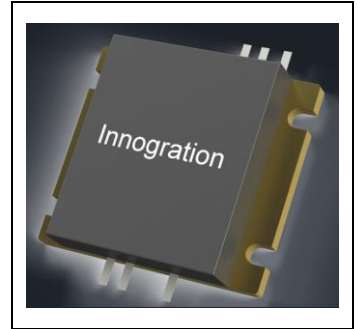




0.4-0.6GHz, 100W, 2 stages GaN Fully matched PA

Description

The G2MAH0406-100H3P is a 100-watt Psat capable, 2 stage integrated IMFET, designed for broad band applications, with frequencies from 0.4 to 0.6GHz. The module is 50 Ω input/output matched and requires minimal external components, with DC block capacitor integrated inside. 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.



$V_{DS}= 28V, V_{gs1}= -2.73V, I_{dq1}=200mA, V_{gs2}= -2.57V, I_{dq2}=20mA$							
Freq (MHz)	P1dB (dBm)	P1dB (W)	P1dB Eff(%)	P1dB Gain(dB)	P3dB (dBm)	P3dB (W)	P3dB Eff(%)
400	49.78	95.2	52.2	31.57	50.47	111.5	56.0
450	49.76	94.6	47.8	31.84	50.45	111.0	50.6
500	49.89	97.5	48.0	32.75	50.93	123.9	52.8
550	50.29	106.8	55.8	33.13	51.26	133.7	61.5
600	49.42	87.5	57.0	33.01	50.58	114.3	63.7

Applications

- P band power amplifier
- ISM power amplifier

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}	+36	Vdc
Storage Temperature Range	T_{stg}	-65 to +150	°C
Case Operating Temperature	T_c	+150	°C
Operating Junction Temperature	T_j	+225	°C

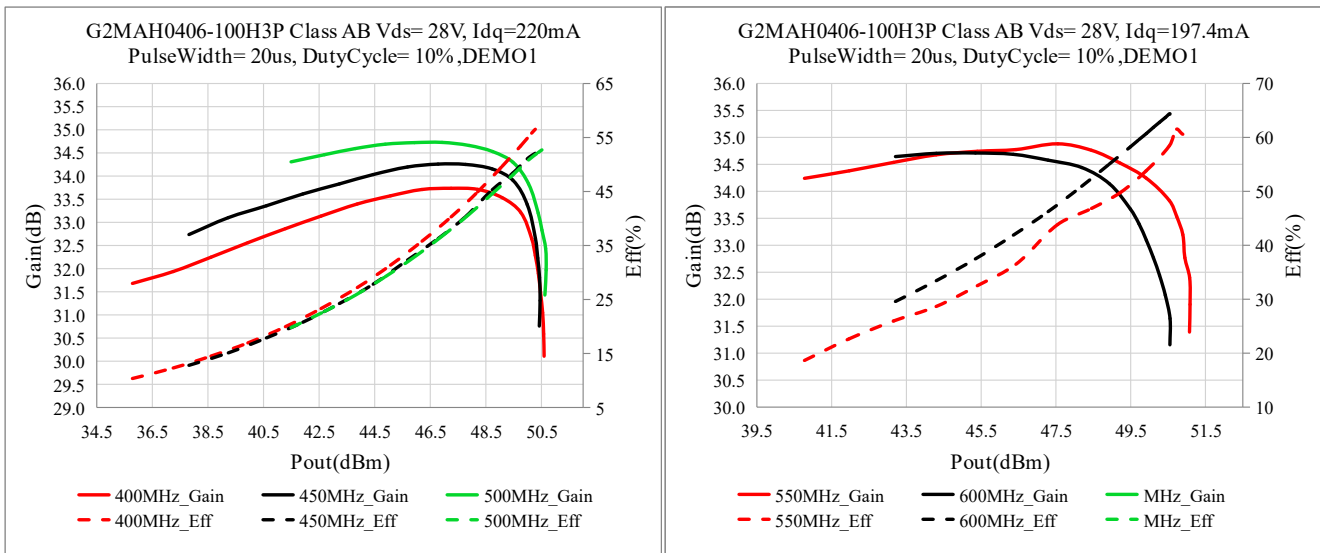


TYPICAL CHARACTERISTICS

Figure 1. Network analyzer output S11/S21 (Pin=0dBm, Idq=220mA)

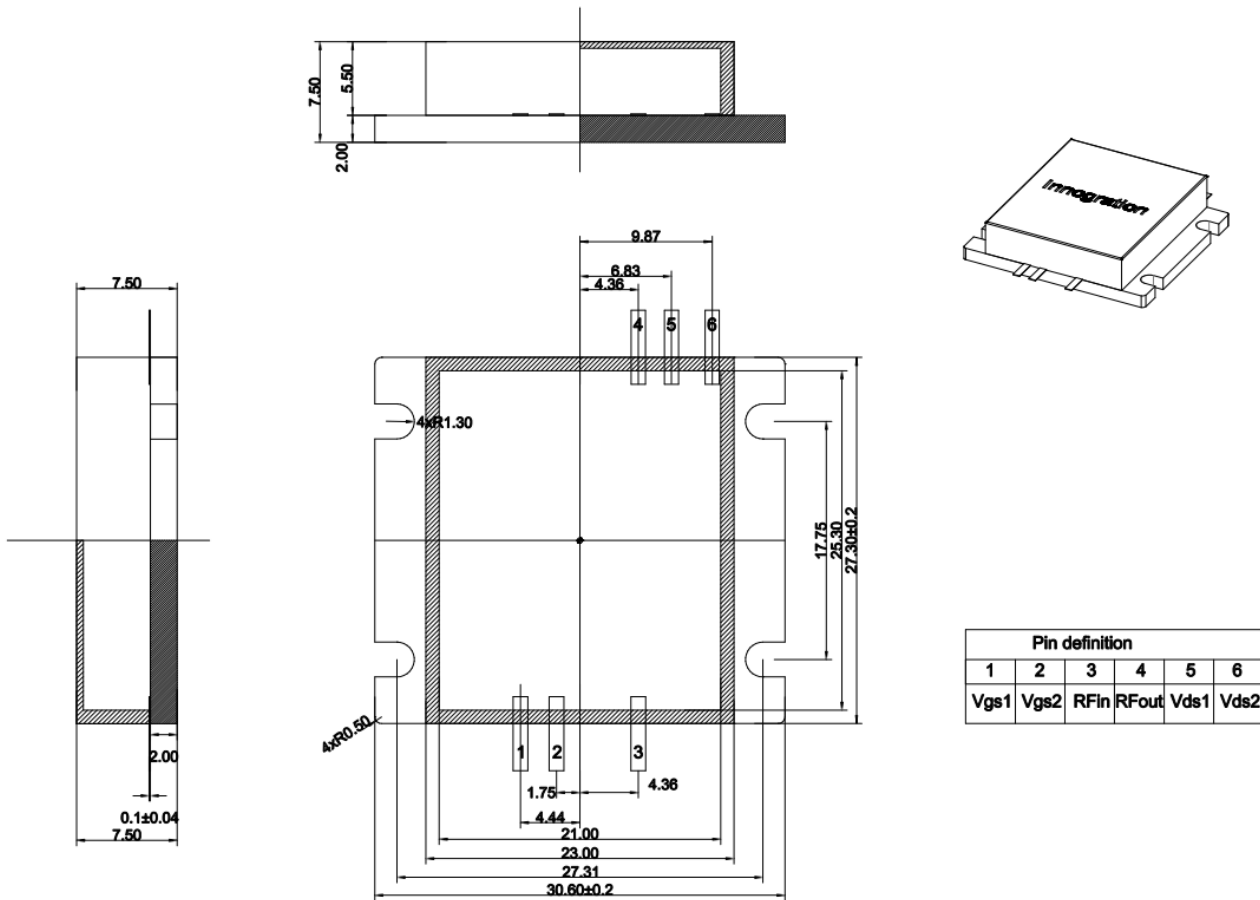


Figure 2. Pout, Eff, Gain, drain current Vs Frequency @28V under pulsed CW condition 10%,100us





Package Dimensions (Unit:mm)



Pin definition					
1	2	3	4	5	6
Vgs1	Vgs2	RFin	RFout	Vds1	Vds2

Revision history

Table 6. Document revision history

Date	Revision	Datasheet Status
2026/3/25	Rev 1.0	Advanced Datasheet (XTAH80010PD+NU3013HS)

Application data based on LBG-26-12

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