Test Report XTAH62071G2*2 Class AB 4000-6000MHz

Dec. 5th, 2025

Introduction

This amplifier is designed with Innogration 28V XTAH62071G2 GaN

Demo and Transistor

Frequency band : 4000-6000 MHz
Application : Telecom
Configuration : Class AB
Test Signal : CW
Transistor : XTAH62071G2
Date code :
PCB :20 Mil Rogers 4350B

The amplifier has been characterized under the following conditions:

- Network Analyzer plots for gain and IRL.
- Gain, Efficiency.
- P1dB and P3dB Peak power measurement using the CW
- RF Test Bench 4

Test Results:

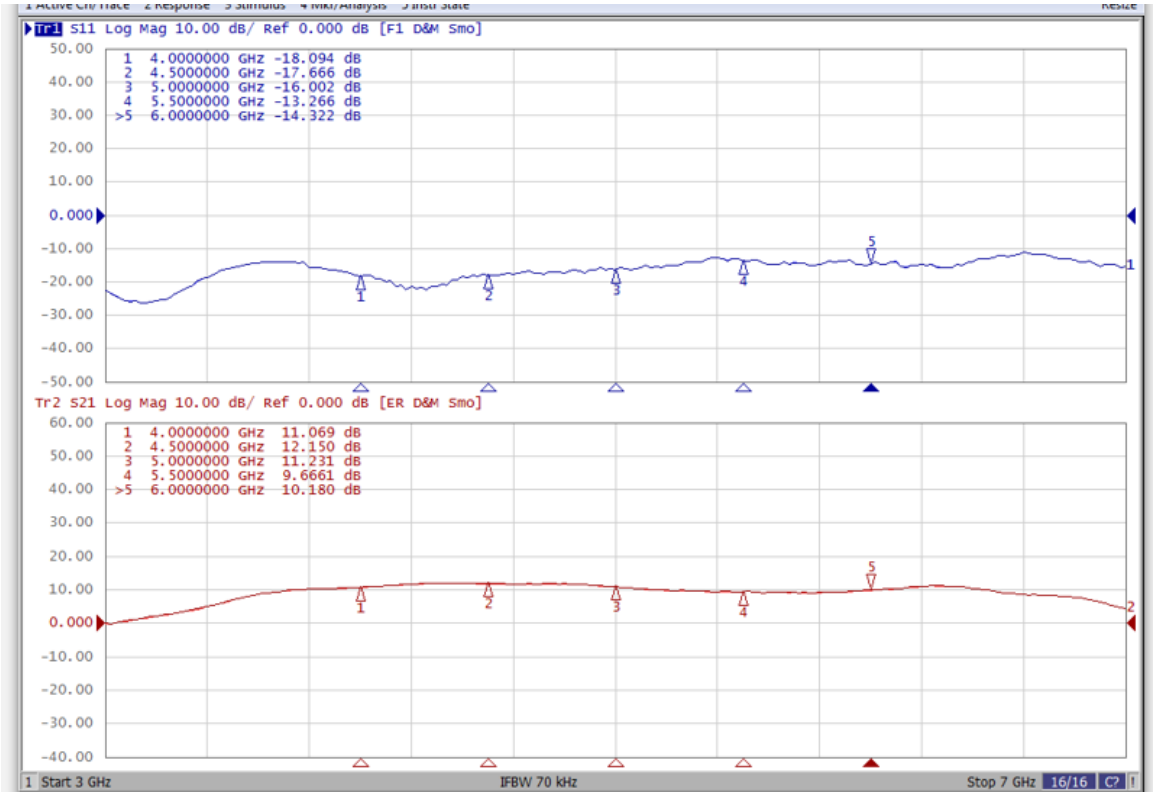
1. **CW test**

V_{DS} = 28V, I_{DQ} = 30mA

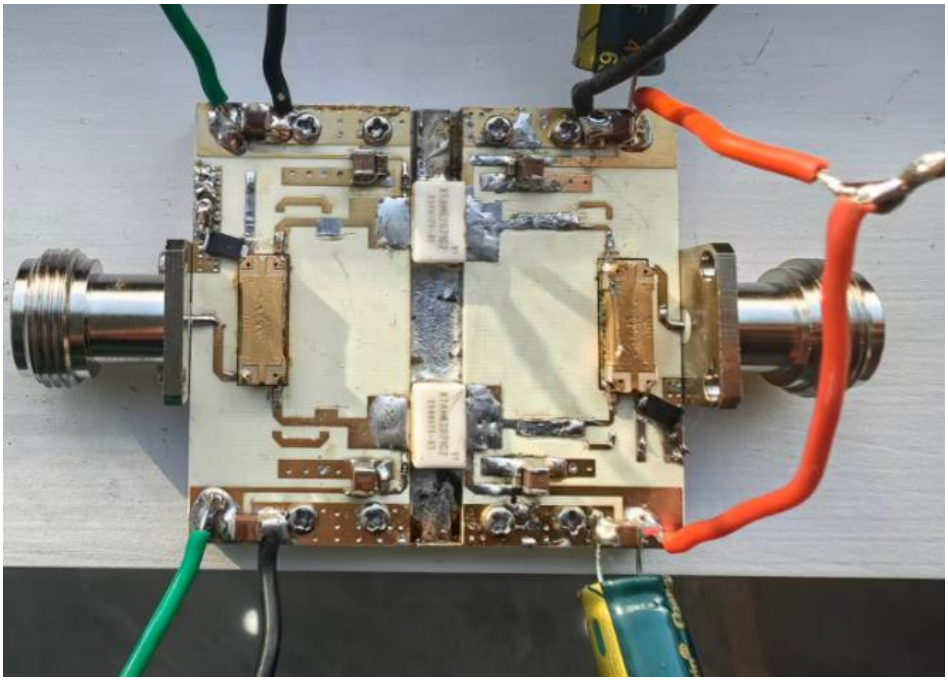
Freq (MHz)	Pin dB (dBm)	Pout dB (dBm)	Pout dB (W)	Gain(dB)	Pout dB Eff(%)	Id (mA)
4000	40.8	50.5	112.03	9.7	55.8	7185.0
4100	40.1	50.3	108.18	10.3	56.9	6778.0
4200	40.3	50.4	110.42	10.2	58.3	6787.5
4300	39.7	50.6	115.27	10.9	61.9	6700.5
4400	40.5	51.0	124.13	10.5	61.0	7405.3
4500	41.0	51.2	131.9	10.2	61.9	7715.0
4600	40.5	51.11	129.1	10.6	63.0	7303.0
4700	41.4	50.88	122.5	9.5	62.8	6972.3
4800	40.9	50.6	114.8	9.7	62.2	6668.2
4900	41.1	50.5	110.2	9.4	59.1	6739.7
5000	41.2	50.3	107.1	9.1	56.2	6771.1
5100	42.0	50.36	108.6	8.3	52.9	7323.9
5200	42.9	50.71	117.9	7.8	53.4	7882.9

5300	42.6	50.77	119.5	8.2	55.0	7778.0
5400	42.7	50.62	115.4	7.9	52.6	7808.3
5500	42.4	50.9	123.1	8.5	55.3	7934.2
5600	42.7	50.57	114.0	7.9	51.2	8001.1
5700	43.1	50.74	118.5	7.6	50.7	8418.9
5800	43.0	51.08	128.2	8.0	51.9	8878.7
5900	42.3	51.18	131.3	8.9	52.0	9086.0
6000	41.7	50.78	119.7	9.1	50.5	8612.0

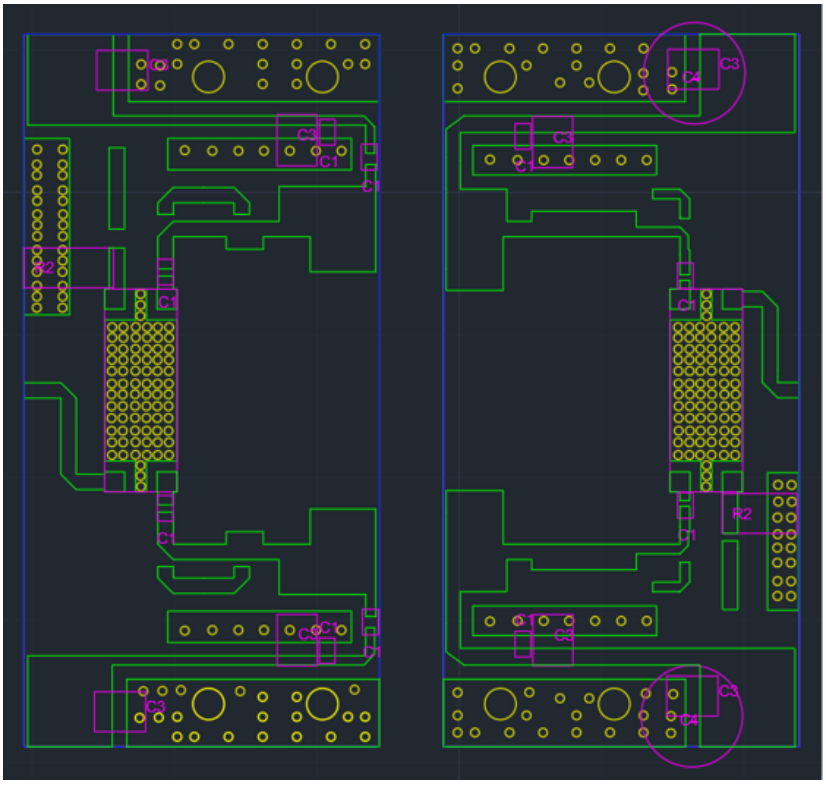
2. Network Analyzer Results（S11，S21）
V_{DS} = 28Vdc, I_{DQ} = 210mA



3. Demo Picture



4. PCB Layout



5. BOM of Test Circuit

BOM		
Component	**Value**	**Quantity**
C2	3.9pF	8
C3	10uF/63V	8
R1	10 ohm	2
R2	51 Ω Power Resistor	2
COUT1	3 dB Bridge 4-6ghz	2
C4	470uF	1