

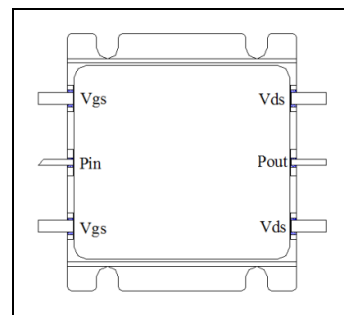


## 2.7-6.2GHz, 100W, GaN Fully matched PA Module

### Description

The YMAH2762-100H3 is a 100-watt Psat capable, single stage integrated IMFET, designed for broad band applications, with frequencies from 2.7 to 6.2GHz. The module is 50  $\Omega$  input/output matched and requires minimal external components.

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.



**Pout at Vds=28V, Idq=200mA**

Freq(MHz)	Pin(dBm)	Pout(dBm)	Pout(W)	IDS(A)	Gain(dB)	Eff(%)	2nd Harmonic	3rd Harmonic
2700	40.85	50.05	102	8.30	9.20	43.5	-8.3	-13.5
3000	40.40	50.73	118	8.98	10.33	47.1	-19.4	-23.7
3500	43.20	50.30	107	10.42	7.10	36.7	-12.2	-33.0
4000	43.45	50.50	112	10.24	7.05	39.1	-15.0	-38.0
4500	42.45	51.45	139	8.95	9.00	55.7	-26.7	-41.4
5000	40.78	51.50	141	10.21	10.72	49.4		
5500	41.90	51.47	140	10.25	9.57	48.9		
6000	43.60	50.80	120	8.66	7.20	49.6		
6200	42.66	50.05	102	7.74	7.39	46.7		
6500	40.05	49.09	81.1	5.63	9.04	51.4		

### Applications

- Ultra Broadband Amplifiers within S/C band
- Test Instrumentation
- EMC Amplifier Drivers
- 2-way Radios

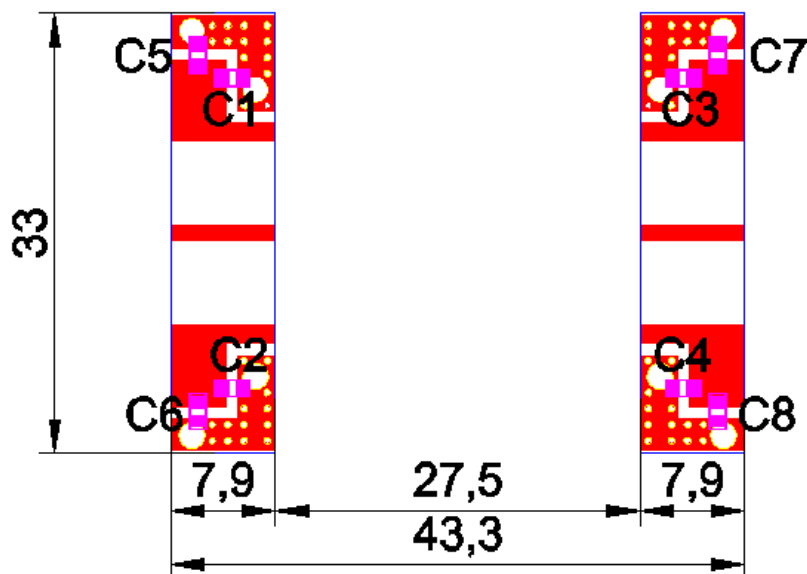
**Table 1. Maximum Ratings**

Rating	Symbol	Value	Unit
Drain--Source Voltage	$V_{DS}$	150	Vdc
Gate--Source Voltage	$V_{GS}$	-10 to +2	Vdc
Operating Voltage	$V_{DD}$	+32	Vdc
Storage Temperature Range	$T_{stg}$	-65 to +150	°C
Case Operating Temperature	$T_c$	+150	°C
Operating Junction Temperature	$T_j$	+225	°C

**Table 2. Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Thermal Resistance, Junction to Case $T_c = 25^\circ\text{C}$ , Pout=100W, FEA	$R_{\theta JC}$	0.8	°C/W

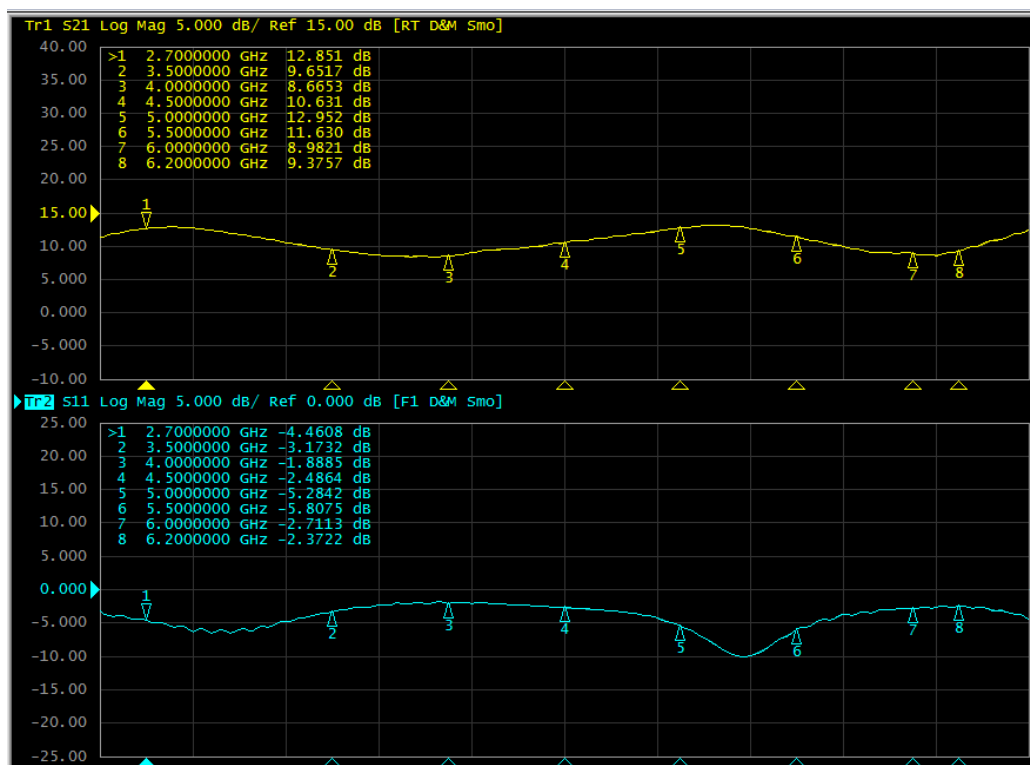
## Typical application circuit



Component	Description	Suggestion
C1 C2 C3 C4	100 pF	MQ301111
C5 C6 C7 C8	10 uF	TDK
PCB	20Mil Rogers 4350	Rogers

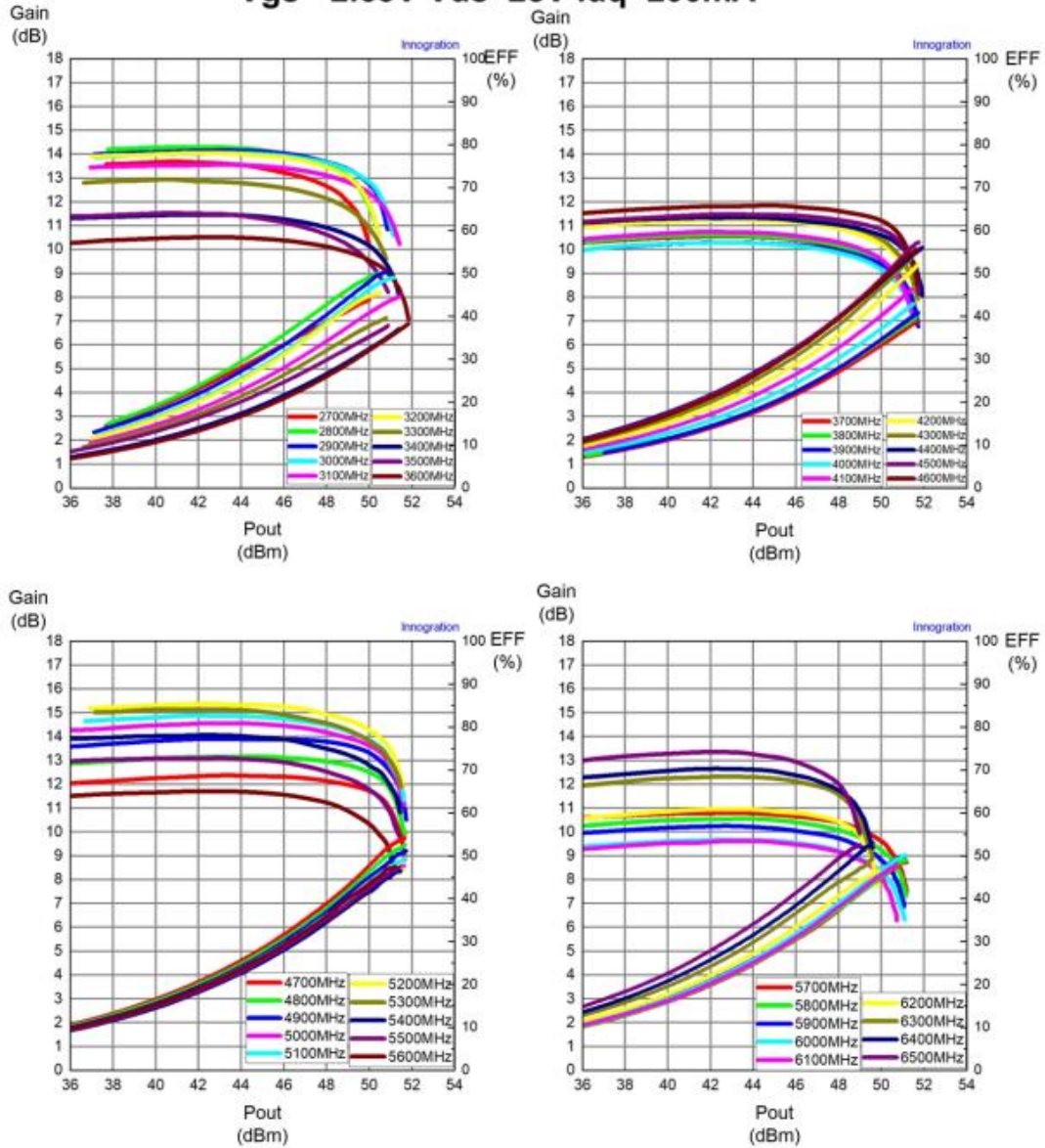
## TYPICAL CHARACTERISTICS

Figure 1. Network analyzer output S11/S21 (Pin=0dBm, Idq=200mA)



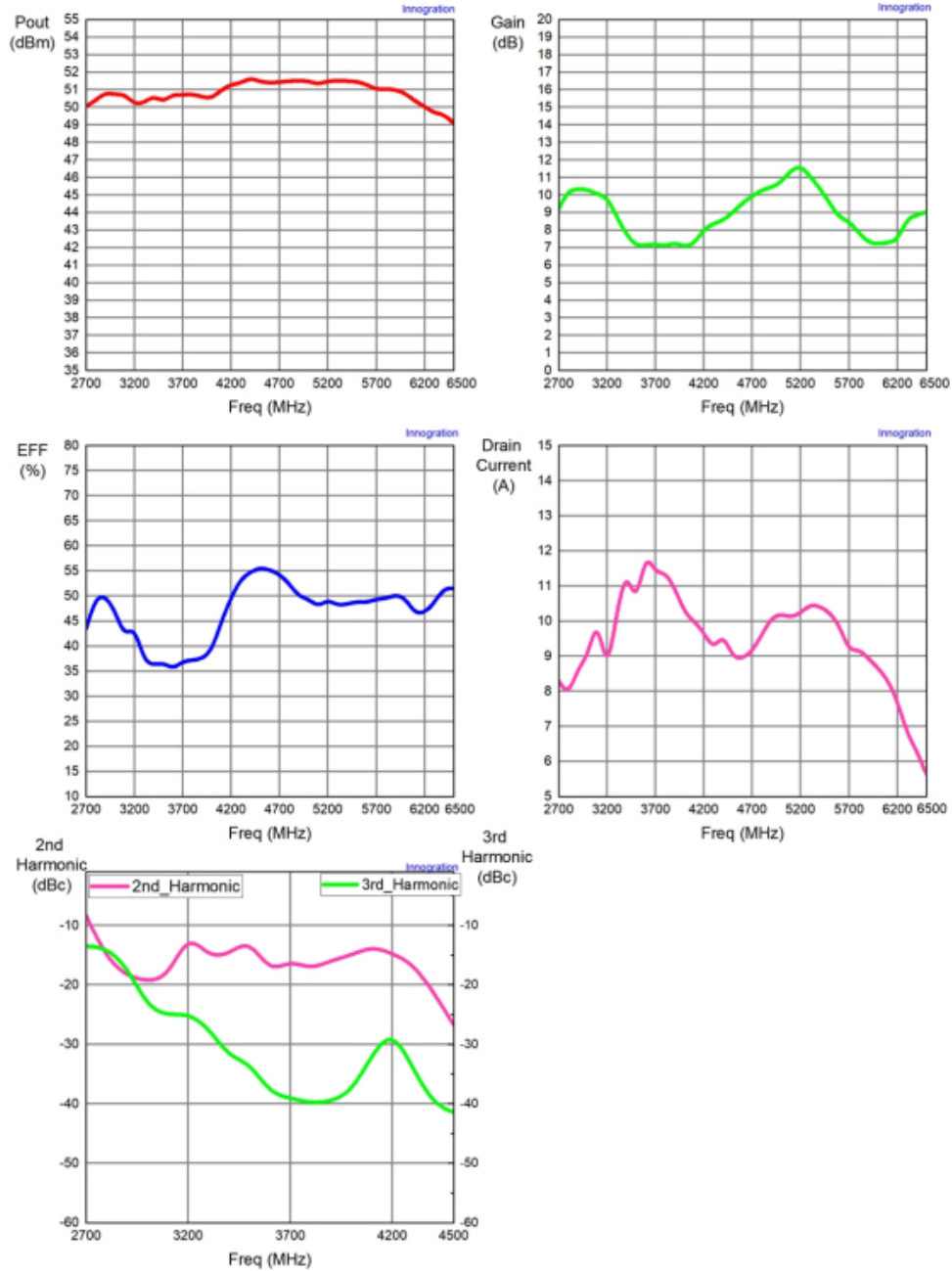


**YMAH2762-100H3 Pulse 100us 10%**  
**Vgs=-2.63V Vds=28V Idq=200mA**

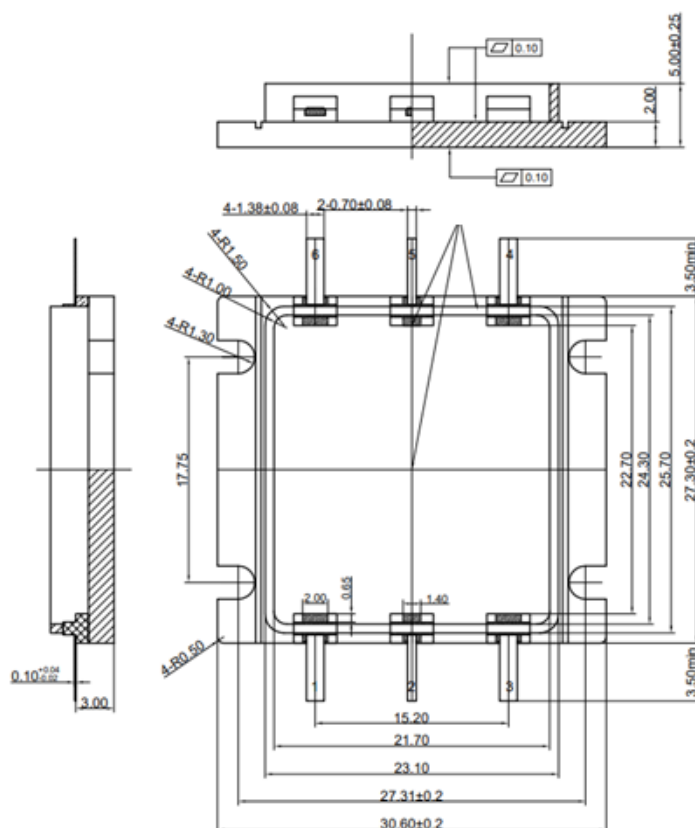




**YMAH2762-100H3 CW Test**  
**V<sub>gs</sub>=-2.63V V<sub>ds</sub>=28V I<sub>dq</sub>=200mA**



### Package Dimensions (Unit:mm)



## Revision history

Table 6. Document revision history

Date	Revision	Datasheet Status
2026/1/23	Rev 1.0	Advanced Datasheet

**Application data based on JF-26-03**

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