.72	117.9	7.11	8.42	59.2
3000	42.30	49.04	80.1	8.41	6.74	34.0
3500	42.30	50.20	104.7	9.97	7.90	37.5
4000	42.30	51.11	129.2	10.27	8.81	44.9
4500	42.30	50.98	125.3	10.31	8.68	43.4
5000	42.30	51.43	138.9	10.47	9.13	47.4
5500	42.30	51.39	137.7	10.26	9.09	47.9
6000	42.30	50.37	108.8	8.11	8.07	47.9



0.1-7GHz, 8W, 28V GaN Fully matched PA Module

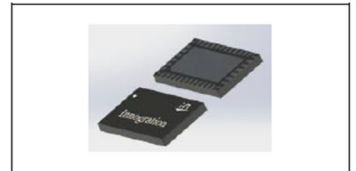
Description

The GMAH0170-8 is a 8-watt ,single stage integrated Power Amplifier Module, designed for broad band applications, with frequencies from 100MHz to 7GHz. The module is 50 Ω input/output matched and requires minimal external components.

The module implements distributed power amplifier in form of multi chips, housed in cost effective plastic open cavity package, offers a much lower cost than traditional MMIC solutions.

V_{ds}=28V, I_{dq}=50mA, CW

Parameter	0.1GHz	1.0GHz	2.0GHz	3.0GHz	4.0GHz	5.0GHz	6.0GHz	7.0GHz	Units
Linear Gain	9.4	9.4	9.9	10.2	9.6	10.0	10.7	11.0	dB
Gain@Pin=32.5dBm	7.0	7.7	8.0	8.5	7.9	8.1	8.5	7.1	dB
Pout@Pin=32.5dBm	9.0	10.4	11.3	12.6	11.1	11.6	12.5	9.1	W
PAE@Pin=32.5dBm	55	51	46	45	36	36	40	29	%



1-8000MHz, 1.5W, 28V GaN Fully matched PA Module

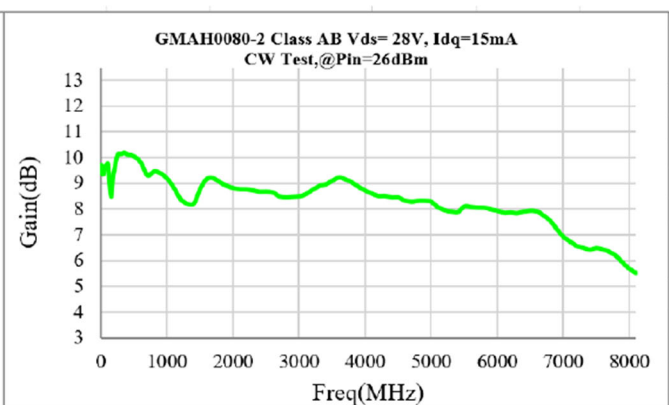
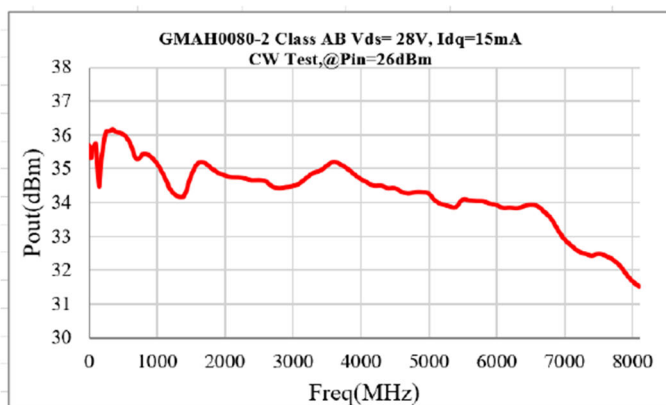
Description

The GMAH0080-2 is a 1.5-watt ,single stage integrated Power Amplifier Module, designed for broad band applications, with frequencies from 1MHz to 8GHz. The module is 50 Ω input/output matched and requires minimal external components.

The module implements distributed power amplifier in form of multi chips, housed in cost effective plastic open cavity package, offers a much lower cost than traditional MMIC solutions.

V_{ds}=28V, I_{dq}=15mA, CW

Parameter	1MHz	1GHz	2GHz	3GHz	4GHz	5GHz	6GHz	7GHz	8GHz	Units
Linear Gain	12.2	10.8	10.5	10.6	10.9	11.2	9.8	8.5	7.6	dB
Gain@Pin=26dBm	9.7	9.2	8.8	8.5	8.7	8.3	7.9	6.9	5.7	dB
Pout@Pin=26dBm	3.7	3.3	3.0	2.8	2.9	2.7	2.5	2.0	1.5	W
Eff@Pin=26dBm	49	43	37	33	35	34	29	24	20	%



0.8-6.0GHz, 40W, GaN Fully matched PA Module

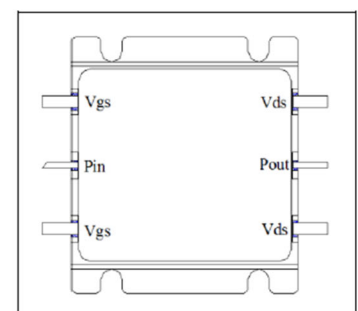
Description

The XMAH0860-40H3 is a 40-watt,single stage integrated Power Amplifier Module, designed for broad band applications, with frequencies from 0.8 to 6.0GHz. The module is 50 Ω input/output matched and requires minimal external components.

When used at higher voltage like 32V, it can deliver 50W across the full band

The module implements multiple GaN active dice and its matching network within highly compact 30.8*27.4mm metal RF package with excellent capability for heat dissipation.

Recommended driver: GMAH0162-10



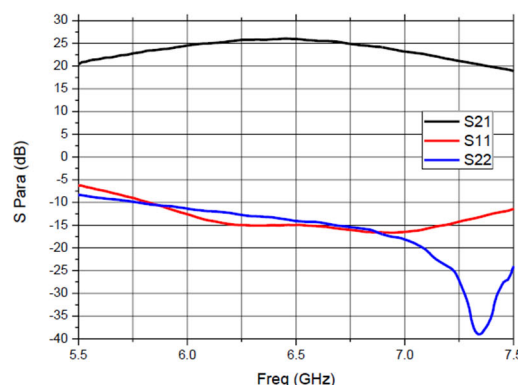
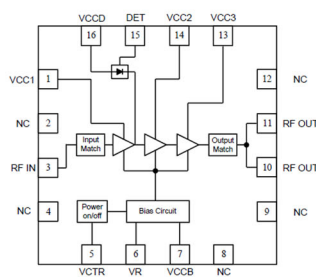


Parameter	Condition	Specification			Unit
		Min.	Typ.	Max.	
Operational Frequency Range		1		6000	MHz
Test Frequency			2140		MHz
Small Signal Gain			13.8		dB
P1dB Output Power			30.9		dBm
Input Return Loss			17.9		dB
Output Return Loss			17		dB
OIP3	Pout=15dBm/ tone, Δf = 1MHz		45		dBm
WCDMA Channel power (at -50dBc ACLR)	3GPP WCDMA, TM1+64 DPCH, +5 MHz offset		20.9		dBm
Supply Voltage		3	5	6	V
Quiescent Current, Icq	VCC=5V, VCB=3.75V		160		mA



Features

- 5500~7500 MHz Frequency Range
- +25dB Gain
- >30dBm P1dB at 5.0V
- 3~5V Supply Voltage
- <-10dB Input Reflection
- Advanced InGaP/GaAs HBT Technology



70W,12.5V High Power RF LDMOS FETs

Description

The ITGH09240RC9 is a 70-watt, highly rugged and stablied, input matched LDMOS FET, designed for commercial and industrial applications at frequencies up to 520MHz. It can be used in linear or saturated power amplifier, for CW and pulsed signal, and any modulation format.

It is also featured by its lower cost of plastic open cavity in 12*10mm QFN package,for surface mount on PCB through high density vias or on heatsink directly

- Typical UHF CW Performance at 520M On Innogratiion fixture with device soldered
Vds=12.5V, Idq=400mA, ,CW

Freq (MHz)	P1dB (dBm)	P1dB (W)	P1dB Eff(%)	P1dB Gain(dB)	P3dB (dBm)	P3dB (W)	P3dB Eff(%)
520	47.66	58.3	60.8	13	48.8	75	68

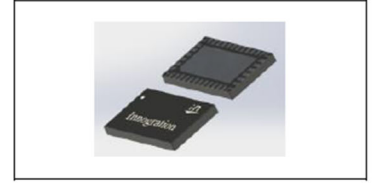
ITGH09240RC9



2.4-2.5GHz, 1 stage 1W, S band 28V GaN MMIC PA module

Description

The XMAH2425-1 is a 1-watt , single stage integrated Power Amplifier Module with high gain, high efficiency, designed for CW or linear back off applications, with frequencies from 2.4 to 2.5GHz. The module is 50 Ω input, and output matched and requires minimal external components, without DC block needed



- VDS= 28V , Vgs =-2.44V, IDQ=5 mA, CW, **as Amplifier**

Freq (MHz)	P1dB (dBm)	P1dB (W)	P1dB Eff (%)	P1dB Gain (dB)	P3dB (dBm)	P3dB (W)	P3dB Eff (%)
2400	30.21	1.1	52.1	12.78	31.17	1.3	57.0
2450	30.27	1.1	54.3	13.13	31.12	1.3	58.7
2500	30.11	1.0	54.8	13.75	30.73	1.2	57.7

- VDS= 28V , Vgs =-2.5V, CW., **as Oscillator**

Vc (V)	Pout (mW)	Ids (mA)	Osc Freq (MHz)	Eff (%)
0	1160	77.4	2357	53.53
1	1200	76.6	2400	55.95
2	1160	72	2442	57.54
3	1160	70	2496	59.18
3.3	1150	69.3	2510	59.27
4	1160	67.6	2541	61.28
5	1090	62.8	2581	61.99

Product Features

- Operating Frequency Range: 2.4-2.5GHz
- Operating Drain Voltage: +28 V (Up to 32V)
- 50 Ω Input/Output
- Psat: $\geq 1W$ @28V (CW)
- Power gain:>10dB
- Efficiency:>55%
- 6x10 mm Surface Mount Package

Applications

- 2450MHz ISM applications

Oscillator

TYPICAL CHARACTERISTICS

