

Testing Report

Customer Name: vivo

Product Name: V2556

Sample Model: PD2541F_EX_A_16.0.0.22.W20.V000L1

Reference Standard: *GB/T 9410-2008; ANSI/IEEE Std 149-2021*

Issue Date: 2025.11.4

Version

Version No.	Date	Description	Formulate	Approval
A0	2025.11.4	For the first time, formulate	Weichangye	Hufangben

Contents

1.General Information	3
1.1 General information of testing institutions	3
1.2 Test equipment	4
1.3 Test environment	4
1.4 Statement	4
2.Sample Information	5
2.1 Client information	5
2.2 Description of EUT(S)	5
2.3 EUT appearance	6
2.4 EUT setup photo of free space OTAtesing	6
3.Test Results	7
3.1 Test standard	7
3.2 Test uncertainty	7
3.3 Test data	7
3.3.1 Typical free space efficiency and gain	7
3.3.2 Typical free space radiation pattern	9
(The following is blank)	18

1.General Information

1.1 General information of testing institutions

Name	Sunway Communication
Address	1013, Xihuan Rd., Shajing Town, Bao'an District, Shenzhen
Tel	/
E-mail	/
Equipment	All the equipment used in the report is fixed in 1013, Xihuan Rd., Shajing Town, Bao'an District, Shenzhen

1.2 Test equipment

Equipment	Model No.	Serial No.	Manufacturer	Calibration date	Next calibration date
OTA Test System	RayZone-5000	Sunway-LAB-RF-D00	GTS	2025.3.14	2026.3.13
Network Analyzer	E5071C	Sunway-LAB-R-D01	KEYSIGHT	2025.5.13	2026.5.12

1.3 Test environment

Temperature	22.8°C
Humidity	58%RH
Pressure	100.23kPa

1.4 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 Sunway Communication 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.

2. Sample Information

2.1 Client information

Name	vivo
Address	No.1, vivo Road, Chang'an, Dongguan, Guangdong, China
Contacts	/
Tel	/
E-mail	/
Manufacturer	/

2.2 Description of EUT(S)

Product Name	V2556
Sample Model	PD2541F_EX_A_16.0.0.22.W20.V000L1
Antenna Size	/
Serial No.	/
Antenna Type	PIFA
Test Item	Antenna gain; Efficiency; Radiation pattern
Frequency Range	2400-2500MHz&5150-5850MHz
Received Date	2025.11.4
Test Date	2025.11.4
Remark	/

3. Test Results

3.1 Test standard

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 149-2021
	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
Antenna gain	$\pm 1\text{dB}$
Radiation efficiency	$\pm 10\%$

3.3 Test data

3.3.1 Typical free space efficiency and gain

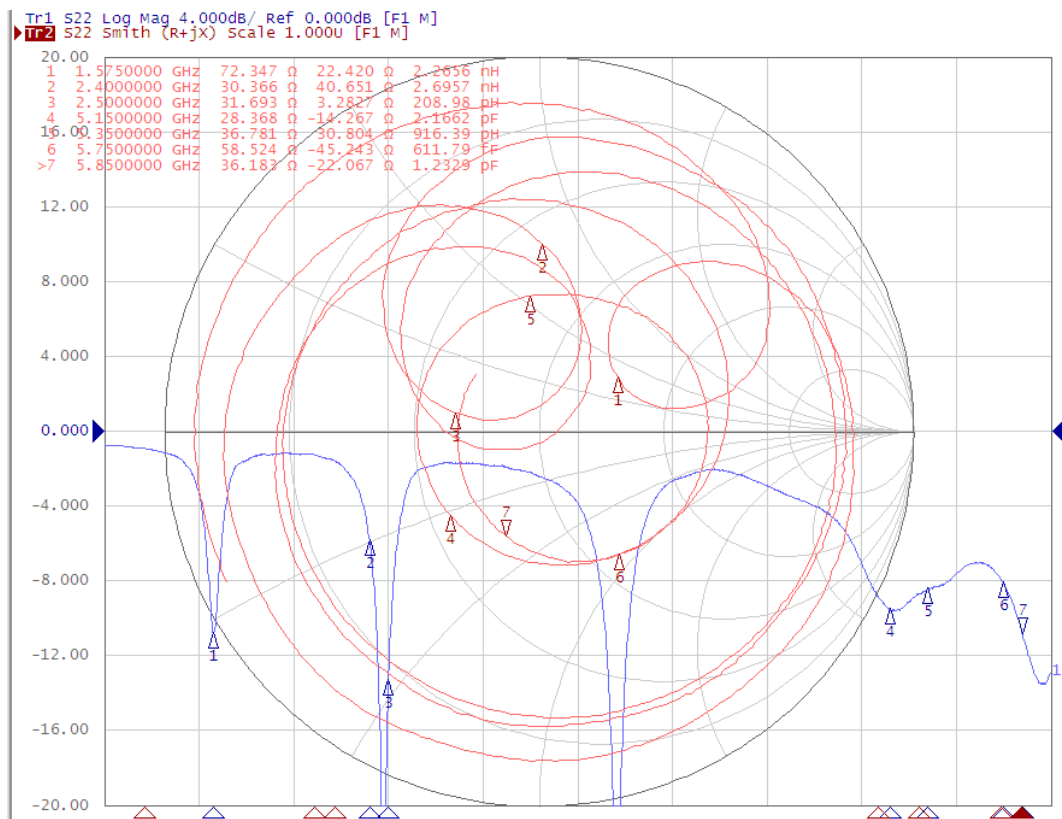
Frequency/MHz	1500	1510	1520	1530	1540	1550	1560	1570	1580	1590	1600
Peak Gain/dBi	-1.25	-0.60	-0.01	0.65	1.01	1.27	1.60	1.59	1.19	0.62	0.06
Efficiency/%	-5.95	-5.25	-4.68	-4.01	-3.70	-3.41	-3.29	-3.39	-3.76	-4.24	-4.68

Frequency/MHz	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain/dBi	0.81	0.84	0.7	0.62	0.74	0.88	1.11	1.21	1.04	0.62	0.19
Efficiency/%	-3.76	-3.6	-3.57	-3.52	-3.45	-3.42	-3.37	-3.44	-3.65	-4.02	-4.47

Frequency/MHz	5180	5200	5220	5240	5260	5280	5300
Peak Gain/dBi	1.52	1.50	1.50	1.46	1.24	1.14	1.00
Efficiency/%	-4.18	-4.08	-4.05	-4.20	-4.38	-4.51	-4.56

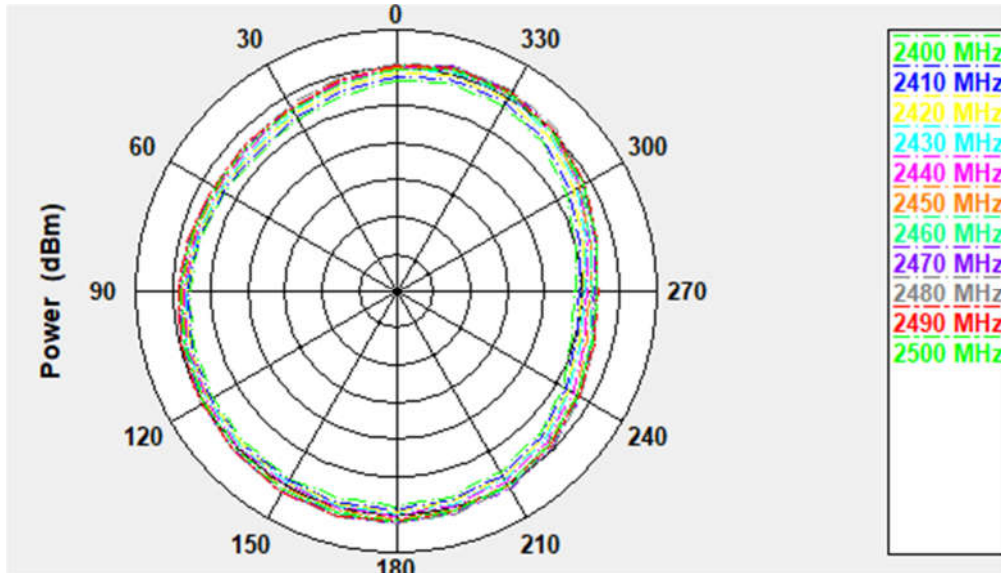
Frequency/MHz	5500	5520	5540	5560	5580	5600	5620	5640	5660	5680	5700
Peak Gain/dBi	0.59	0.66	0.68	0.38	0.42	0.39	0.41	0.59	0.36	0.41	0.49
Efficiency/%	-4.92	-4.68	-4.62	-4.60	-4.44	-4.42	-4.32	-4.25	-4.36	-4.28	-4.09

Frequency/MHz	5750	5770	5790	5810	5830	5850
Peak Gain/dBi	0.43	0.18	-0.29	-0.43	-0.17	-0.07
Efficiency/%	-4.08	-4.20	-4.45	-4.58	-4.24	-4.44

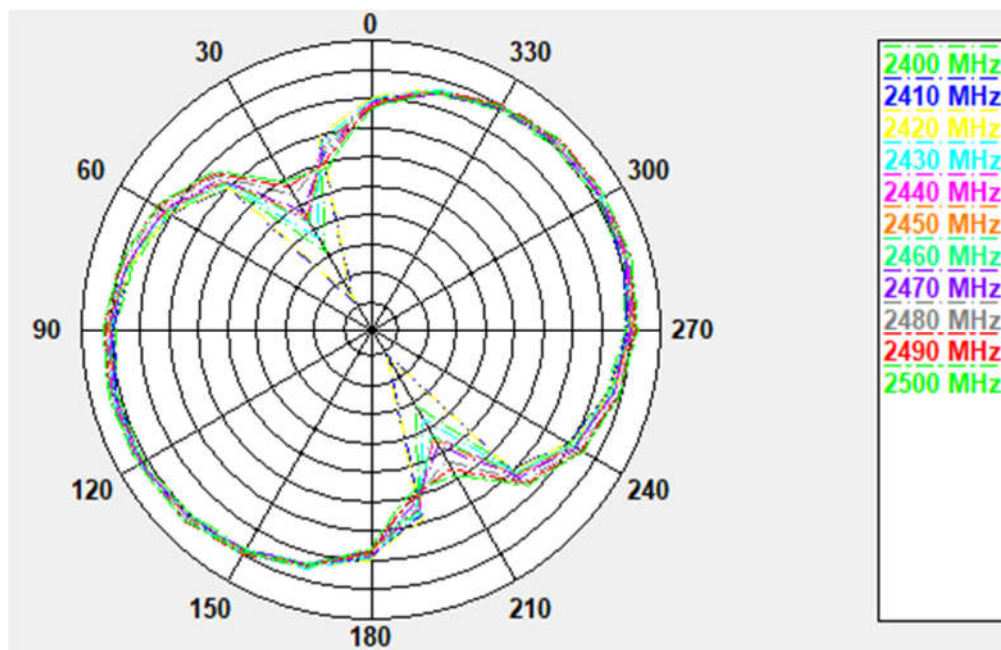


3.3.2 Typical free space radiation pattern

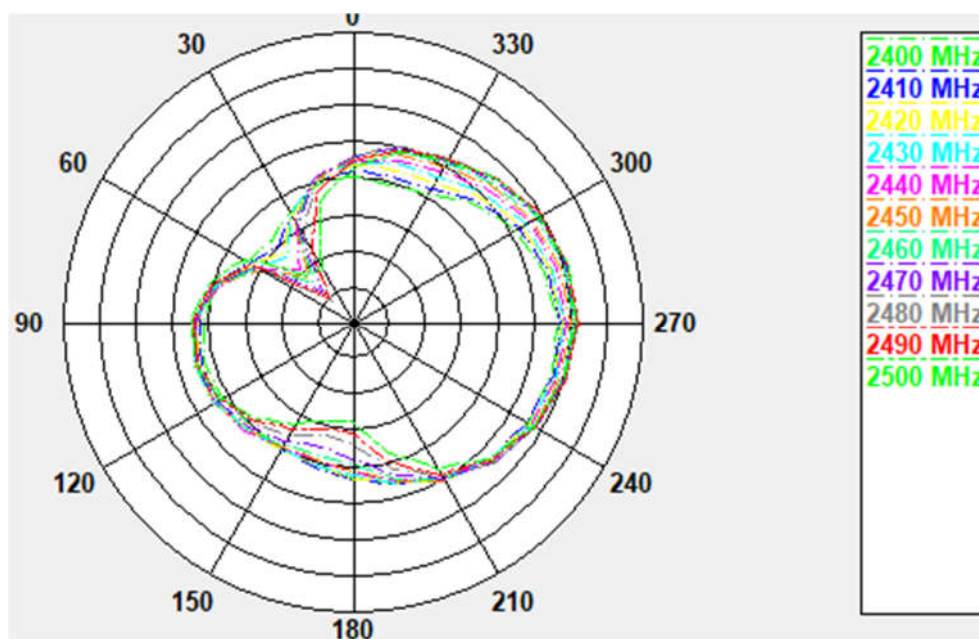
(1) X-Y Plane(unit:dBi):



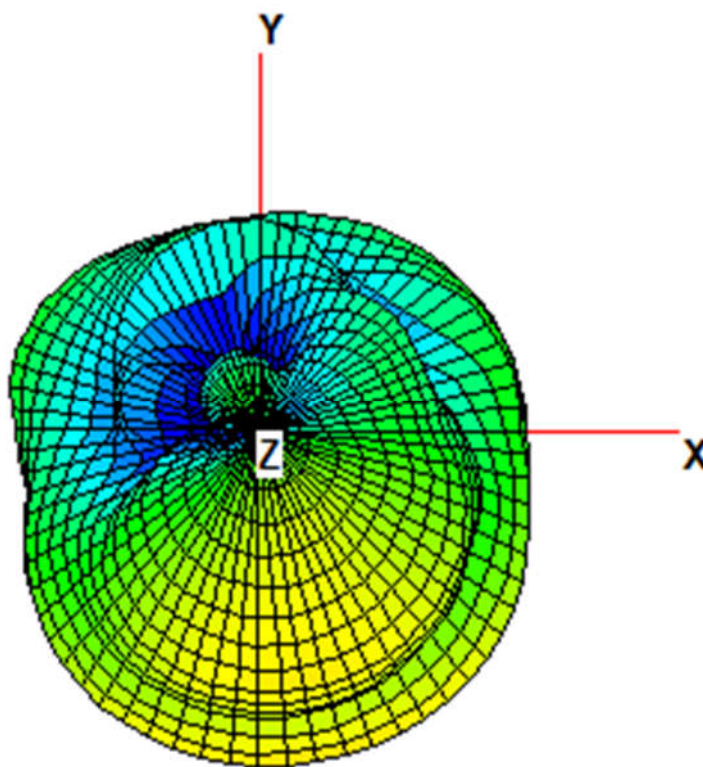
(2) X-Z Plane(unit:dBi):



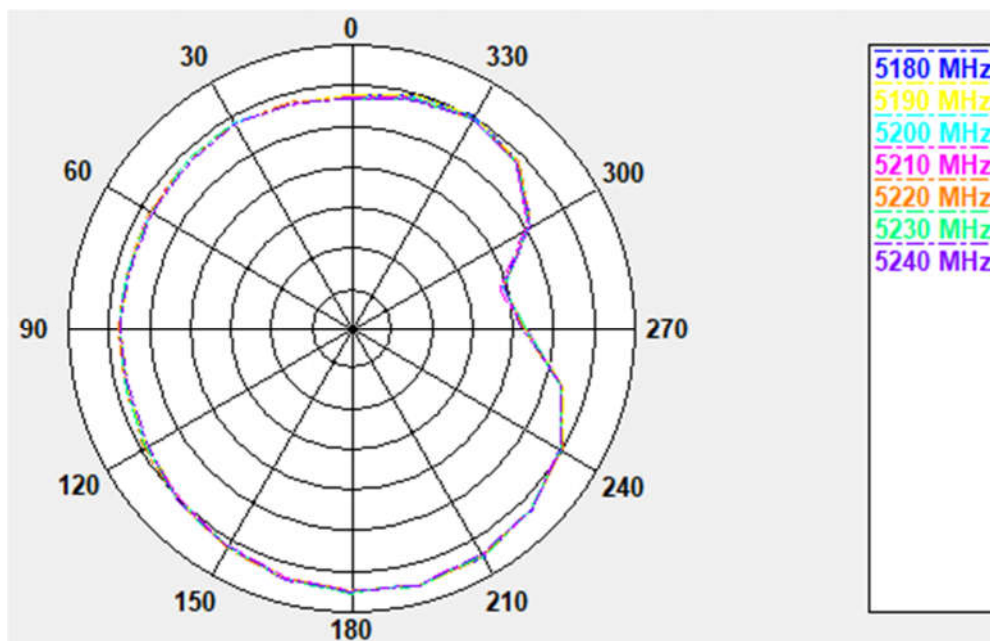
(3) Y-Z Plane(unit:dBi):



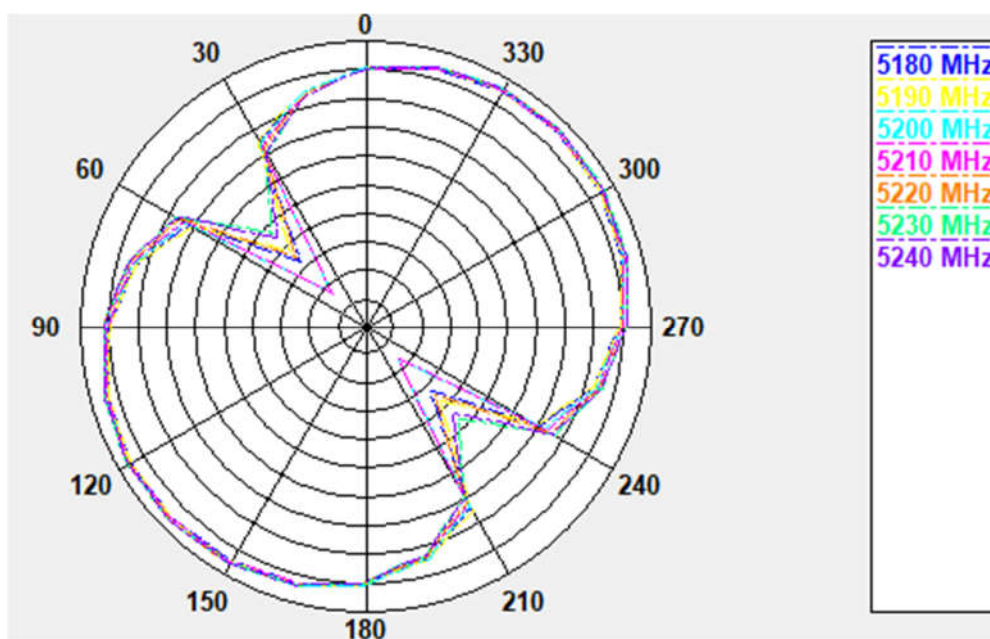
(4) Typical Free Space 3D Radiation Pattern at 2.5GHz(unit:dBi):



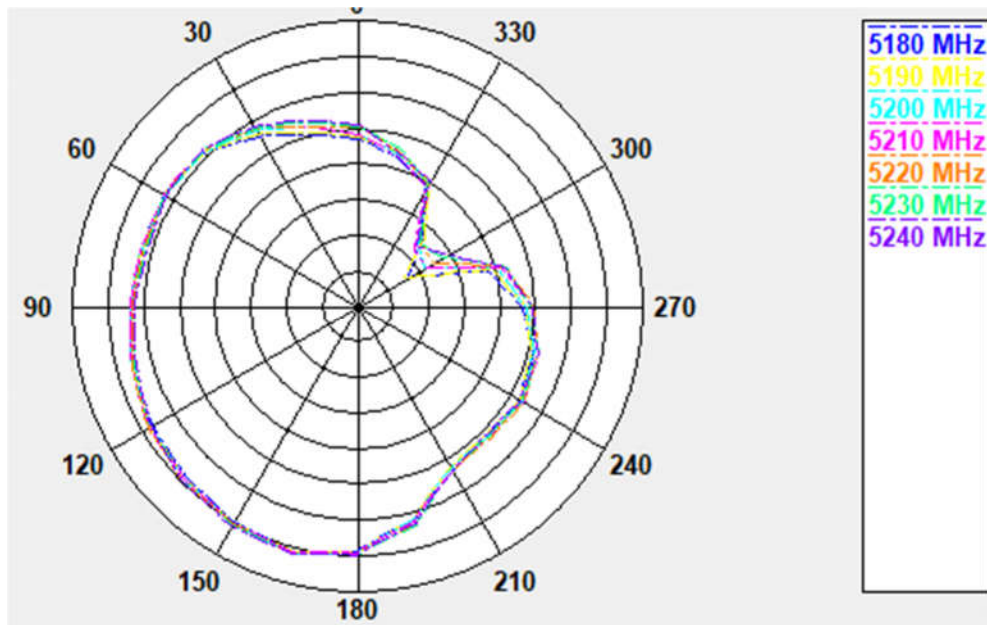
(5) X-Y Plane(unit:dBi)



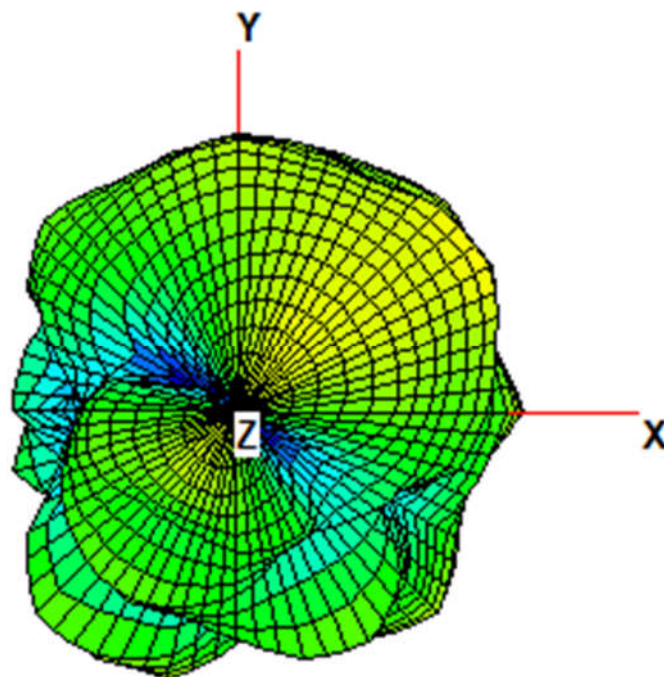
(6) X-Z Plane(unit:dBi):



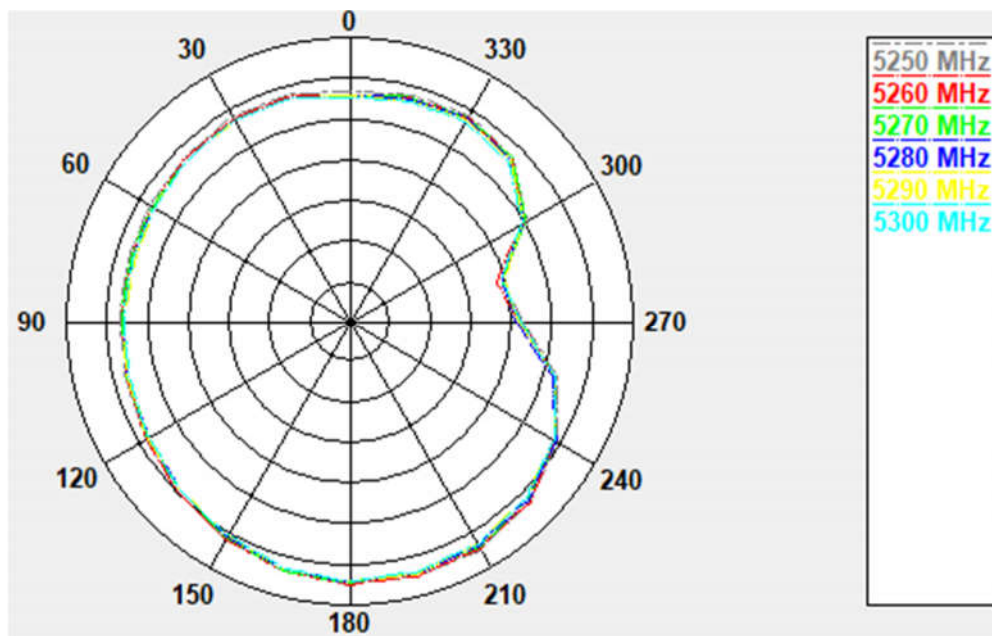
(7) Y-Z Plane(unit:dBi)



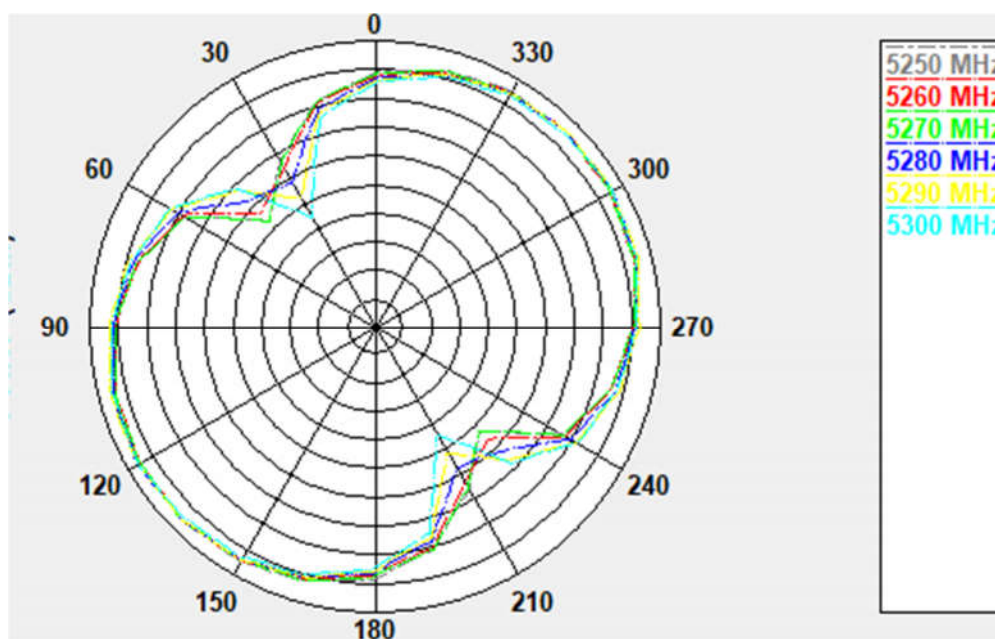
(8) Typical Free Space 3D Radiation Pattern at 5.15GHz(unit:dBi):



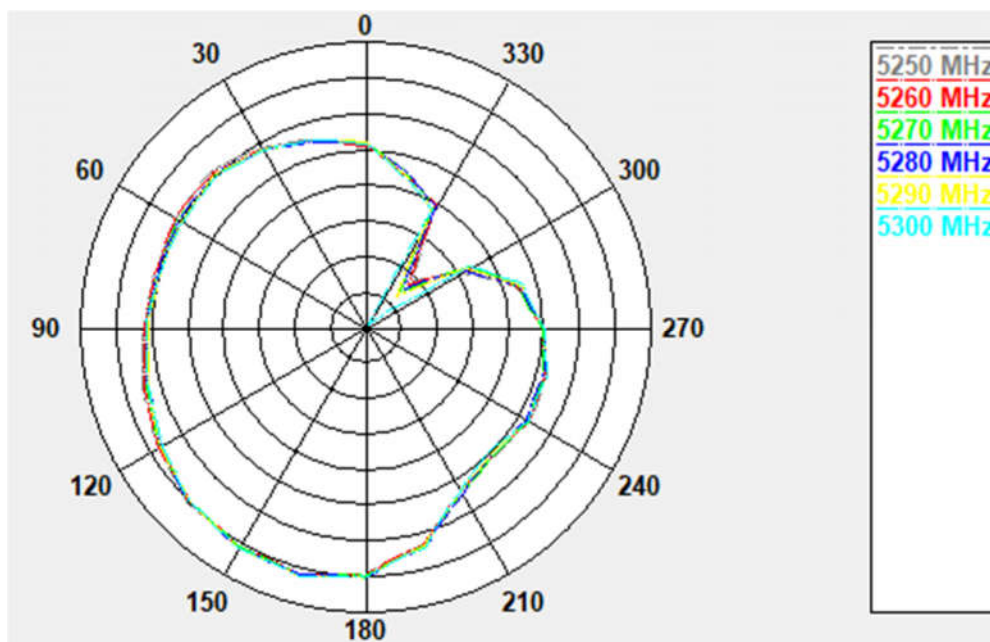
(9) X-Y Plane(unit:dBi):



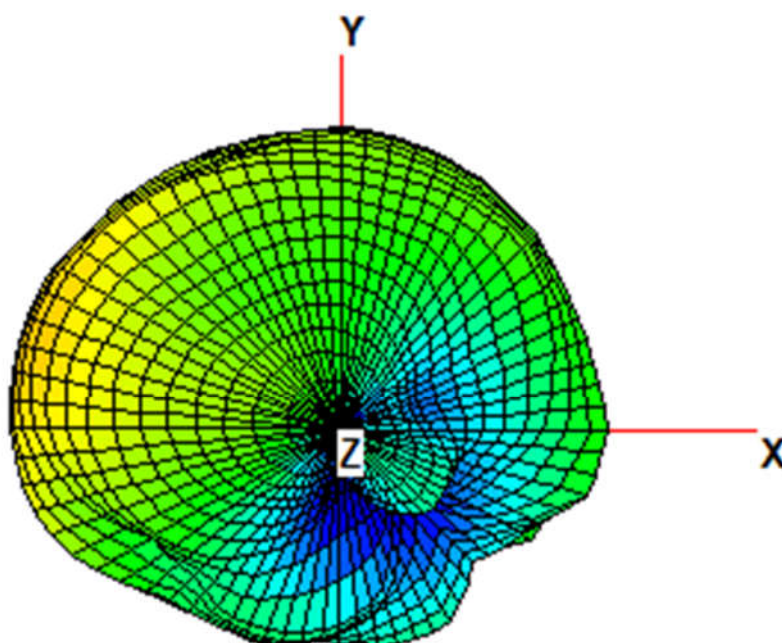
(10) X-Z Plane(unit:dBi):



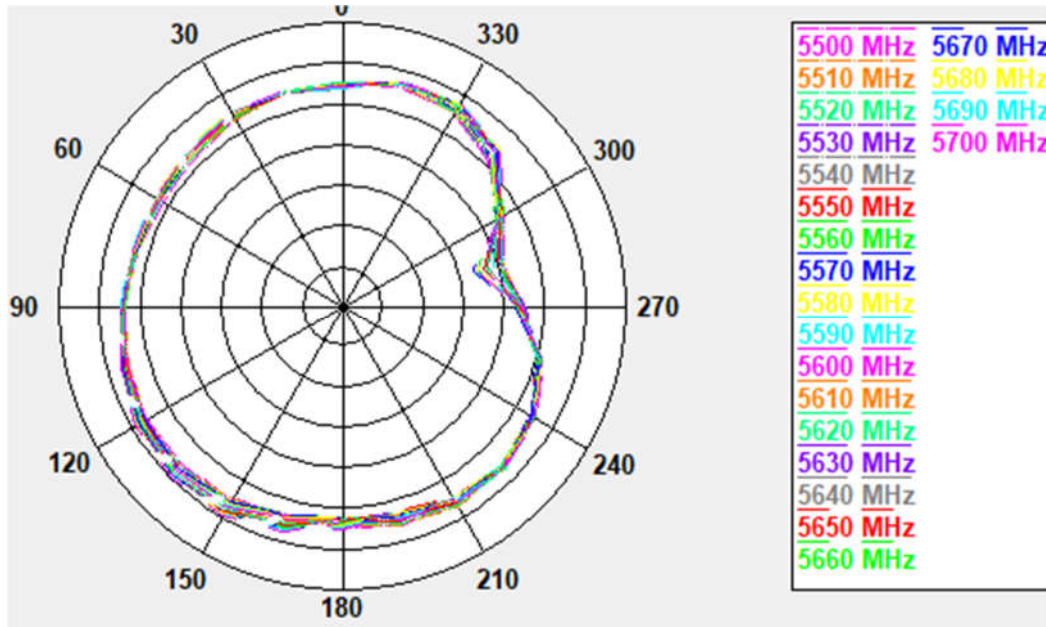
(11) Y-Z Plane(unit:dBi):



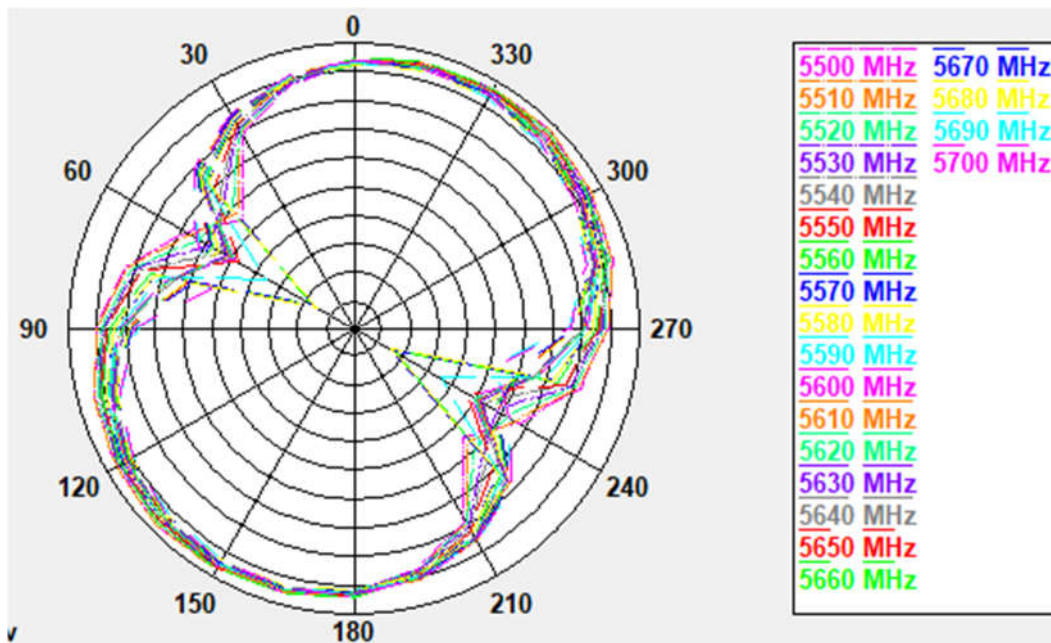
(12) Typical Free Space 3D Radiation Pattern at 5.25GHz(unit:dBi):



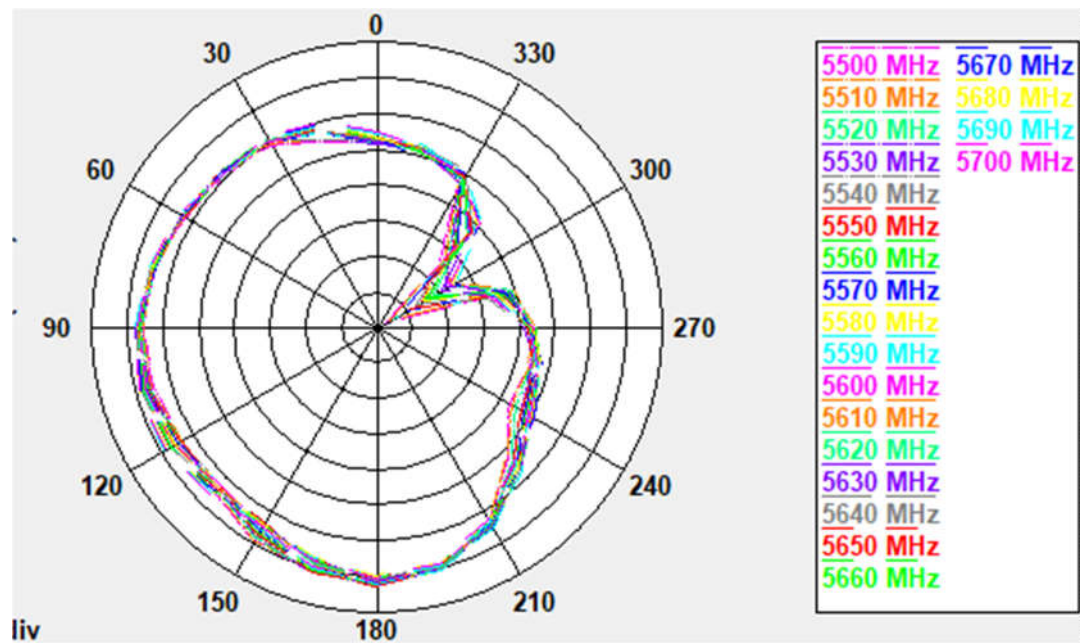
(13) X-Y Plane(unit:dBi)



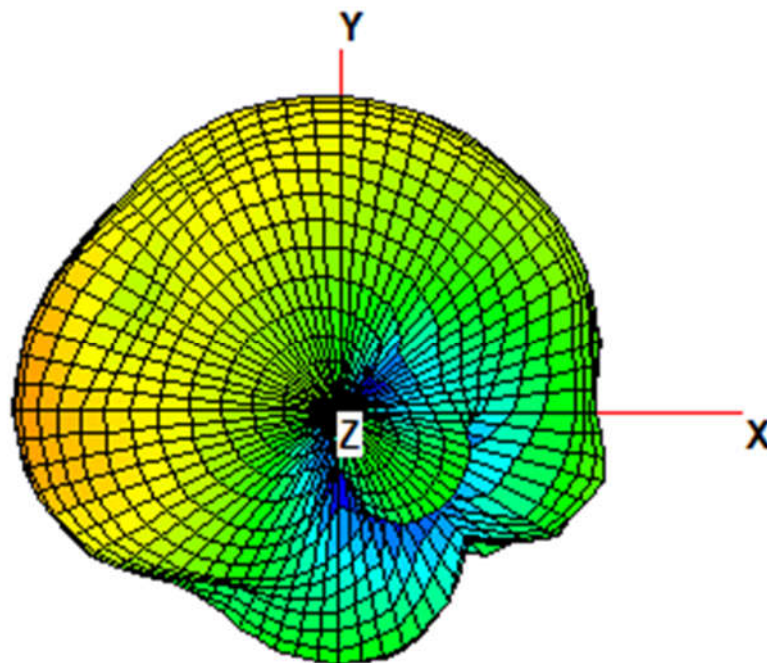
(14) X-Z Plane(unit:dBi):



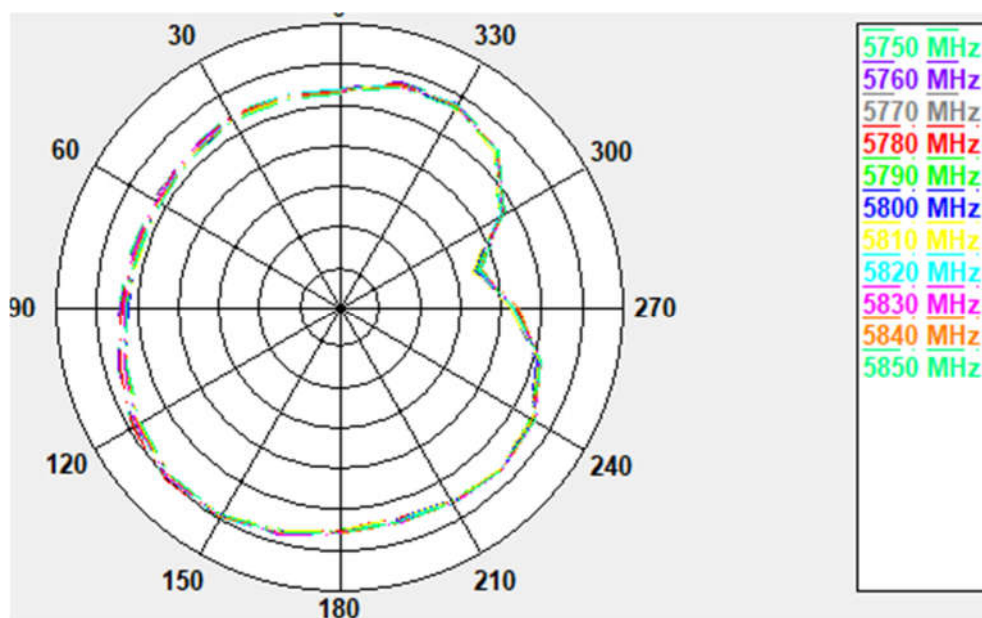
(15) Y-Z Plane(unit:dBi):



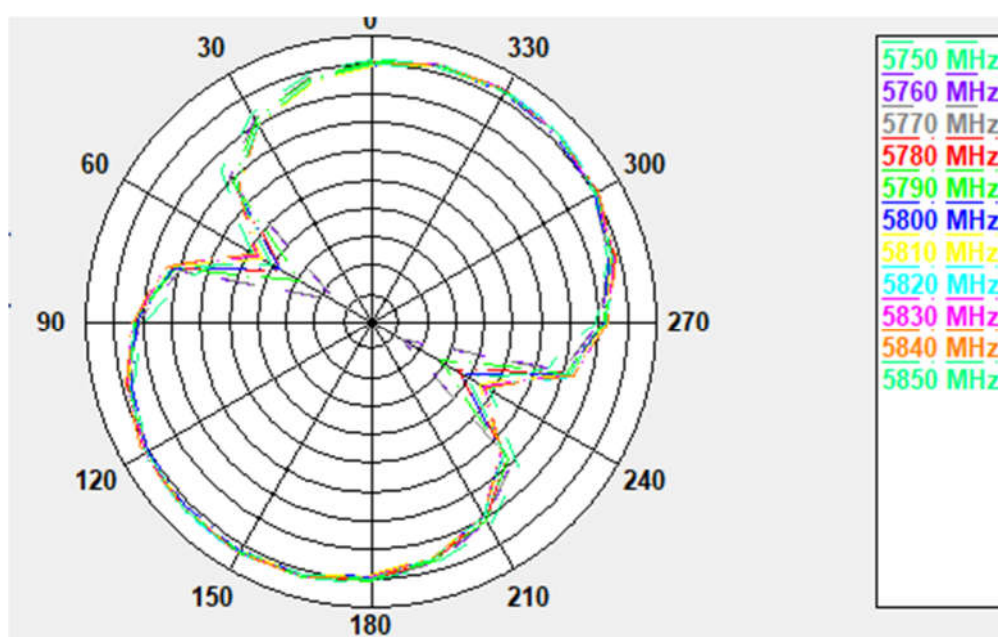
(16) Typical Free Space 3D Radiation Pattern at 5.47GHz(unit:dBi):



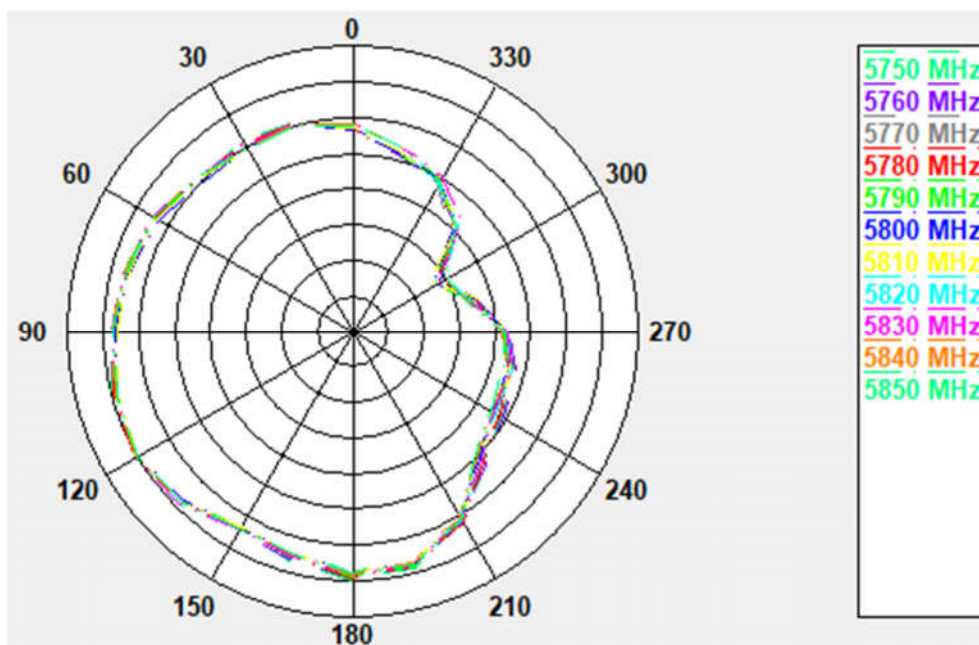
(17) X-Y Plane(unit:dBi)



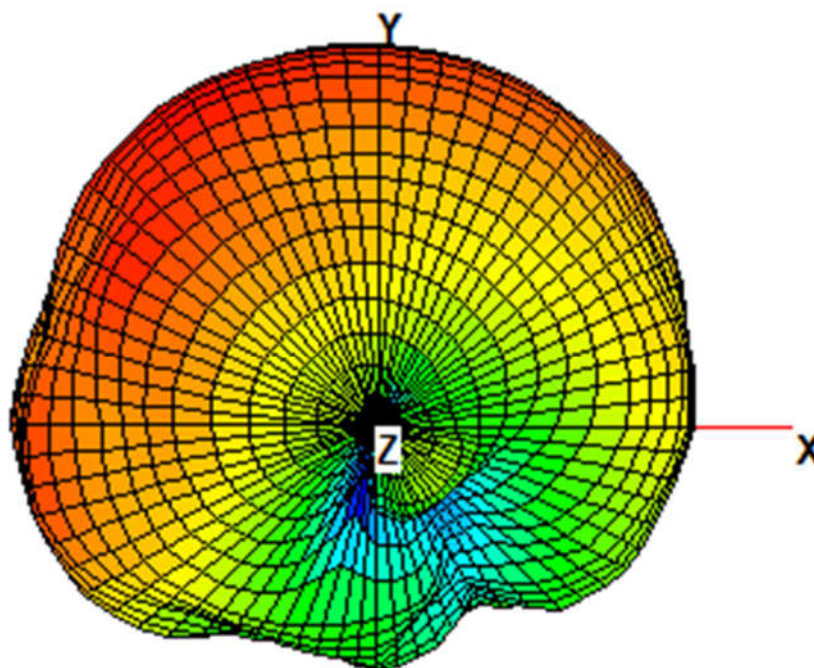
(18) X-Z Plane(unit:dBi):



(19) Y-Z Plane(unit:dBi):



(20) Typical Free Space 3D Radiation Pattern at 5.85GHz(unit:dBi):



End

(The following is blank)