Antenna Test Report

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Applicant’s name : SMP Labs, Inc
Address : 868 Southampton Dr Palo Alto, CA 94303 USA
M/N:SSH1

Project Name: SSH1_V3
Author: Yang
Update: 2022-12-27

OverView

CUSTOMER NAME	MOKO	PROJECT NAME	SSH1_V3

Items	Details
• FREQUENCY	2400MHz-2500MHz
• PROJECT TYPE	
• ANTENNA SPACE	
• FEED & GROUND PAD	
• SENSITIVE ELEMENTS	
• ANTENNA TYPE	
• PCB	
• OTHERS	

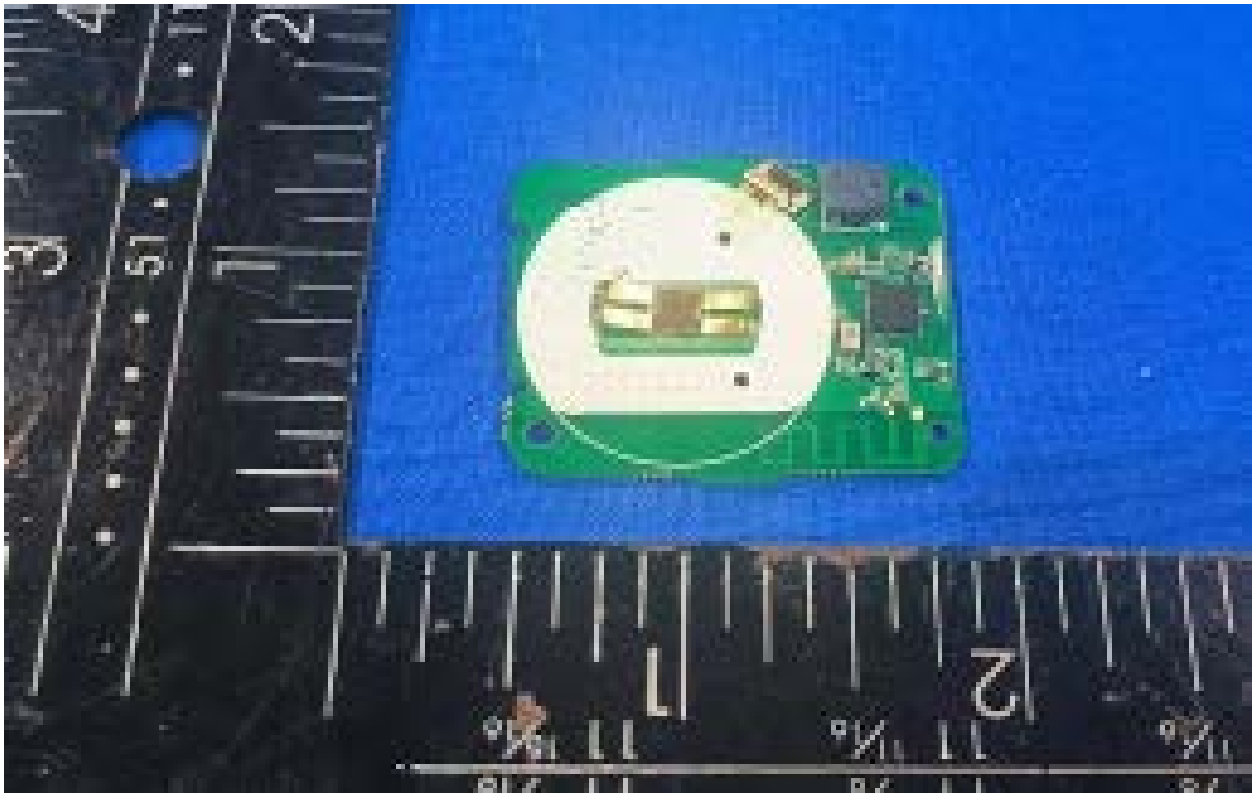
Revision History

Date	Revision	Author	Description of changes

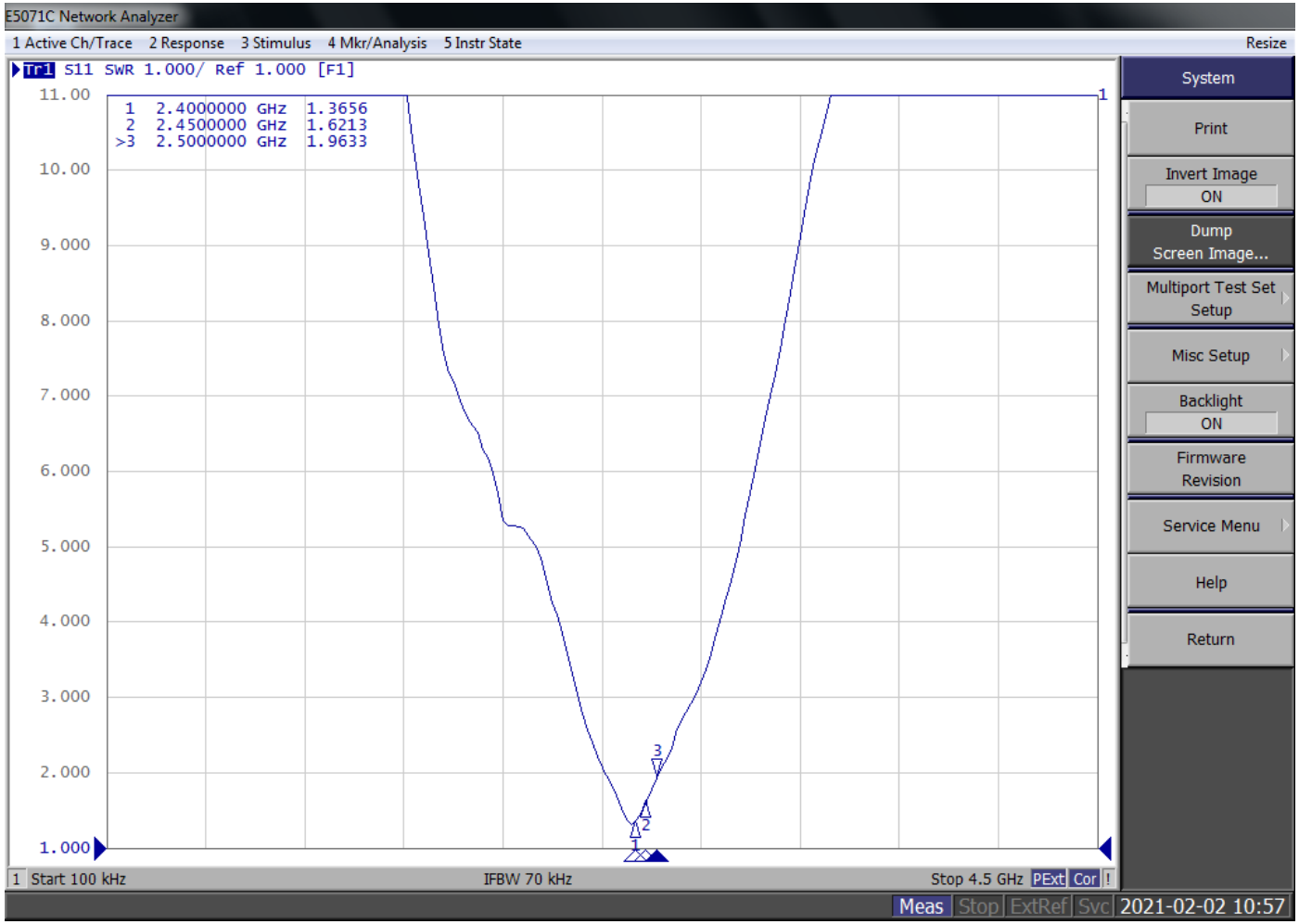
Test Item & Equipment

List	Test Item	Equipment	
1.S Parameter	VSWR, Return Loss	Agilent VNA	
2.Active Test	TRP, TIS	Agilent 8960	RayZone1800
3.Passive Test	Gain, Efficiency, Pattern	Agilent E5071C	

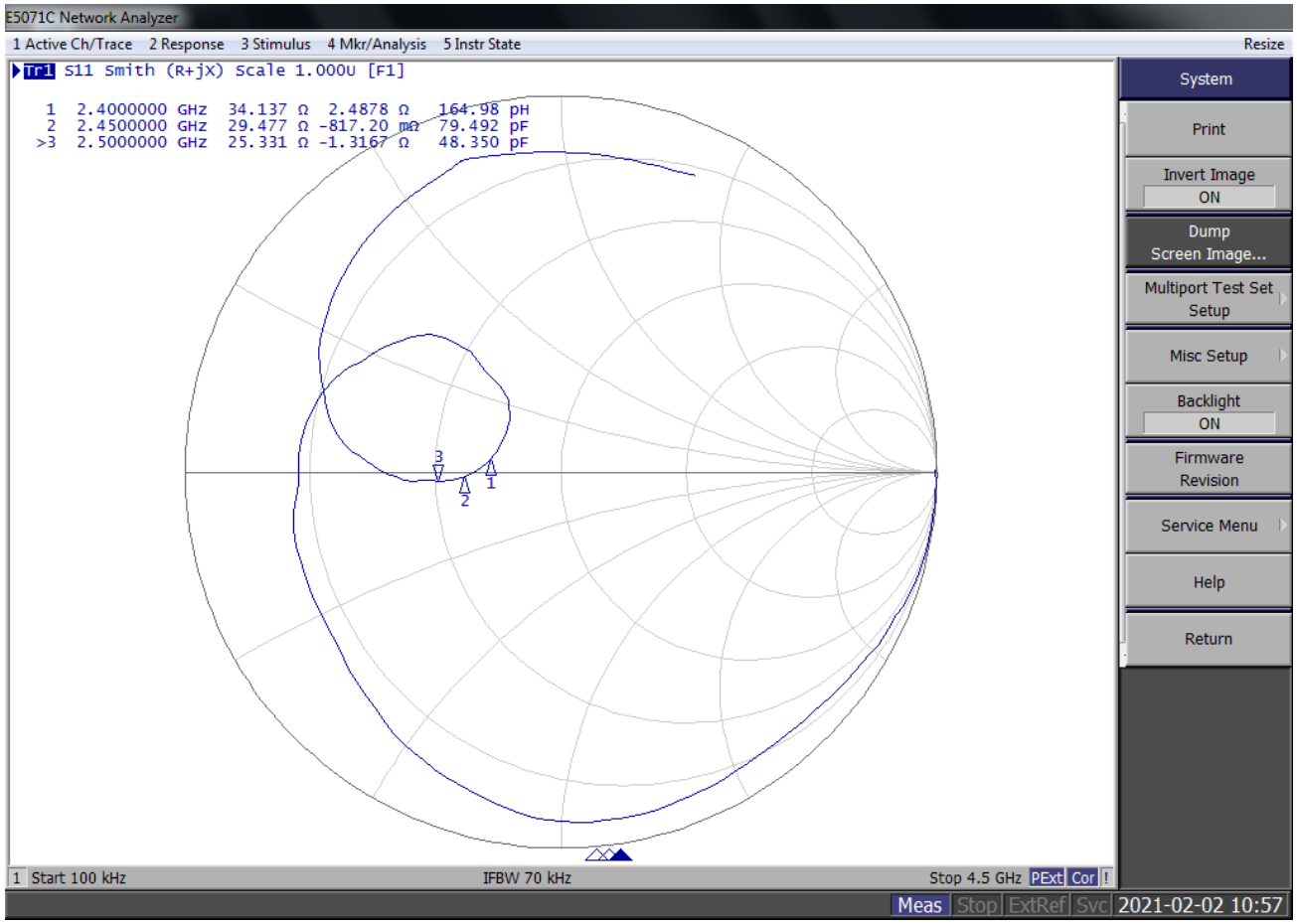
Antenna



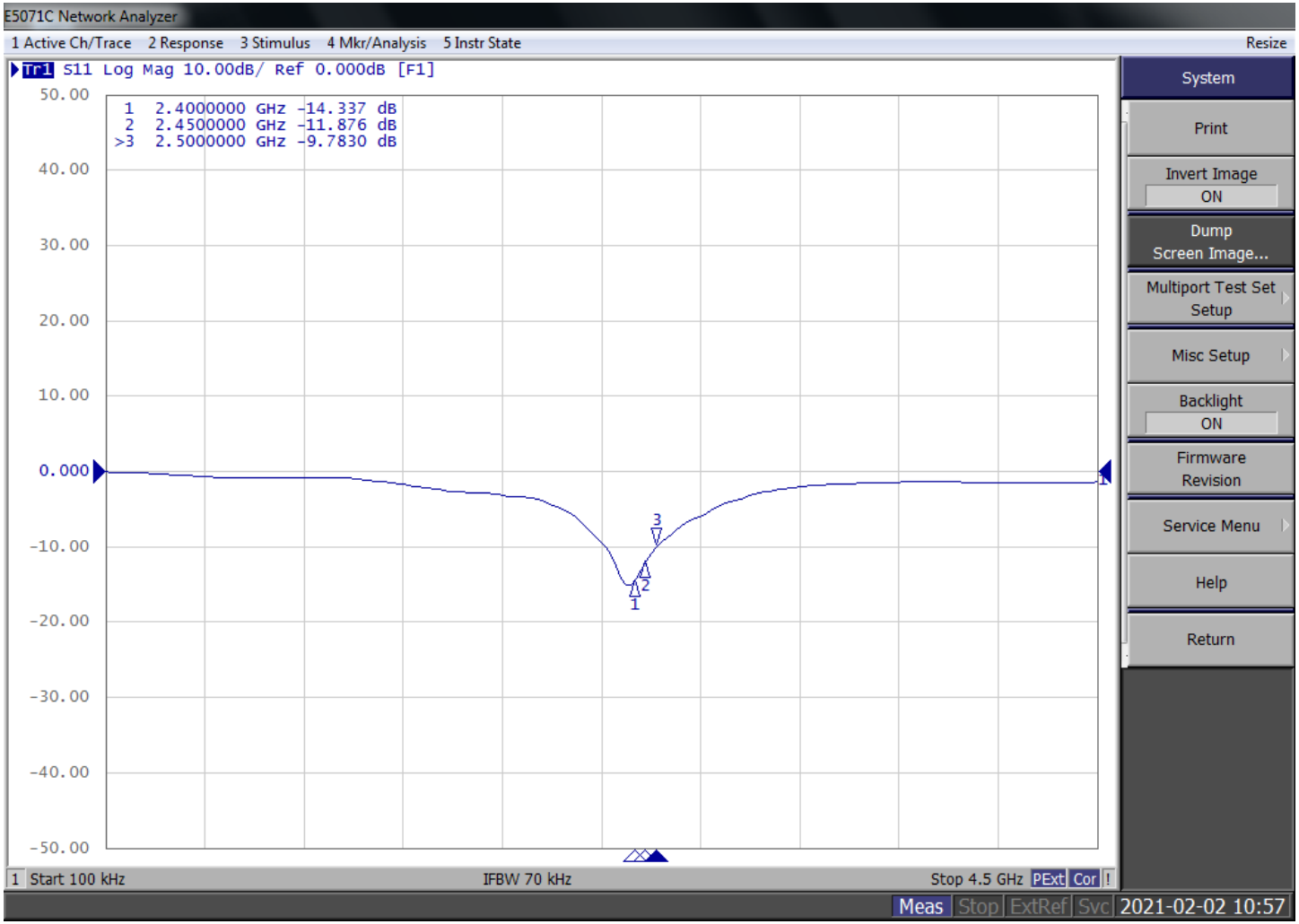
VSWR


E5071C Network Analyzer
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State
Resize
Tr1 S11 SWR 1.000/ Ref 1.000 [F1]
1 2.4000000 GHz 1.3656
2 2.4500000 GHz 1.6213
>3 2.5000000 GHz 1.9633
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
1 Start 100 kHz
IFBW 70 kHz
Stop 4.5 GHz
PExt Cor
System
Print
Invert Image ON
Dump Screen Image...
Multiport Test Set Setup
Misc Setup
Backlight ON
Firmware Revision
Service Menu
Help
Return
Meas Stop ExtRef Svc 2021-02-02 10:57

Smith


E5071C Network Analyzer
1 Active Ch/Trace
2 Response
3 Stimulus
4 Mkr/Analysis
5 Instr State
Resize
Tr1 S11 Smith (R+jX) Scale 1.000U [F1]
1 2.4000000 GHz 34.137 Ω 2.4878 Ω 164.98 pH
2 2.4500000 GHz 29.477 Ω -817.20 mΩ 79.492 pF
>3 2.5000000 GHz 25.331 Ω -1.3167 Ω 48.350 pF
System
Print
Invert Image
ON
Dump
Screen Image...
Multiport Test Set
Setup
Misc Setup
Backlight
ON
Firmware
Revision
Service Menu
Help
Return
1 Start 100 kHz
IFBW 70 kHz
Stop 4.5 GHz
PExt
Cor
Meas
Stop
ExtRef
Svc
2021-02-02 10:57

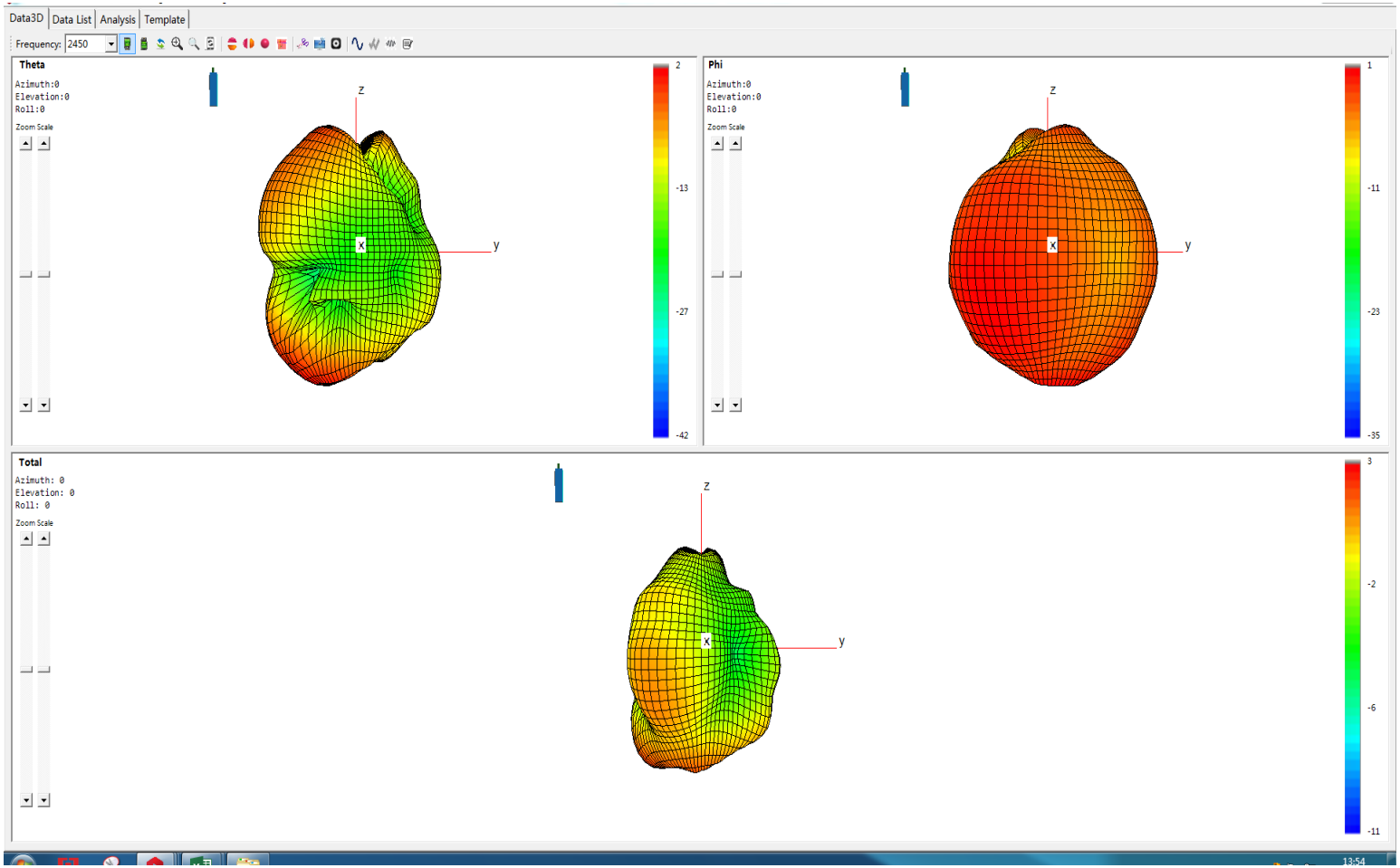
S11


E5071C Network Analyzer
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State
Resize
Tr1 S11 Log Mag 10.00dB/ Ref 0.000dB [F1]
1 2.4000000 GHz -14.337 dB
2 2.4500000 GHz -11.876 dB
>3 2.5000000 GHz -9.7830 dB
50.00
40.00
30.00
20.00
10.00
0.000
-10.00
-20.00
-30.00
-40.00
-50.00
1 Start 100 kHz
IFBW 70 kHz
Stop 4.5 GHz
PExt Cor
System
Print
Invert Image ON
Dump Screen Image...
Multiport Test Set Setup
Misc Setup
Backlight ON
Firmware Revision
Service Menu
Help
Return
Meas Stop ExtRef Svc 2021-02-02 10:57

PASSIVE TEST（plastic）

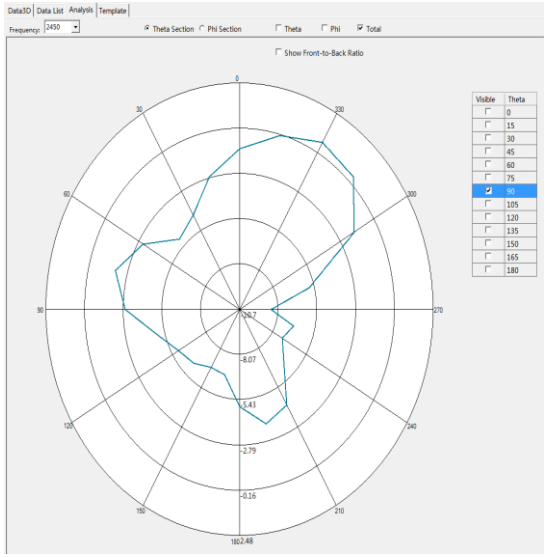
Freq (Mhz)	Gain(dB)	Effi(%)
2400	2.56	55.63
2410	3.00	60.64
2420	2.91	60.53
2430	2.79	60.18
2440	2.52	58.41
2450	2.48	57.44
2460	2.75	60.38
2470	3.00	63.79
2480	3.04	64.20
2490	3.12	64.88
2500	3.21	66.57

3D Antenna Radiation Pattern（2450MHz ）

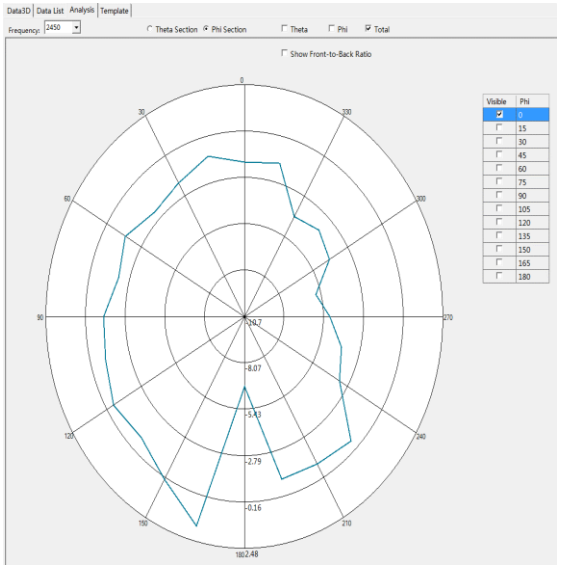
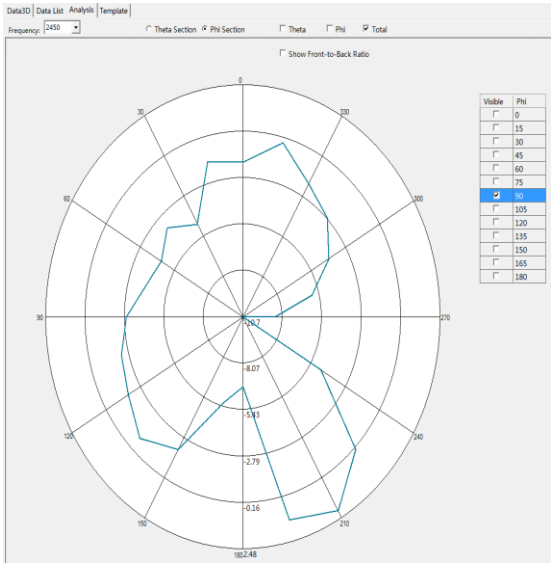


2D Antenna Radiation Pattern（2450MHz ）

XOY



XOZ



Y0Z