ITJV01500A2C^{V0}*2 Class AB 108MHz

Mar 26, 2026

Introduction

This amplifier is designed with Innogration 50V LDMOS transistor.

Demo and Transistor

Frequencyband	:	108MHz
Application	:	Multi Market
Configuration	:	Class AB
Test Signal	:	CW/Pulse
Transistor	:	ITJV01500A2C^{V0}
Date code	:	261219S
PCB	:	Rogers tc350-plus

The amplifier has been characterized under the following conditions:

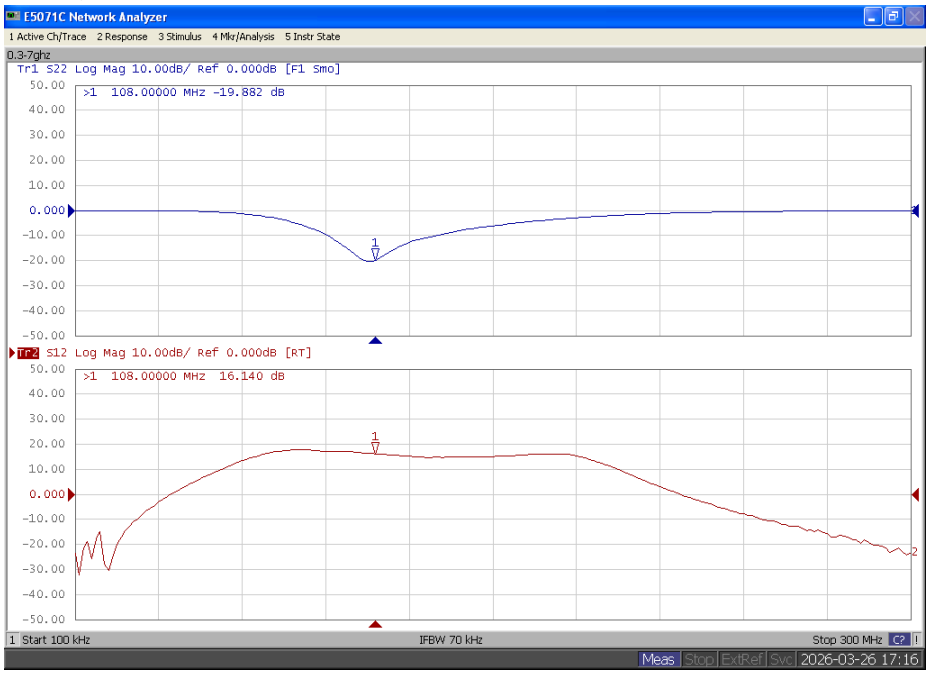
- Network Analyzer plots for gain and IRL.
- The output power measurement using CW / Pulse .

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

1. Network Results

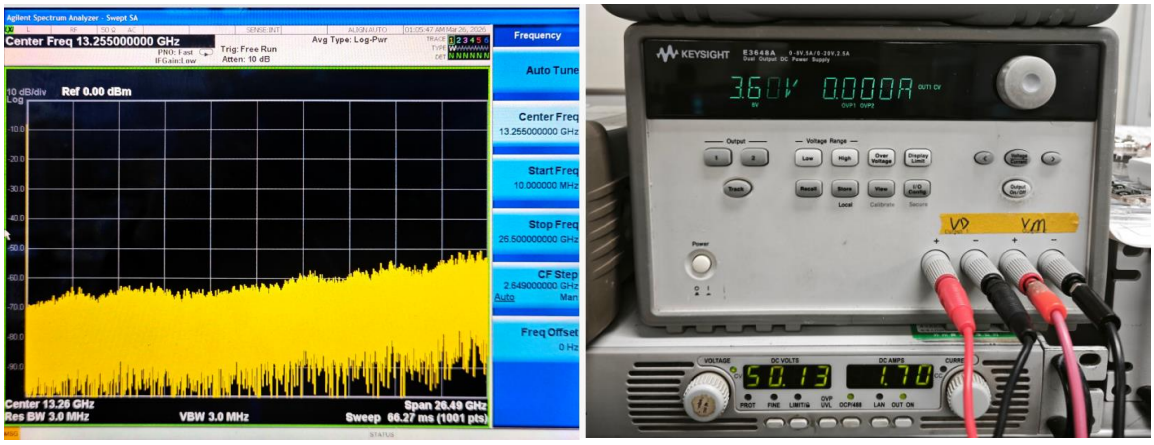
Test Condition

V_{ds}=50V，V_{gs}=3.48V，I_{dq}=700mA，Input Power = 0dBm



spectrum analyzer to • show no oscillation or instability issue

Test Condition:Vgs= 3.6V， Vds= 50V， Idq = 1.7A



Test Results

2. Summary @ Bench 2(SuZhou)

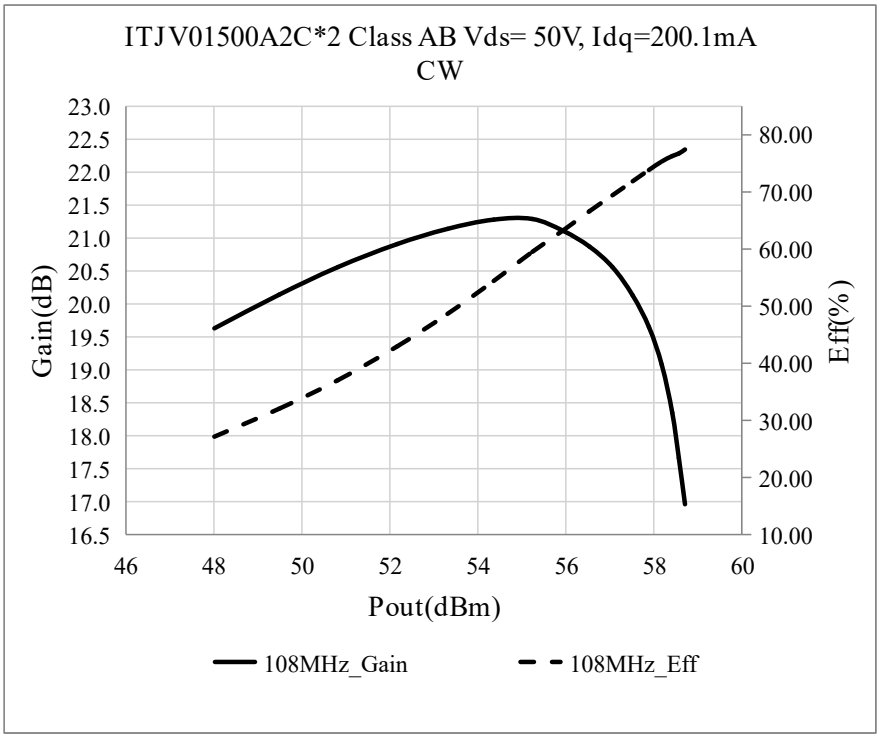
(1) Test Condition

Signal mode： CW

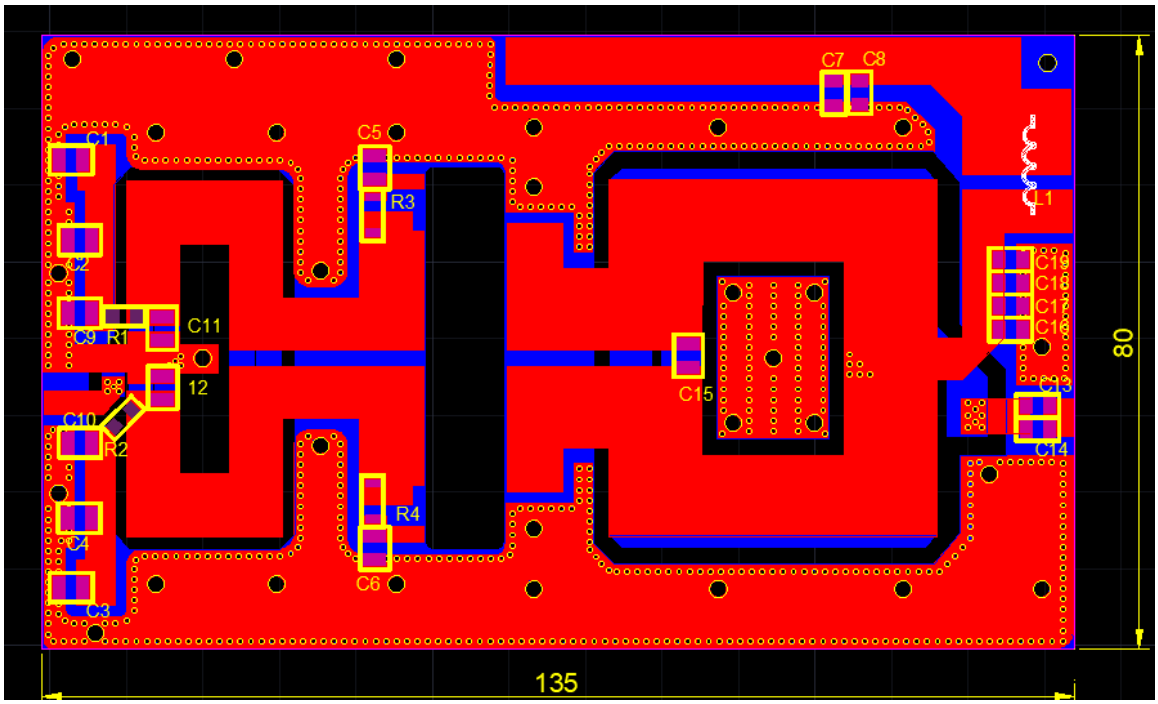
Frequency： 108MHz

V_{gs}= 3.31V， V_{ds}= 50V， I_{dq} = 200mA

Freq (MHz)	P1dB (dBm)	P1dB (W)	P1dB Eff(%)	P1dB Gain(dB)	P3dB (dBm)	P3dB (W)	P3dB Eff(%)
108	57.54	568.1	72.6	20.69	58.63	729.3	78.1

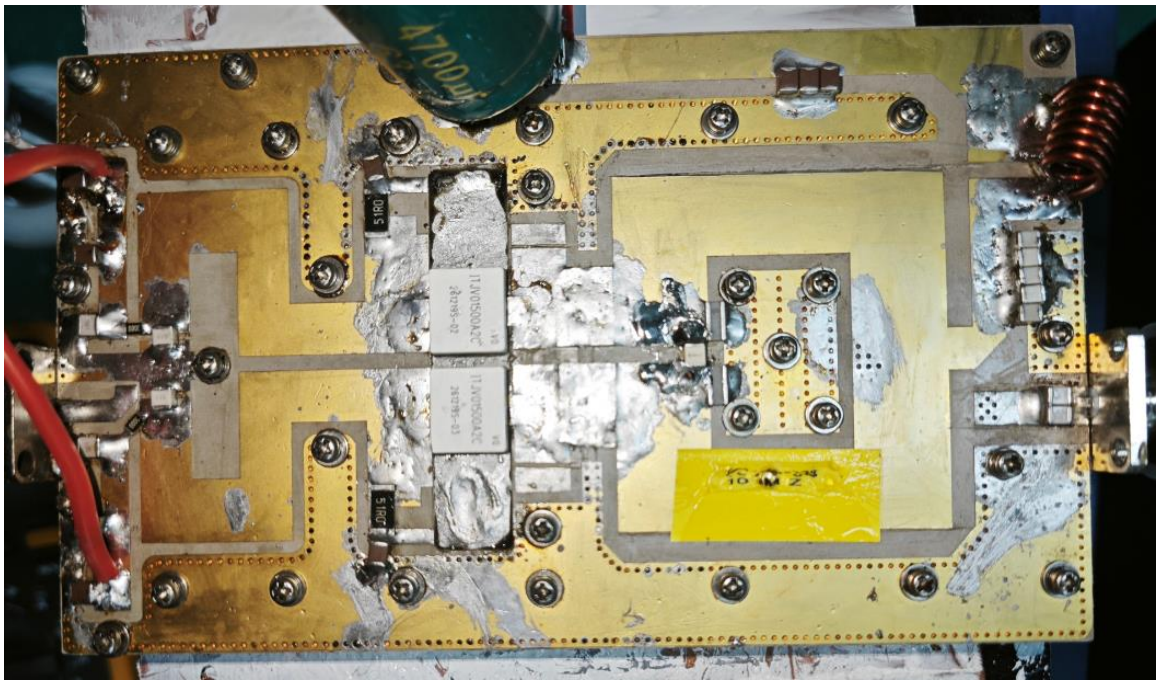


BOM of Test Circuit



Component	Description	Suggested Manufacturer
C1~C8	10uF/200V-1210	Ceramic multilayer capacitor
C9,C10	560pF	
C11,C12	510pF	
C13,C14,C16~C19	470pF	
C15	30pF	
R1,R2	300Ω/1206	Chip Resistor
R3,R4	51Ω2512	Chip Resistor
L1	1.5mm wire，5mm innerdiameter，7turns	DIY

Demo Picture


4700μF