

Test Report ITDE10450C2*2 915MHz

2025-4-24

Introduction

This amplifier is designed with Innegration 40V ITDE10450C2 LDMOS

Demo and Transistor

Frequency band : 915MHz
 Application : RF Energy
 Configuration : Class C
 Test Signal : Pulsed CW
 Transistor : ITDE10450C2
 Date code : 243341
 PCB : 20 Mil R04350

The amplifier has been characterized under the following conditions:

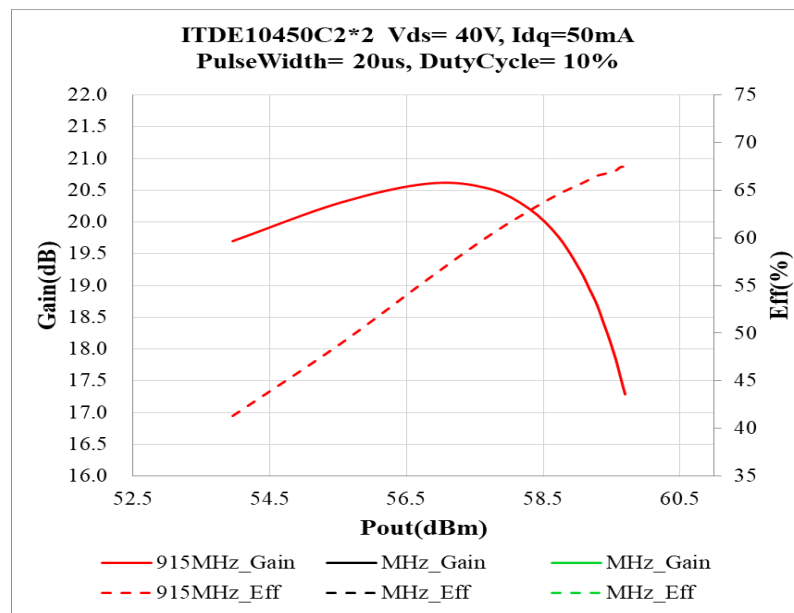
- Network Analyzer plots for gain and IRL.
- P3dB Peak power measurement using the Pulse, 20uS width, 10% cycle.
- RF Test Bench 4

Note: The PA is tested with a supply voltage of $V_{DS}= 40V$, all measurements unless otherwise noted.

Test Results:

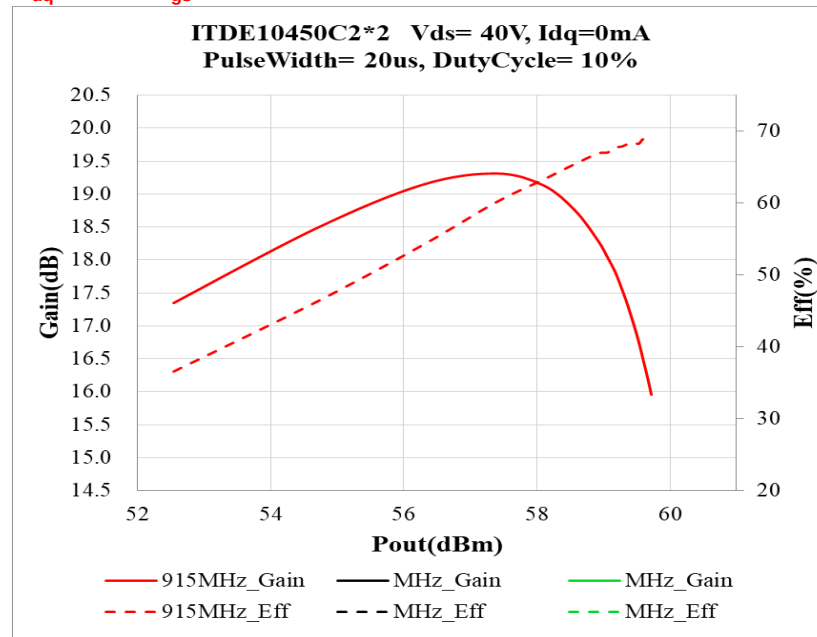
1. Summary

1) Pulse ($I_{dq}=50mA$ $V_{gs}=2.5V$)



Freq (MHz)	P1dB (dBm)	P1dB (W)	P1dB Eff(%)	P1dB Gain(dB)	P3dB (dBm)	P3dB (W)	P3dB Eff(%)
915	58.81	760.8	64.9	19.62	59.61	915.1	67.4

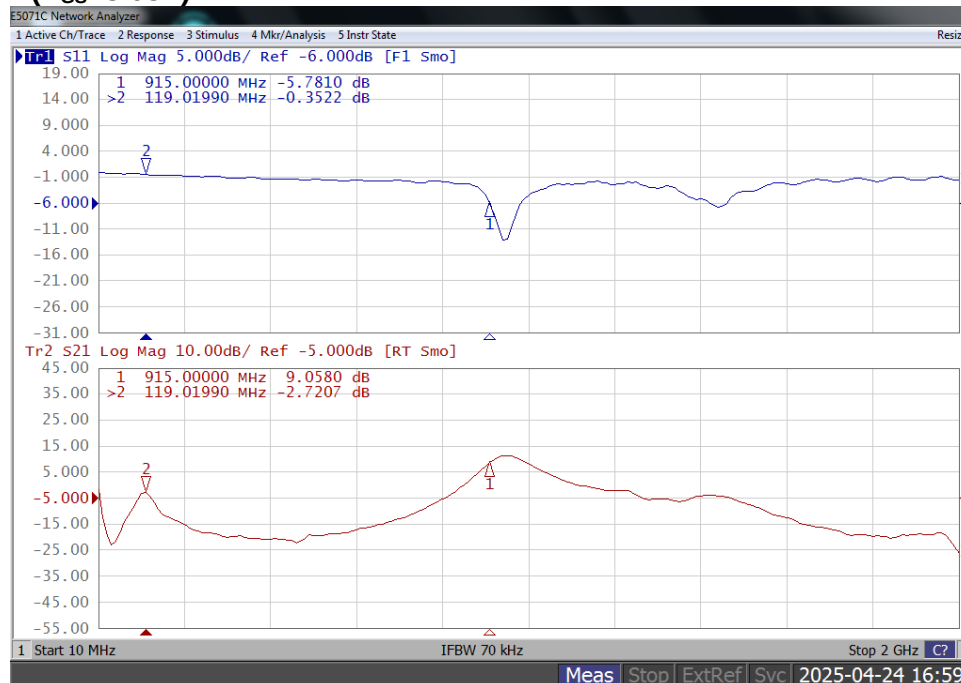
2) Pulse ($I_{dq}=0mA$ $V_{gs}=2.0V$)



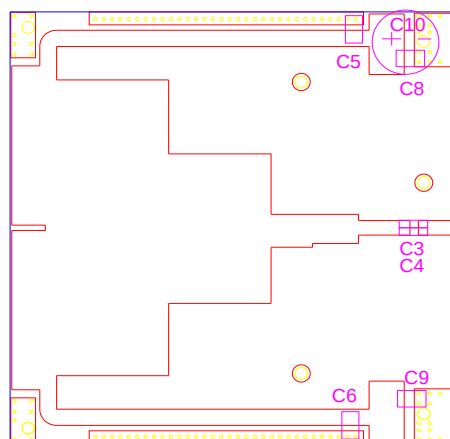
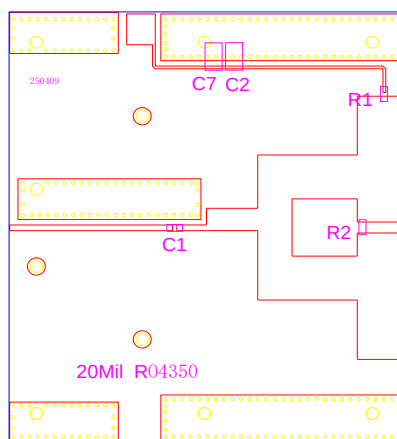
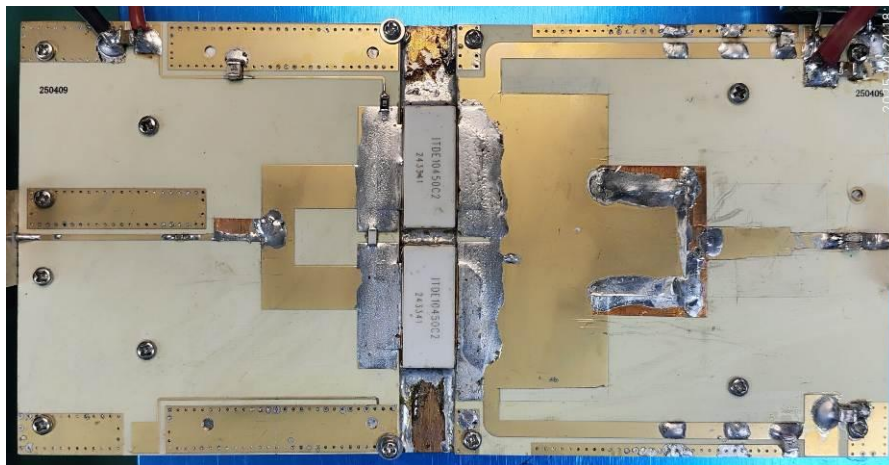
Freq (MHz)	P1dB (dBm)	P1dB (W)	P1dB Eff(%)	P1dB Gain(dB)	P3dB (dBm)	P3dB (W)	P3dB Eff(%)
915	58.89	773.6	66.8	18.33	59.63	919.0	68.6

2. Network Analyzer Results

$I_{DQ}=1A$ ($V_{GS}=3.03V$)



3. Demo PCB



BOM of Test Circuit

Designator	Comment	Footprint	Quantity
C1	10pF	0603	1
C2, C3, C4, C5, C6	47 pF	1210	6
C7, C8, C9	10 uF/100V	1210	3
C10	1000 uF/63V		2
R1, R2	10 Ω	0805	3

(HIGH Q CAPACITORS)