

TEST REPORT

Applicant :TZBao

PRODUCT NAME :

MODEL NAME : SIKU_BLE_Module_3.0

BRAND NAME : SIKU

RECEIPT DATE : 2019-8-18

TEST DATE :2019-9-3

ISSUE DATE : 2019-10-23

DIRECTORY

1. Technical Information	3
1.1. Manufacturer and Factory Information	3
1.2. Equipment Under Test (EUT) Description	3
2. Test Results	4
2.1. Applied Reference Documents	4
2.2. Test Conditions	4
2.3. Test Results lists	4
Annex A Photographs	5
Annex B Figures	6
1. 2D Radiation Pattern	6
2. 3D Radiation Pattern	8
3. Return Loss	9
4. VSWR	11
5. Input Impedance	11
Annex C Photographs	13
Annex D General Information	15
1.1 Identification of the Responsible Testing Laboratory	15
1.2 Identification of the Responsible Testing Location	15
1.3 Test Equipments Utilized	15

1. Technical Information

Note: Provide by manufacturer.

1.1. Manufacturer and Factory Information

Applicant:	TZBao
Applicant Address:	Sieper Hardware & Plastic (Dongguan) Co., Ltd. No. 10, Western Industrial Park I, Hengli Town, Dongguan; 523460 Guangdong, PR China
Manufacturer:	Sieper Hardware & Plastic (Dongguan) Co., Ltd.
Manufacturer Address:	Sieper Hardware & Plastic (Dongguan) Co., Ltd.No. 10, Western Industrial Park I, Hengli Town, Dongguan; 523460 Guangdong, PR China

1.2. Equipment Under Test (EUT) Description

Wireless Type	Bluetooth4.1
Frequency	2.400~2.500GHz

2. Test Results

2.1. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	ANSI/IEEE Std 149-2008	IEEE Standard Test Procedures for Antennas

2.2. Test Conditions

Test Environment Conditions:

Relative Humidity:	25~75 %
Temperature:	+10 °C to +30 °C

2.3. Test Results lists

2.3.1. Gain

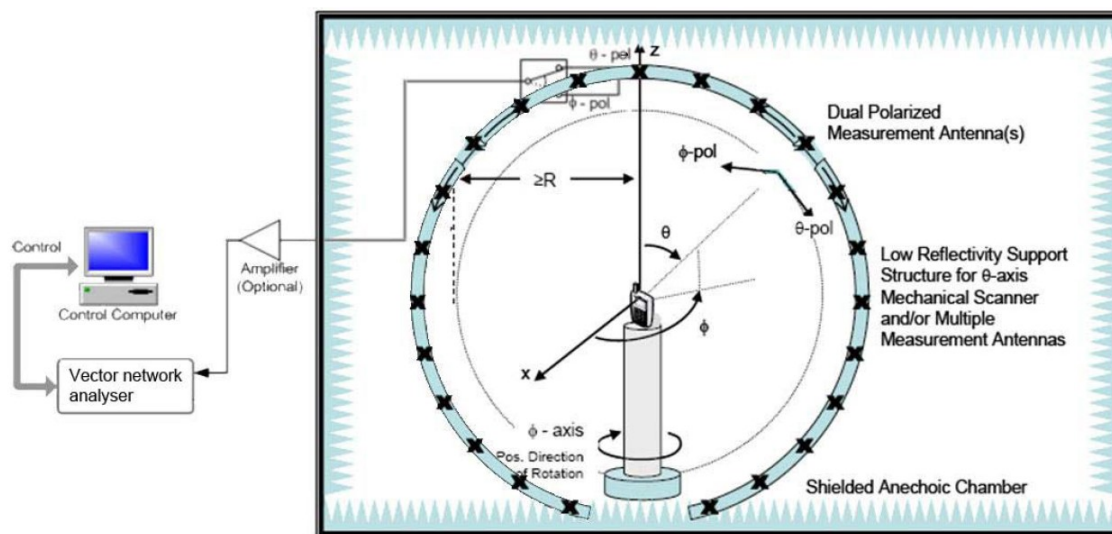
Frequency	Gain(dBi)
2400MHz	2.85
2410MHz	2.78
2420MHz	2.98
2430MHz	2.75
2440MHz	1.08
2450MHz	1.35
2460MHz	1.58
2470MHz	1.55
2480MHz	1.47
2490MHz	0.43
25000MHz	0.39

2.3.2. Return Loss/VSWR/Input Impedance

Frequency	Return Loss (dB)	VSWR	Input Impedance(Ω)
2400MHz	-7.23	2.53	25.37
2440MHz	-6.47	2.8	17.99
2450MHz	-6.22	2.9	17.18
2480MHz	-5.18	3.44	15.55
2500MHz	-4.56	3.89	15.48

Annex A Photographs

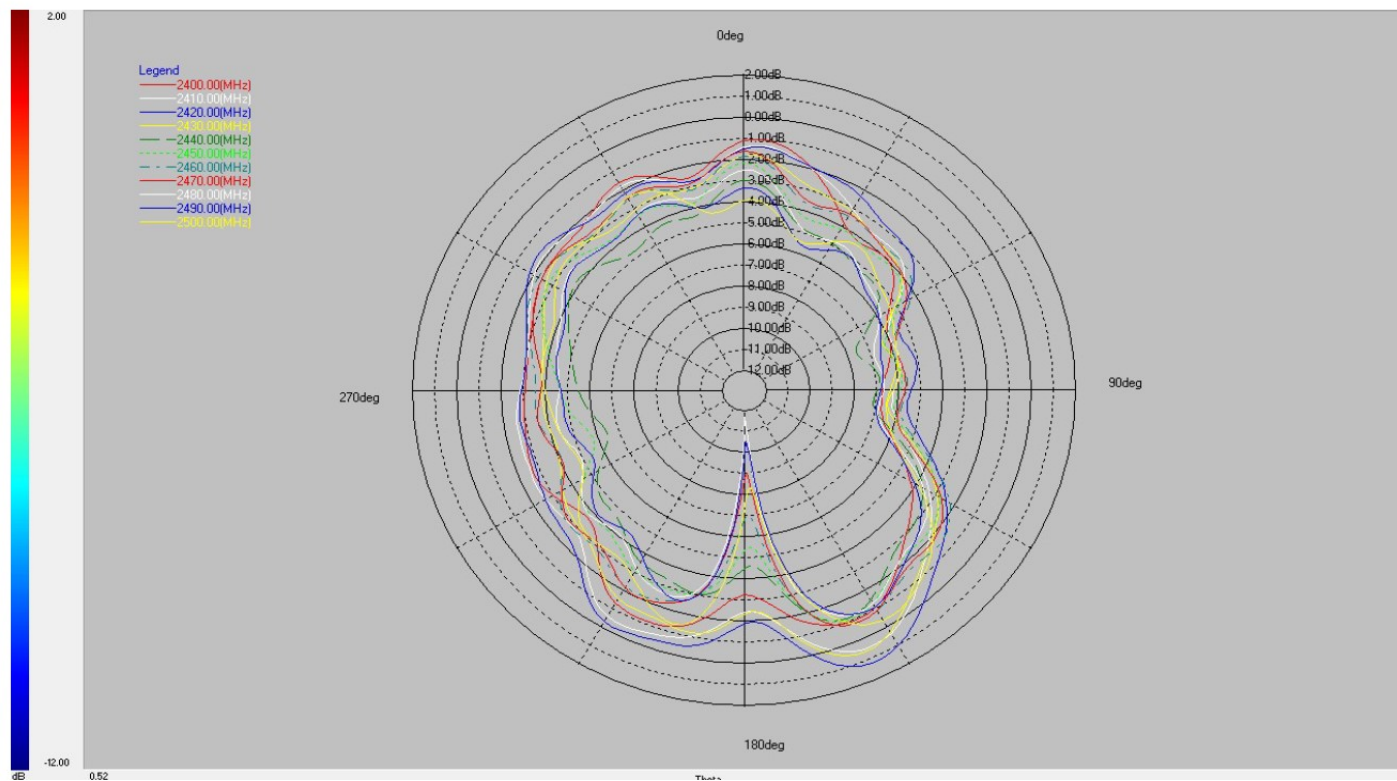
1. Test Setup



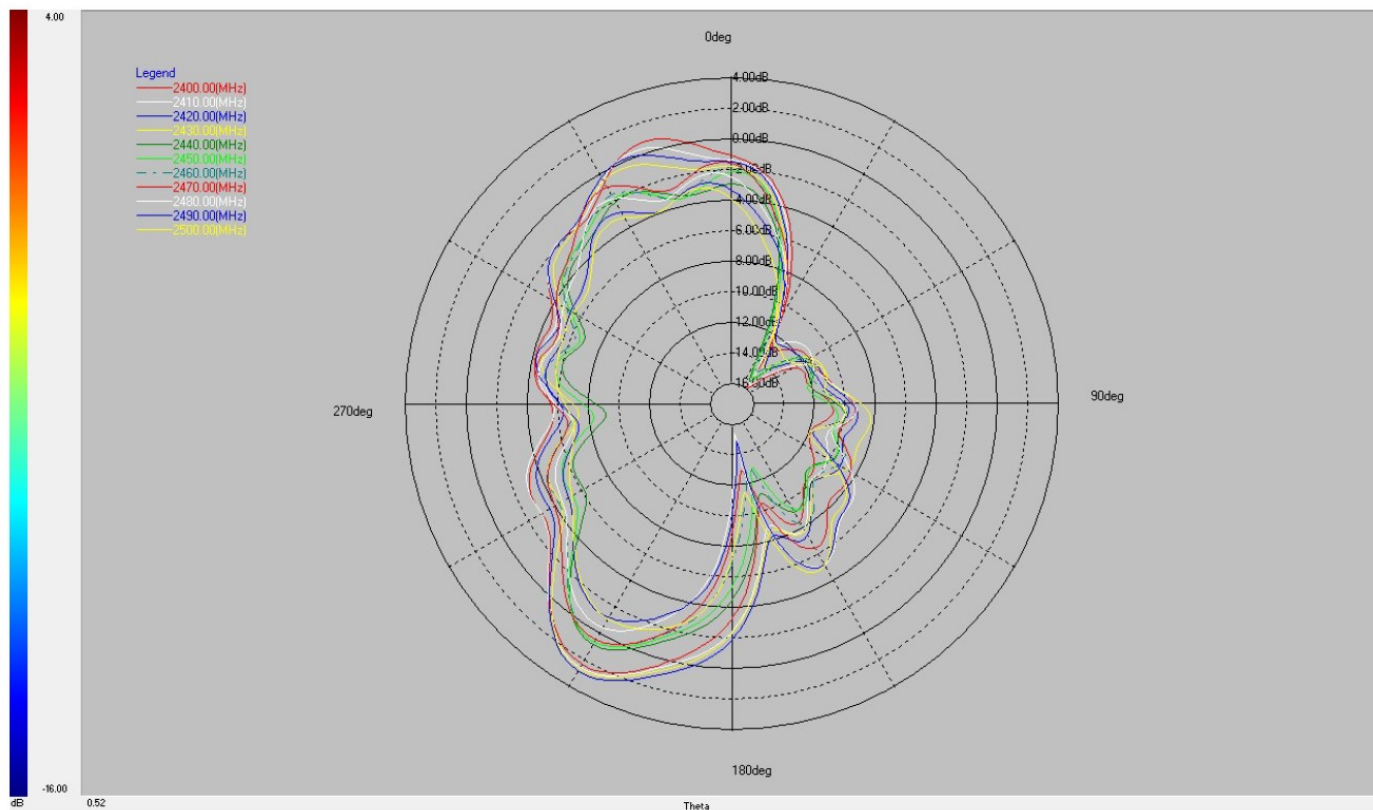
Annex B Figures

1. 2D Radiation Pattern

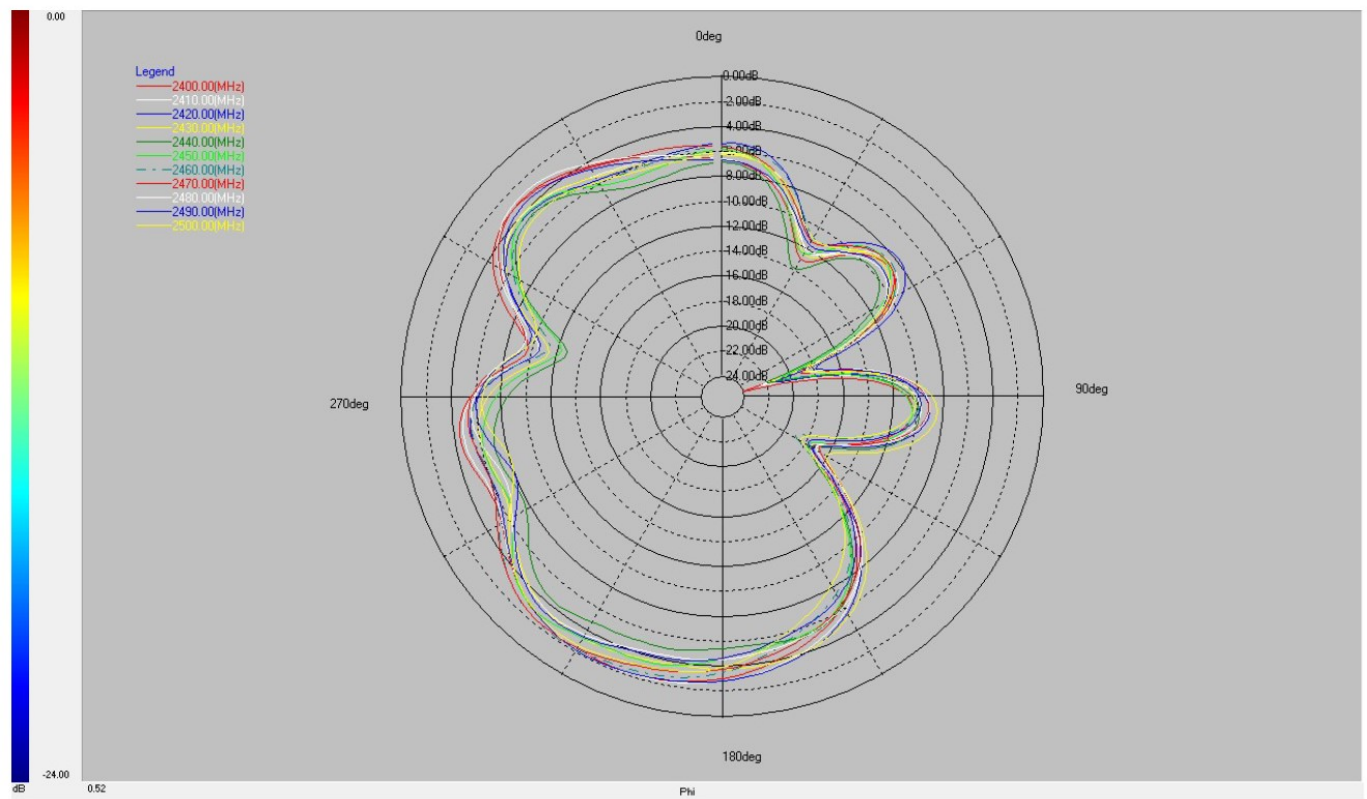
Phi=0°



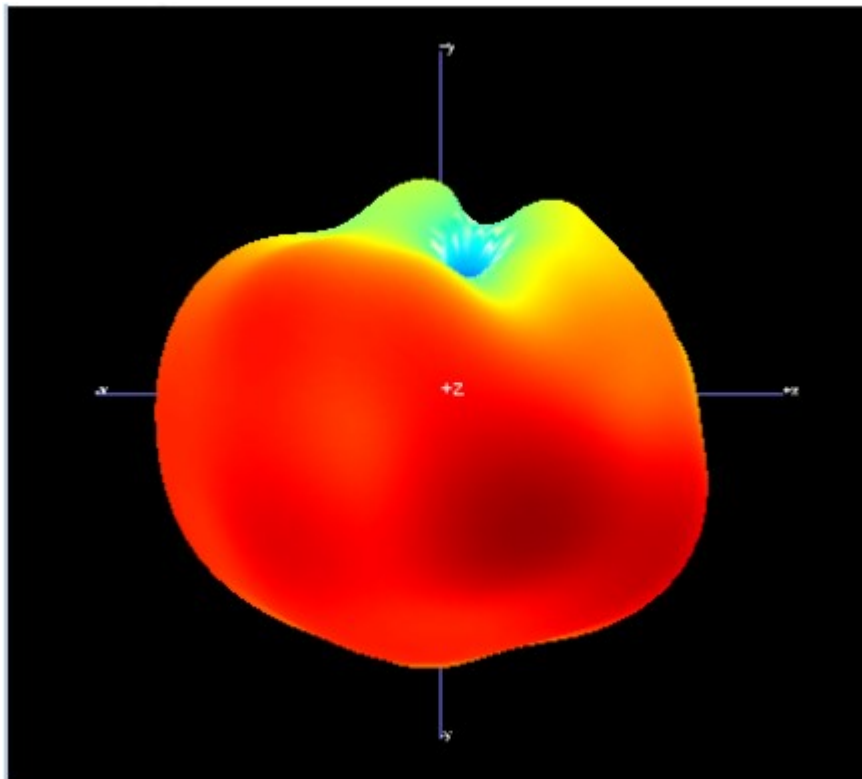
Phi=90°



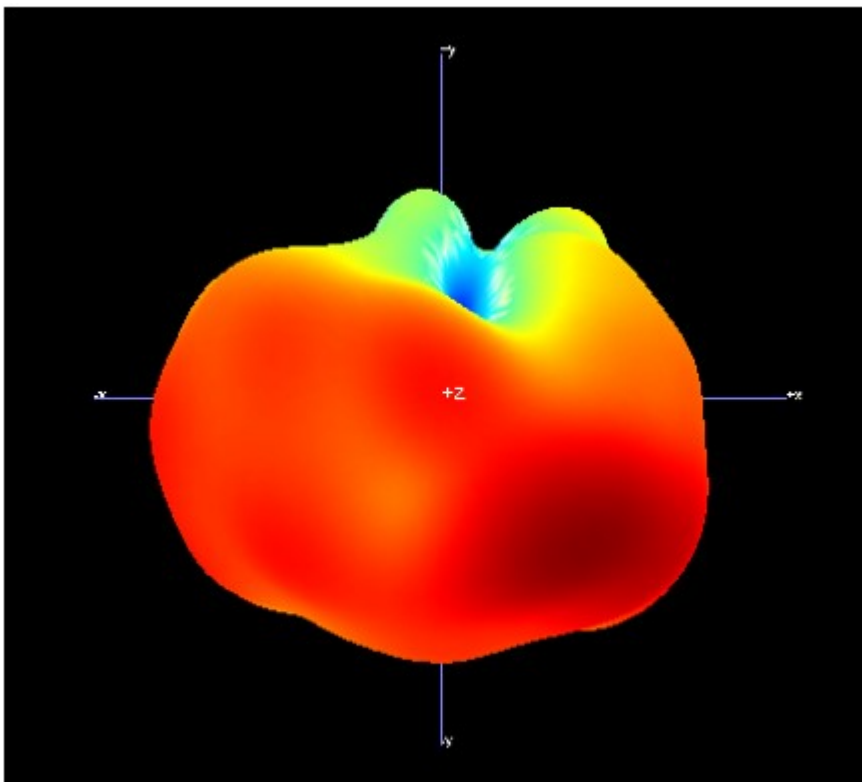
Theta=90°



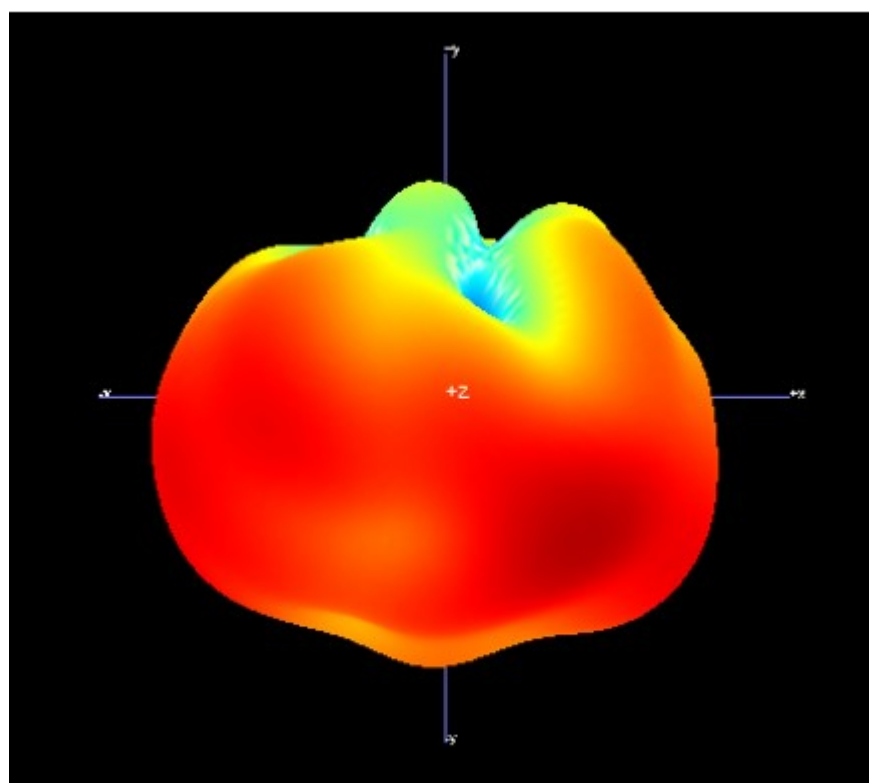
2. 3D Radiation Pattern



2400MHz

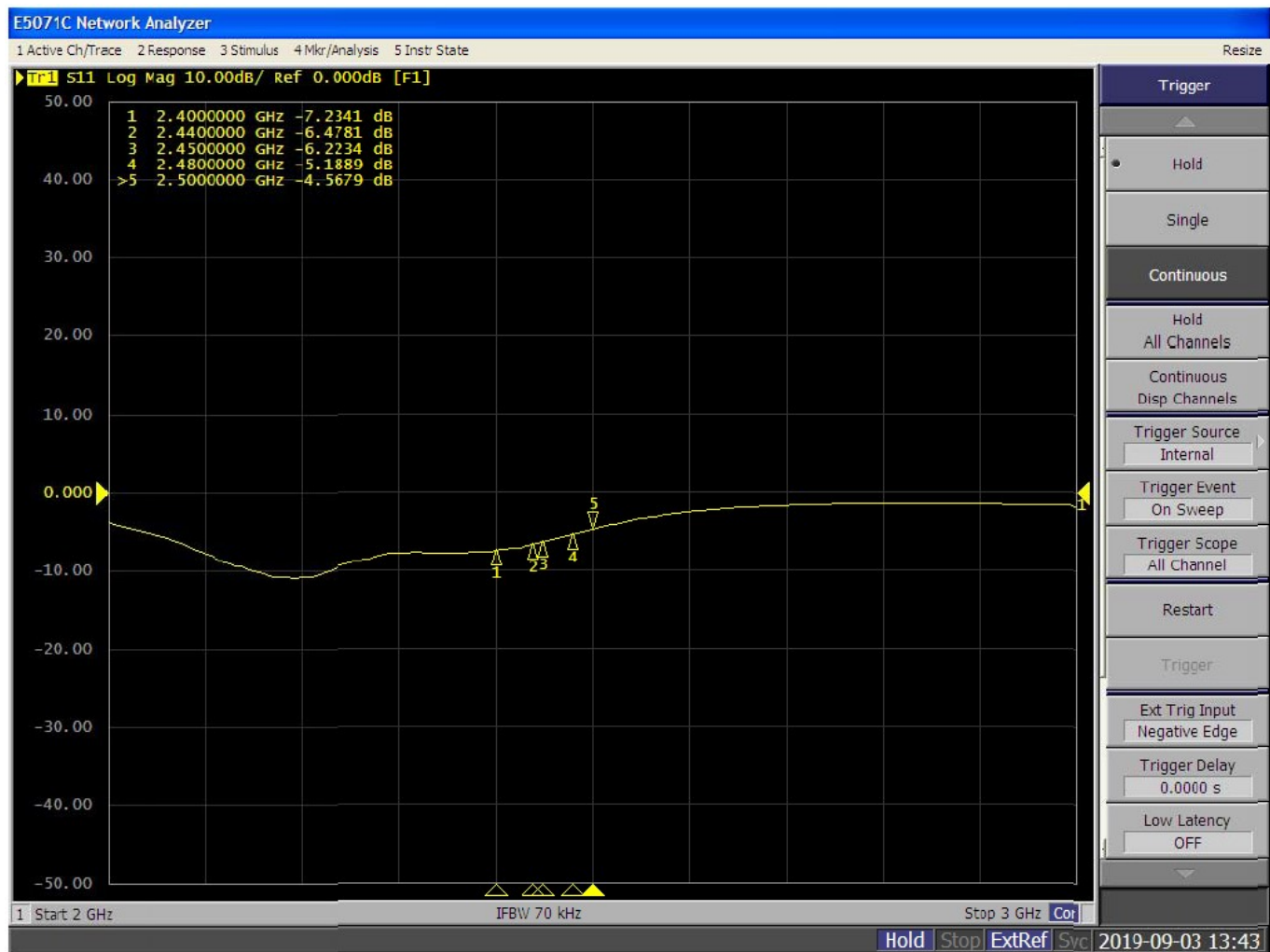


2450MHz

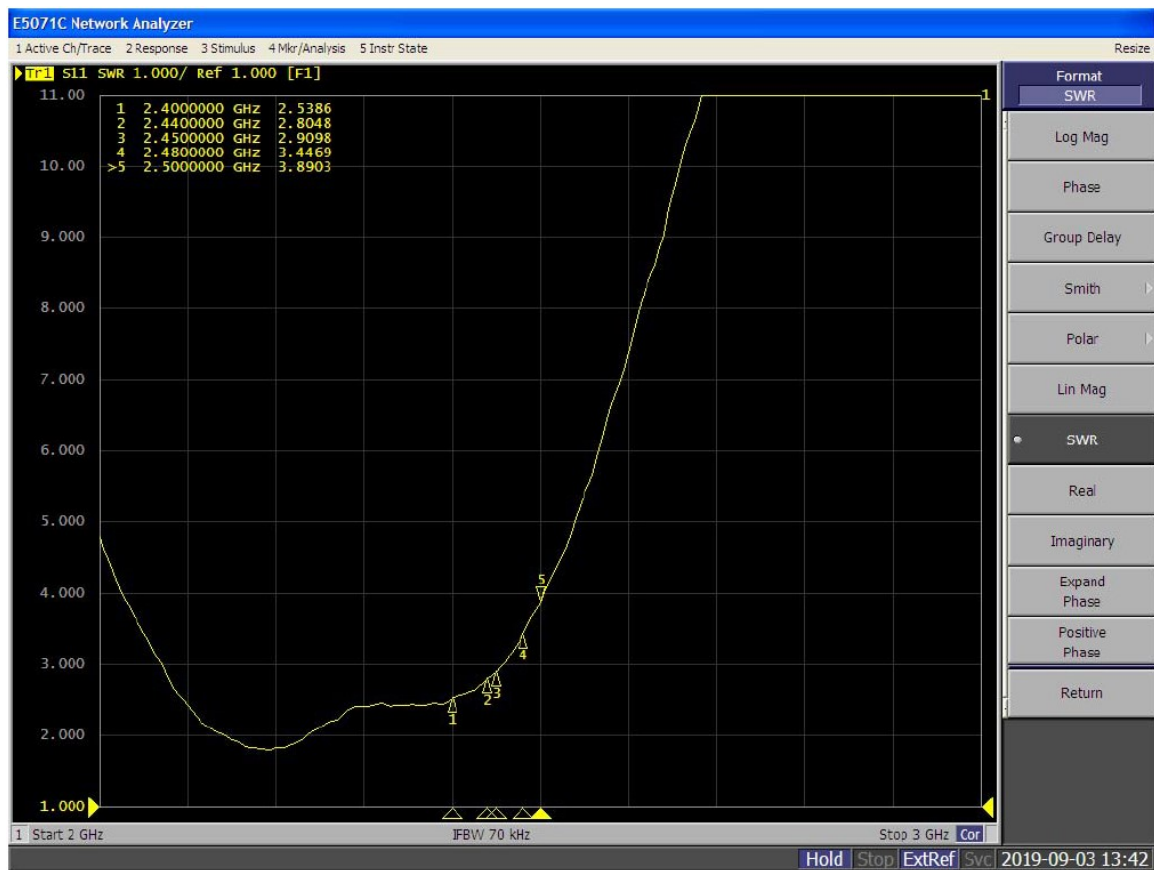


2500MHz

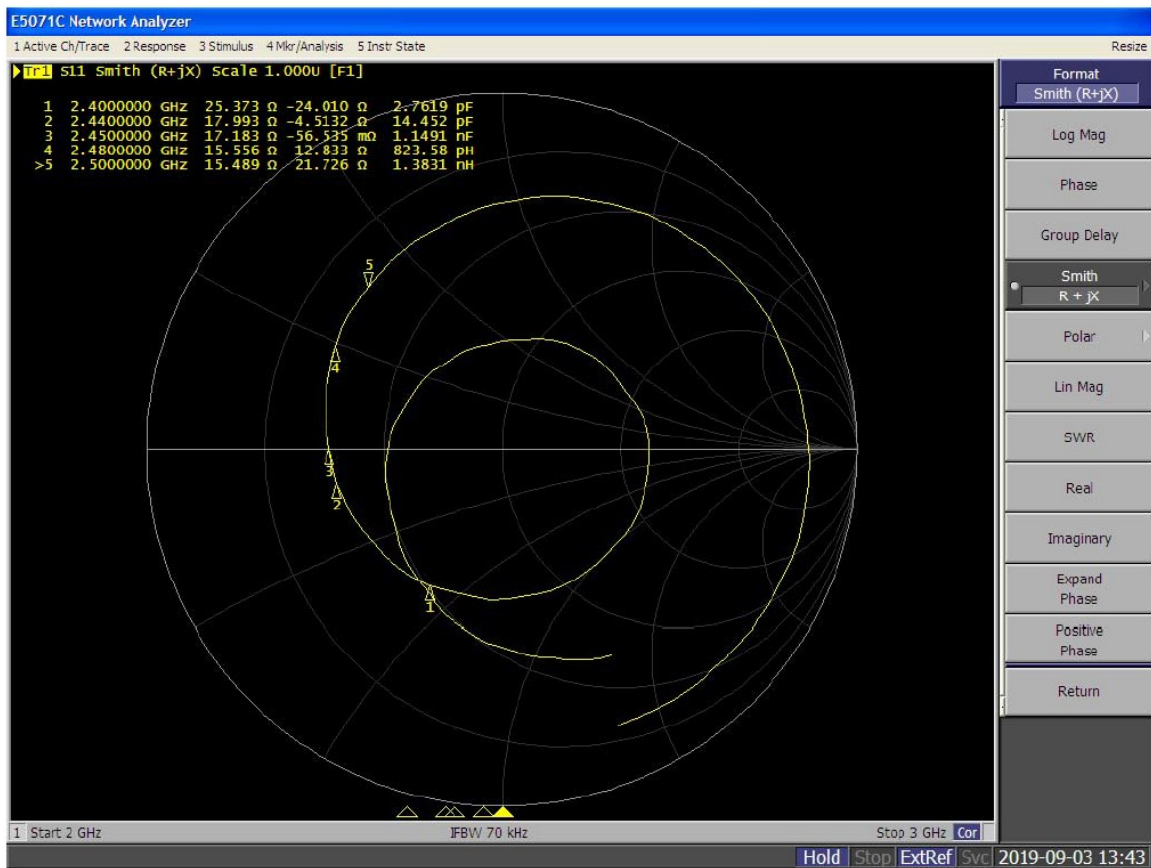
3. Return Loss



4. VSWR

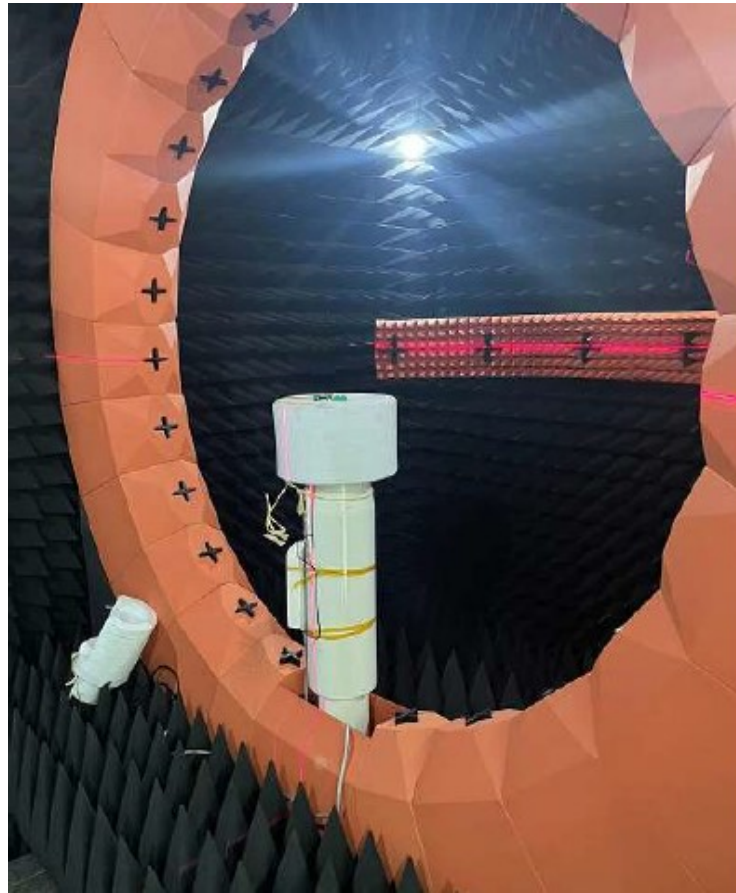


5. Input Impedance

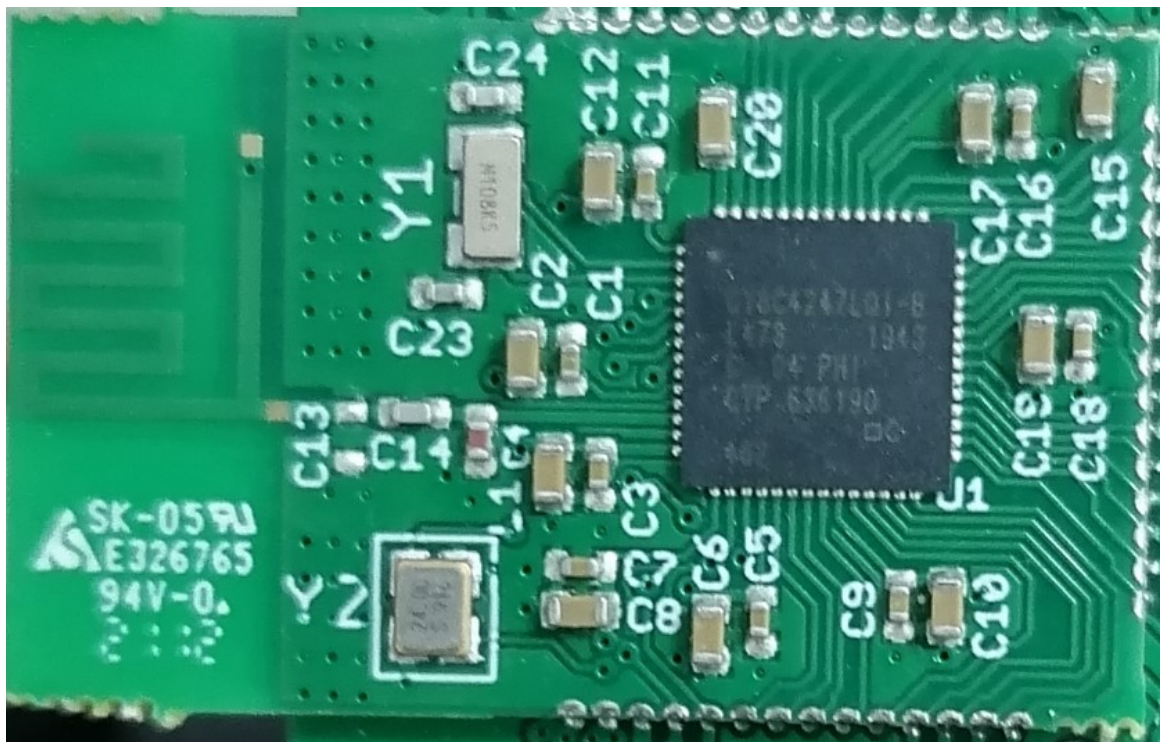


Annex C Photographs

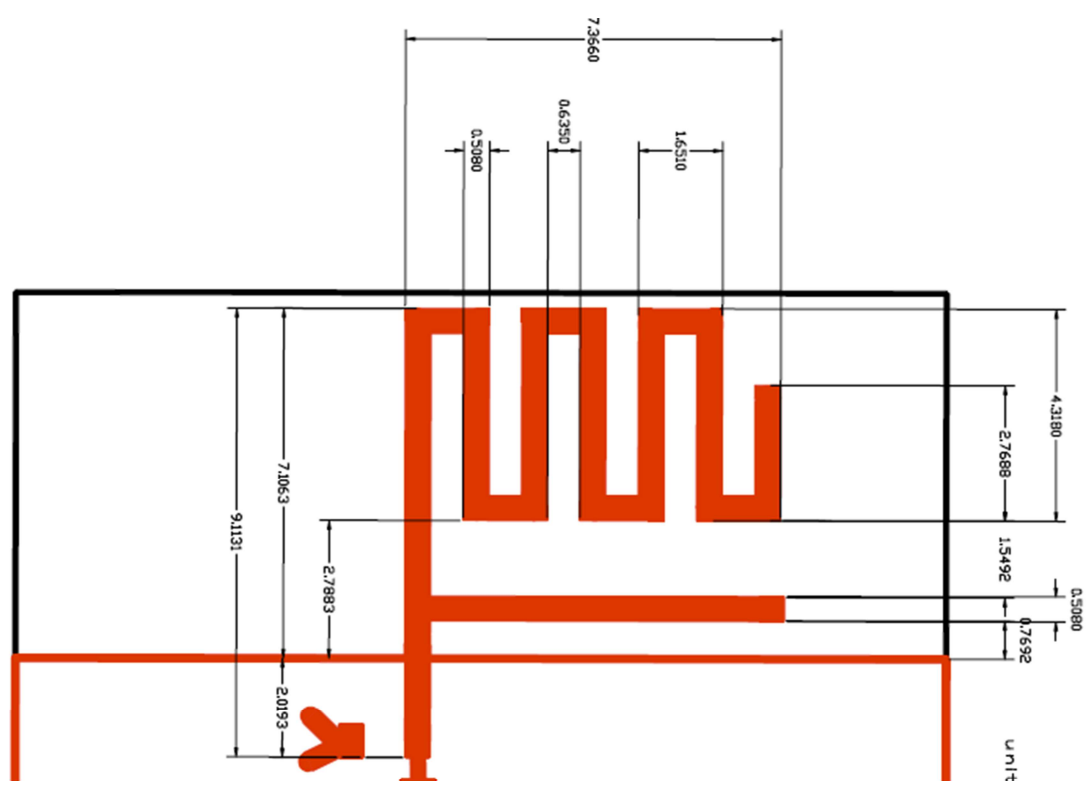
1. Test environment



2. EUT



3. PCB Antenna Size



Annex D General Information

1.1 Identification of the Responsible Testing Laboratory

Laboratory Name:	STC
Laboratory Address:	
Telephone:	
Facsimile:	

1.2 Identification of the Responsible Testing Location

Name:	
Address:	

1.3 Test Equipments Utilized

1.3.1 List of Test Equipment

No.	Type	Specification
1	E5071C Vector Network Analyzer	Manufacturer: Agilent
2	4*4*4 Full Anechoic Chamber	Manufacturer: Satimo
3	SG24 Multi-probe Antenna Measurement System	Manufacturer: Satimo