

Test Report IMEH0017-8 ClassAB 1000-1700MHz

Sep 8th, 2022

Introduction

This amplifier is designed with Innegration 28V IMEH0017-8 Rev1 LDMOS

Demo and Transistor

Frequency band : 1000-1700 MHz
 Application : Telecom
 Configuration : Class AB
 Test Signal : CW
 Transistor : IMEH0017-8 Rev1
 Date code :
 PCB : 20 Mil Rogers 4350B

The amplifier has been characterized under the following conditions:

- Network Analyzer plots for gain and IRL.
- P1dB and P3dB Peak power measurement using the CW Signal.
- RF Test Bench 3

Note: The PA is tested with a supply voltage of $V_{DS}= 28V$, $I_{DQ}=150$ mA $V_{gs} =2.7V$. all measurements unless otherwise noted.

Test Results:

1. CW Test

1.1 Table

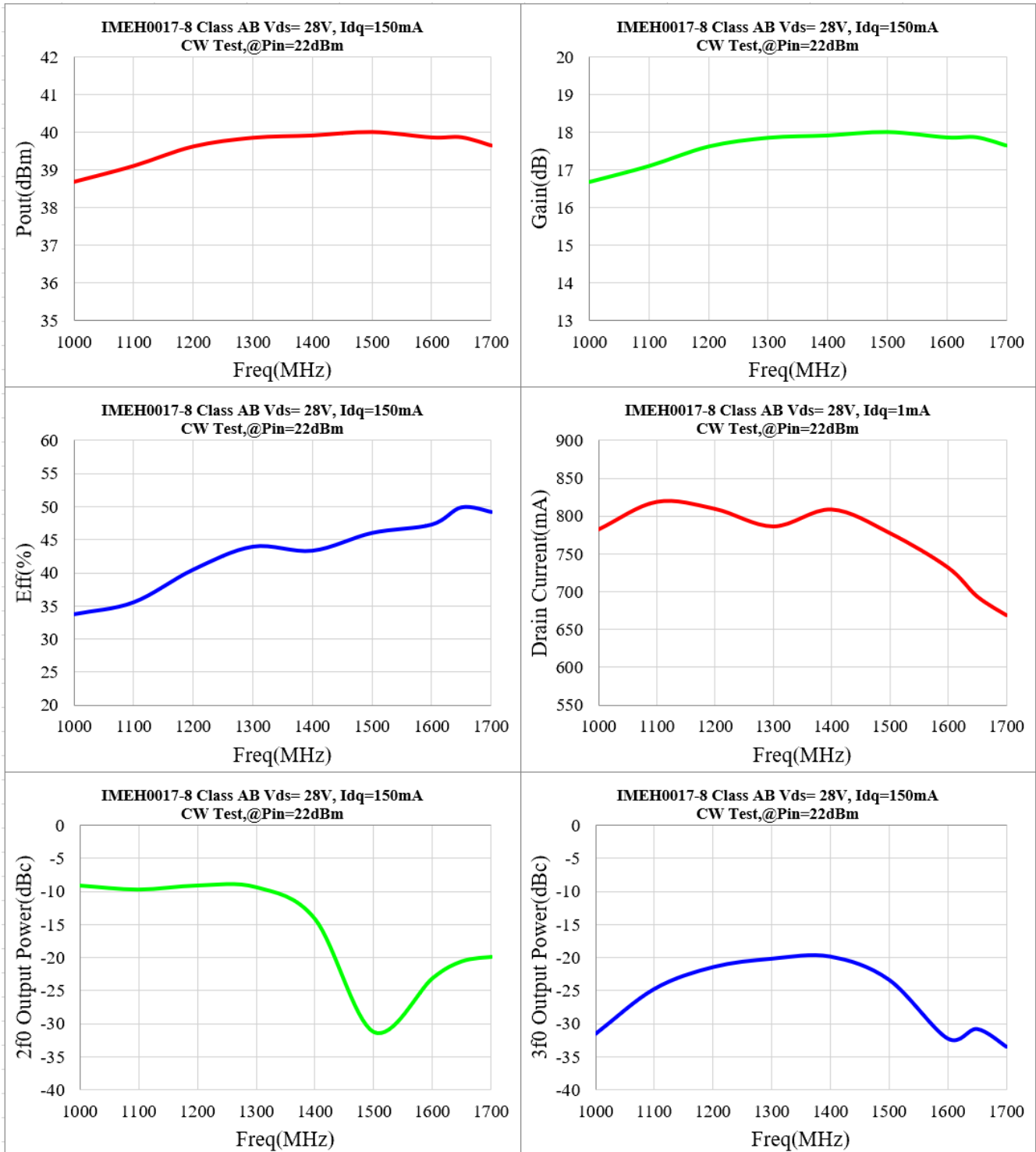
**$V_{DS}= 28V$, $I_{DQ}=150$ mA
 $V_{gs} =2.70V$**

Parameter	1.0GHz	1.1GHz	1.2GHz	1.3GHz	1.4GHz	1.5GHz	1.6GHz	1.7GHz	Units
Linear Gain	18.6	17.8	18.0	18.7	19.2	20.1	20.5	20.3	dB
Pout@Pin=22dBm	7.4	8.1	9.2	9.7	9.8	10.0	9.7	9.2	W
Gain@Pin=22dBm	16.7	17.1	17.6	17.8	17.9	18.0	17.9	17.6	dB
Eff@ Pin=22dBm	34	36	40	44	43	46	47	49	%

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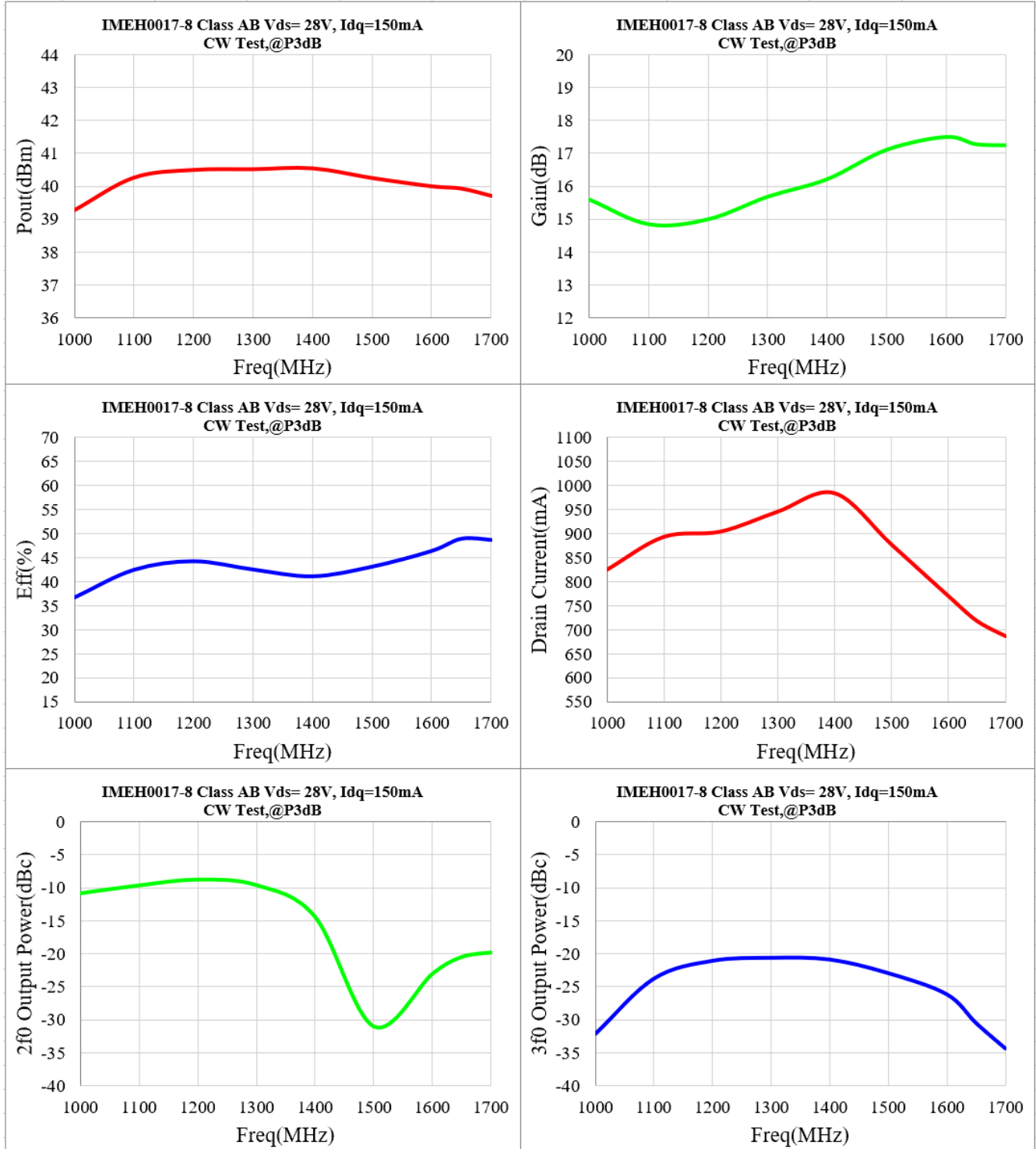
1.2 Pin=22dBm Plot



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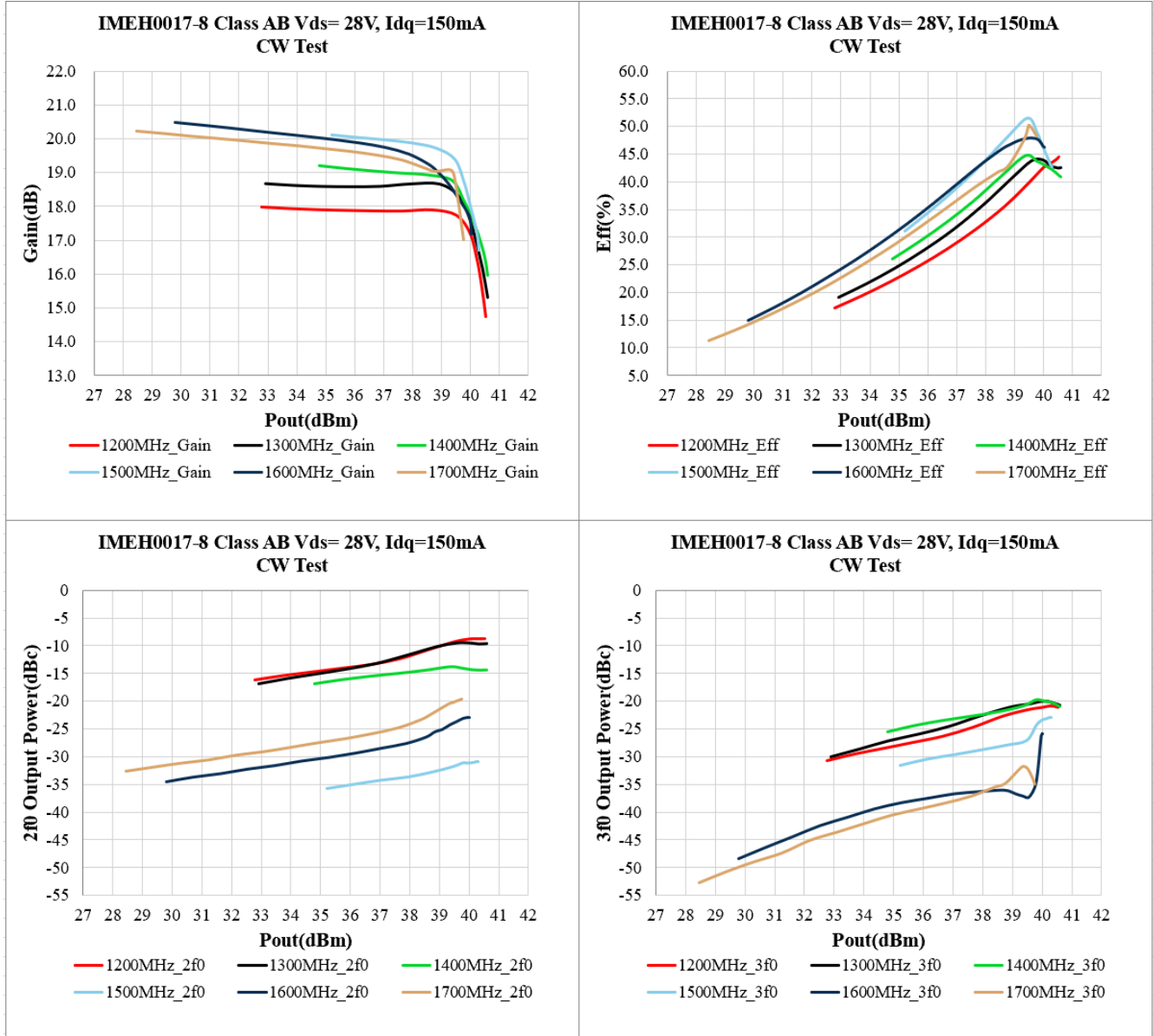
1.3 P3dB Plot



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1.4 AM-AM Plot



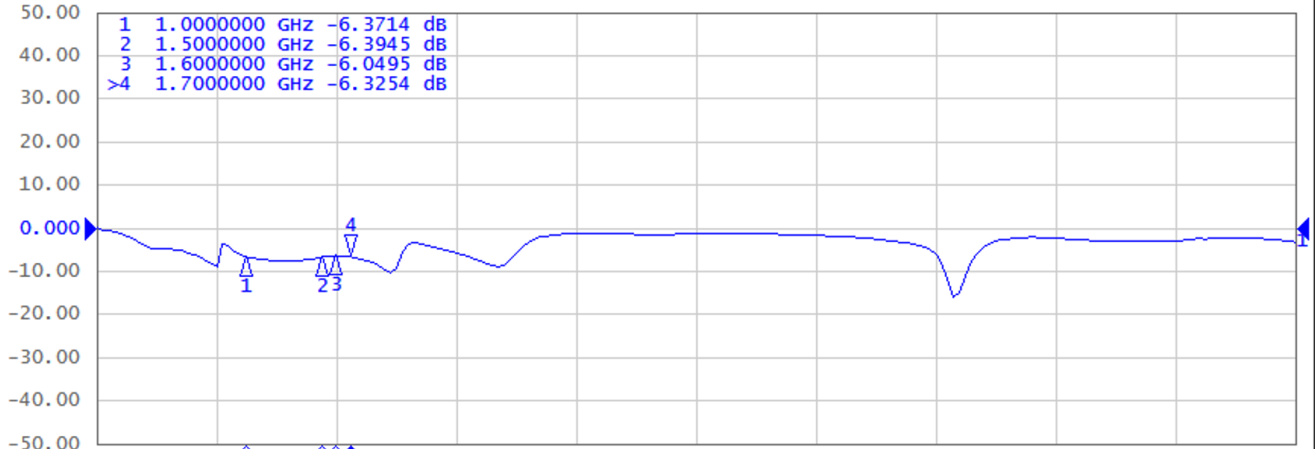
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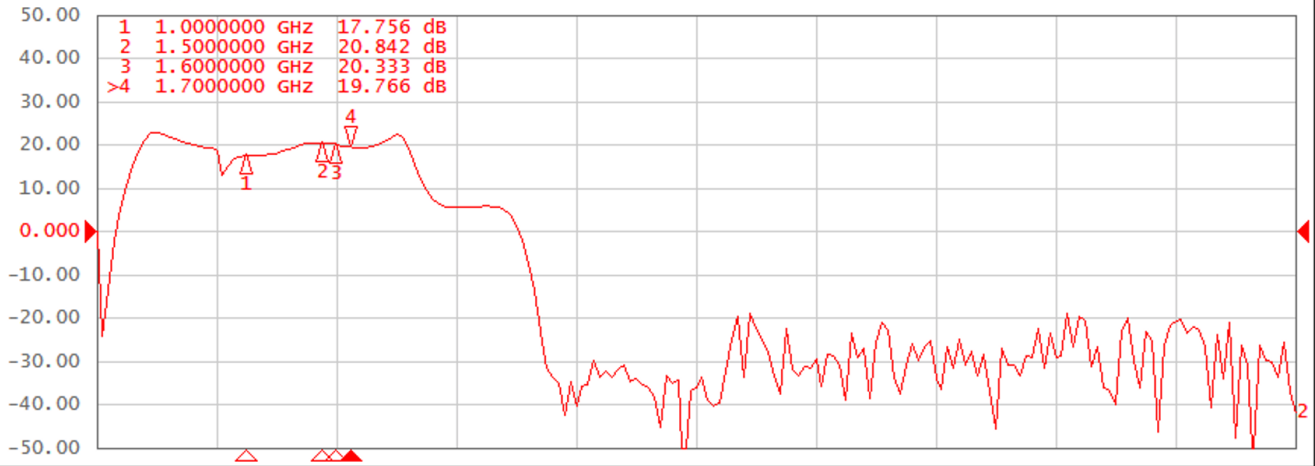
2. S21 S11 Network Analyzer Results

$V_{DS} = 28\text{ V}$, $I_{DQ} = 55\text{ mA}$ $V_{GS} = 2.7\text{ V}$

Tr1 S11 Log Mag 10.00 dB/ Ref 0.000 dB [F1]



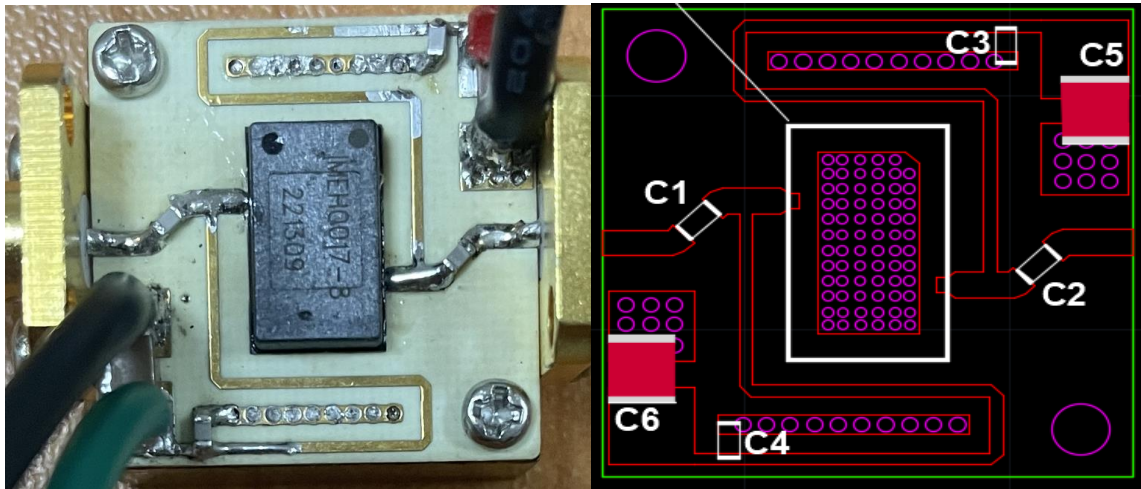
Tr2 S21 Log Mag 10.00 dB/ Ref 0.000 dB [ER]



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3 DEMO And BOM Picture



		Part NO.	Vendor
C1,C2,C3,C4	20pF (0603) Capacitor		
C5,C6	100V 10uF Chip Capacitor	G5750X7S2A106M230KB	muRata
PCB	RO4350B,20mil,er=3.48		