TEST REPORT

Product	:	WiFi Smart Plug
Model Name	:	BERT110AP
Report No.	:	PTC25061214901E-RF01

Prepared for

Versa Wireless Inc.

103 - 19292 60th Ave. Surrey BC, CANADA Zip code: V3S 3M2

Prepared by

Precise Testing & Certification Co., Ltd

Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China

TEL: +86-769-3880 8222

FAX: +86-769-3882 6111

1 Test Result Certification

Applicant's name	:	Versa Wireless Inc.
Address	:	103 - 19292 60th Ave. Surrey BC, CANADA Zip code: V3S 3M2
Manufacture's name	:	NIE-TECH Co., Ltd
Address	:	Jinlian commercial center 9001, Jinxiu road No.2, Changan Town,Dongguan City, GuangDongProv., CHINA
Product name	:	WiFi Smart Plug
Model name	:	BERT110AP
Standards	:	GB/T 9410-2008; ANSI/IEEE Std 149-1979
Test Date	:	Sep. 01, 2025 to Sep. 04, 2025
Date of Issue	:	Sep. 04, 2025
Test Result	:	Pass

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the GB/T 9410 and ANSI/IEEE Std 149 requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of PTC, this document may be altered or revised by PTC, personal only, and shall be noted in the revision of the document.

Test Engineer:

Jack zhou / Engineer

Technical Manager:

Simon Pu / Manager

Revision History of Report

Vision No.	Date	Revisions	Modifier
00	Sep. 04, 2025	Initial Issue	

Contents

2 Test Summary

Name	Parameter	Method	Standard no.
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 Test Site

3.1 Test Facility

Name	Precise Testing & Certification Co., Ltd
Address	Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China
CNAS Number	L5772

3.2 Measurement 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
Antenna gain	±0.68dB
Radiation efficiency	±0.68dB

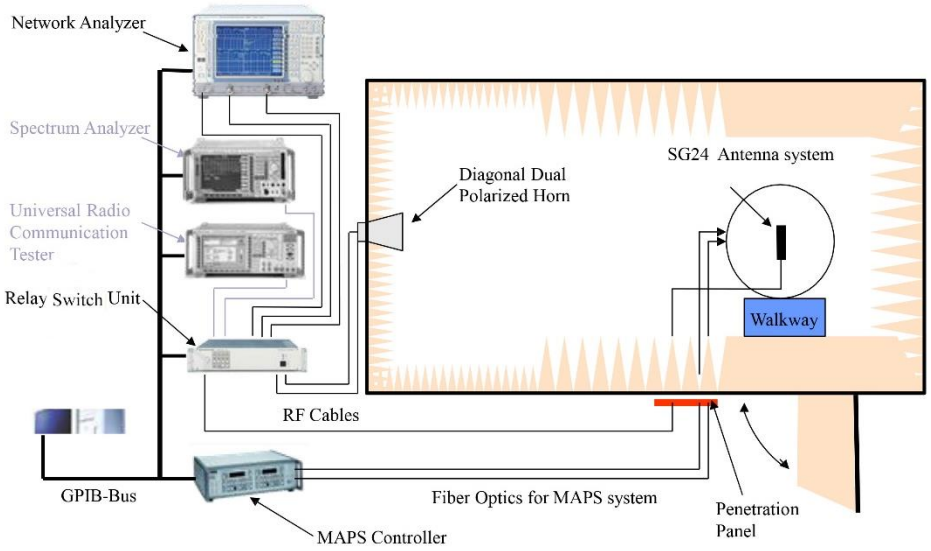
3.3 List Of Test And Measurement Instruments

Name of Equipment	Manufacturer	Serial No.	Last Cal.	Calibration Interval
24 probe microwave chamber	YIHENG ELECTPONC	4*4*4	Jan. 10,2025	1 Year
Network Analyzer	E5071C	Agilent	Jan. 10,2025	1 Year
XH.PassiveTest 2.7.6	XH-IOT	/	/	/

3.4 Test environmental

Environment Parameter	Selected Values During the Testes	
Relative Humidity	45% to 55%	
Value	Temperature(℃)	Voltage(V)
NTNV	20 to 24	N/A
Note: NV: Normal Voltage; NT: Normal Temperature		

3.5 Test Setup



4 EUT Description

Product Name	WiFi Smart Plug
Sample Model	BERT110AP
Size	/
Test Item	Antenna gain; Radiation pattern and efficiency
Antenna Type	FPC Antenna
Frequency Range	2400MHz-2500MHz 5100MHz-5900MHz

5 Test Data

5.1 Typical free space efficiency and gain

Test data For Band 2400 MHz to 2500MHz:

Frequency/MHz	Efficiency / dB	Efficiency / %	Max Gain/dBi	Avg Gain/dBi
2400	-6.41	22.86	-2.03	-6.41
2410	-5.99	25.18	-1.62	-5.99
2420	-5.56	27.8	-1.43	-5.56
2430	-5.06	31.19	-1.02	-5.06
2440	-4.8	33.11	-0.98	-4.8
2450	-4.51	35.4	-0.79	-4.51
2460	-4.21	37.93	-0.37	-4.21
2470	-3.78	41.88	0.05	-3.78
2480	-3.35	46.24	0.05	-3.35
2490	-2.92	51.05	0.5	-2.92
2500	-2.5	56.23	0.9	-2.5

Test data For Band 5100 MHz to 5900MHz:

Frequency/MHz	Efficiency / dB	Efficiency / %	Max Gain/dBi	Avg Gain/dBi
5100	-3.29	46.88	2.23	-3.29
5120	-3.34	46.34	2.63	-3.34
5140	-3.44	45.29	2.43	-3.44
5160	-3.3	46.77	2.66	-3.3
5180	-3.45	45.19	2.61	-3.45
5200	-3.54	44.26	2.34	-3.54
5220	-3.38	45.92	2.67	-3.38
5240	-3.39	45.81	2.71	-3.39
5260	-3.56	44.06	2.44	-3.56
5280	-3.42	45.5	2.82	-3.42
5300	-3.37	46.03	2.65	-3.37
5320	-3.41	45.6	2.79	-3.41
5340	-3.29	46.88	3.02	-3.29
5360	-3.29	46.88	2.97	-3.29
5380	-3.3	46.77	3.16	-3.3
5400	-3.29	46.88	3.33	-3.29
5420	-3.24	47.42	2.91	-3.24
5440	-3.34	46.34	3.29	-3.34
5460	-3.21	47.75	3.2	-3.21
5480	-3.33	46.45	2.87	-3.33
5500	-3.45	45.19	3.12	-3.45
5520	-3.49	44.77	2.98	-3.49
5540	-3.53	44.36	2.93	-3.53
5560	-3.68	42.85	3.03	-3.68
5580	-3.61	43.55	2.87	-3.61
5600	-3.89	40.83	2.97	-3.89
5620	-3.87	41.02	2.84	-3.87
5640	-3.83	41.4	2.68	-3.83
5660	-4.06	39.26	2.99	-4.06
5680	-4.1	38.9	2.75	-4.1
5700	-4.03	39.54	2.62	-4.03
5720	-4.18	38.19	2.97	-4.18
5740	-4.3	37.15	2.74	-4.3
5760	-4.11	38.82	2.9	-4.11
5780	-4.24	37.67	2.96	-4.24
5800	-4.42	36.14	2.82	-4.42
5820	-4.15	38.46	2.79	-4.15
5840	-4.24	37.67	3.07	-4.24

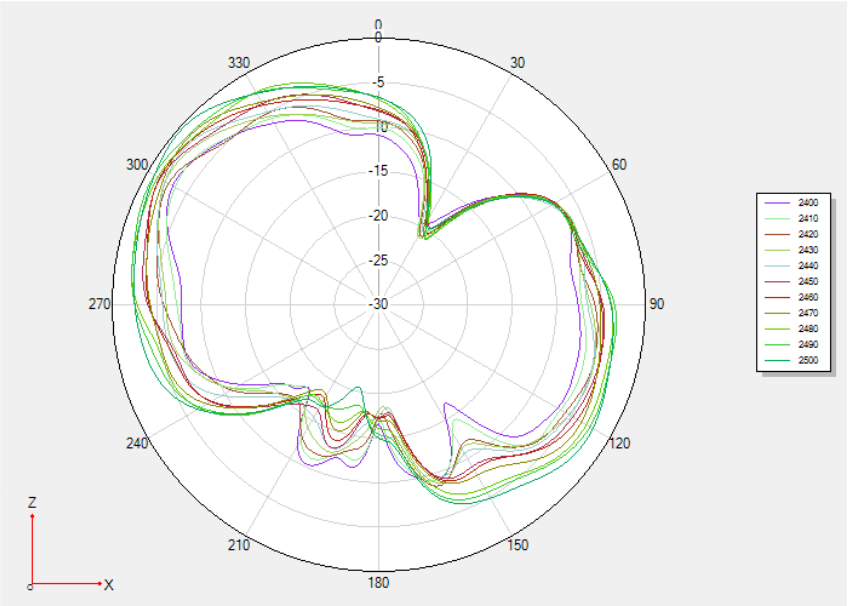
5860	-4.28	37.33	3.28	-4.28
5880	-4.06	39.26	3.21	-4.06
5900	-4.06	39.26	3.31	-4.06

5.2 Typical free space radiation pattern

Test data For Band 2400 MHz to 2500MHz:

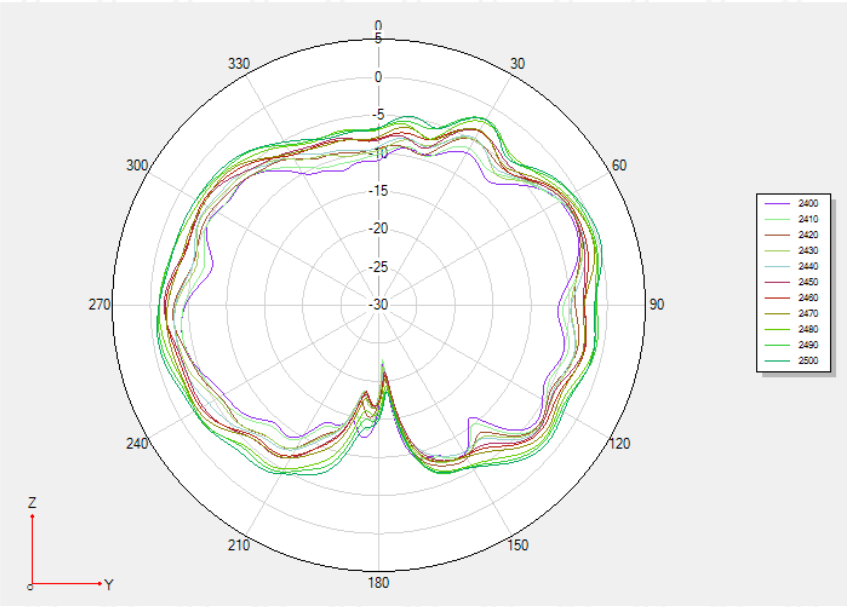
(1) X-Z Plane:

V Phi=0



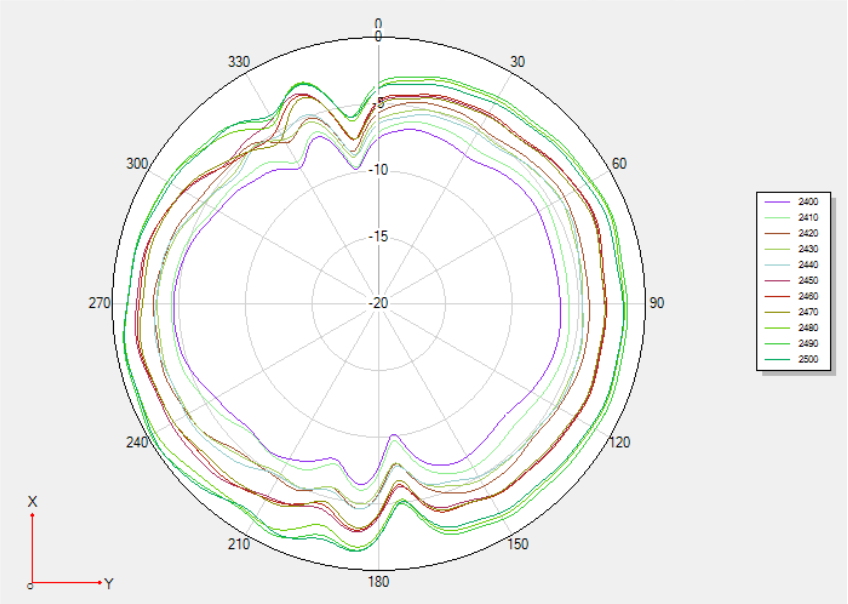
(2) Y-Z Plane:

V Phi=90



(3)X-Y Plane:

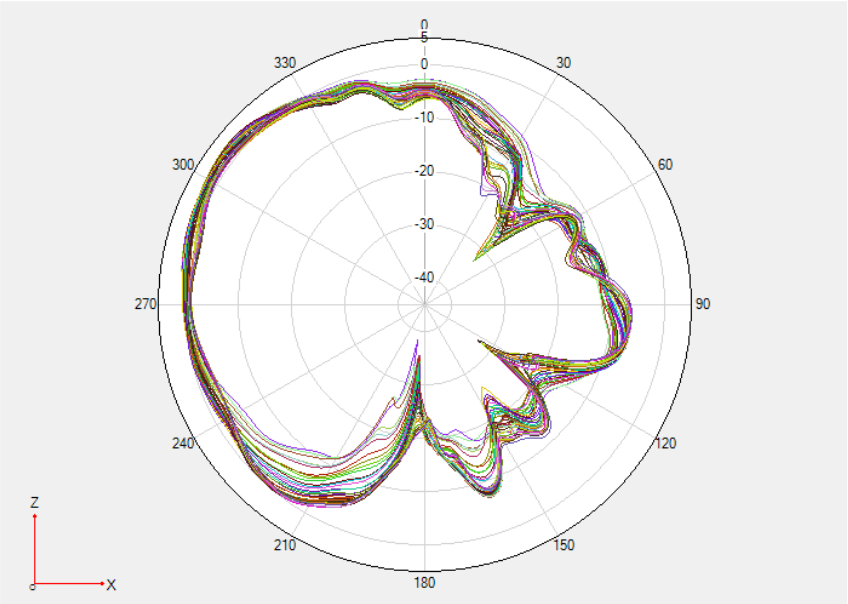
H Theta=90



Test data For Band 5100 MHz to 5900MHz:

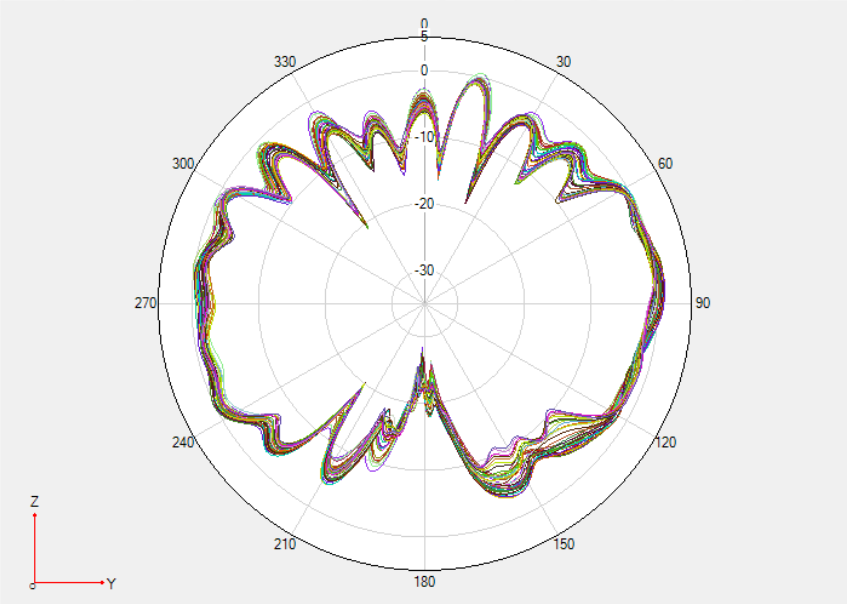
(1) X-Z Plane:

V Phi=0



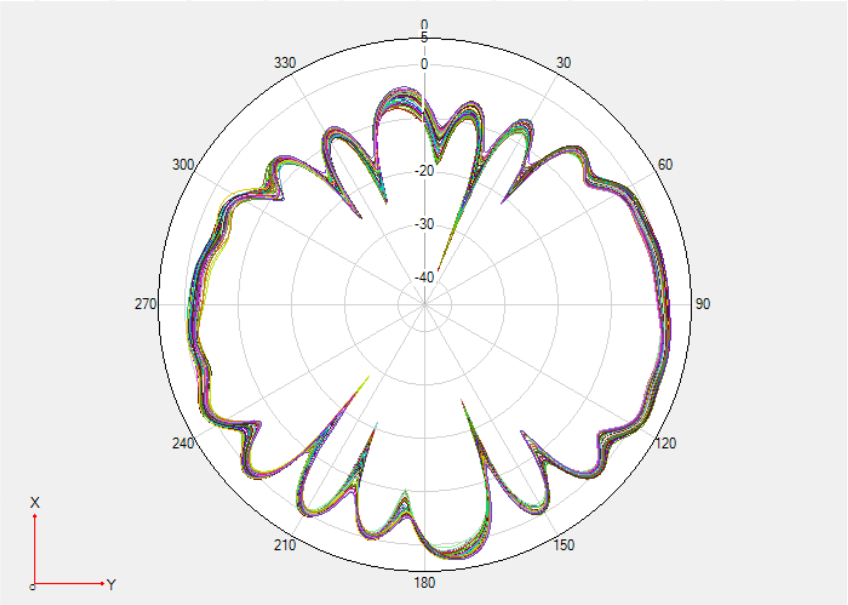
(2) Y-Z Plane:

V Phi=90



(3)X-Y Plane:

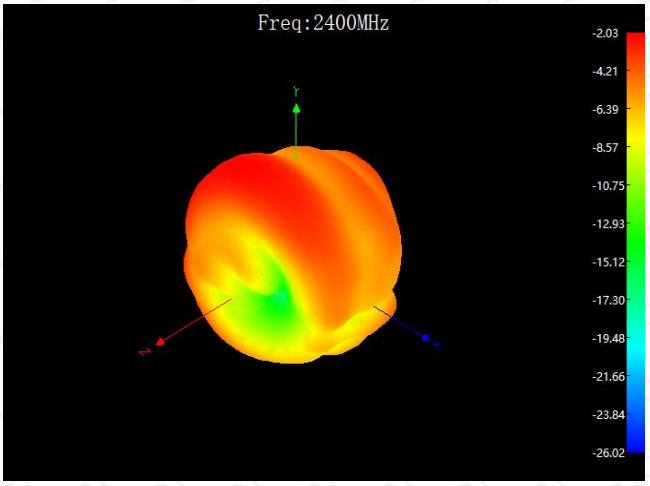
H Theta=90



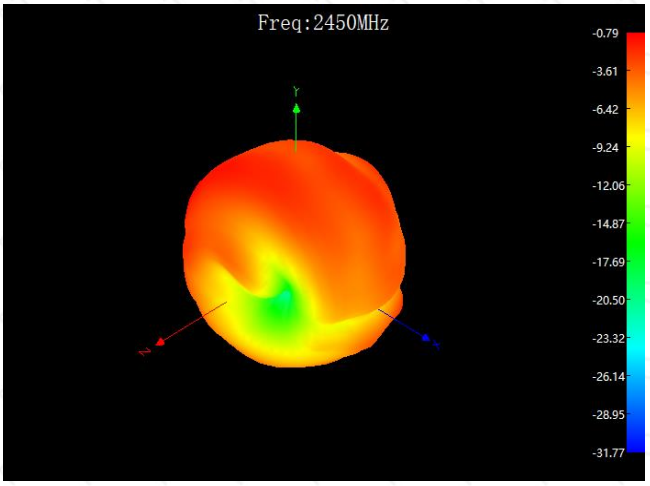
5.3 3D Pattern

Test data For Band 2400 MHz to 2500MHz:

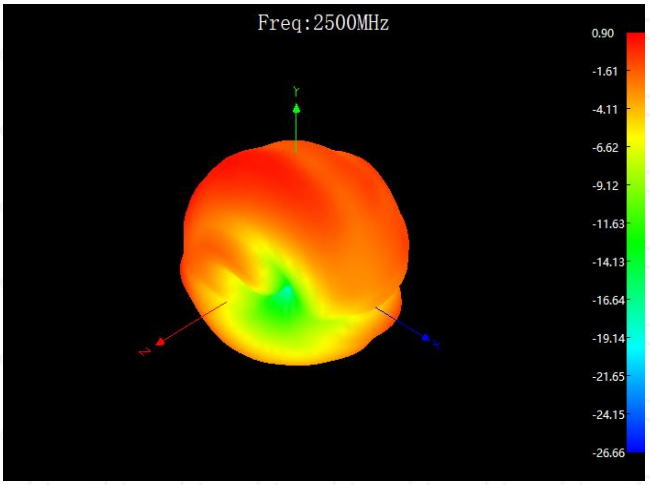
3D Pattern for 2400MHz



3D Pattern for 2450MHz

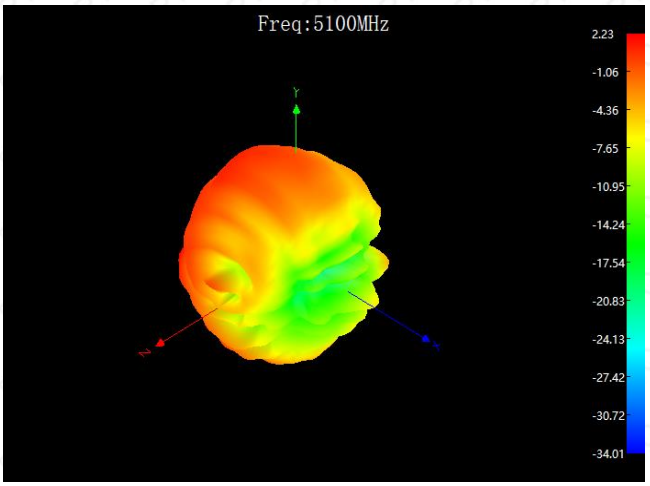


3D Pattern for 2500MHz

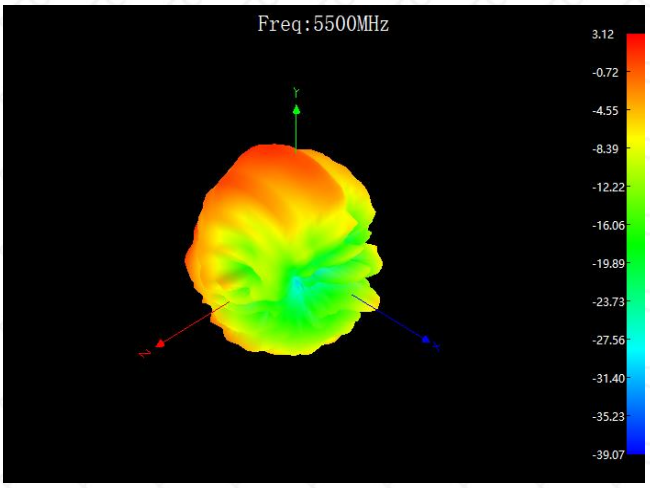


Test data For Band 5100 MHz to 5900MHz:

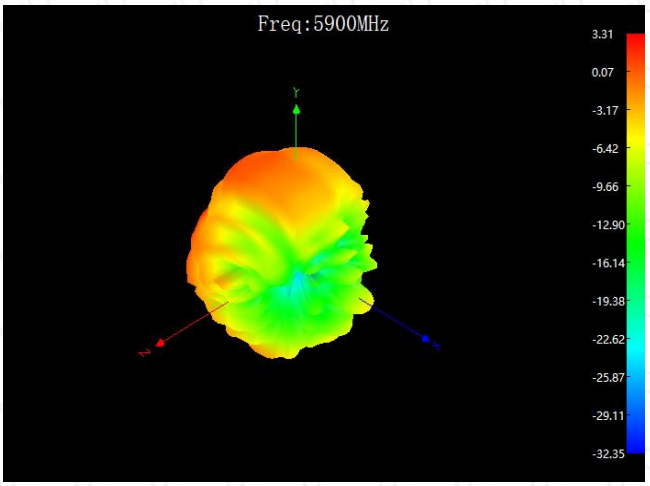
3D Pattern for 5100MHz



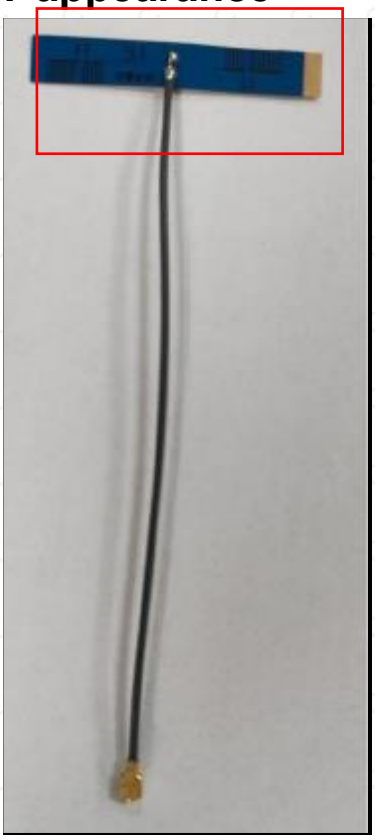
3D Pattern for 5500MHz



3D Pattern for 5900MHz



6 EUT appearance



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