

YHG-26-27**XU0760V^{V0}: 150-900MHz****XU0760V^{V0} Class AB 150-900MHz****July 23, 2026****Introduction**

This amplifier is designed with Innogrations 50V Gan transistor.

Demo and Transistor

Frequencyband	: 150-900MHz
Application	: Multi Market
Configuration	: Class AB
Test Signal	: Pulse/CW
Transistor	: XU0760V ^{V0}
Date code	: 262820S-01
PCB	: F4BTMS1000 ,r=10.2 ,30 mil

The amplifier has been characterized under the following conditions:

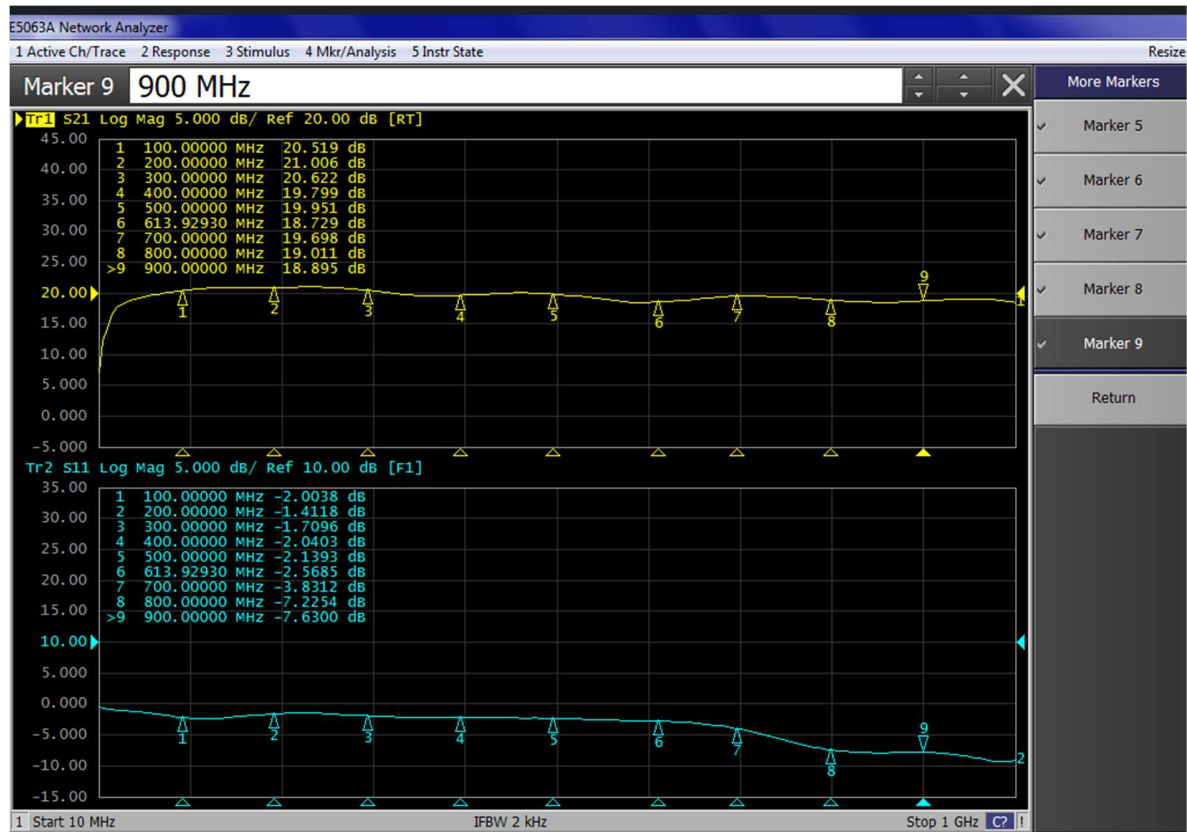
- Network Analyzer plots for gain and IRL.
- The output power measurement using CW .

Note: The PA is tested with a supply voltage of $V_{DS} = 50V$, $I_{dq} = 200mA$, all measurements unless otherwise noted.

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1. Network Results

Test Condition

 $V_{ds}=50V$, $V_{gs}=-3.39V$, $I_{dq}=500mA$, Input Power = 0dBm


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Test Results

2. Summary @ Bench 2(Chengdu)

(1) Test Condition

Signal mode : Pulse 10% 100us

Frequency : 150-900MHz

$V_{gs} = -3.46V$, $V_{ds} = 50V$, $I_{dq} = 200mA$

Freq(MHz)	Pin(dBm)	Pout(dBm)	Pout(W)	IDS(A)	Gain(dB)	Eff(%)	2th	3rd
150	39.6	55.5	354.81	1.18	15.9	60.14	-6.7	-7.4
200	40.68	56.93	493.17	1.36	16.25	72.53	-17.7	-11.0
300	40.64	56	398.11	1.1	15.36	72.38	-9.7	-10.6
400	40.97	57.67	584.79	1.79	16.7	65.34	-36.1	-39.3
500	41.31	56.61	458.14	1.23	15.3	74.49	-16.0	-15.6
600	41.16	56.93	493.17	1.58	15.77	62.43	-23.1	-24.0
700	41.29	56.65	462.38	1.37	15.36	67.50	-16.1	-27.1
800	41.79	57.8	602.56	1.85	16.01	65.14	-18.9	-21.9
900	42.03	56.69	466.66	1.34	14.66	69.65	-15.9	-21.1

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(2) Test Condition

Signal mode : CW

Frequency : 150-900MHz

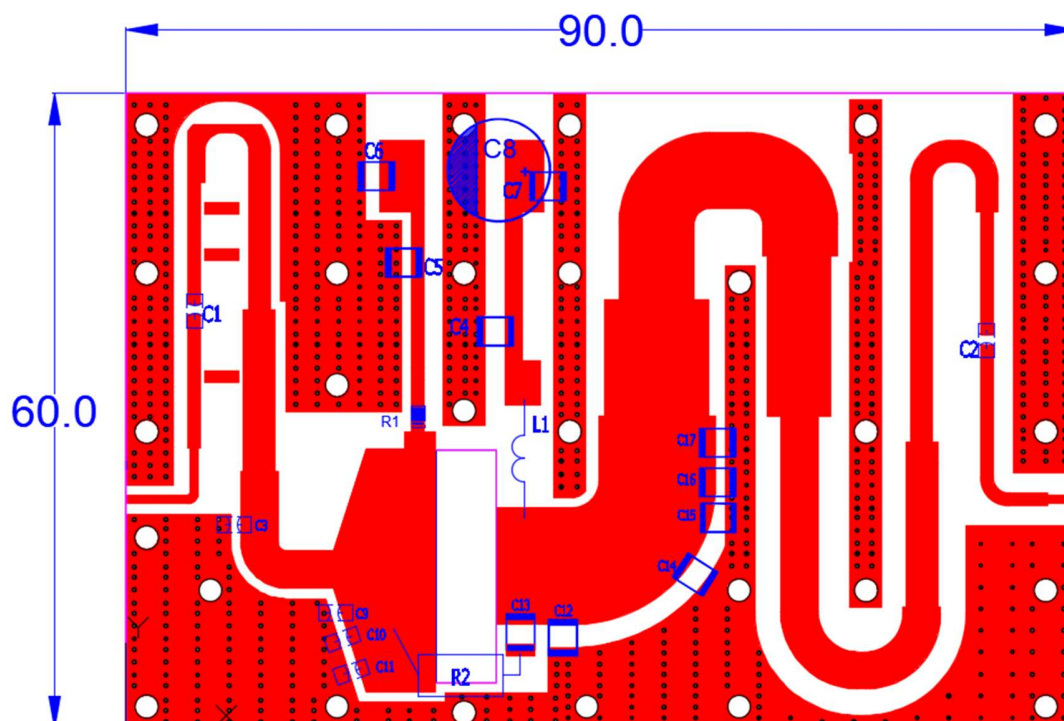
$V_{gs} = -3.44V$, $V_{ds} = 28V$, $I_{dq} = 200mA$

Freq(MHz)	Pin(dBm)	Pout(dBm)	Pout(W)	IDS(A)	Gain(dB)	Eff(%)	2th	3rd
150	37.7	50.88	122.46	7.23	13.18	60.49	-6.4	-7.2
200	39.88	52.28	169.04	8.6	12.4	70.20	-16.1	-11.3
300	39.74	51.39	137.72	7.04	11.65	69.87	-8.8	-10.7
400	39.27	53.15	206.54	11.5	13.88	64.14	-22.9	-18.9
500	40.51	51.83	152.41	7.44	11.32	73.16	14.2	-21.0
600	40.36	52.39	173.38	10.1	12.03	61.31	-18.7	-25.1
700	40.69	51.85	153.11	8.92	11.16	61.30	-16.6	-45.0
800	41.09	53.14	206.06	12	12.05	61.33	-16.3	-23.2
900	41.43	51.54	142.56	7.35	10.11	69.27	-17.0	-27.7

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BOM of Test Circuit



Component	Description	Suggested Manufacturer
C1	200pF/MQ300805	BEIJING YUANLU HONGYUAN ELECTRONIC TECHNOLOGY CO., LTD.
C2	200pF/ MQ301111	BEIJING YUANLU HONGYUAN ELECTRONIC TECHNOLOGY CO., LTD.
C8	470uF	
C6,C7	10uF	
C4, C5	10nF	BEIJING YUANLU HONGYUAN ELECTRONIC TECHNOLOGY CO., LTD.
C13	1000pF/ MQ301111	
C3, C10, C11,	5.6pF/ MQ300805	BEIJING YUANLU HONGYUAN ELECTRONIC TECHNOLOGY CO., LTD
C9	8.2pF/ MQ300805	BEIJING YUANLU HONGYUAN ELECTRONIC TECHNOLOGY CO., LTD
C12, C14,C17	5.6pF/ MQ301111	BEIJING YUANLU HONGYUAN ELECTRONIC TECHNOLOGY CO., LTD
C15	2pF/ MQ301111	BEIJING YUANLU HONGYUAN ELECTRONIC TECHNOLOGY CO., LTD
C16	1pF/ MQ301111	BEIJING YUANLU HONGYUAN ELECTRONIC TECHNOLOGY CO., LTD
L1	1mm, 9 turns, diameter :5mm	DIY air core inductance
R2	330ohm	---
R1	10ohm/1206	Chip Resistor
PCB	F4BTMS1000 ,r=10.2 ,30 mil	