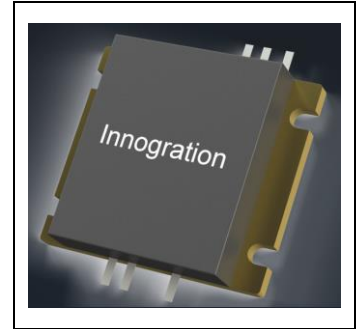




## 960-1215M, 200W , 2 stages GaN Fully matched PA

### Description

The S2MBV0912-200H3P is a 200-watt Psat capable, 2 stage integrated IMFET, designed for L band applications, with frequencies from 960 to 1215MHz. 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.



VDS= 50V, Vgs1= -3.32V, Idq1=230mA, Vgs2= -3.25V, Idq2=20mA							
Freq (MHz)	P1dB (dBm)	P1dB (W)	P1dB Eff (%)	P1dB Gain (dB)	P3dB (dBm)	P3dB (W)	P3dB Eff (%)
960	52.42	174.6	46.4	32.4	53.9	245.4	52.3
1000	52.66	184.3	49.2	32.36	54.21	263.4	55.8
1050	53.05	202.0	54.2	33.03	54.49	281.1	60.9
1100	53.07	202.7	57.5	32.5	54.36	272.9	63.5
1150	53.11	204.6	60.6	32.99	54.51	282.4	67.8
1215	52.31	170.1	58.7	31.98	53.87	243.8	66.2

### Applications

- Avionics power amplifier

Table 1. Maximum Ratings

Rating	Symbol	Value	Unit
Drain--Source Voltage	V <sub>DSS</sub>	200	Vdc
Gate--Source Voltage	V <sub>GS</sub>	-10 to +2	Vdc
Operating Voltage	V <sub>DD</sub>	+55	Vdc
Storage Temperature Range	T <sub>stg</sub>	-65 to +150	°C
Case Operating Temperature	T <sub>c</sub>	+150	°C
Operating Junction Temperature	T <sub>j</sub>	+225	°C

## TYPICAL CHARACTERISTICS

Figure 1. Network analyzer output S11/S21 (Pin=0dBm)

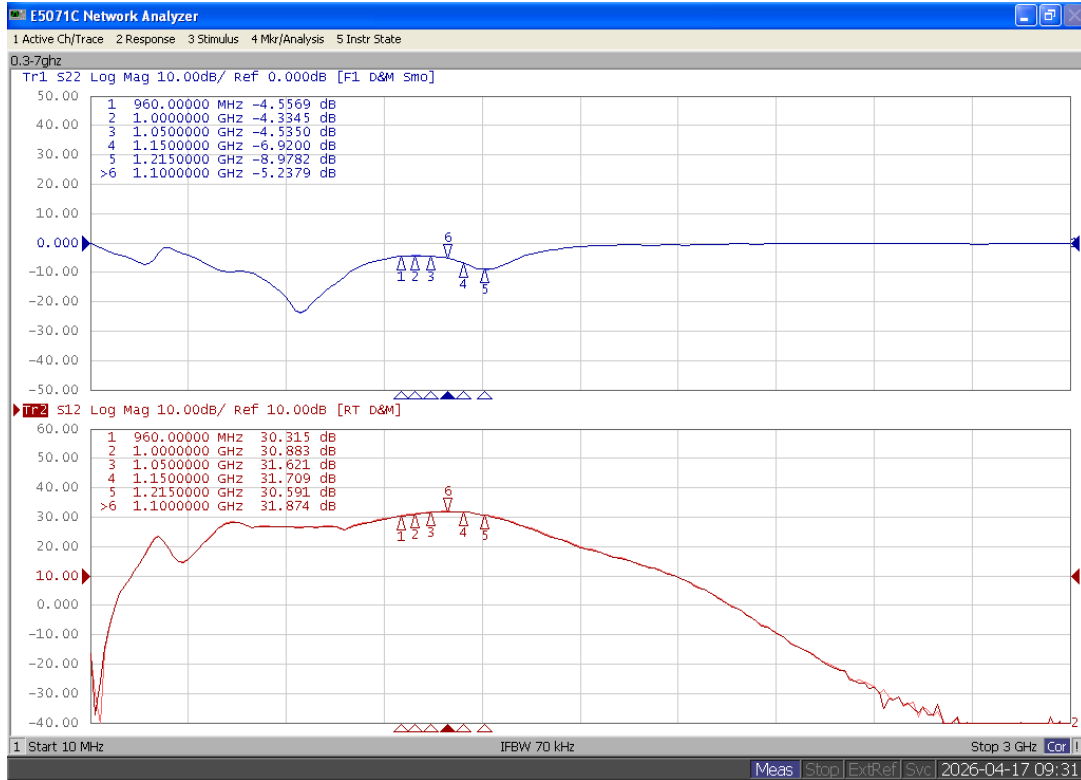
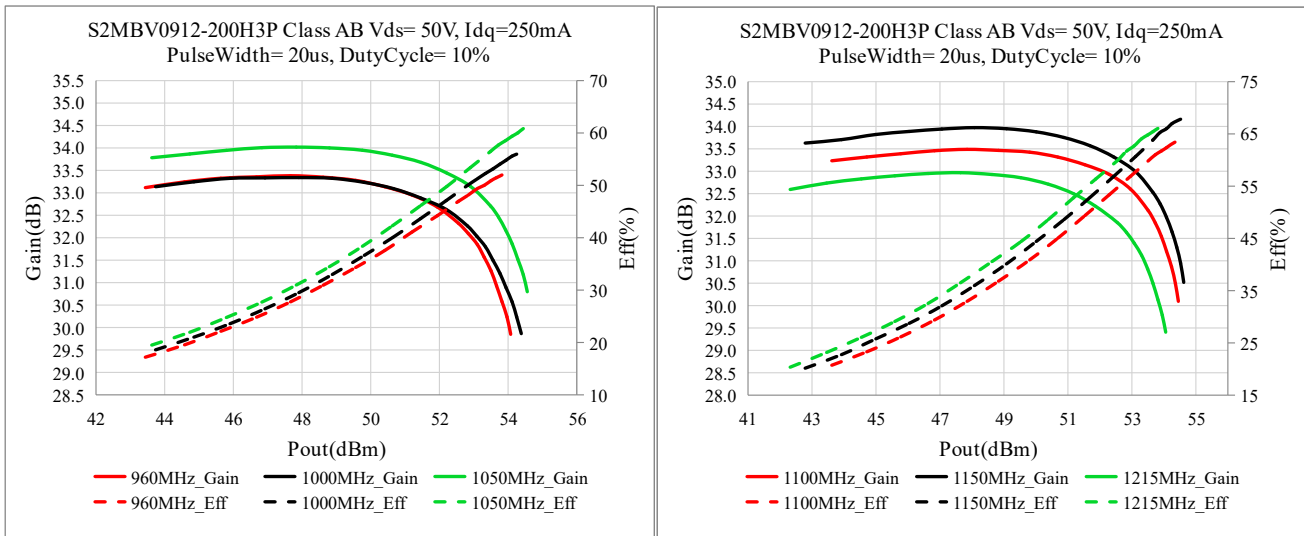
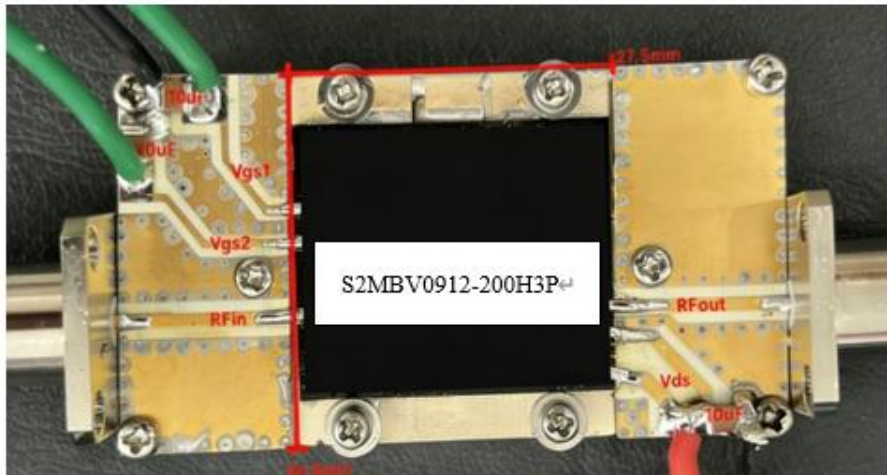


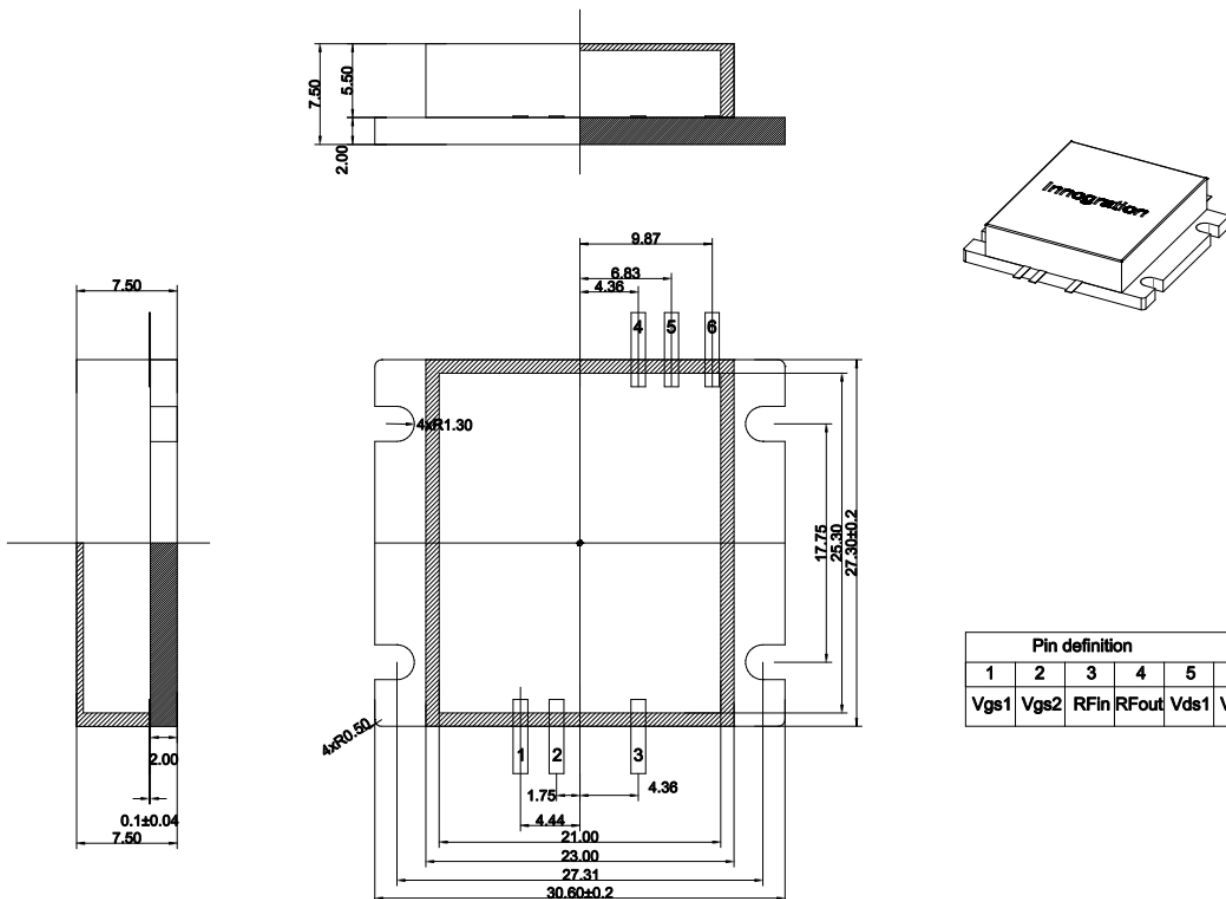
Figure 3. Pout, Eff, Gain, drain current Vs Frequency @50V ,Pulsed 20us 20%



Typical application board



Package Dimensions (Unit:mm)





## Revision history

Table 6. Document revision history

Date	Revision	Datasheet Status
2026/4/17	Rev 1.0	Advanced Datasheet

Application data based on LBG-26-19

## Disclaimers

Specifications are subject to change without notice. Innogratiion believes the information contained within this data sheet to be accurate and reliable. However, no responsibility is assumed by Innogratiion for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Innogratiion . Innogratiion makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose. "Typical" parameters are the average values expected by Innogratiion in large quantities and are provided for information purposes only. These values can and do vary in different applications and actual performance can vary over time. All operating parameters should be validated by customer's technical experts for each application. Innogratiion products are not designed, intended or authorized for use as components in applications intended for surgical implant into the body or to support or sustain life, in applications in which the failure of the Innogratiion product could result in personal injury or death or in applications for planning, construction, maintenance or direct operation of a nuclear facility. For any concerns or questions related to terms or conditions, pls check with Innogratiion and authorized distributors

Copyright © by Innogratiion (Suzhou) Co.,Ltd.