OTA TEST REPORT

Applicant	blackview
Project name	DK051P
Date of report	November 23.05.10
Engineer	Feng Guo Jun

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Test Laboratory

1. 1 Notes of the Test Report

This report shall not be reproduced in full or paritial,without the written approval of **Shenzhen Maya Communication Equipment Co. , Ltd.** The results documented in this report apply only to the tested sample,under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1. 2 Test facility

CERTIFICATE OF COMPLIANCE N° CC.126.2.16.MVI.A

Shenzhen Maya Communication Equipment Co. , Ltd. has been included in the Italian Institute of Laboratory Accreditation Executive Measurement

1. 3 Testing Location

Company: Shenzhen Maya Communication Equipment Co. , Ltd.

Address: 2/F, Unit 2, Building 1, Guanghui Science and Technology Park, Minqing Road, Longhua District, Shenzhen City, Guangdong Province

Post code: 518000

Contact: WangZhiFeng

Telephone: 13823540870

1. 4 Laboratory Environment

Temperature	22℃-25℃	
Relative humidity	≤80%	
Shield effect	0.7-6GHz	>100dB
Ground resistance	<0.5Ω	

02

General Descrlption of Equipment under Test

2. 1 Applicant and Manufacturer Information

Applicant Name	blackview
Applicant address	3 / F, Block B, Weidong Long Business Building, Longhua District, Shenzhen
Manufacturer Name	Shenzhen Maya Communication Equipment Co. , Ltd.
Manufacturer address	2/F, Unit 2, Building 1, Guanghui Science and Technology Park, Minqing Road, Longhua District, Shenzhen City, Guangdong Province

2. 2 General Information

EUT Description	
Project name	DK051P
Antenna Type	PIFA
Antenna Manufacturer	Shenzhen Maya Communication Equipment Co. , Ltd.
Test Frequency	791-2700MHZ 2400-2500MHZ 1570-1580MHZ 5200-5800MHZ
Note:The EUT is sent from the applicant to MAYA and the information of the EUT is declared by the applicant. All indications of Pass/Fail in this report are opinions expressed by MAYA based on interpretations and/or observations of test results.Measurement Uncertainties were not taken into account and are published for informational purposes only.	

2.3 Test Date

The test is performed from November 8,2022 to November 23.05.10

2.4 Receiving Date

The sample was received on November 23.05.10

2.5 Applied Standards

According to the specifications of the manufacturer,it must comply with the requirements of the following standards.

Test Method:Have been manufactured and tested following the MV Italy procedure and according to ISO 9001 requirements.

Test lab.of the antenna gain and radiation pattern measurement :
Shenzhen Maya Communication Equipment Co. , Ltd.

Test Conditions

3. 1

Test method description and data

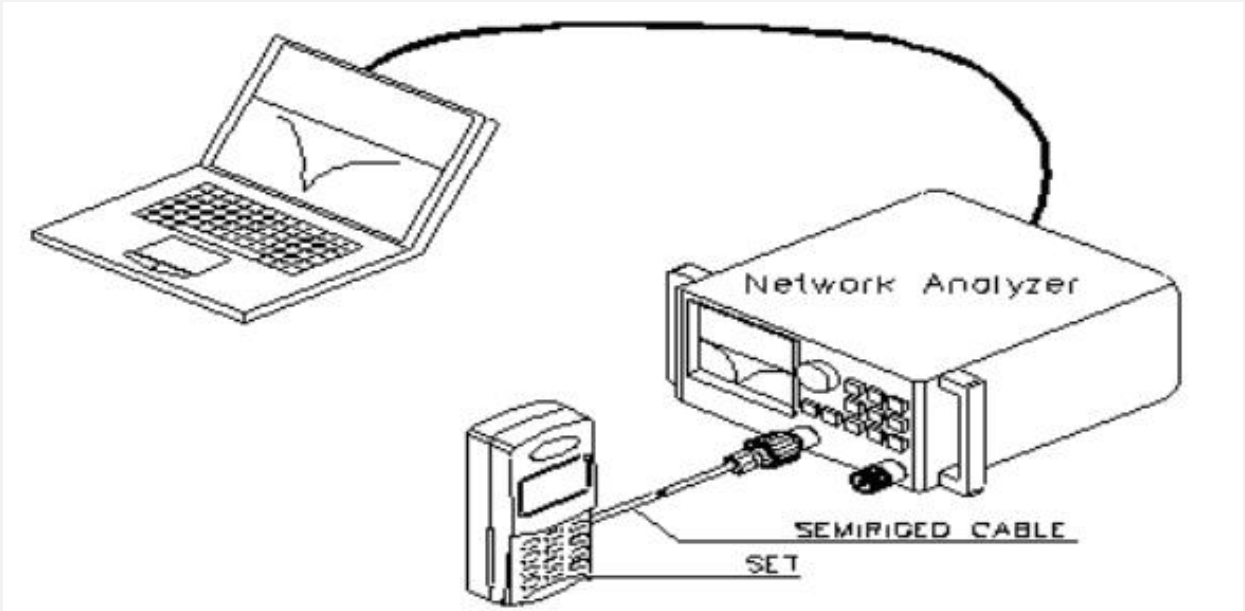
Device name	Purpose
Vector Network Analyzer	S11/Impedance/ Passive Test
Agilent 8960 SP6010 R&S CMU200	Mobile Communication Device Test including GSM, GPRS, EDGE, CDMA2000,1XEV-DO, TD-SCDMA, WCDMA, HSDPA
R&S CMW500 MT8820C	Mobile phone test including TD-SCDMA, WCDMA, HSDPA, LTE, WIFI, GPS
SP9500E	Contains 5G, SA, NSA
Agilent E4438C	Test active GPS
MVG Chamber	Passive Test / OTA active Test / Efficiency/Gain

3. 2

Passive Test Report

Test Equipment：Network analyzer

Test method: A 50 ohm CABLE is used to export from the instrument test port. After calibration, the SMA Joint of the handset is connected with the calibrated parts, and the data of the relevant frequency points such as echo loss or standing wave ratio is recorded.



测试示意图

3. 3

Active Test Report

TRP/TIS

Testing Tools: General Surveyor, Network Analyzer, full-wave Far-field ETS, French MVG SG24LT (Satmio) near-field 3D anechoic chamber,High Precision positioning system and its controller and computer test environment with automatic test program:Temperature 22 ° C ± 3 ° C, humidity 60% ± 15%:Using the Test Method and calculation of TRP in EST or Satimo 24LT system software, DUT (Device Under Test) is in the state of maximum transmitting power when TRP is tested, the position of the DUT is controlled by the positioning system. The 15-degree step is used to measure the 3D effective radiated power (EIRP) at each point. The mean value on the sphere is calculated by integrating,The formula is as follows:

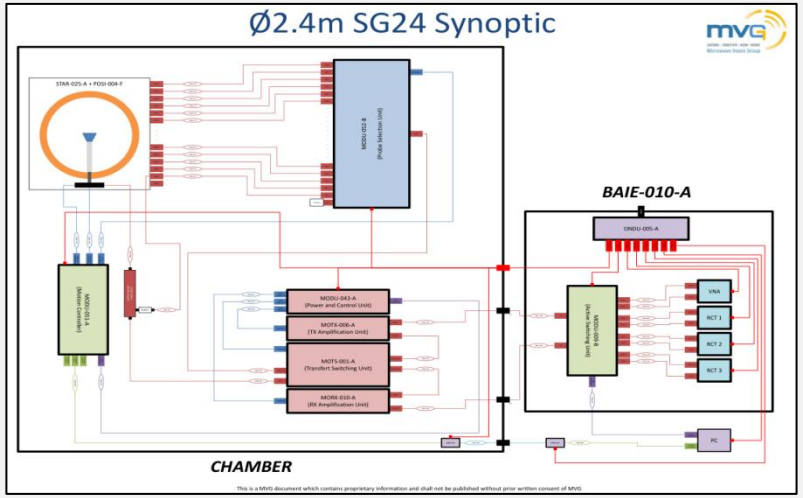
$$TRP \cong \frac{\pi}{2NM} \sum_{i=1}^{N-1} \sum_{j=0}^{M-1} \left[EiRP_{\theta}(\theta_i, \phi_j) + EiRP(\theta_i, \phi_j) \right] \sin(\theta_i)$$

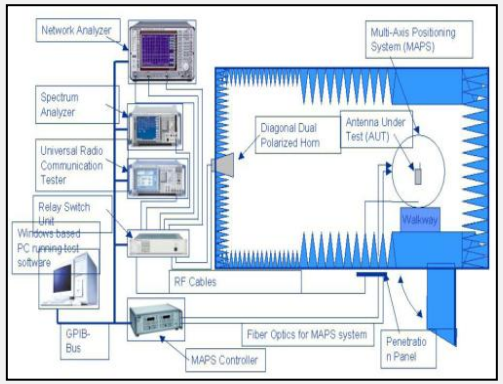
3. 3

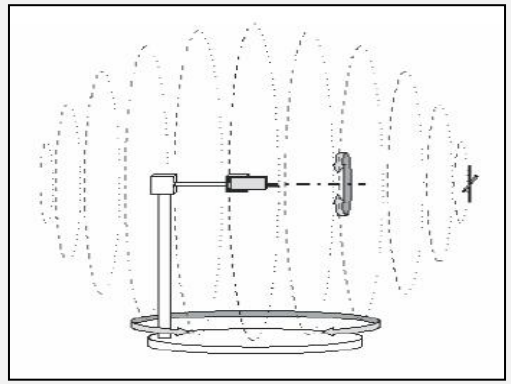
Active Test Report

In the TIS test, the DUT is in the state of maximum transmitting power. Three channels are selected to test. By controlling the position of the DUT, the receiving sensitivity of each point of the 3D is measured at a step length of 30 degrees, the mean value on the sphere is calculated by integration,The formula is as follows:

$$TIS \cong \frac{2NM}{\pi \sum_{i=1}^{N-1} \sum_{j=0}^{M-1} \left[\frac{1}{EIS_{\theta}(\theta_i, \phi_j)} + \frac{1}{EIS_{\phi}(\theta_i, \phi_j)} \right] \sin(\theta_i)}$$







04

Test Results

5. 1 Active test

BAND	GSM900			DCS1800		
CHANNAL	1	62	124	512	699	885
TRP	27.54	26.81	26.82	24.77	25.04	25.26
TIS			-104.20			-104.41
BAND	GSM850			PCS1900		
CHANNAL	128	190	251	512	661	810
TRP	26.88	26.75	27.03	25.18	24.57	24.13
TIS			-103.87			-104.41
BAND	WCDMA 1			WCDMA 2		
CHANNAL	L	M	H	L	M	H
TRP	17.13	17.51	17.23	18.00	18.15	18.25
TIS			-105.30			-108.12
BAND	WCDMA 4			WCDMA 5		
CHANNAL	L	M	H	L	M	H
TRP	17.76	17.86	18.04	17.03	17.02	17.25
TIS			-105.70			-106.21

5. 1 Active test

BAND	WCDMA 6			WCDMA 8		
CHANNAL	L	M	H	L	M	H
TRP	17.04	17.16	17.16	17.01	17.18	17.04
TIS			-106.35			-106.21
BAND	BC0			BC1		
CHANNAL	L	M	H	L	M	H
TRP	18.06	18.25	18.21	18.55	18.25	18.03
TIS			-105.72			-106.10
BAND	BC10					
CHANNAL	L	M	H			
TRP	17.66	18.05	18.15			
TIS			-106.47			

5. 1 Active test

BAND	B1			B2		
CHANNAL	L	M	H	L	M	H
TRP	18.01	17.63	17.42	17.58	18.08	18.07
TIS			-92.87			-95.15
	B3			B4		
CHANNAL	L	M	H	L	M	H
TRP	17.36	17.91	17.70	17.26	17.62	17.74
TIS			-94.62			-93.21
BAND	B5			B7		
CHANNAL	L	M	H	L	M	H
TRP	17.07	17.48	17.48	17.22	17.35	17.29
TIS			-94.18			-93.69
	B8			B12		
CHANNAL	L	M	H	L	M	H
TRP	17.10	17.31	17.05	16.16	16.21	16.31
TIS			-92.45			-93.47

5. 1 Active test

BAND	B13			B17		
CHANNAL	L	M	H	L	M	H
TRP	17.03	16.86	16.88	16.16	16.25	16.20
TIS			-92.35			-93.32
	B18			B19		
CHANNAL	L	M	H	L	M	H
TRP	16.98	17.13	17.08	17.10	17.41	17.39
TIS			-95.20			-94.21
BAND	B20			B25		
CHANNAL	L	M	H	L	M	H
TRP	16.84	17.07	17.15	18.08	18.05	18.04
TIS			-91.39			-95.10
	B26			B28		
CHANNAL	L	M	H	L	M	H
TRP	16.69	17.02	17.22	16.04	16.23	16.54
TIS			-94.36			-94.10

5. 1 Active test

BAND	B30			B66		
CHANNAL	L	M	H	L	M	H
TRP	17.56	17.52	17.61	17.31	17.83	17.80
TIS			-92.21			-93.45
	B34			B38		
CHANNAL	L	M	H	L	M	H
TRP	17.47	17.56	17.47	17.37	17.39	17.60
TIS			-94.36			-91.54
BAND	B39			B40		
CHANNAL	L	M	H	L	M	H
TRP	18.06	18.09	17.61	18.02	17.71	17.24
TIS			-92.54			-91.67
	B41					
CHANNAL	L	M	H			
TRP	17.58	17.63	17.82			
TIS			-91.45			

5. 1 Active test

BAND	WIFI-B			WIFI-G		
CHANNAL	L	M	H	L	M	H
TRP	14.09	14.56	14.02	12.08	12.57	12.00
TIS			-83.55			-71.27
	WIFI-N			WIFI-A		
CHANNAL	L	M	H	L	M	H
TRP	10.55	11.66	10.08	10.66	11.88	12.07
TIS			-66.22			-72.67
BAND	WIFI-AC			GPS		
CHANNAL	L	M	H			
TRP	10.86	12.05	12.56	CN	40.08	
TIS			-65.23	TIS	-153.53	

5.1 Active test

射频增益规格书		
产品名（中英文）		
产品型号		
商标		Antenna Gain(dBi):
2G 频段选择 GSM Band	■850	0.3
	■900	0.4
	■1800	0.7
	■1900	0.8
3G 频段选择 WCDMA UMTS Band	■WCDMA band 1	0.8
	■WCDMA band 2	0.9
	■WCDMA band 4	0.8
	■WCDMA band 5	0.3
	■WCDMA band 8	0.4
	■BC0	0.3
	■BC1	0.8
	■BC10	0.3

4G 频段选择 LTE Band	■LTE band 1	0.8
	■LTE band 2	0.9
	■LTE band 3	0.8
	■LTE band 4	0.8
	■LTE band 5	0.3
	■LTE band 7	1.0
	■LTE band 8	0.4
	■LTE band 12	0.2
	■LTE band 13	0.3
	■LTE band 17	0.2
	■LTE band 18	0.3
	■LTE band 19	0.3
	■LTE band 20	0.3
	■LTE band 30	0.8
	■LTE band 25	0.8
	■LTE band 26	0.3
	■LTE band 28	0.2
	■LTE band 66	0.7
	■LTE band 34	0.8
	■LTE band 38	0.8
	■LTE band 39	0.9
	■LTE band 40	0.8
	■LTE band 41	0.9

5.1

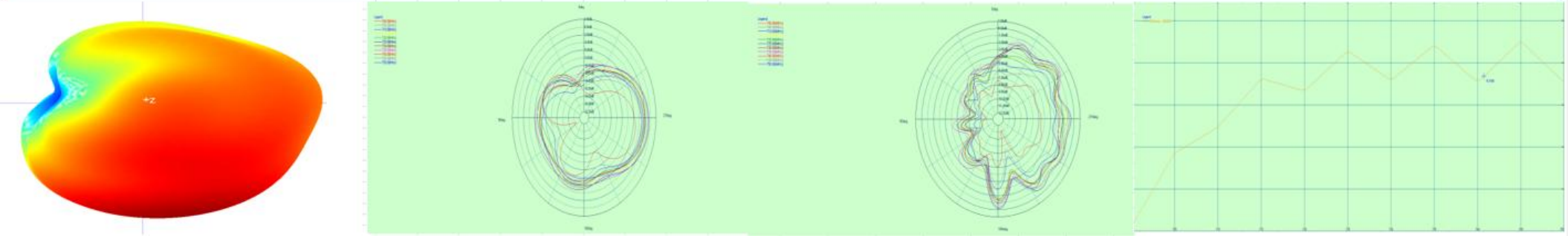
Active test

WIFI 2.4GHz	■802.11b 2.4GHz	1.5
	■802.11g 2.4GHz	
	■802.11n(20M) 2.4GHz	
	■802.11n(40M) 2.4GHz	
WIFI 5GHz(CE)	■802.11a/n5150-5250	1.2
	802.11a/n 5250-5350 (DFS)	
	802.11a/n 5470-5725 (DFS)	
	802.11ac 80M 160M	
WIFI 5GHz(FCC)	■802.11a/n 5150-5250	
	802.11a/n 5250-5350 (DFS)	
	802.11a/n 5470-5725 (DFS)	
	802.11a/n 5725-5850	
	802.11ac 80M 160M	
Bluetooth	■Bluetooth 3.0通用蓝牙(2.1+EDR)	1.5
	■Bluetooth 4.0BLE only (4.0单模)	
	Bluetooth 4.0with BLE (4.0双模)	
	■Bluetooth 5.1with BLE (4.1双模)	
GPS	■1.57GHz	1.6

5. 1

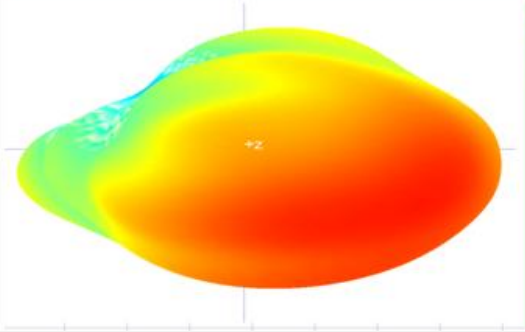
Active test

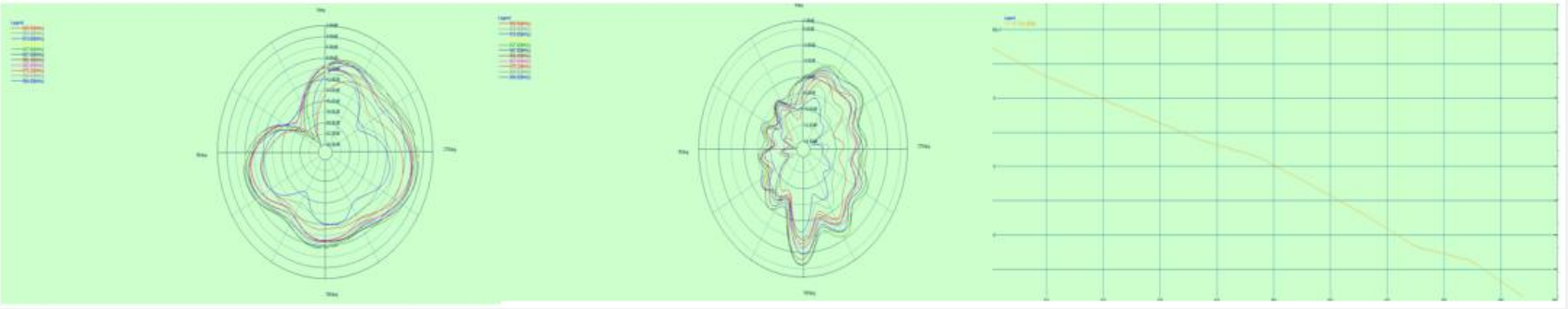
700-750M



5. 1 Active test

800-894M

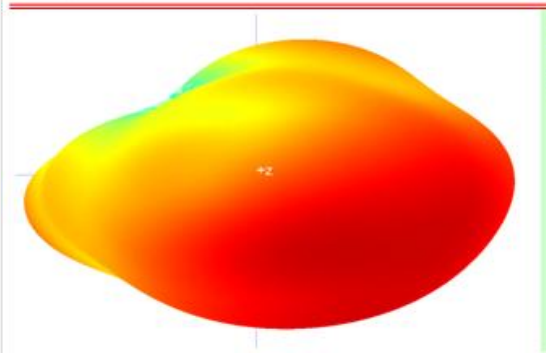


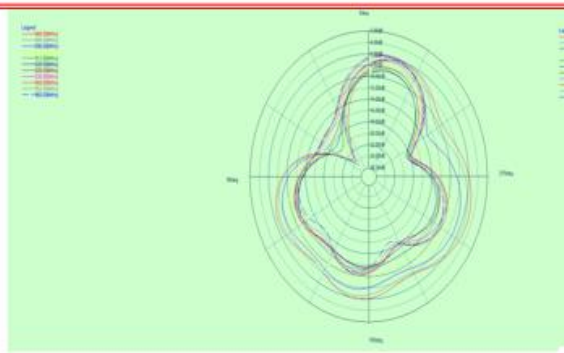


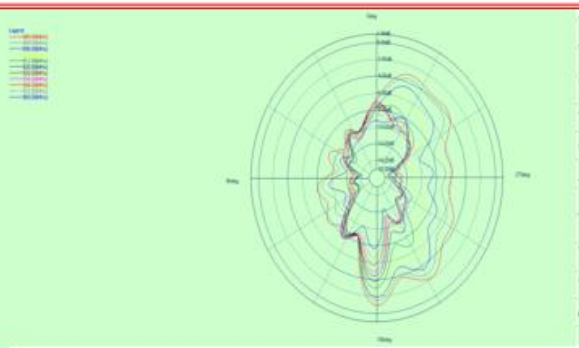
5. 1

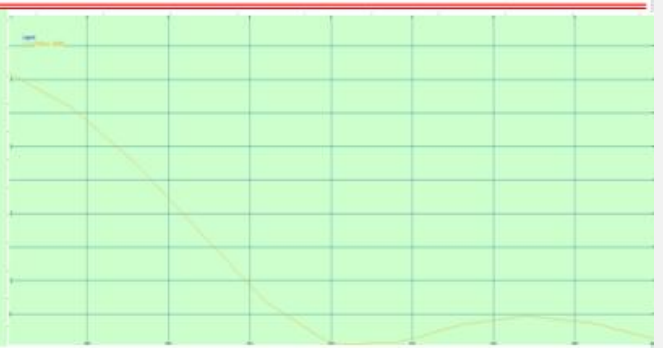
Active test

880-960M





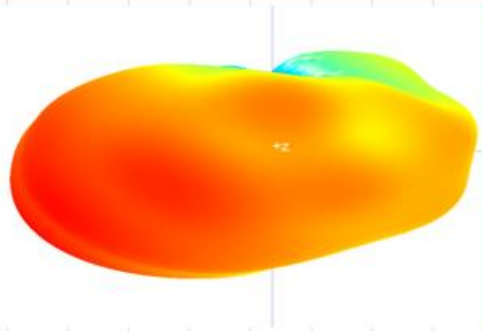


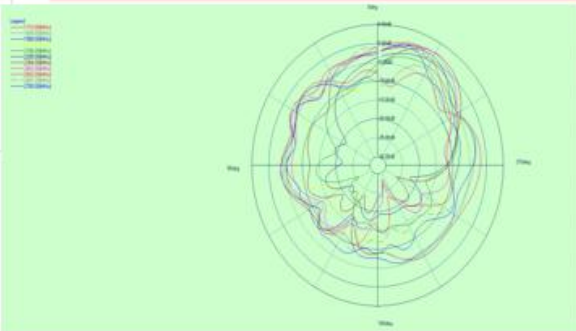


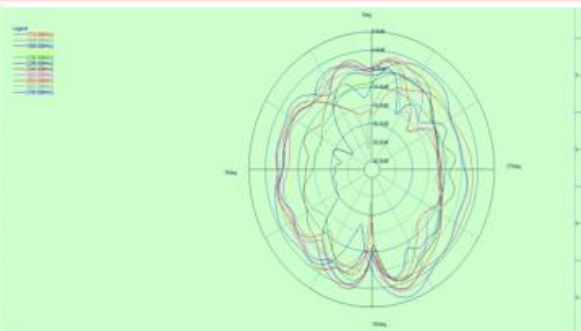
5. 1

Active test

1710-2700M

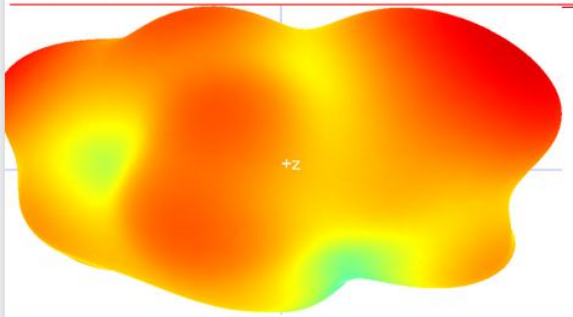


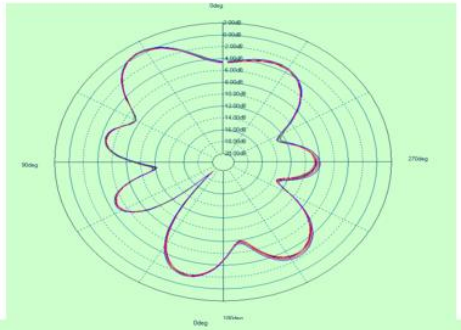


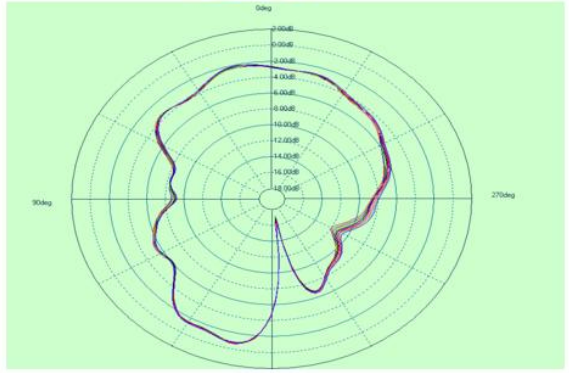


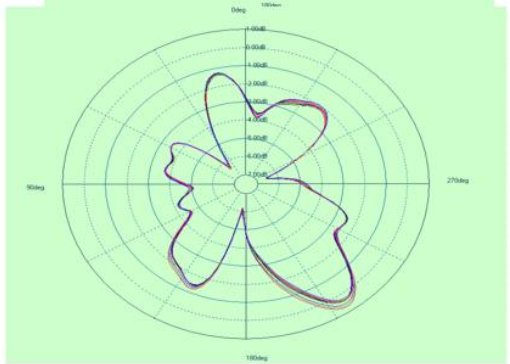
5. 1 Active test

GPS



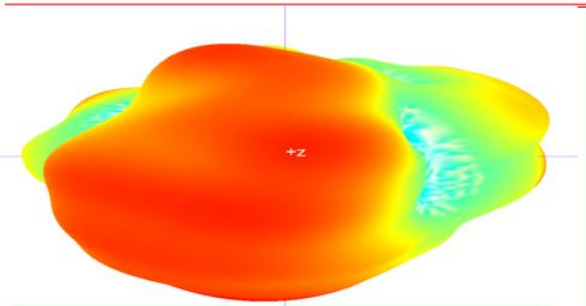


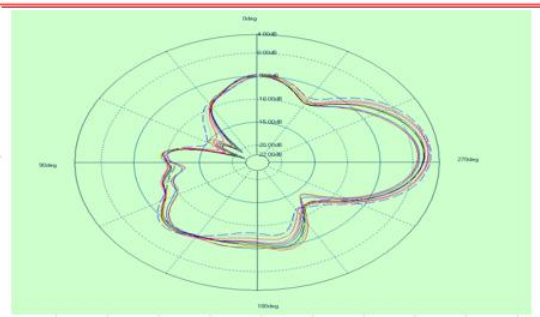


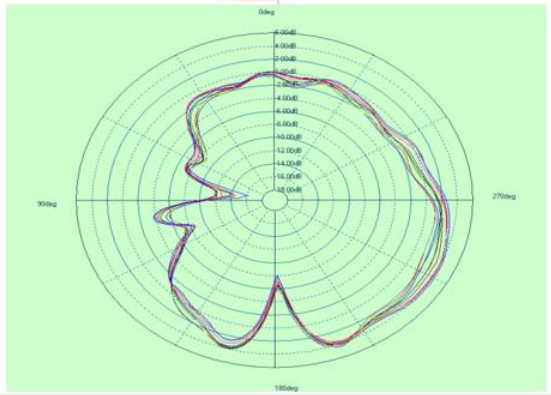


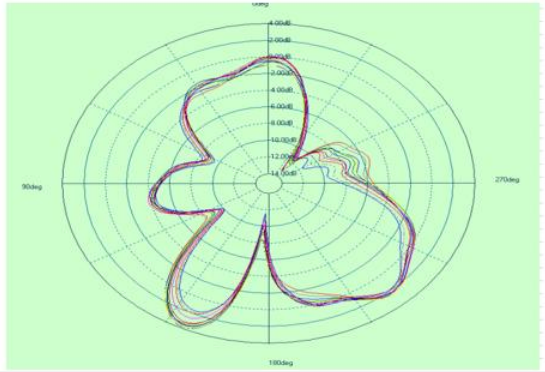
5. 1 Active test

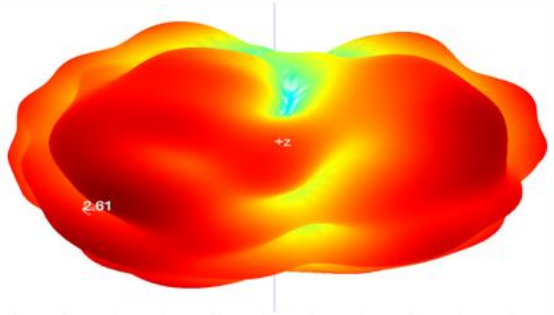
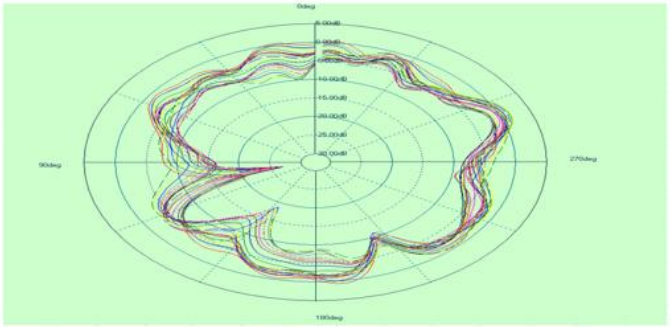
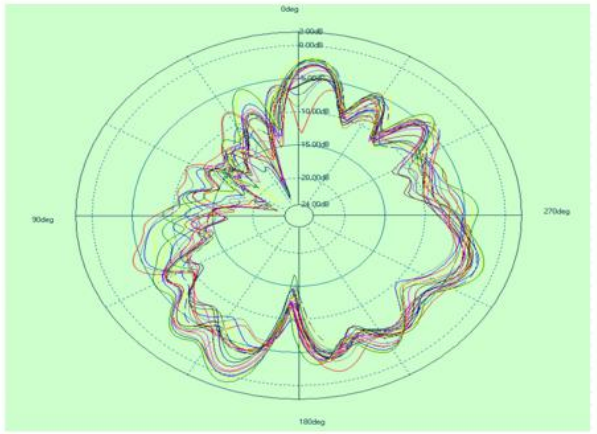
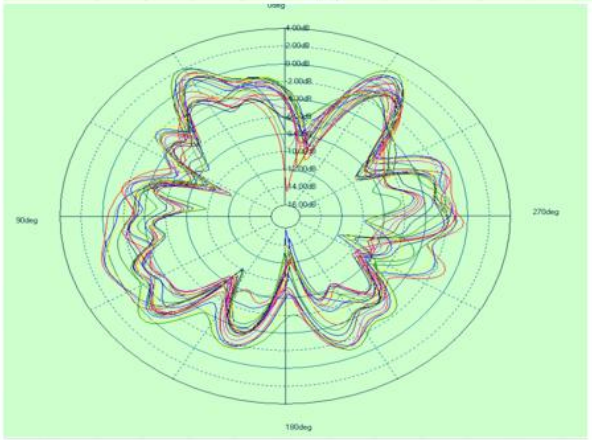
2. 4G









5. 1 Active test

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