Testing Report

Customer Name: Genesis Technology USA Inc.

Product Name: Dipole Antenna

Sample Model: 300-11318-01

Reference Standard: *GB/T 9410-2008;*

ANSI/IEEE Std 149-2021

Issue Date: 2024.5.11

Engineer: Amanda	Date: 2024-5-10
Auditor: Eason	Date: 2024-5-10
Approver: Aaron	Date: 2024-5-11

Version

Version No.	Date	Description	Formulate	Approval
A0	2024.5.11	For the first time, formulate	Amanda	Eason

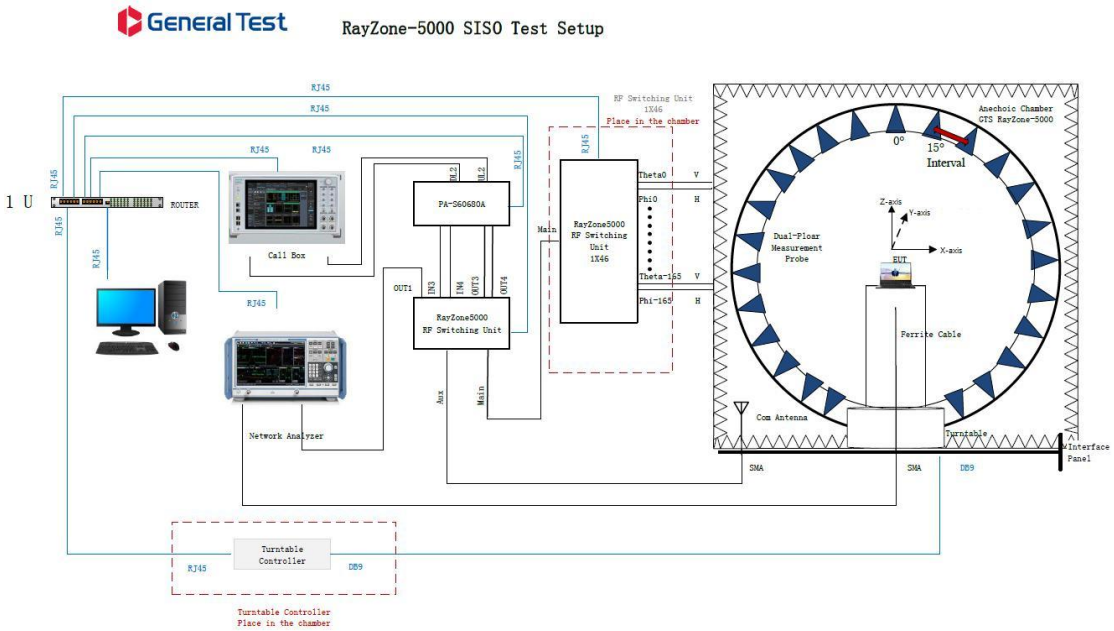
Contents

1.General Information

1.1 General information of testing institutions

Name	Shenzhen RFI-LAB Communication Technology Co., Ltd.
Address	Zone B, West Side of 1/F, Building 1Tingwei Industrial Park, No.6 Liufang Road, Bao 'an District, Shenzhen
Tel	/
E-mail	/
Equipment	All the equipment used in the report is fixed in Zone B, West Side of 1/F, Building 1Tingwei Industrial Park, No.6 Liufang Road, Bao 'an District, Shenzhen

1.2 Testing principle



1.3 Test equipment

Equipment	Model No.	Serial No.	Manufacturer	Calibration date	Next calibration date
OTATest System	RayZone-5000	RFI-LAB-RF-D00	GTS	2023.03.14	2025.03.13
Network Analyzer	E5071C	RFI-LAB-RF-D01	KEYSIGHT	2024.05.11	2025.05.10
Network Analyzer	E5071C	RFI-LAB-RF-C02	KEYSIGHT	2024.05.11	2025.05.10

1.4 Test environment

Temperature	24.9℃
Humidity	59%RH
Pressure	100.03kPa

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

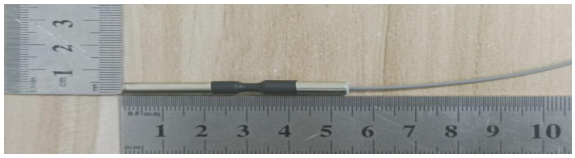
2.1 Client information

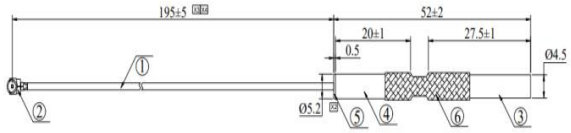
Name	Genesis Technology USA Inc.
Address	NO.1 JIANGANGRD.CHANGANTOWNDONGGUANCITYGUANGDONGPROVINCECHINA
Contacts	JamesYang
Tel	15012800608
E-mail	James.yang@acesconn.com
Manufacturer	ACESGroup./GenesisInnovationGroupLtd.

2.2 Description of EUT(S)

Product Name	Dipole Antenna
Sample Model	300-11318-01
Size	52±2mm
AntennaType	External Antenna
Test Item	VSWR;Gain; Efficiency; Radiation pattern
Frequency Range	2400MHz-2500MHz;5000MHz-6000MHz;
Received Date	2024.5.10
Test Date	2024.5.10
Remark	/

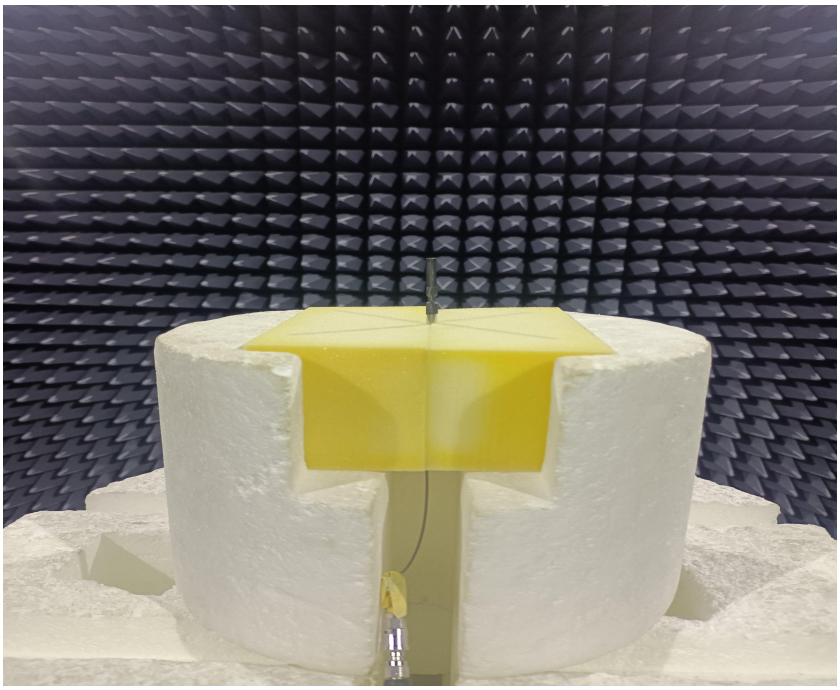
2.3 EUT appearance



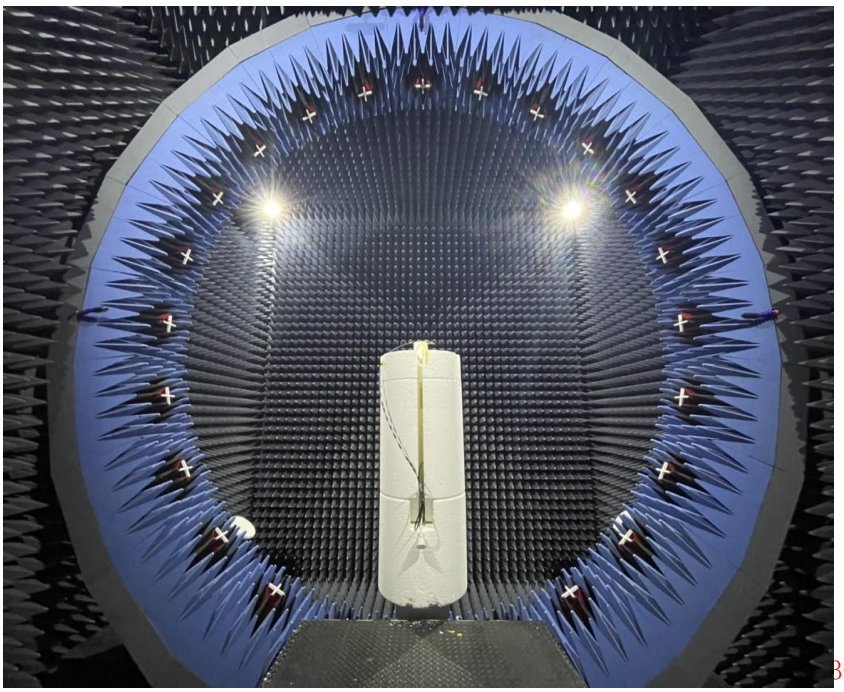


2.4 DUT setup photo of free space OTA testing

Planform



Front view



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		

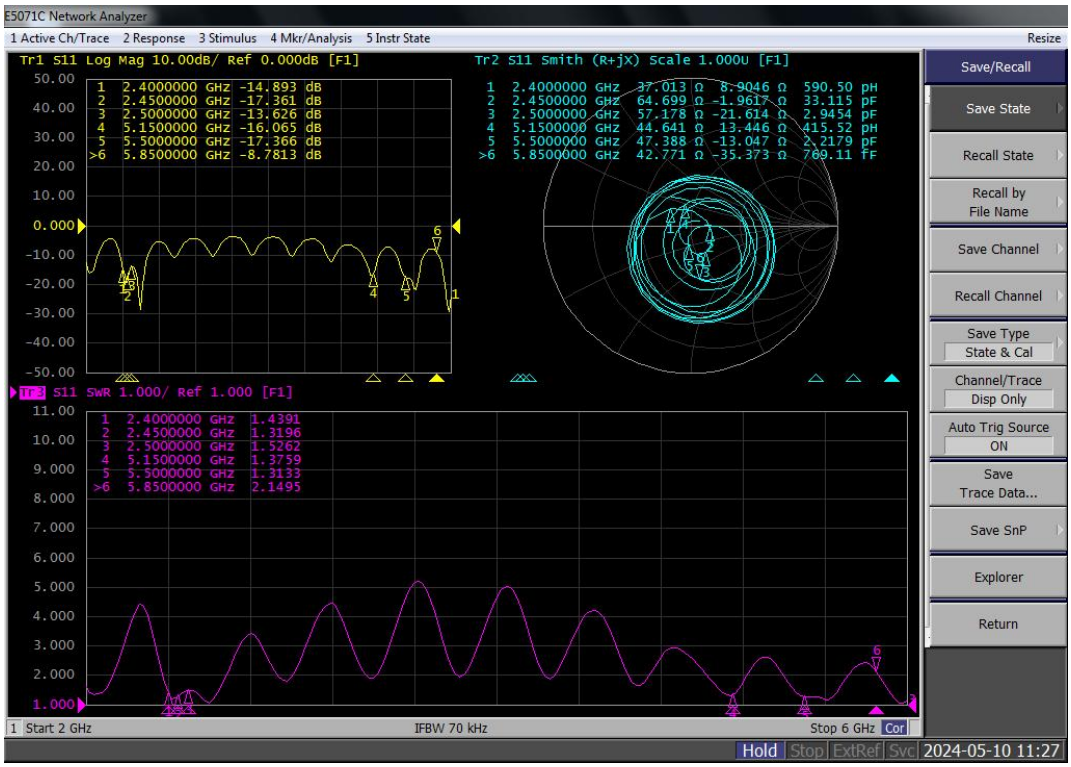
3.2 Test uncertainty

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
VSWR	±0.3
Antenna gain	±1dB
Radiation efficiency	±10%

3.3 Test data

3.3.1 VSWR parameters



3.3.2 VSWR data

Frequency/MHz	2400	2450	2500	5150	5500	5850
VSWR	1.4391	1.3196	1.5262	1.3759	1.3133	2.1495

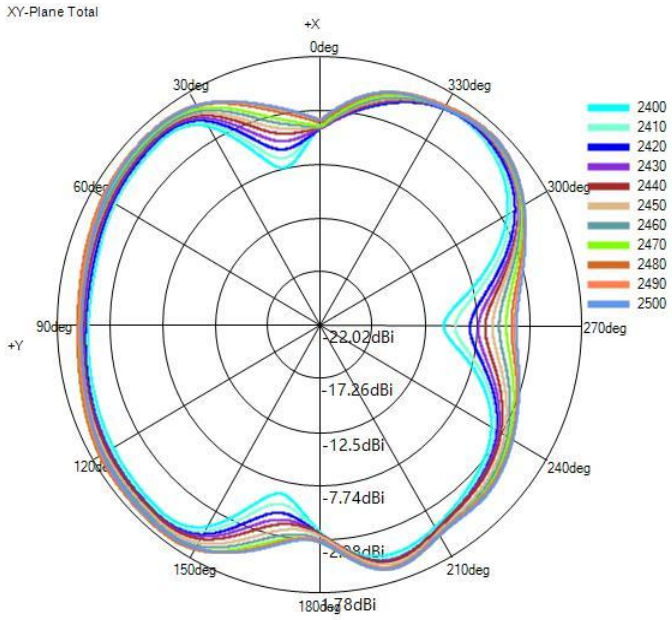
3.3.3Typical free space efficiency and gain

Frequency/MHz	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain/dBi	1.42	1.43	1.48	1.39	1.46	1.58	1.68	1.70	1.74	1.59	1.62
Efficiency/%	54.00	55.63	56. 78	57.91	59.43	62.11	64.14	65.82	66.45	66.11	66.45

Frequency/MHz	5000	5100	5200	5300	5400	5500	5600	5700	5800	5900	6000
Peak Gain/dBi	1.59	1.89	1.82	1.66	3.00	3.56	4.26	4.85	5.85	6.87	7.86
Efficiency/%	55.91	57.47	55.81	57.68	59.16	59.07	56.72	58.05	57. 93	58.40	61.31

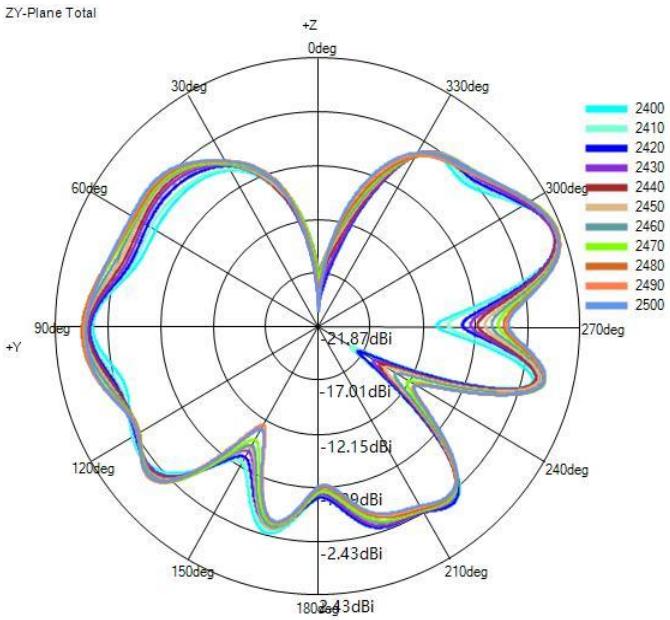
3.3.4Typical free space radiation pattern

(1) 2.4GHz XY-Plane Total

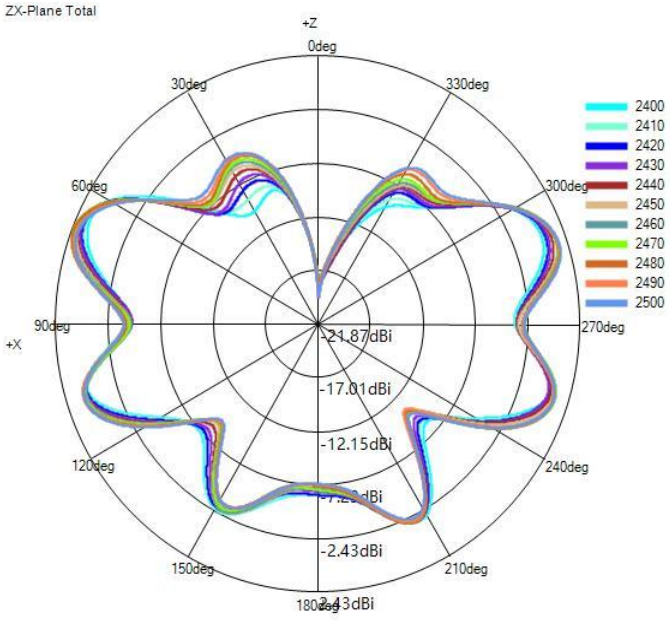


（2）

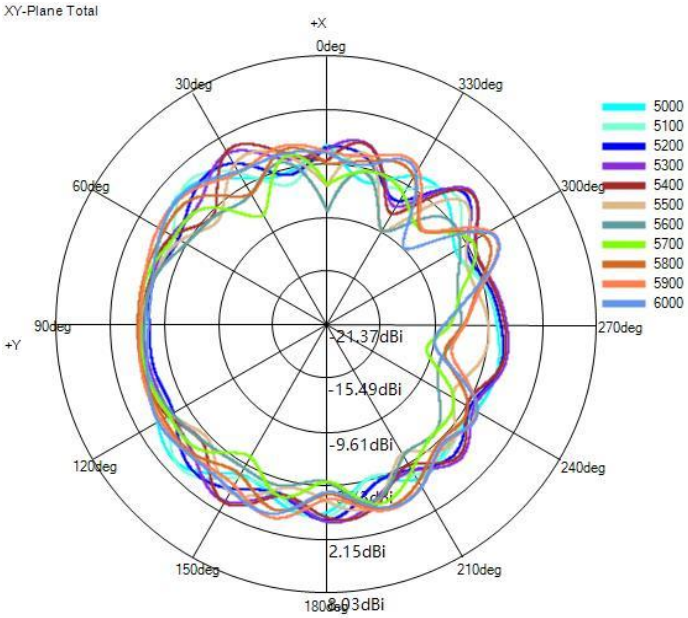
（2） 2.4GHz ZY-Plane Total



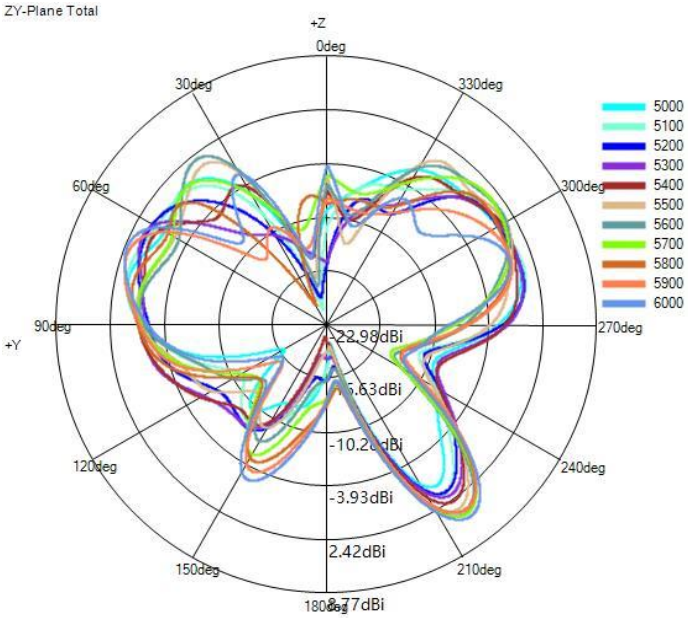
（3） 2.4GHz ZX-Plane Total



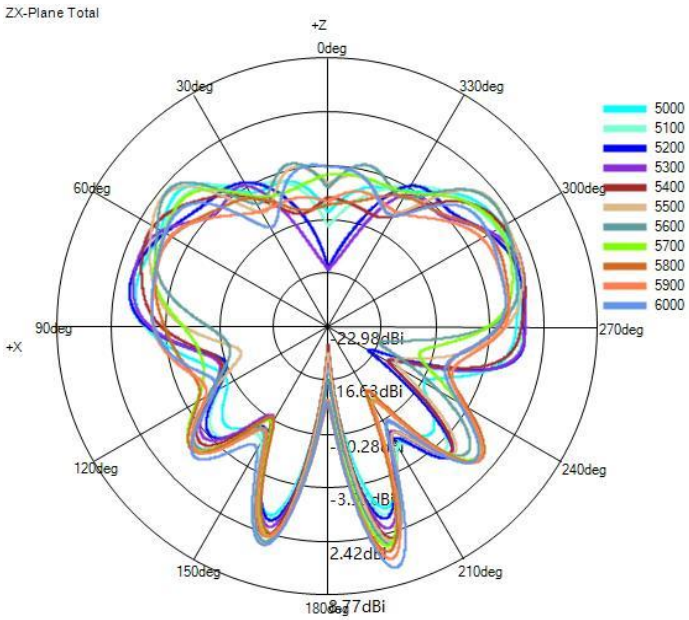
（4）5GHz XY-Plane Total



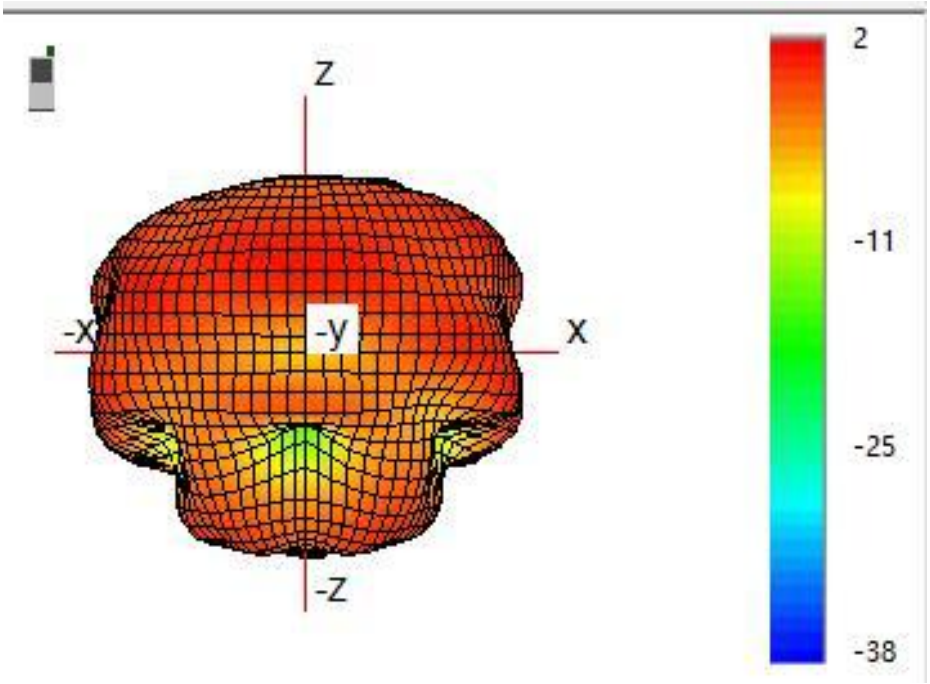
（5） 5GHz ZY-Plane Total



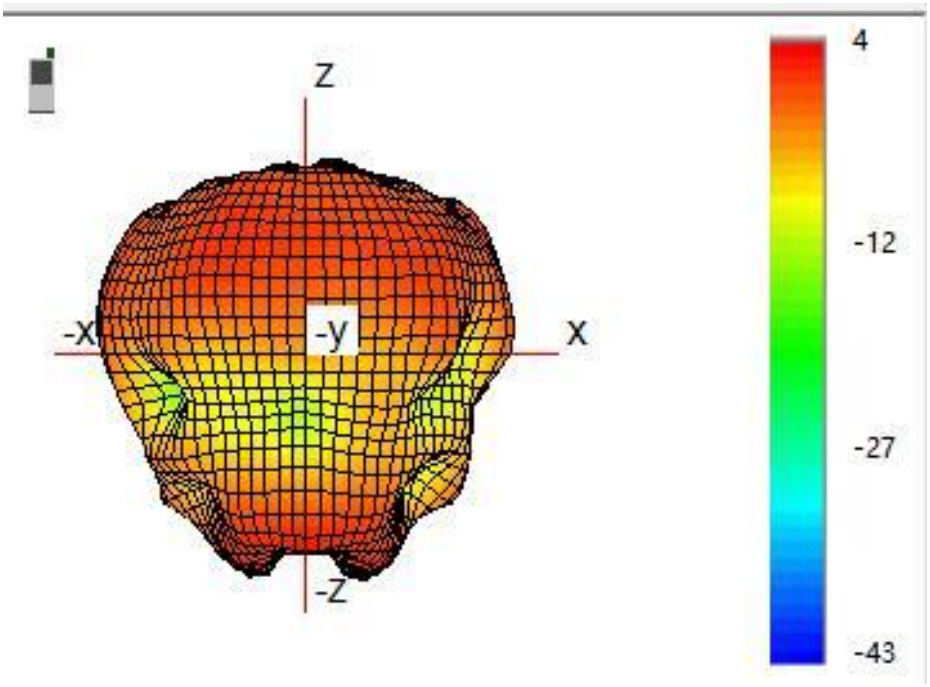
(6) 5GHz ZX-Plane Total



(7) Typical Free Space 3D Radiation Pattern at 2.45GHz:



(8) Typical Free Space 3D Radiation Pattern at 5.50GHz:



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