

HL-23-56**ITDE10550C2 × 2****915MHz**

ITDE10550C2 × 2 Class C 915 MHz

Nov.15, 2023

Introduction

This amplifier is designed with Innogrations 42V LDMOS transistor.

Demo and Transistor

Frequencyband	: 915MHz
Application	: Multi Market
Configuration	: Class C
Test Signal	: CW
Transistor	: ITDE10550C2
Date code	: 234115S-04/234115S-05
PCB	: 30mil/60mil Rogers 4350B

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 $V_{DS} = 42V$, $I_{dq} = 0mA$, all measurements unless otherwise noted.

Test Results

1. Summary @ Bench 2(Chengdu)

(1) Test Condition

Signal mode : CW

Frequency : 915MHz

HL-23-56

ITDE10550C2 × 2

915MHz

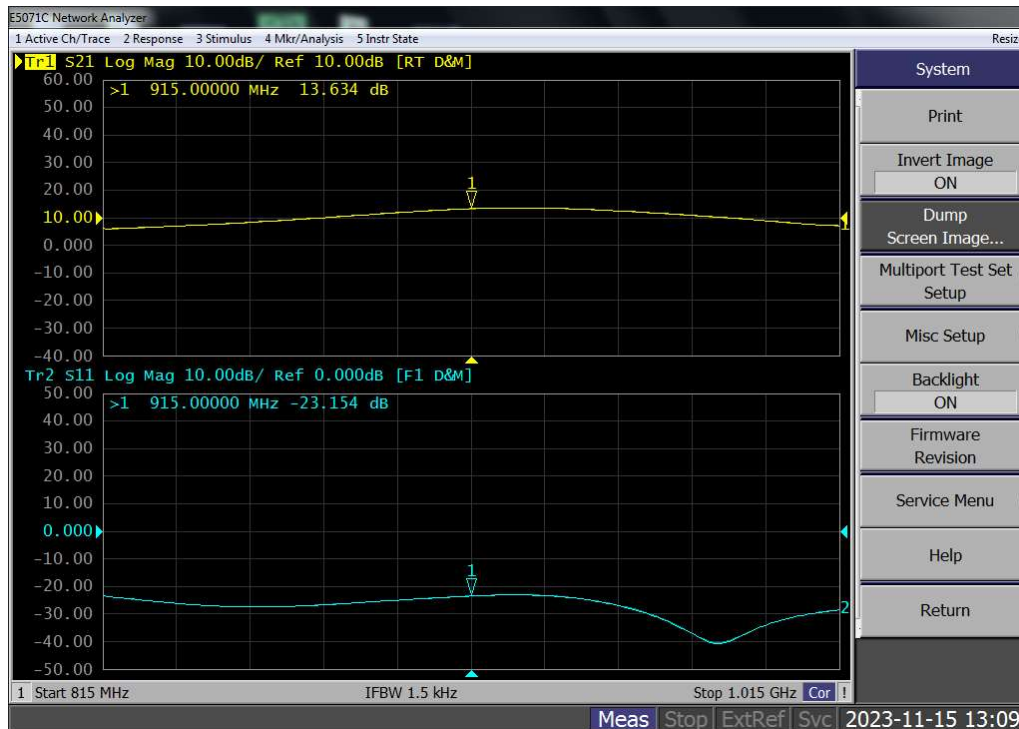
ITDE10550C2×2 VDS=42V VGS=1.5V IDQ=0mA CW

F(MHz)	Pin (dBm)	Pout (dBm)	Pout (W)	I(A)	Gain (dB)	Eff(%)	2th	3th
915.00	48.49	60.17	1040	37.75	11.7	65.6	-40.8	51.3
	47.69	60.02	1005	36.40	12.3	65.7	/	/
	46.77	59.80	955	34.80	13.0	65.3	/	/
	45.81	59.50	891	33.00	13.7	64.3	/	/
	44.8	59.24	839	31.00	14.4	64.5	/	/
	43.78	58.70	741	28.60	14.9	61.7	/	/
	42.76	58.17	656	26.07	15.4	59.9	/	/
	41.74	57.44	555	23.10	15.7	57.2	/	/
	40.7	56.40	437	20.30	15.7	51.2	/	/
	39.7	55.23	333	17.16	15.5	46.3	/	/
	38.65	53.50	224	13.90	14.9	38.3	/	/

2. Network Results

Test Condition

$V_{ds}=42V$, $V_{gs}=2.95V$, $I_{dq}=1000mA$, Input Power = 0dBm

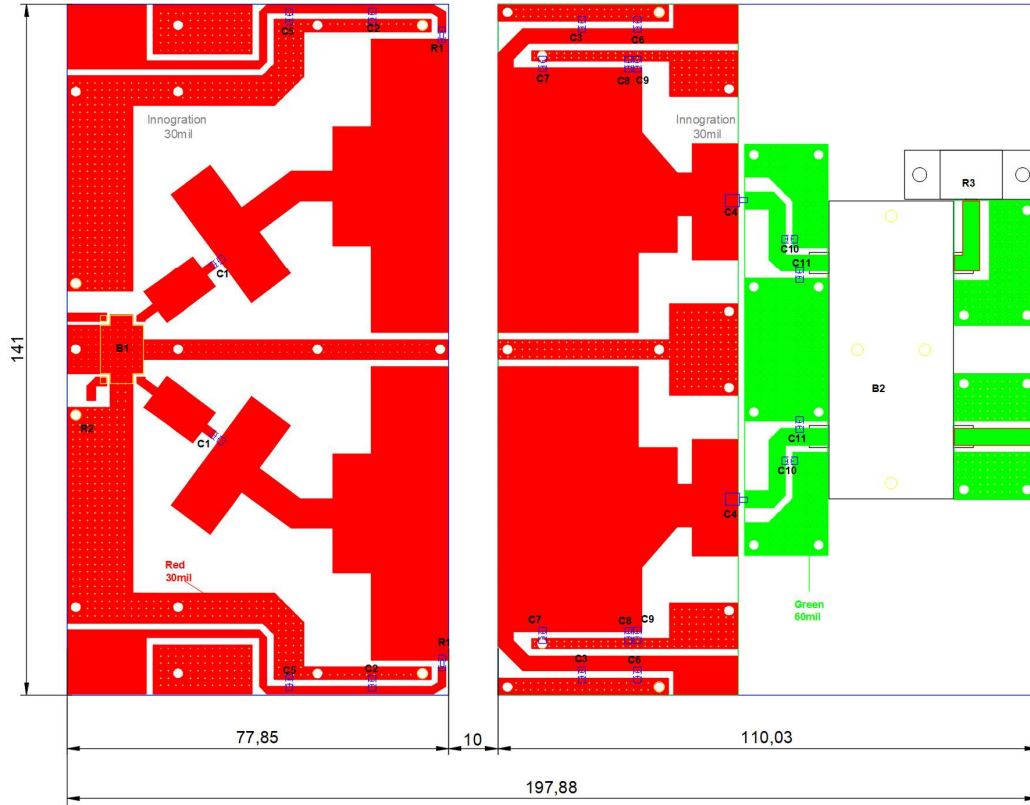


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BOM of Test Circuit



Component	Description	Suggested Manufacturer
C1,C2,C3	100pF	MQ301111
C5,C6	10uF/100V	Ceramic multilayer capacitor
C4	100pF	MCM-1-300V-D-101J
C8,C9,C10	1.2pF	MQ301111
C7,C11	3.0pF	MQ301111
R1	10 Ω 1206	Chip Resistor
R2	50 Ω	60W
R3	50 Ω	250W
B1	IPP-7047RT	
B2	HLD-F010023-3	
PCB	60mil/30mil Rogers 4350B	

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Demo Picture

