Testing Report

Customer Name: Fuzhou ZTX Communication Technology Co., LTD.

Product Name: WIFI Antenna

Sample Model:ZTX-7108N-WIFI

Reference Standard: GB/T 9410-2008; ANSI/IEEE Std 149-1979

Issue Date:2023.06.12

Engineer:林权	Date:2023.06.12
Auditor: 胡小良	Date:2023.06.15
Approver:王而栋	Date:2023.06.15

Version

VersionNo.	Date	Description	Formulate	Approval
1.0	2023.06.12		林权	

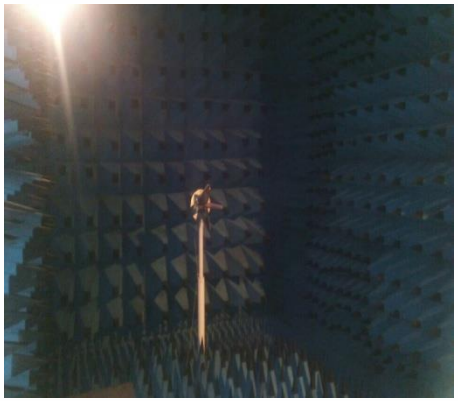
Contents

1.General Information

1.1 General information of testing institutions

Name	Fuzhou ZTX Communication Technology Co., LTD.
Address	Unit SC02, 2nd Floor, Huatong Zhongchuang Building, Building 45 Juyuanzhou, Jinshan Industrial Zone, Cangshan District, Fuzhou, China
Tel	0591-83583660
E-mail	
Equipment	Unit SC02, 2nd Floor, Huatong Zhongchuang Building, Building 45 Juyuanzhou, Jinshan Industrial Zone, Cangshan District, Fuzhou, China

1.2 Testing principle



公司拥有通信行业最领先的法国 Satimo SG24 OTA测试系统1套，ETS OTA 标准测试系统2套，Bluetest 混响暗室1套， MicroPross NFC测试系统1套，能快速稳定的给客户提供精确的测试报告，完全符合CTA标准，支持GSM/CDMA/WCDMA/TD/LTE/WIFI/BT/GPS/MIMO等各制式的有源无源测试。

MicroPross NFC系统能满足各运行商测试要求，对NFC设备进行快速性能测试，并输出正式认证测试报告

1.3 Test equipment

Equipment	Model No.	Serial No.	Manufacturer	Calibration date	Next calibration date
16 probe microwave chamber	3*3*2.5		SUNYIELD	2022.04.15	2023.04.15
Network Analyzer	8753ES		Agilent	2022.03.21	2023.03.21

1.4 Test environment

Temperature	23.7℃
Humidity	58%RH
Pressure	100.15kPa

1.5 Statement

(1) The test results in the report are only applicable to the tested samples and the tested samples
work under the environment described in the report.
(2) Only Shenzhen RFI-LAB Communication Technology Co., Ltd. have the right to modify the
report, and the modification information shall be annotated in the revision form.
(3) Any objection to this report shall be raised within 30 days after formal confirmation of the
report.
(4) This report is invalid if there is any evidence that the sample information provided is falsified.
(5) The report is invalid without the signature of the auditor and approver.

2.Sample Information

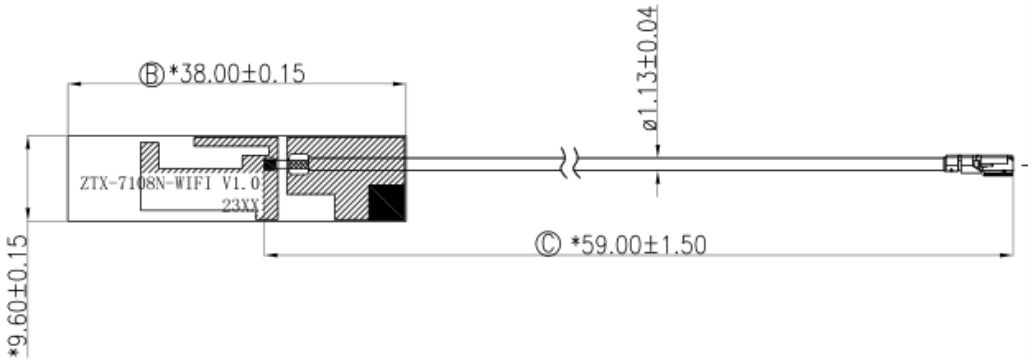
2.1 Client information

Name	
Address	
Contacts	
Tel	
E-mail	

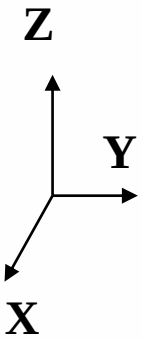
2.2 Description of EUT(S)

ProductName	WIFI Antenna
SampleModel	ZTX-7108N-WIFI
AntennaSize	38*9.6mm
AntennaType	FPC Antenna
SerialNo.	/
TestItem	Antenna gain;Efficiency;Radiation pattern
FrequencyRange	2400-2500MHz 5150-5850MHz
ReceivedDate	2023.06.12
TestDate	2023.06.15
Remark	The length of the RF cable is 59 mm

2.3 EUT appearance



2.4 DUT setup photo of free space OTA testing



3.Test Results

3.1 Test standard

Name	Parameter	Method	Standardno.
Mobile communication antenna	Antenna gain	Generic specification for antennas used in the mobile communications	GB/T 9410-2008
	Radiation pattern		
Antenna	Radiation efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149-1979
	Gain and directivity		

3.2 Test uncertainty

The uncertainty was calculated on the basis of the GUM published by ISO, using the inclusion factor of K=2 and the 95% confidence level to express the extended uncertainty.

Item	Uncertainty
Antennagain	±1dB
Radiationefficiency	±10%

3.3 Test data

3.3.1 Typical free space efficiency and gain

Freq	Gain	Efficiency_Pcent
2400	4.0005	43.752
2410	4.0037	43.722
2420	3.9425	43.2878
2430	3.7111	41.6123
2440	3.2555	39.589
2450	3.4304	42.7271

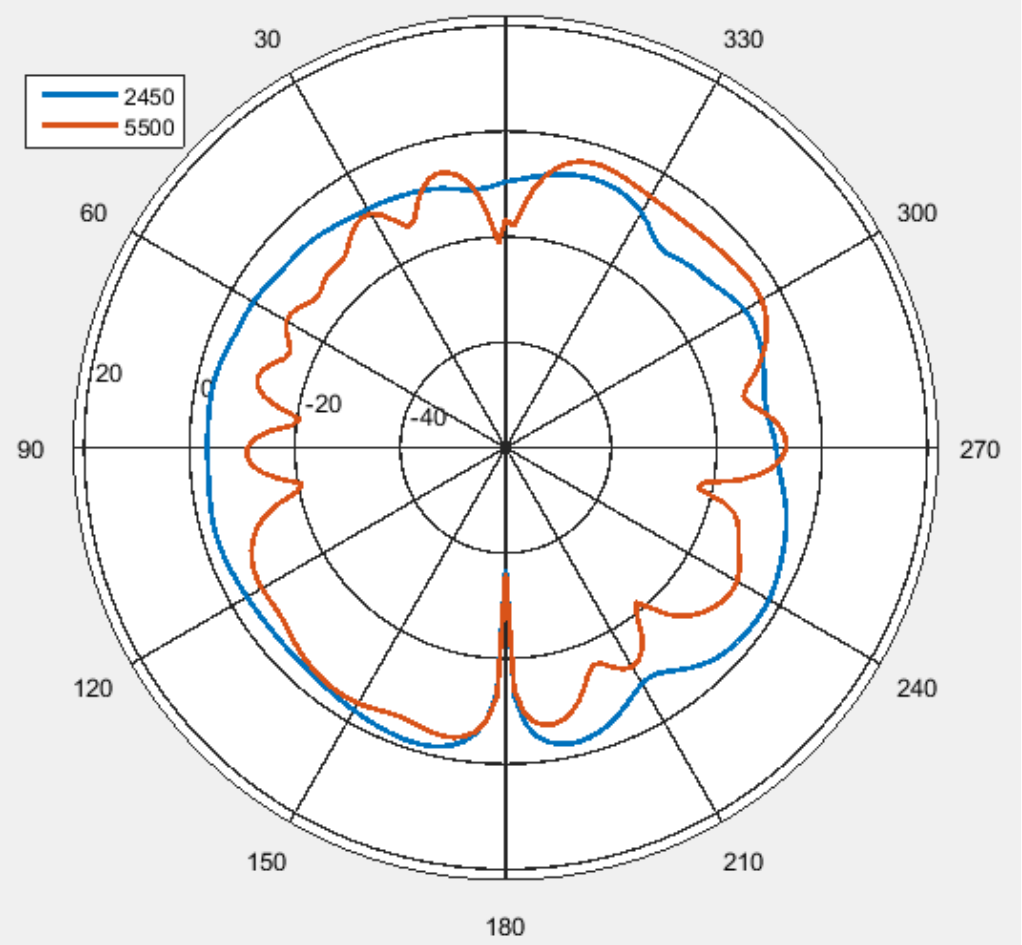
Freq	Gain	Efficiency_Pcent
2460	3.1114	39.7322
2470	2.9977	38.7049
2480	3.0253	38.4641
2490	2.9845	38.3407
2500	3.1507	40.0476
5150	4.6828	34.4135
5200	4.5833	31.3893
5250	4.2336	30.0031
5300	3.9531	29.2455
5350	3.4586	27.327
5400	3.1396	26.9914
5450	2.8901	25.8439
5500	1.7524	22.8609
5550	1.1102	20.7048
5600	0.8129	20.9938

Freq	Gain	Efficiency_Pcent
5650	0.7379	21.9499
5700	-0.0621	18.5295
5750	0.3757	19.6137
5800	1.3802	20.4961
5850	1.3124	20.6146

3.3.2 Typical free space radiation pattern

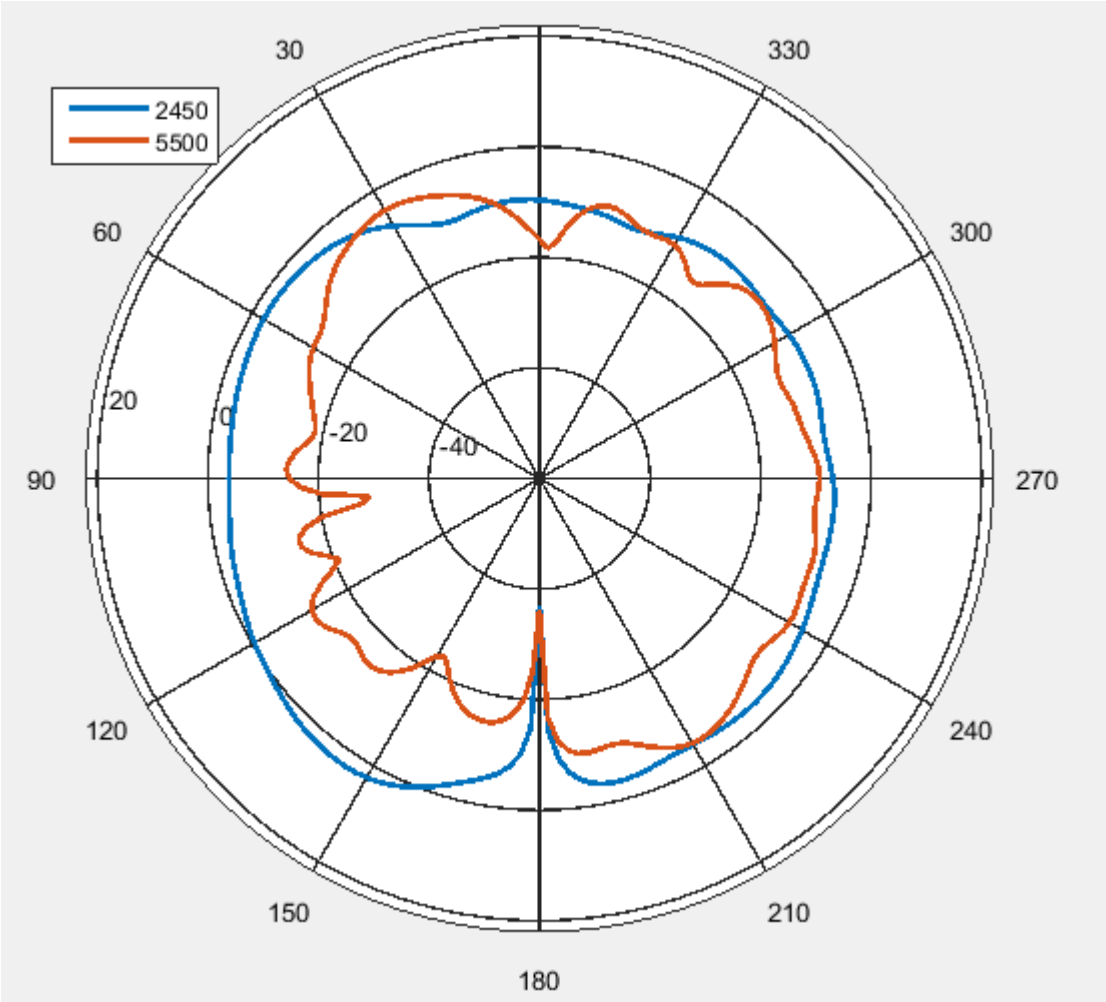
(1) X-Z Plane:

V Phi=0



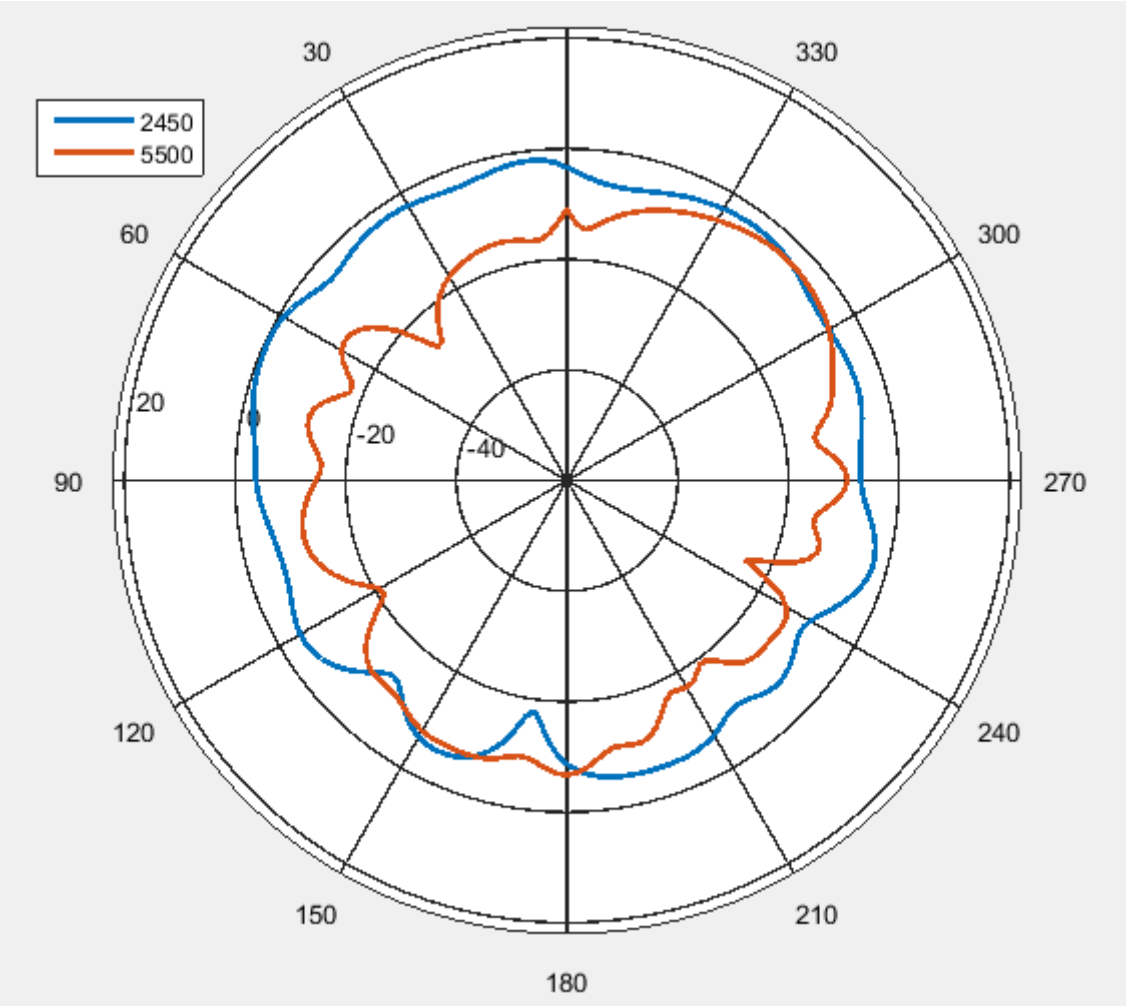
(2) Y-Z Plane:

V Phi=90

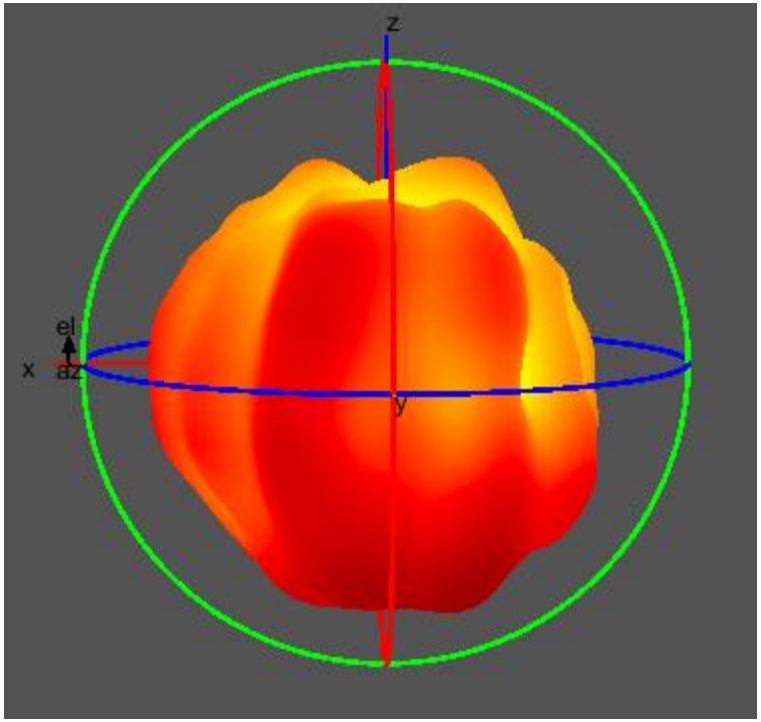


(2) X-Y Plane:

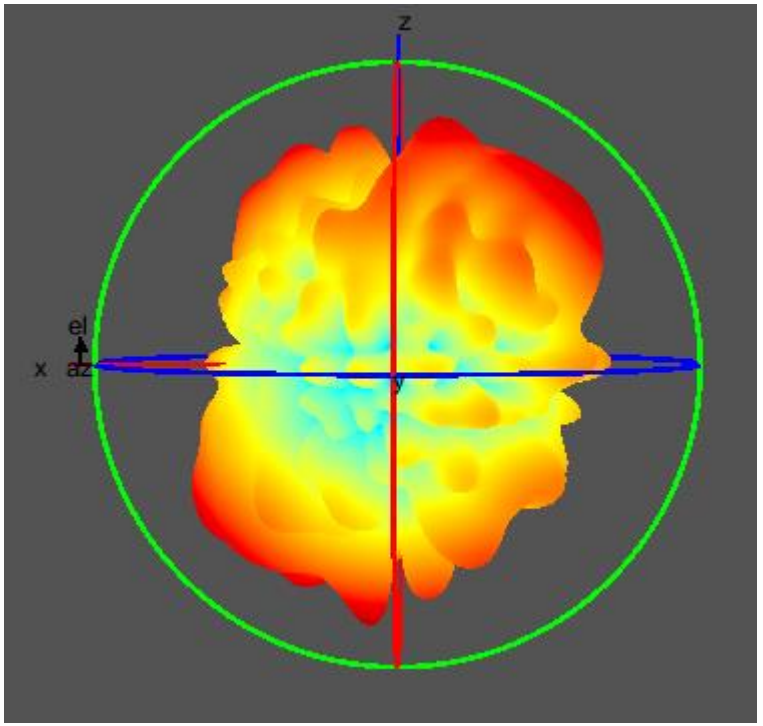
H Theta=90



（4）Typical Free Space 3D Radiation Pattern at 2450MHz 5500MHz:



2450MHz



5500MHz

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