

CREDITS TECHNOLOGY

(Revision : R : Ao)

Manufacturer	Shenzhen Lingdechuang Technology Co., Ltd.
CS P/N(客户机种)	F1
PART NAME(品名)	Antennal
FREQUENCY(频率)	WIFI2.4G/5G
CREDITS NO.(物料编号)	XB-F1-WIFI
DATE(日期)	2024/7/19

CUSTOMER（客户确认）			
QA (品质)	ME (结构)	RF (射频)	MANAGER (经理)

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1. General Description

This report summarizes the electrical performance results of the proposed Internal antenna to support the F1 program. The antenna is an assembly WIFI2.4G/5.8G.



2. Electrical Specifications

2-1 Set-up

2-1-1 Frequency Band

Frequency Band	2.4G	5.8G
WIFI	2400-2500MHZ	5150-5850MHZ

2-1-2 Impedance

Nominal Impedance(including matching circuit) : 50 ohms

2-1-3 Matching Requirements

The matching circuit on the PCB of the handset is according to Figure 1
Optimum matching circuit is highly dependent on the handset and thus.

Final matching circuit layout and values will be defined when handset is available.

客供

2-1-4 VSWR And GAIN

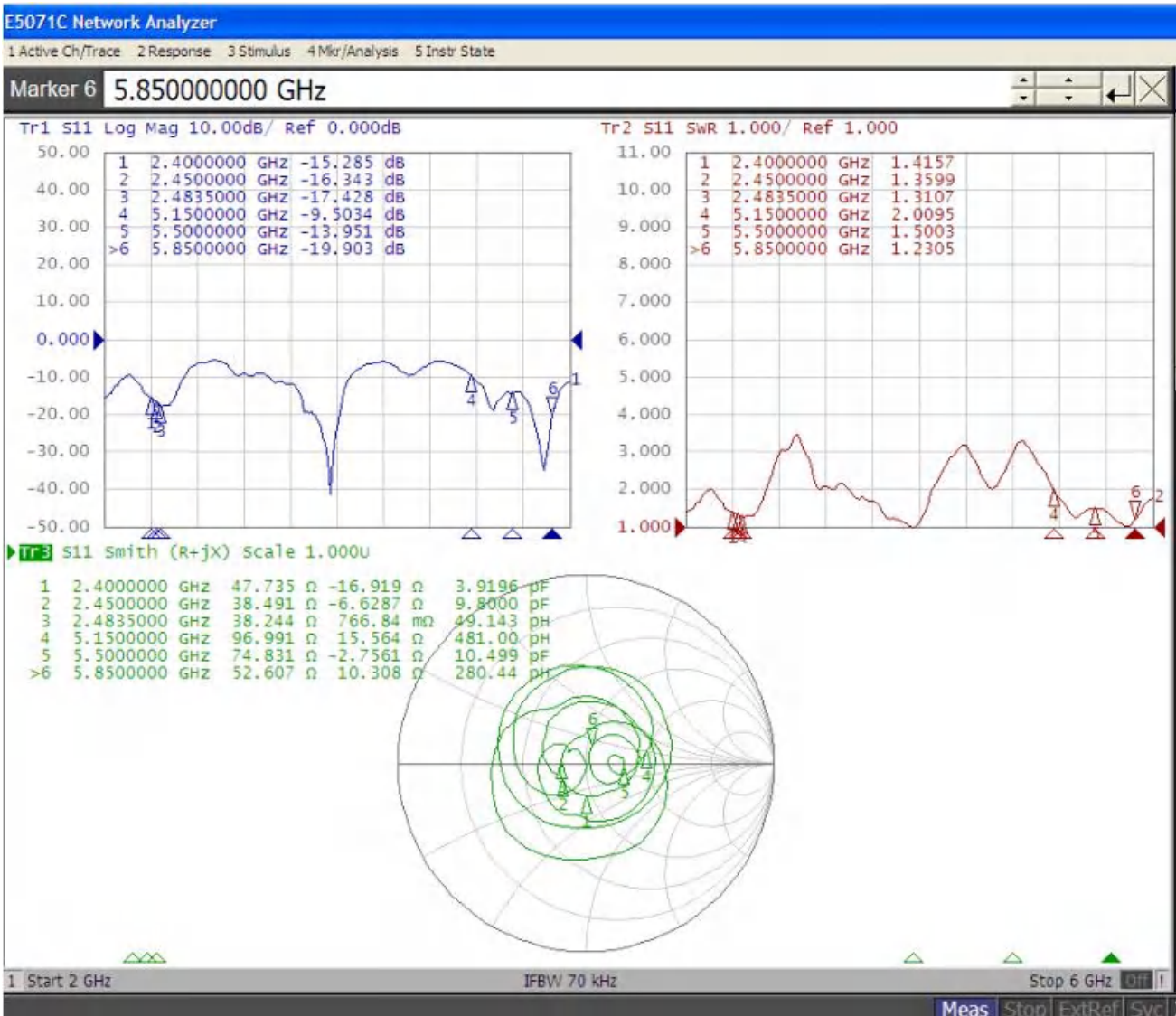
VSWR			GAIN		
Freq. Band	OPEN	SPEC	Band	Freq.	OPEN SPEC
2400MHz	≤2.5		2400MHz		≥0.5dBi
2450MHz	≤2.0		2450MHz		≥0.5dBi
2500MHz	≤2.0		2500MHz		≥0.5dBi
5150MHz	≤2.5		5150MHz		≥-1.0dBi
5500MHZ	≤2.0		5500MHZ		≥0.5dBi
5850MHZ	≤2.0		5850MHZ		≥-1.0dBi

※Measuring a 50Ω test jig is connected to a network analyzer to
measure the VSWR ※※All test value is done in customer
approval fixture.

2-2 Test Data

2-2-1 WIFI VSWR

Model No:	File:
CREDITS NO:	Note: WIFI -VSWR
Sample No:	
Test Condition: Free Space	Matching: 客供
Confirmation:	Engineer:

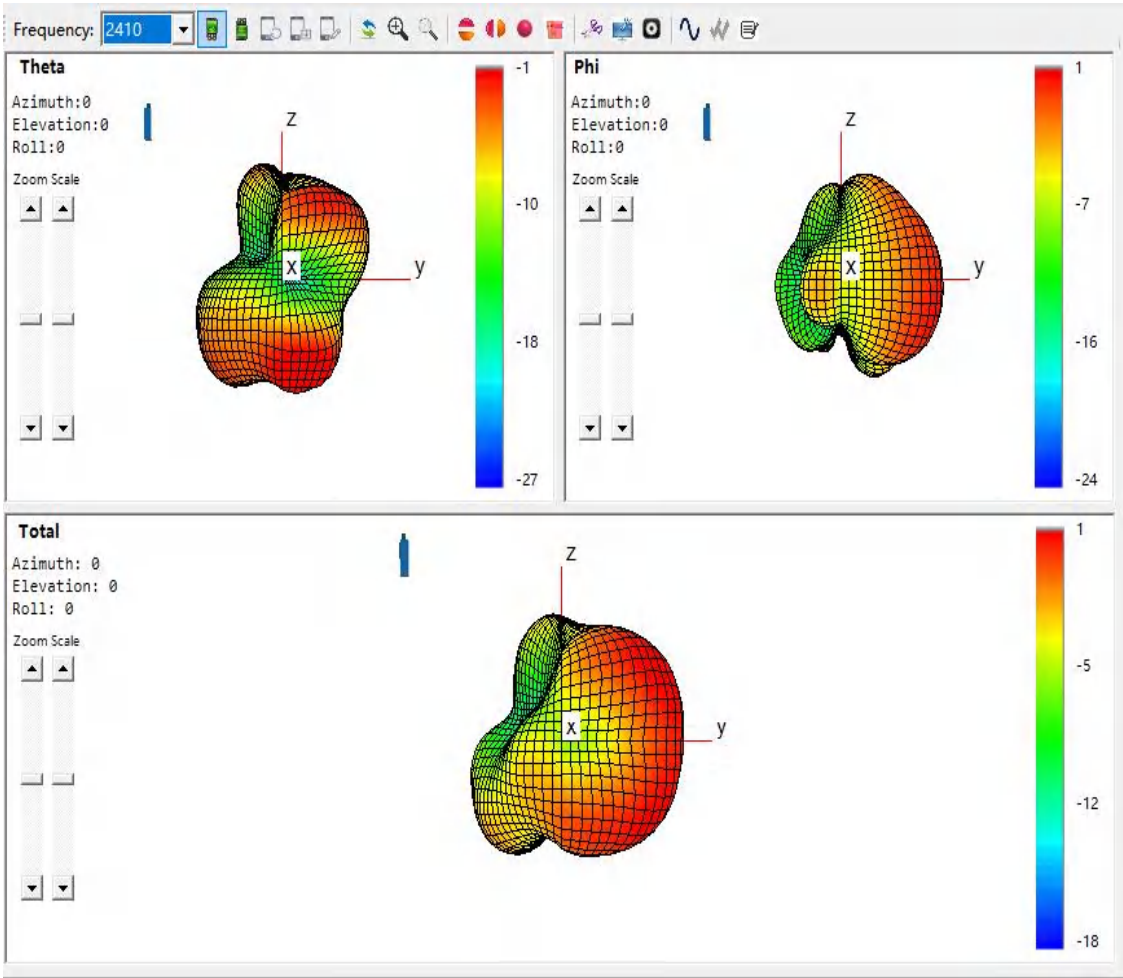


2-2-2 WIFI GAIN&EFF

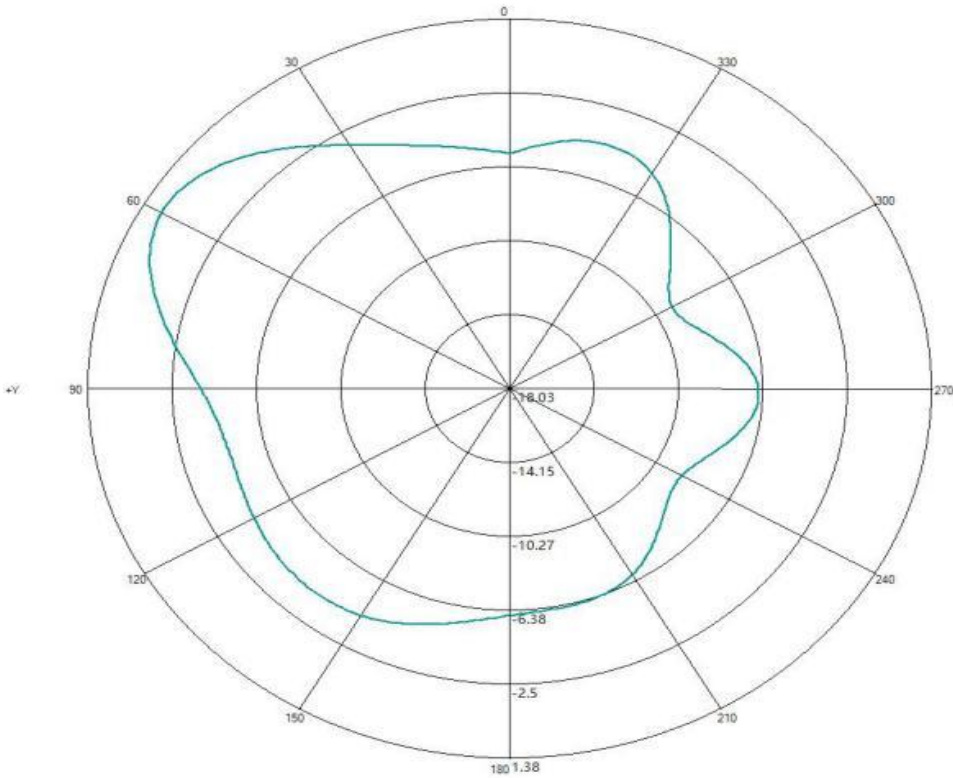
Freq (MHz)	Gain (dBi)	Efficiency (%)	Freq (MHz)	Gain (dBi)	Efficiency (%)
2400	0.96	42.95	5150	-0.13	37.14
2410	0.79	42.74	5240	0.39	41.83
2420	0.62	42.42	5280	0.68	42.46
2430	0.56	42.42	5320	1.13	43.74
2440	0.59	43.13	5400	0.83	42.54
2450	0.56	43.21	5480	0.79	42.82
2460	0.65	43.67	5520	0.31	40.94
2470	0.72	44.01	5600	-0.21	40.43
2480	0.74	44.24	5780	-0.53	37.95
2490	0.79	44.67	5820	-0.33	37.28
2500	0.81	45.19	5850	-0.67	35.41

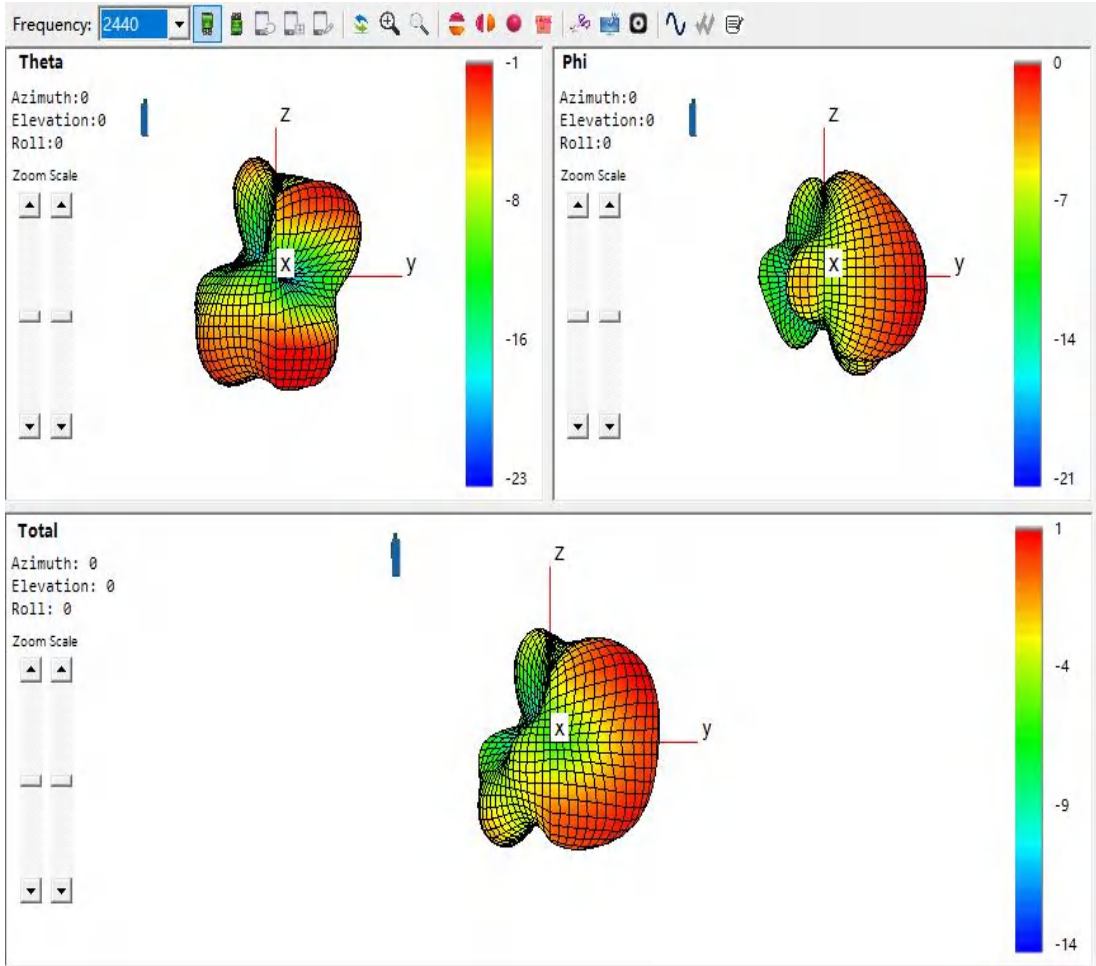
2.4G: 0.96dBi
U-NII Band 1: 0.39dBi;
U-NII Band 2A: 1.13dBi;
U-NII Band 2C: 0.31dBi;
U-NII Band 3: -0.33dBi;

2.4G

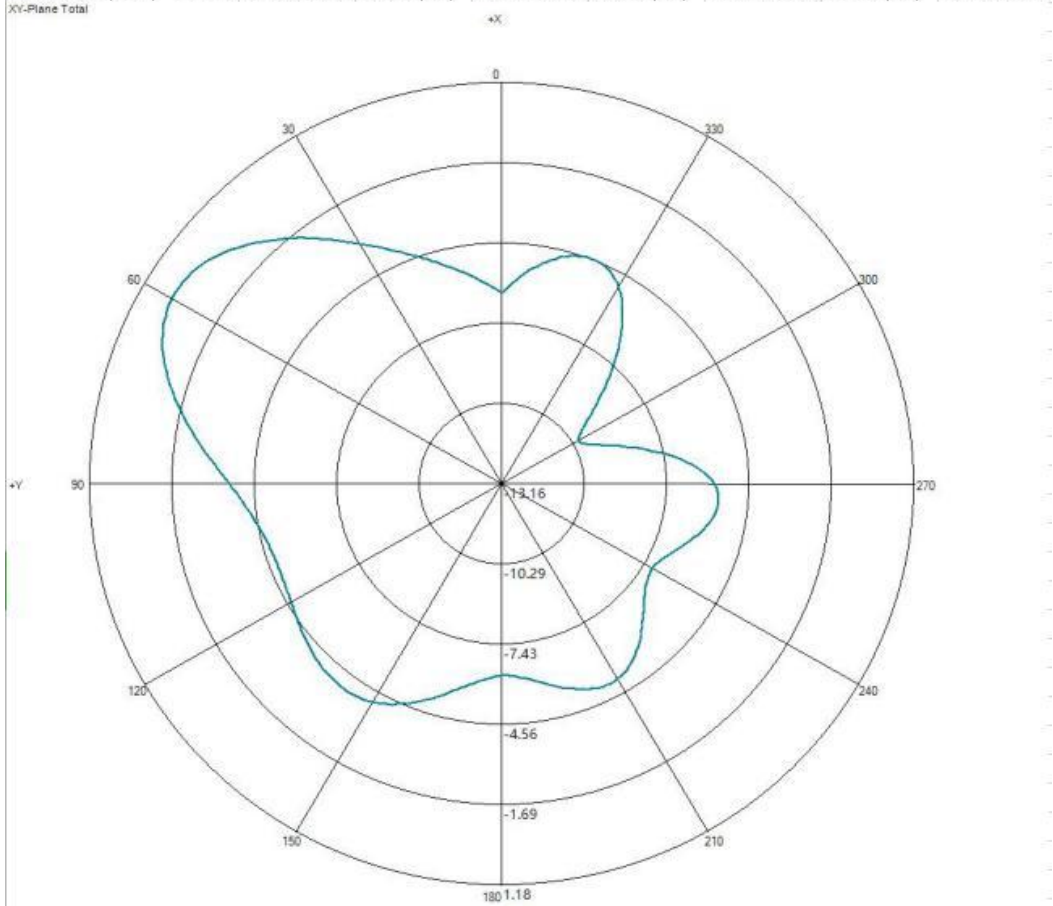


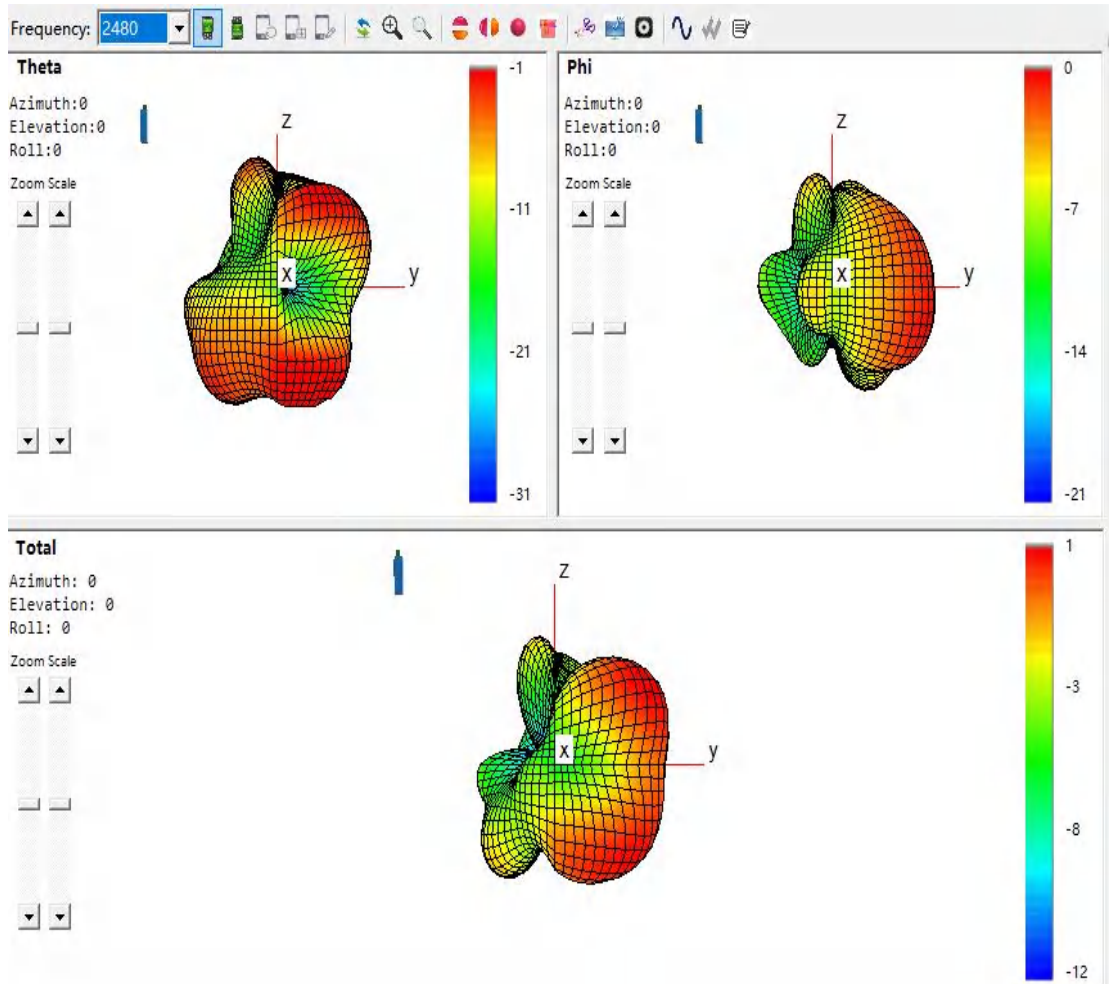
Channel (MHz) 2410 XY-Plane Max. (dB) 0.489967 Ave. (dB) -4.50953 Min. (dB) -9.41807
XY-Plane Total



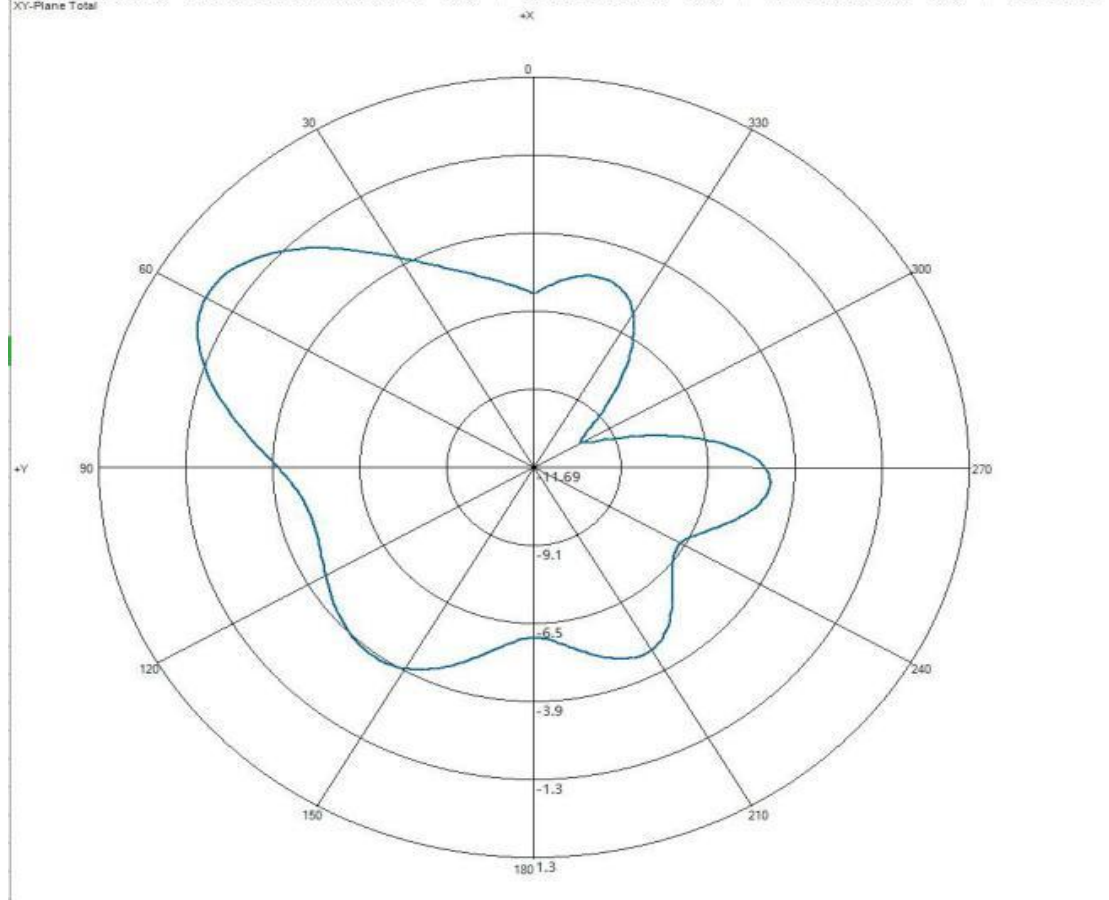


Channel (MHz) 2440 XY-Plane Max. (dB) 0.104186 Ave. (dB) -4.46002 Min. (dB) -10.0735

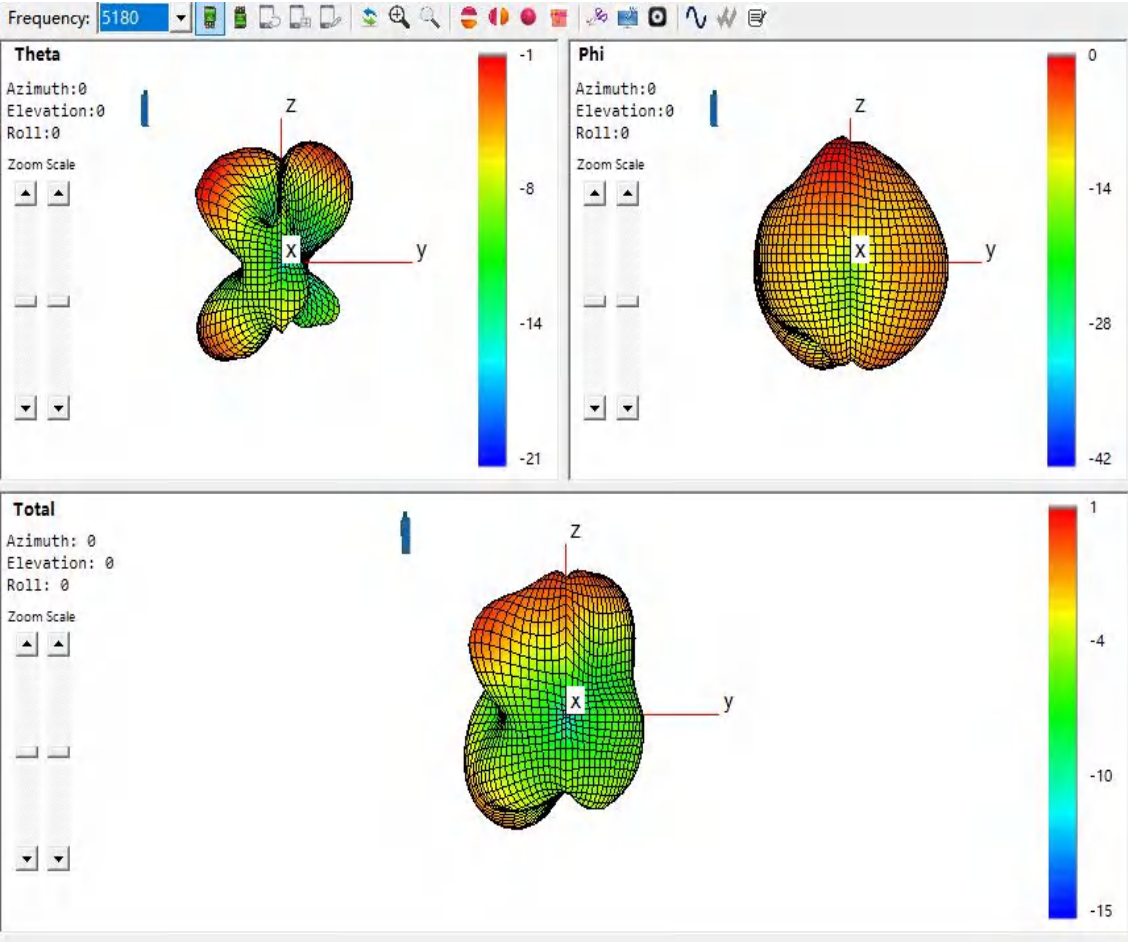




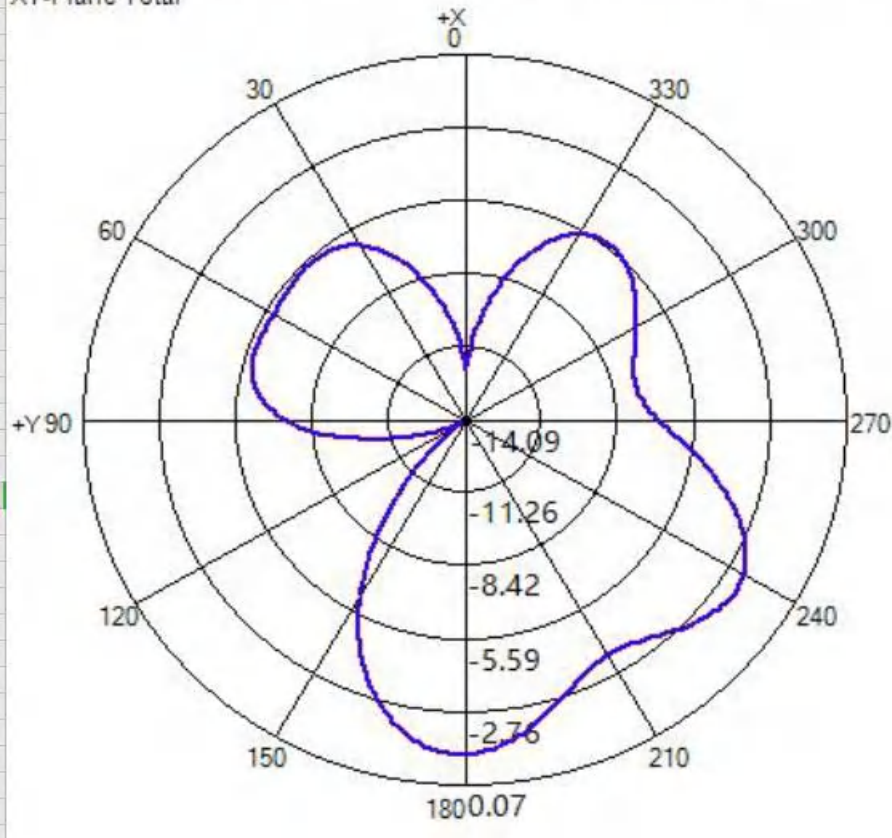
Channel (MHz)	2480	XY-Plane	Max. (dB)	-0.35206	Ave. (dB)	-4.49578	Min. (dB)	-10.0369
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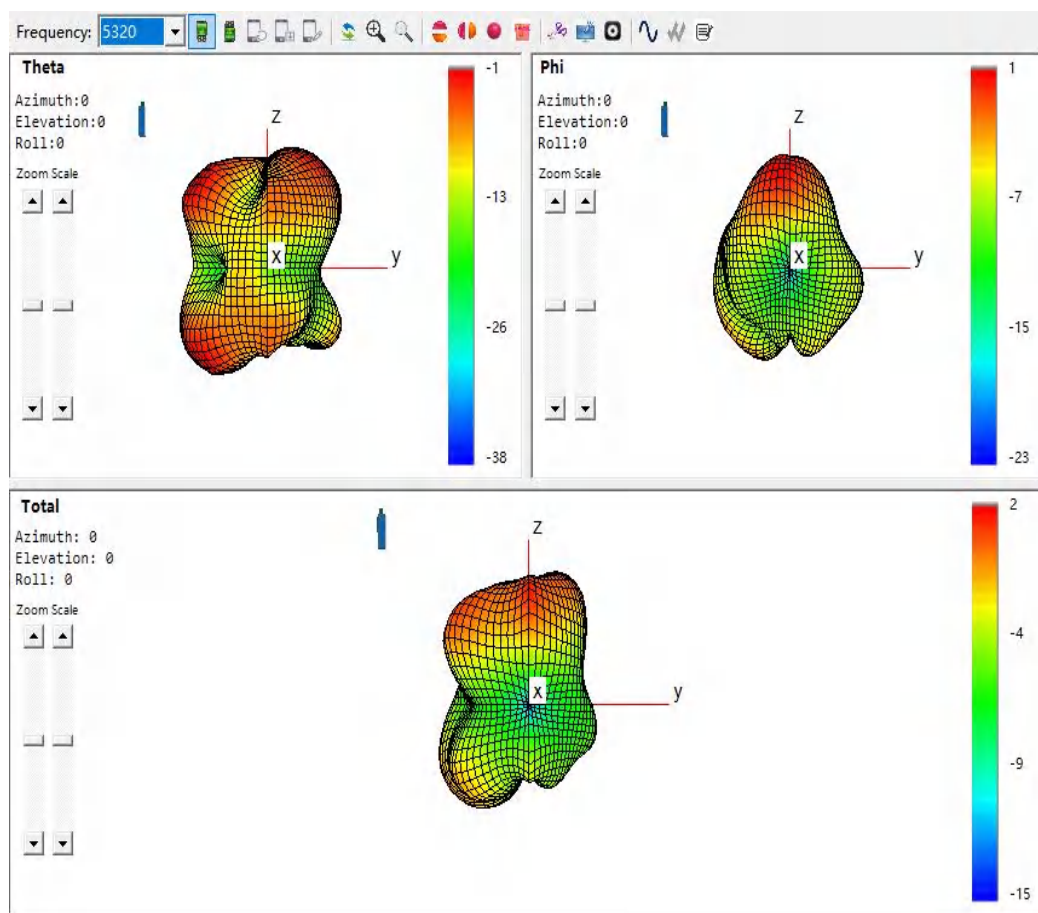


5.8G

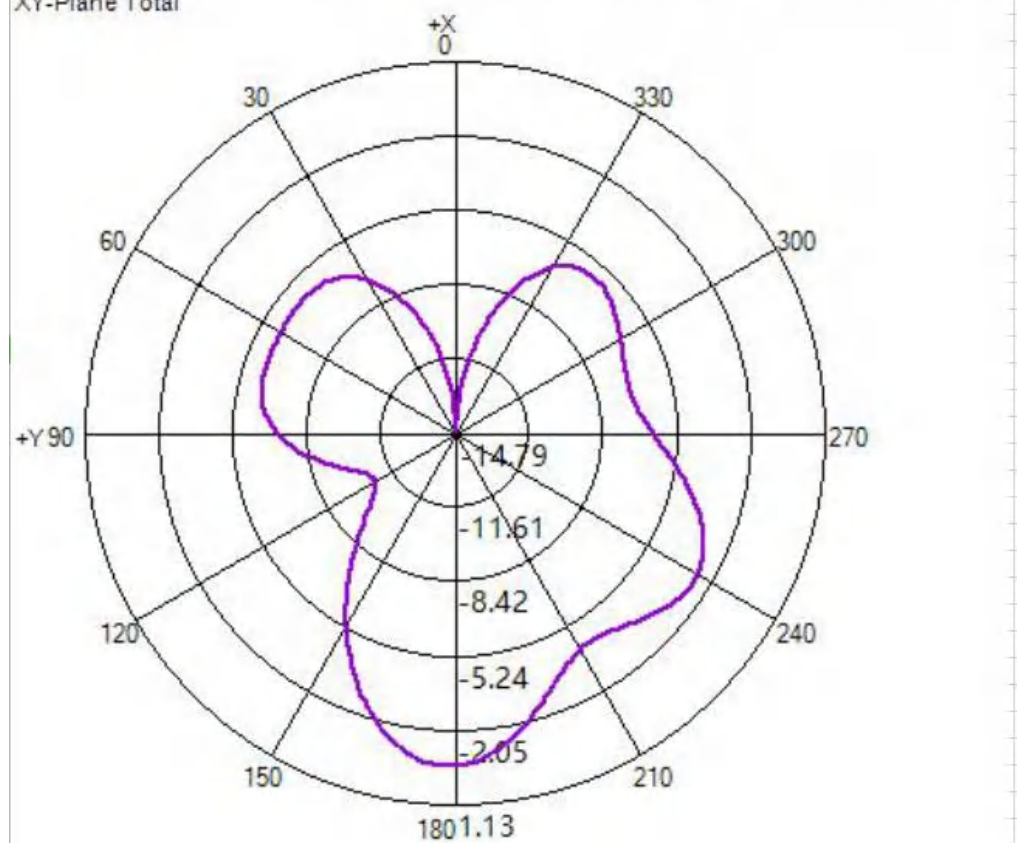


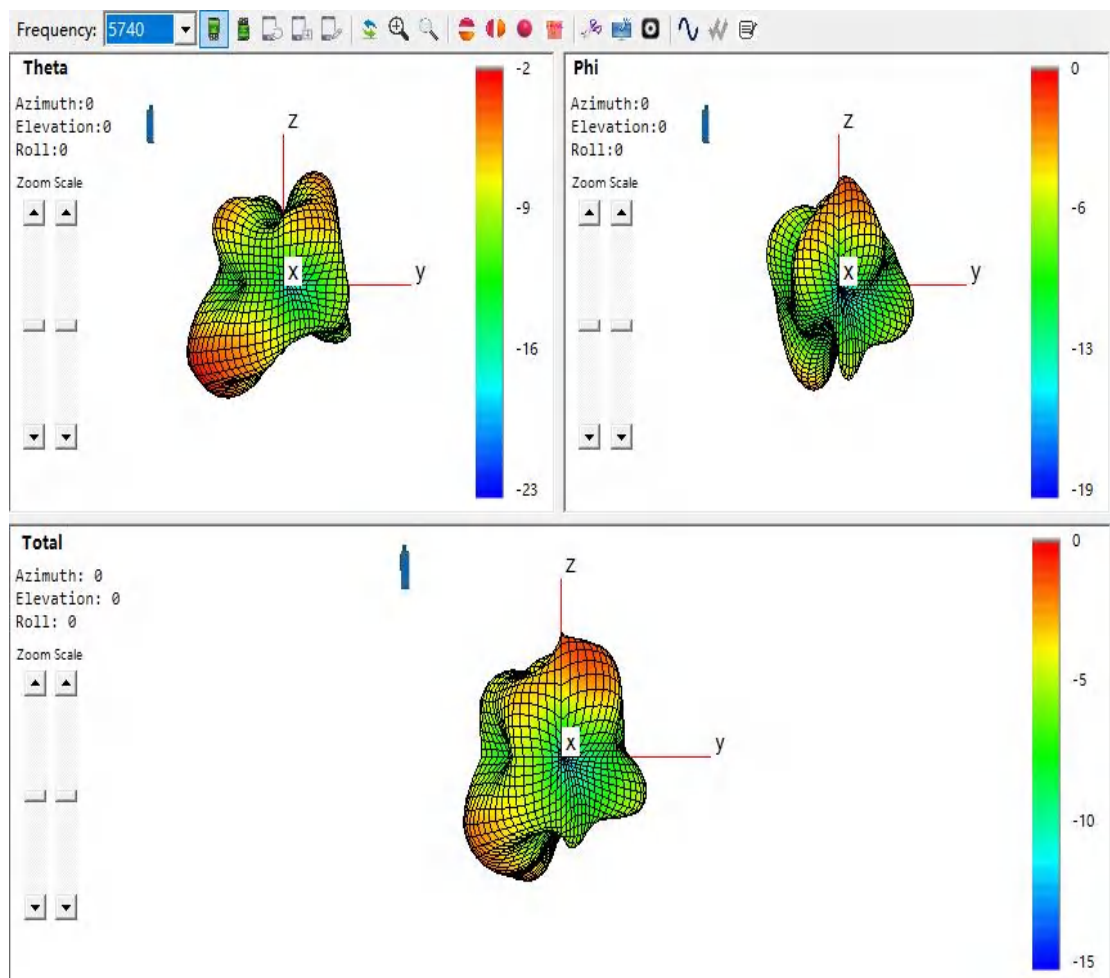
Channel (MHz) 5180 XY-Plane Max. (dB) -1.10745 Ave. (dB) -5.31114 Min. (dB) -13.9591
XY-Plane Total



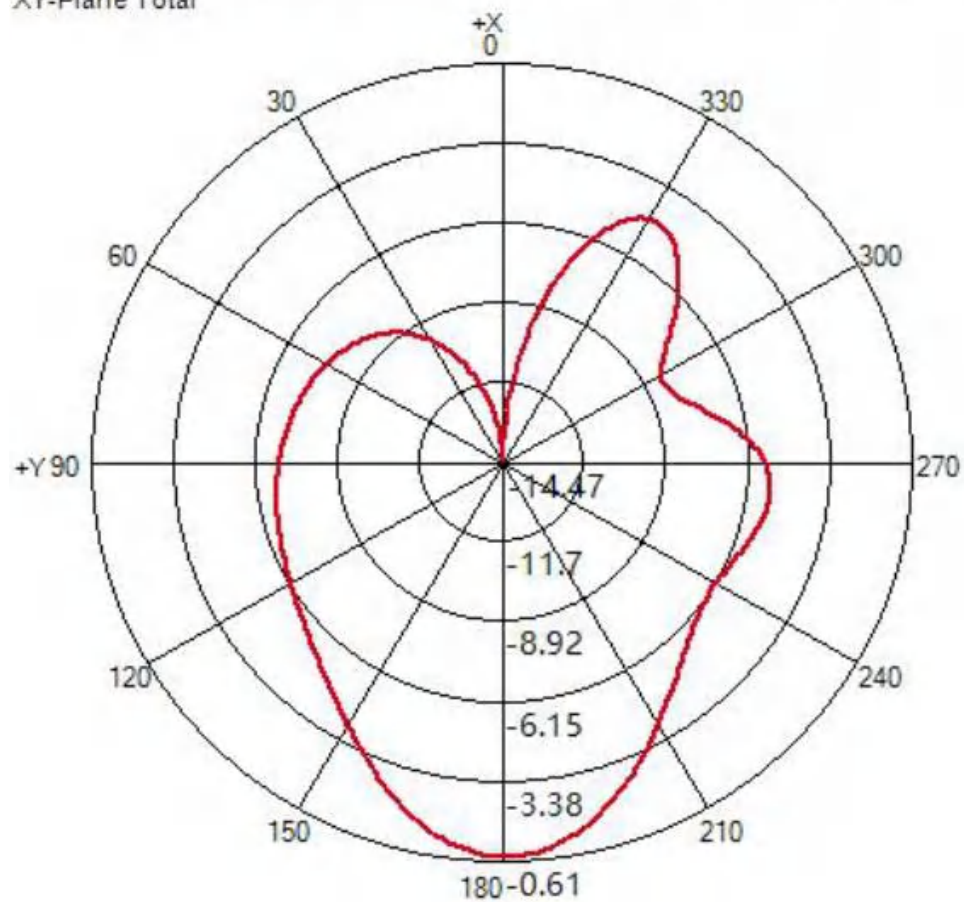


Channel (MHz) 5320 XY-Plane Max. (dB) -0.53132 Ave. (dB) -5.31605 Min. (dB) -14.7915
XY-Plane Total





Channel (MHz) 5740 XY-Plane Max. (dB) -0.77301 Ave. (dB) -5.44932 Min. (dB) -14.4674
XY-Plane Total



3. Mechanical Specification

3-1-1 Mechanical Configuration(组装图)

3-2 Measurement Data

3-3 Salt-Spray test

35°C, 85%RH, 48Hours(According to MIL-STD-810E)The salt-spray is generated from a 5% salt solution., The VSWR, Gain, Radiation Pattern must be met specifications after the salt-spray test.

4. Environment Characteristic

NO.	ITEM	TEST CONDITION	SPECIFICATION
4-1	High Temperature/Humidity Storage Test(non operating)	1.Temperature: +70 ±2°C 2.Humidity: 90~95%RH 3.Time: 48hrs	No material deformation is allowed.
4-2	Low Temperature/Humidity Storage Test(non operating)	1.Temperature: -30±2°C 2.Humidity: 0%RH 3.Time:48hrs	The VSWR, Gain, Radiation Pattern must be met specifications after these test.

