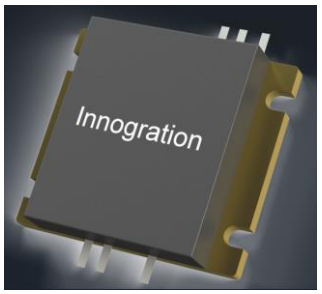
2.3-2.6GHz, 100W, 2 stages GaN Fully matched PA



Description

The X2MAH2326-100H3P is a 100-watt Psat capable，2 stage integrated IMFET, designed for broad band applications, with frequencies from 2.3 to 2.6GHz. 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}= -2.61V, I_{dq1}=190mA, V_{gs2}= -2.62V, I_{dq2}=10mA，CW							
Freq (MHz)	P1dB (dBm)	P1dB (W)	P1dB Eff(%)	P1dB Gain(dB)	P3dB (dBm)	P3dB (W)	P3dB Eff(%)
2300	49.41	87.2	44.5	31.68	50.94	124	50.6
2350	49.7	93.2	47.8	32.79	51.11	129	53.8
2400	49.49	89.0	49.0	33.01	50.97	125	55.3
2450	49.22	83.6	49.8	33.33	50.75	118	56.5
2500	49.21	83.3	51.7	32.91	50.63	115	57.7
2550	48.92	78.1	52.1	32.82	50.3	107	57.6
2600	48.58	72.2	52.3	33.01	49.9	98	57.3

Applications

- S 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	Tstg	-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)

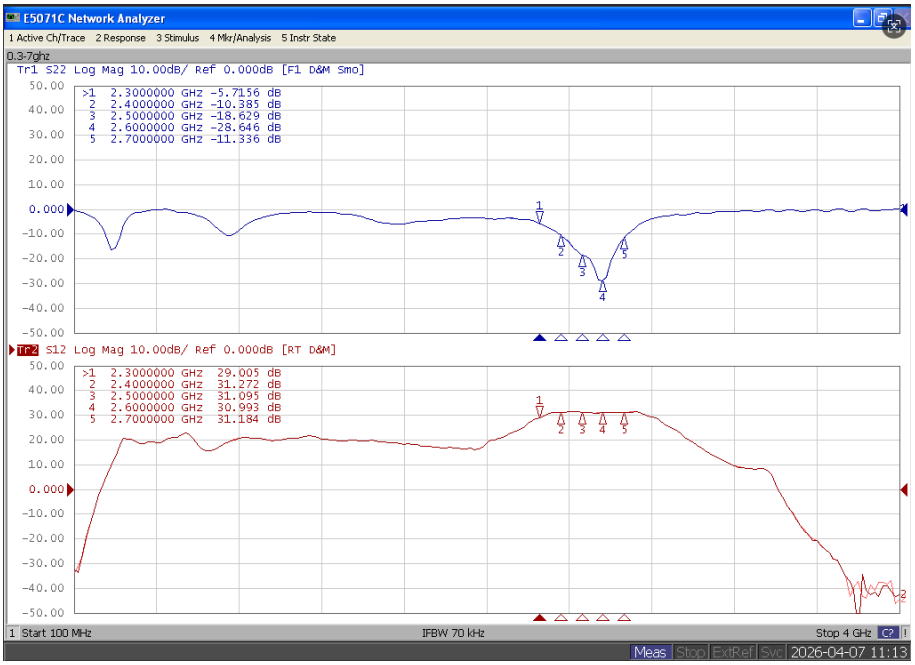
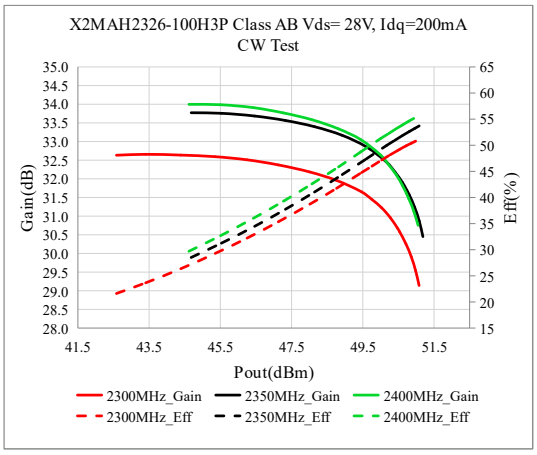
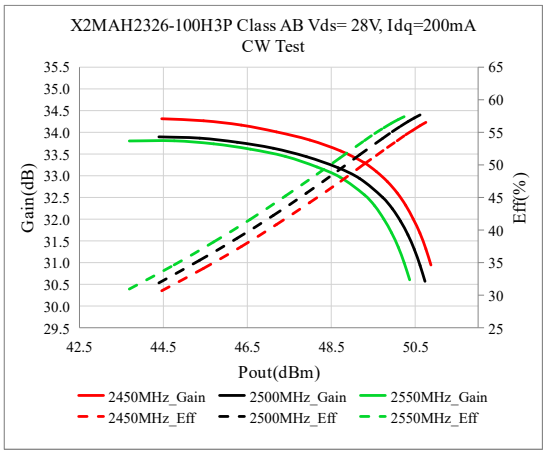
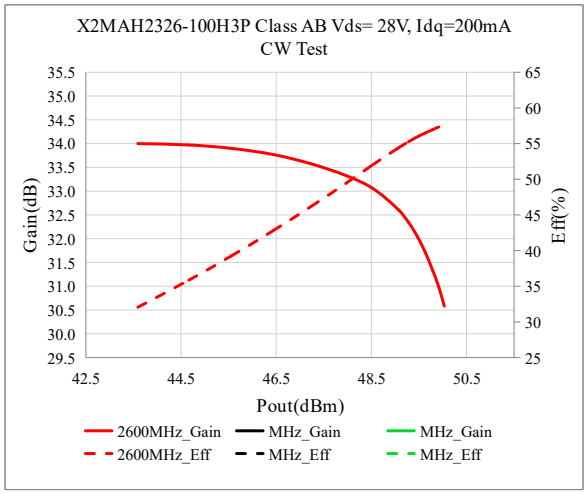


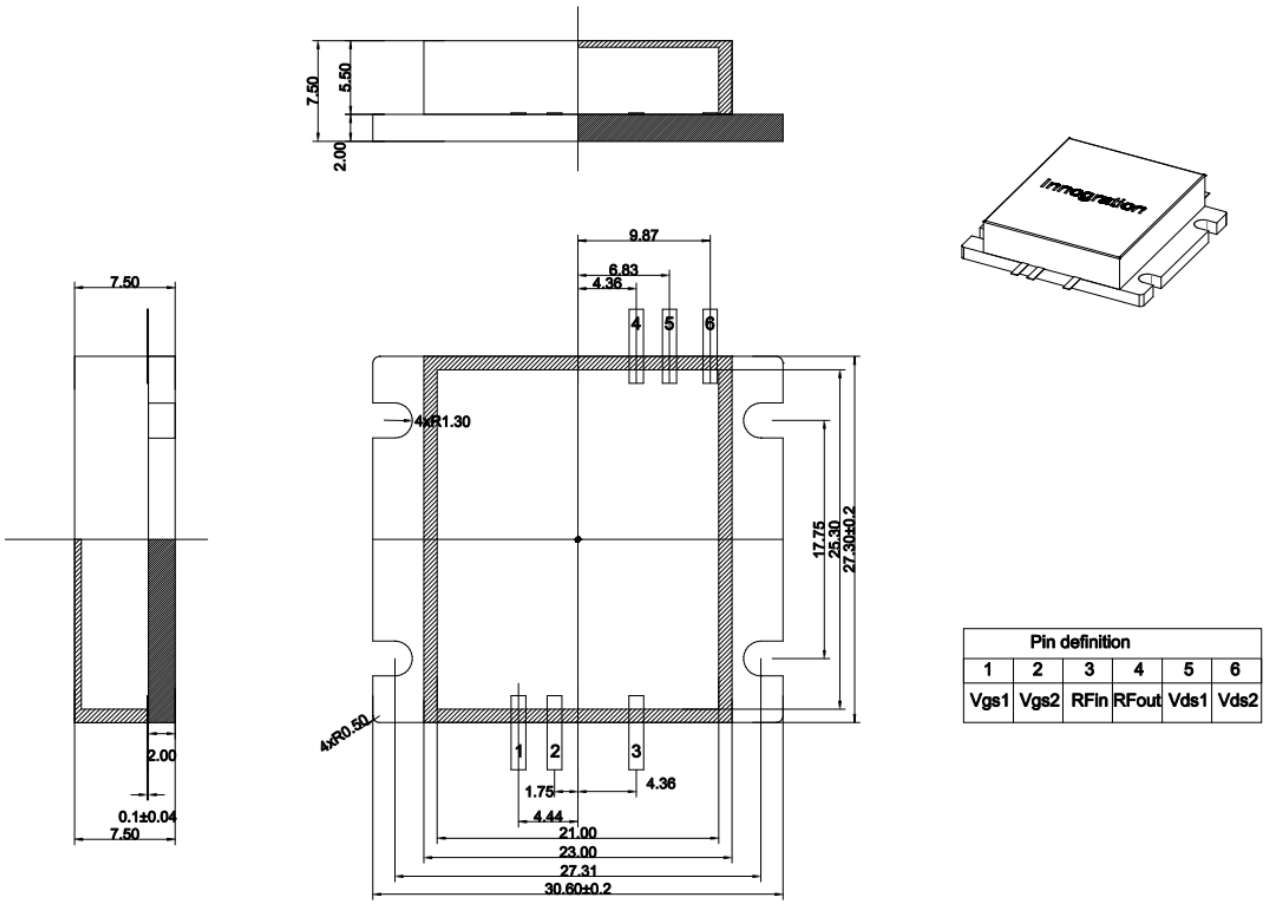
Figure 2. Pout, Eff, Gain，drain current Vs Frequency @28V under pulsed CW condition 10%,100us







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
2026/4/7	Rev 1.0	Advanced Datasheet （XTAH80010PD+ XTAH30120G2）

Application data based on LBG-26-17

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