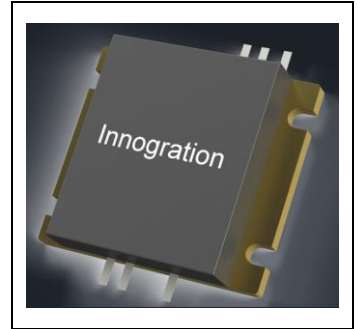




## 0.6-0.8GHz, 100W, 2 stages GaN Fully matched PA

### Description

The G2MAH0608-100H3P is a 100-watt Psat capable, 2 stage integrated IMFET, designed for broad band applications, with frequencies from 0.6 to 0.8GHz. 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.



$V_{DS}= 28V, V_{gs1}= -2.76V, I_{dq1}=200mA, V_{gs2}= -2.57V, I_{dq2}=20mA, CW$

| Freq (MHz) | P1dB (dBm) | P1dB (W) | P1dB Eff(%) | P1dB Gain(dB) | P3dB (dBm) | P3dB (W) | P3dB Eff(%) |
|------------|------------|----------|-------------|---------------|------------|----------|-------------|
| 600        | 49.25      | 84.1     | 45.0        | 31.51         | 50.6       | 114.9    | 51.9        |
| 650        | 49.53      | 89.8     | 48.1        | 32.8          | 50.81      | 120.6    | 55.3        |
| 700        | 49.85      | 96.6     | 51.4        | 33.03         | 50.81      | 120.5    | 55.6        |
| 750        | 50.46      | 111.1    | 58.9        | 32.86         | 51.52      | 141.9    | 64.6        |
| 800        | 49.87      | 97.1     | 61.3        | 31.8          | 51.06      | 127.6    | 67.2        |

### 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)

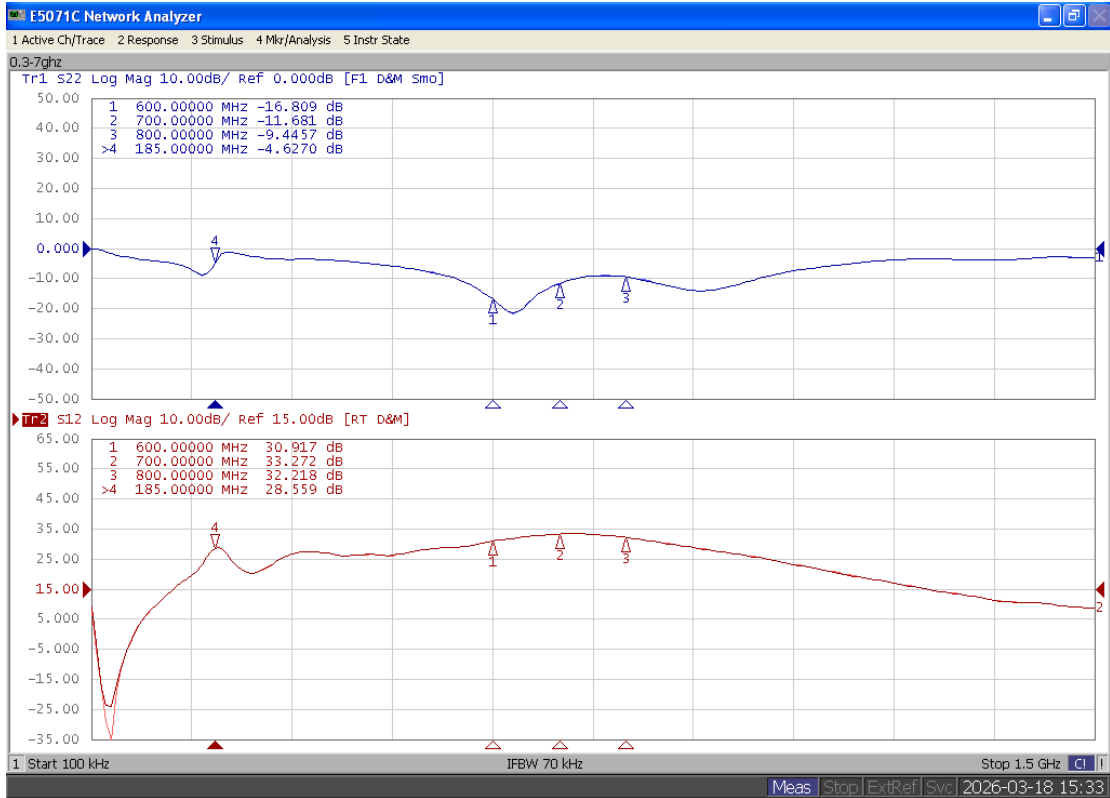
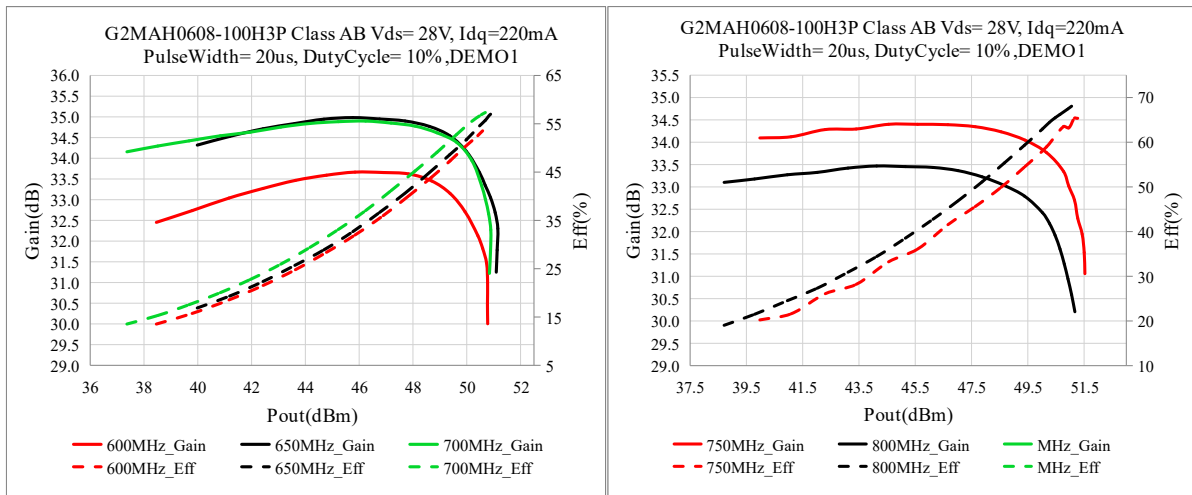
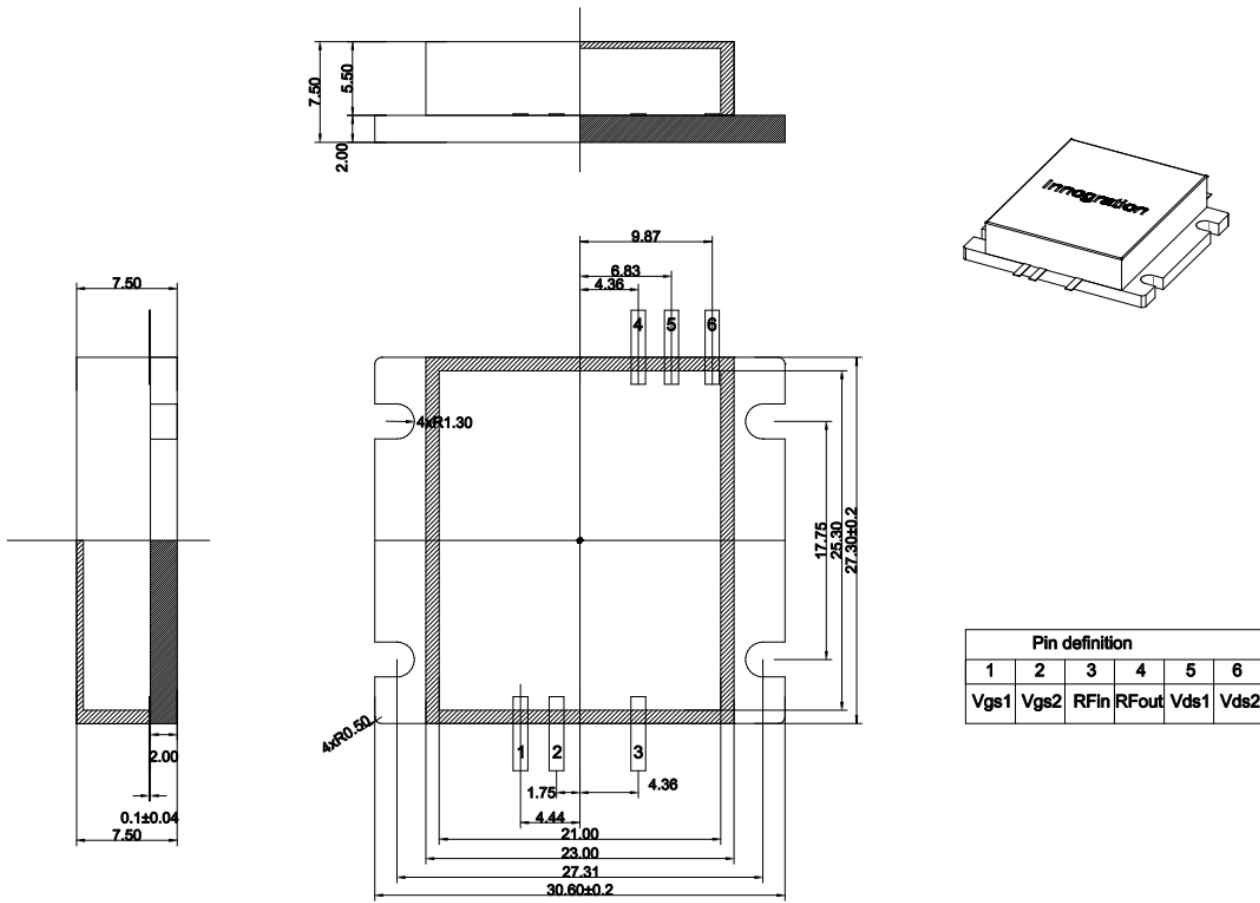


Figure 3. Pout, Eff, Gain, drain current Vs Frequency @28V under pulsed CW condition 10%,100us





### Package Dimensions (Unit:mm)



### Revision history

Table 6. Document revision history

| Date      | Revision | Datasheet Status                          |
|-----------|----------|---|
| 2026/3/18 | Rev 1.0  | Advanced Datasheet (XTAH80010PD+NU3013HS) |
|           |          |   |
|           |          |   |

Application data based on LBG-26-11

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