Be-Comfortable 得自在 Shenzhen be-comfortable Technology Co. Ltd.

规格承认书

SPECIFICATION FOR APPROVAL

日期
DATE: 2023.5.24

版本
REV.: V1.1

供应商
SUPPLIER: Shenzhen be-comfortable Technology Co. Ltd.

供应商地址
Address: 1603, Building C6, Hengfeng Industrial City, Shenzhen,China

品　　名
PART NAME: STX1140 WIFI Antenna

供 方 料 号
SUPPLIER P/N: 1. STX1140-WIFI-L　　2. STX1140-WIFI-R

送样日期 **Date:**　　送样数量 **Q'TY:**　　**Pcs**

客户确认CUSTOMER APPROVED BY		
工程研发部	生产采购部	承认
ENGINEER R&D DEPT	BUSSINESS DEPT	APPROVED BY

供方确认 SUPPLIER SIGNATURE		
研发部	工程部	批准
ENGINEER R&D DEPT	ENGINEER R&D DEPT	APPROVAL

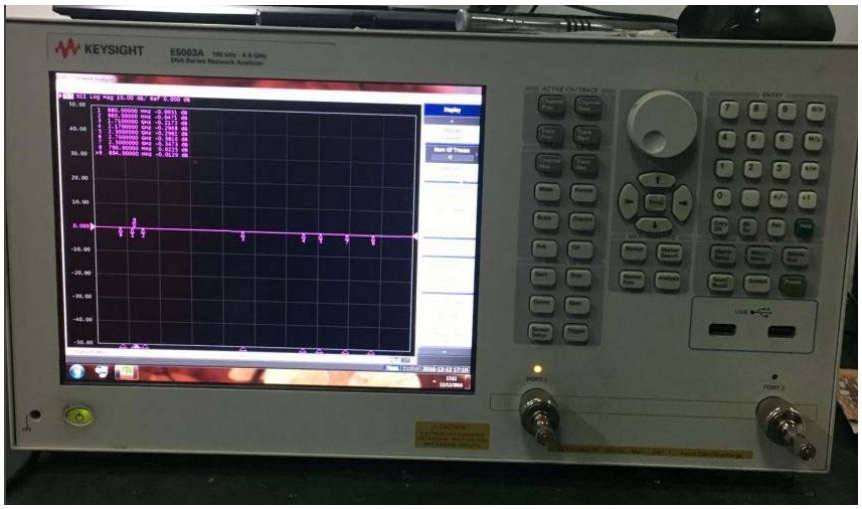
CONTENTS

1.RF Fixture Experiment

1.1 Test Setup

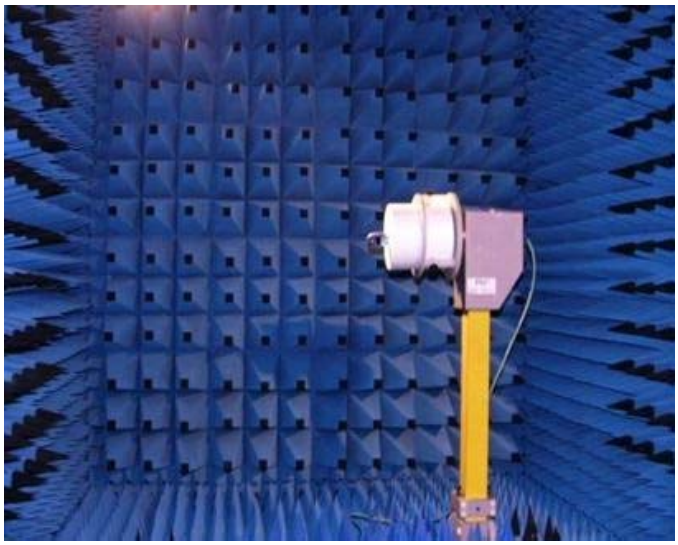
1.1.1 VNA Test Setup

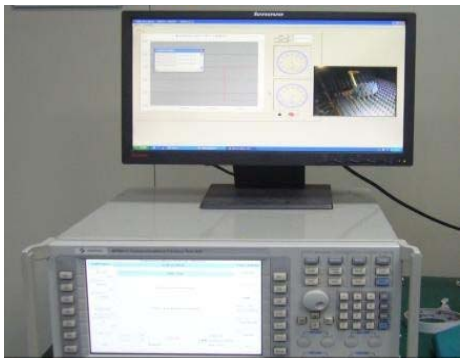
VSWR and Return Loss measurements (S11) were performed using an KeySight E5071C Network Analyzer. The isolation between antennas is also teste. The testing was performed with apparatus in free space.



1.1.2 Anechoic Chamber Test Setup

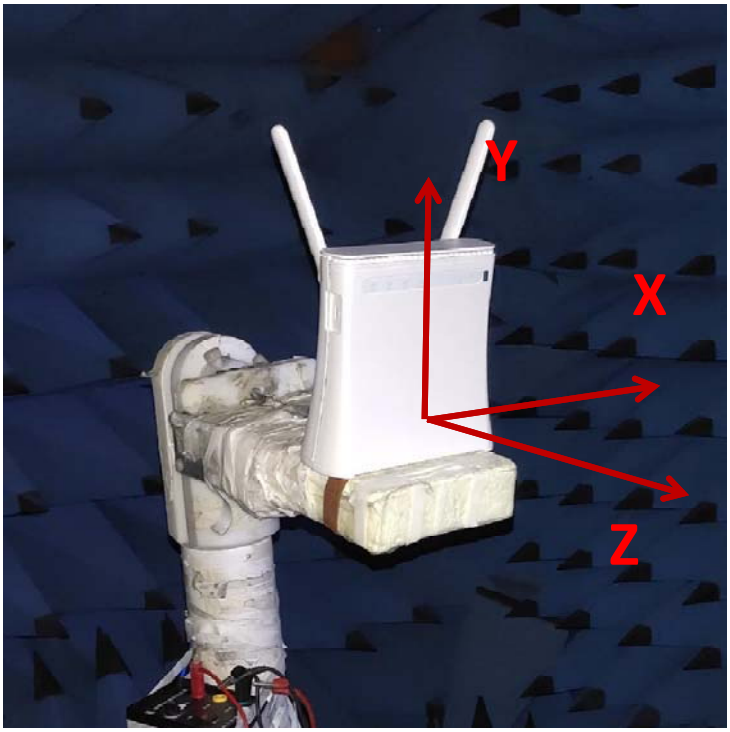
When we test Gain and Efficiency of the antenna, we will use the ETS 3D chamber.
The chamber provides test frequency from 400MHz to 6GHz.The real test environment is showing as following picture



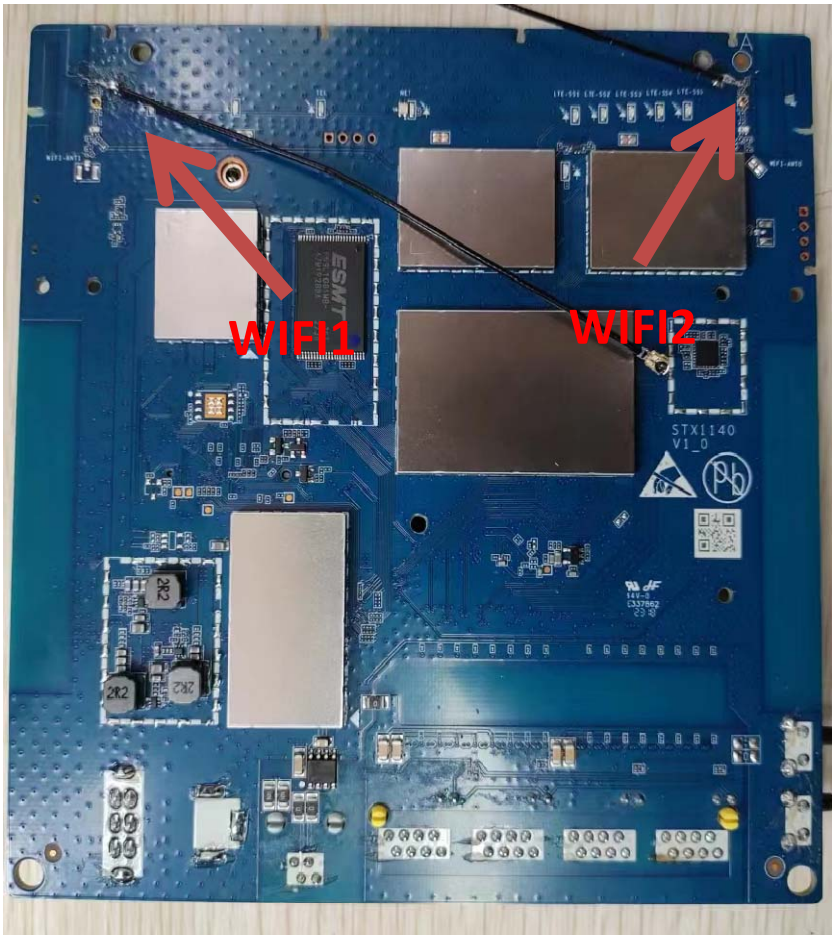



1.2 UE configuration

1.2.1 Antenna location pictures



1.2.2 Physical figure

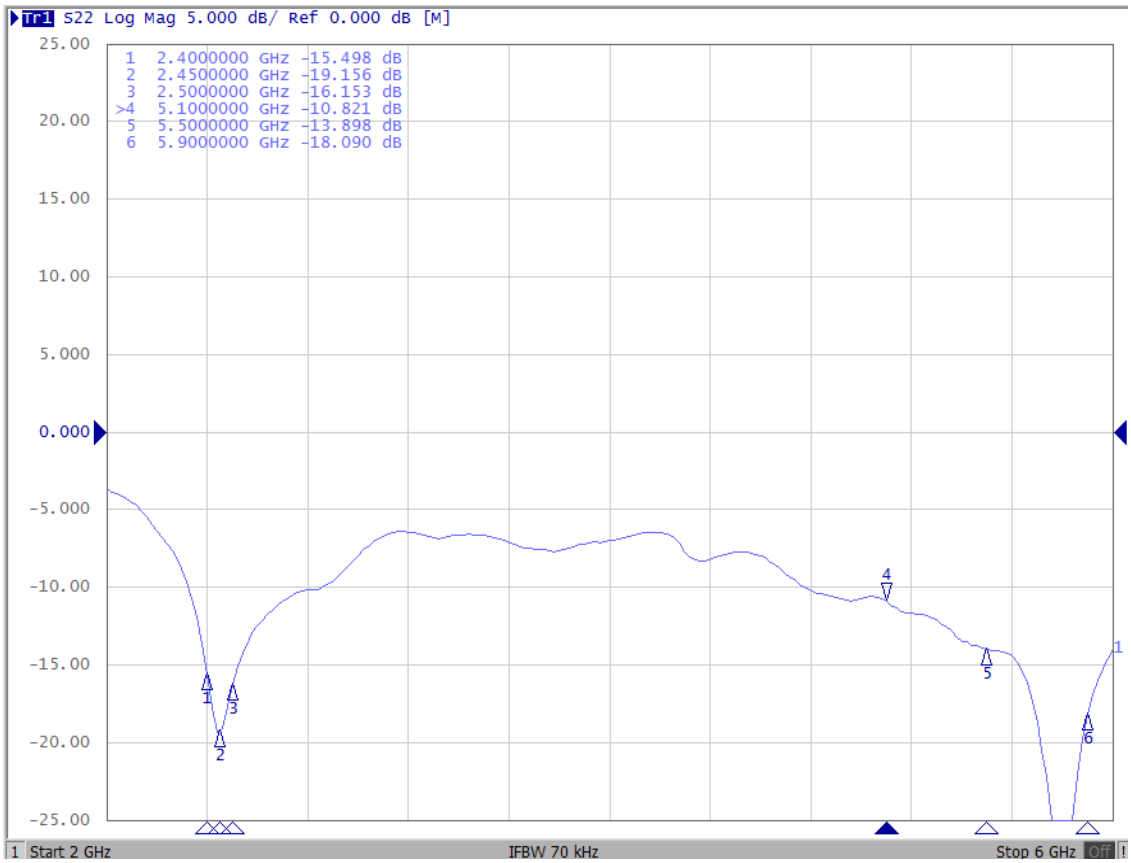


WIFI1	2400~2500MHz 5100~5900MHz
WIFI2	2400~2500MHz 5100~5900MHz

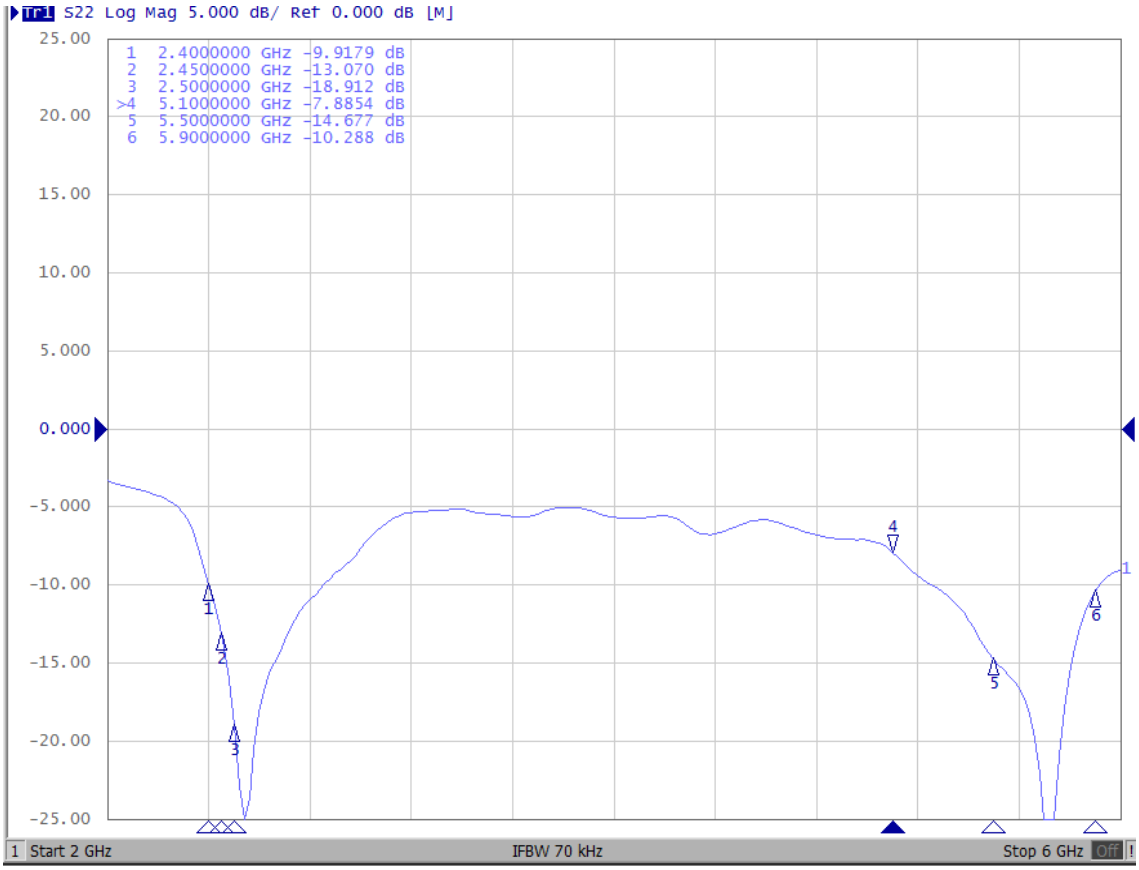
2.Test Report

2.1 S11

WIFI1

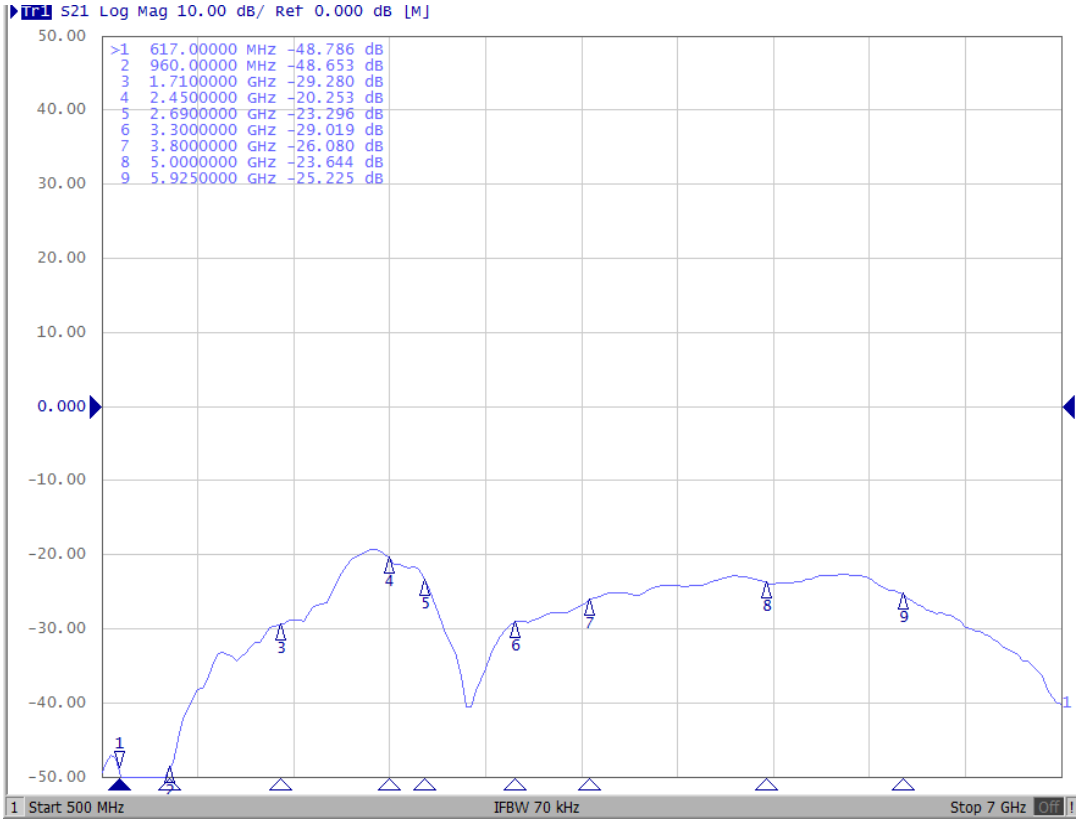


WIFI2


Tr1 S22 Log Mag 5.000 dB/ Ref 0.000 dB [M]
1 2.4000000 GHz -9.9179 dB
2 2.4500000 GHz -13.070 dB
3 2.5000000 GHz -18.912 dB
>4 5.1000000 GHz -7.8854 dB
5 5.5000000 GHz -14.677 dB
6 5.9000000 GHz -10.288 dB
25.00
20.00
15.00
10.00
5.000
0.000
-5.000
-10.00
-15.00
-20.00
-25.00
1 Start 2 GHz
IFBW 70 kHz
Stop 6 GHz
Off

2.2 S21

WIFI1&WIFI2 S21



2.3 Peak Gain & Efficiency

WIFI1

Frequency (MHz)	Gain(dBi)	Efficiency(%)
2400	2.56	49.78
2410	2.64	50.65
2420	2.78	52.73
2430	2.86	53.57
2440	3.05	53.45
2450	3.12	54.08
2460	3.05	53.79
2470	2.87	52.48
2480	2.75	52.54
2490	2.66	51.75
2500	2.59	50.71

Frequency (MHz)	Gain(dBi)	Efficiency(%)
5100	1.68	49.84
5200	1.75	51.65
5300	1.81	52.68
5400	1.96	54.58
5500	2.14	56.69
5600	2.26	59.64
5700	2.35	60.38
5800	2.55	61.06
5900	2.61	60.27

BF Gain	2.8

WIFI2

Frequency (MHz)	Gain(dBi)	Efficiency(%)
2400	1.89	48.25
2410	2.01	49.31
2420	2.26	50.74
2430	2.34	51.36
2440	2.39	52.15
2450	2.48	52.89
2460	2.56	53.19
2470	2.51	53.69
2480	2.59	54.14
2490	2.62	54.34
2500	2.66	54.48

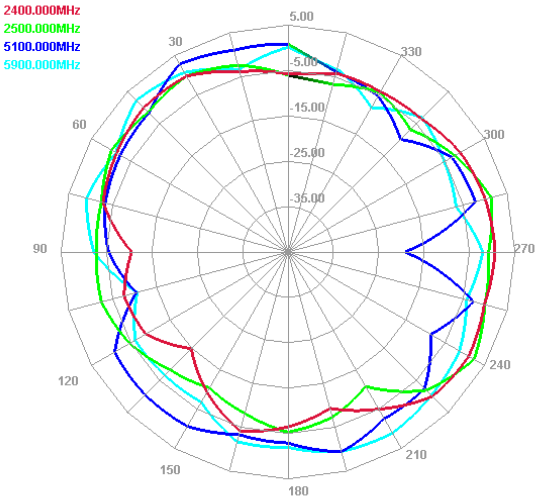
Frequency (MHz)	Gain(dBi)	Efficiency(%)
5100	1.71	44.48
5200	1.83	44.89
5300	1.89	45.18
5400	1.94	45.65
5500	2.09	46.17
5600	2.17	46.31
5700	2.21	47.03
5800	2.14	46.51
5900	2.07	46.18

BF Gain	2.8

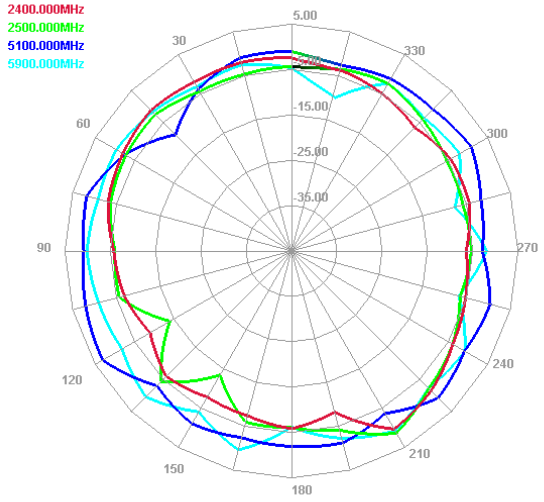
2.4 2D

WIFI1

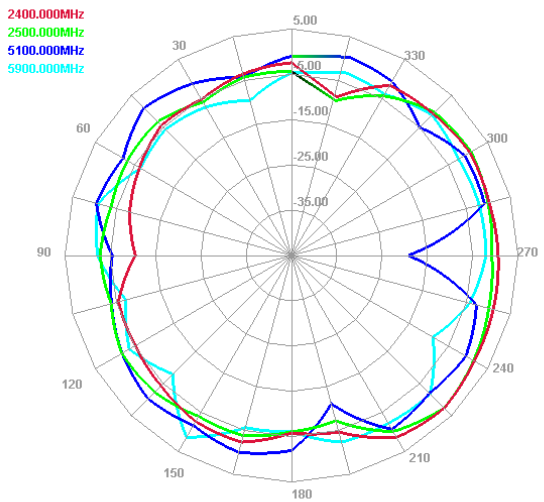
Horizontal



E1 Face

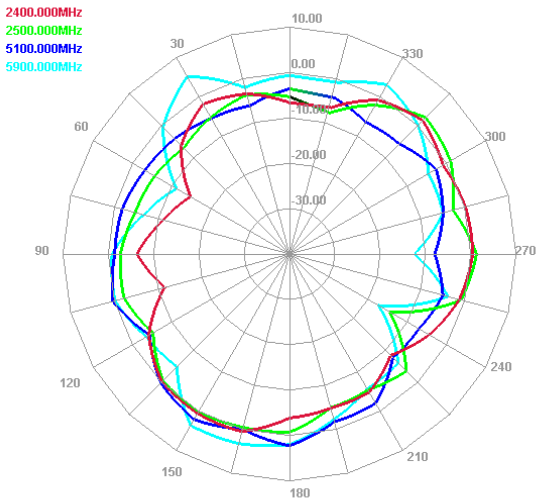


E2 Face

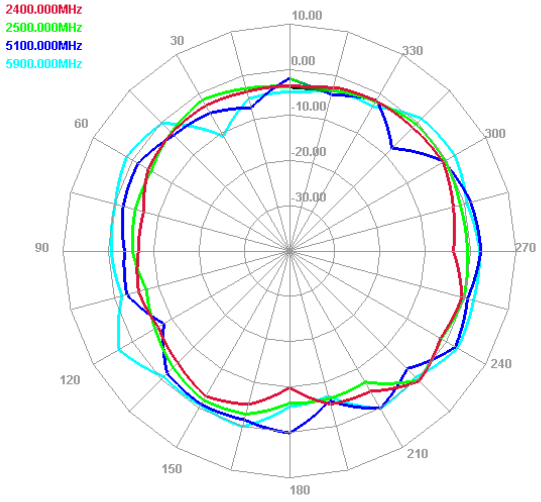


WIFI2

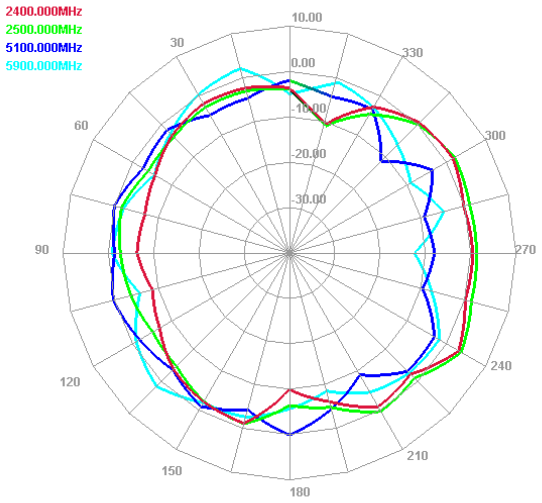
Horizontal



E1 Face

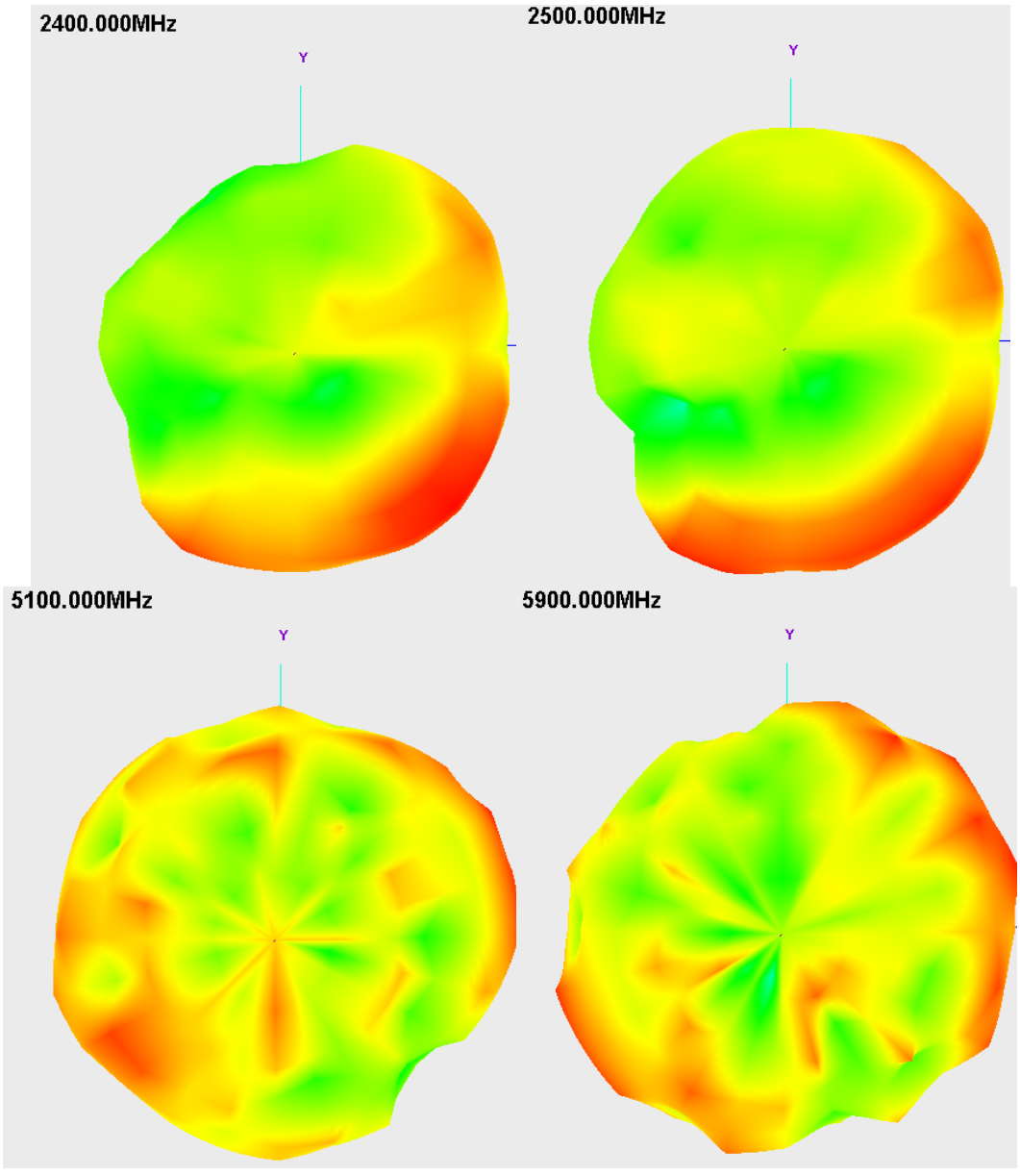


E2 Face



2.5 3D

WIFI1



WIFI2