ShenZhenQiXinTongDa Technology Co.,Ltd.

Antenna Test Report

Project Name： BM245-USA

Frequency Band:

G8+W1/2/4/5+FDD2/4/5/12/13/17/66

DATE： 2023-05-06

1.Test Project

	Test Project	Equipment
1. S Parameter	1. Return Loss(RL) 2. VSWR	Network Analyzer: Agilent 5071B
2. RF Test （2G+3G+4G）	1. power 2. level 3.TRP/TIS	Comprehensive Test: CMW500/8960 Test Environment: Anechoic Chamber

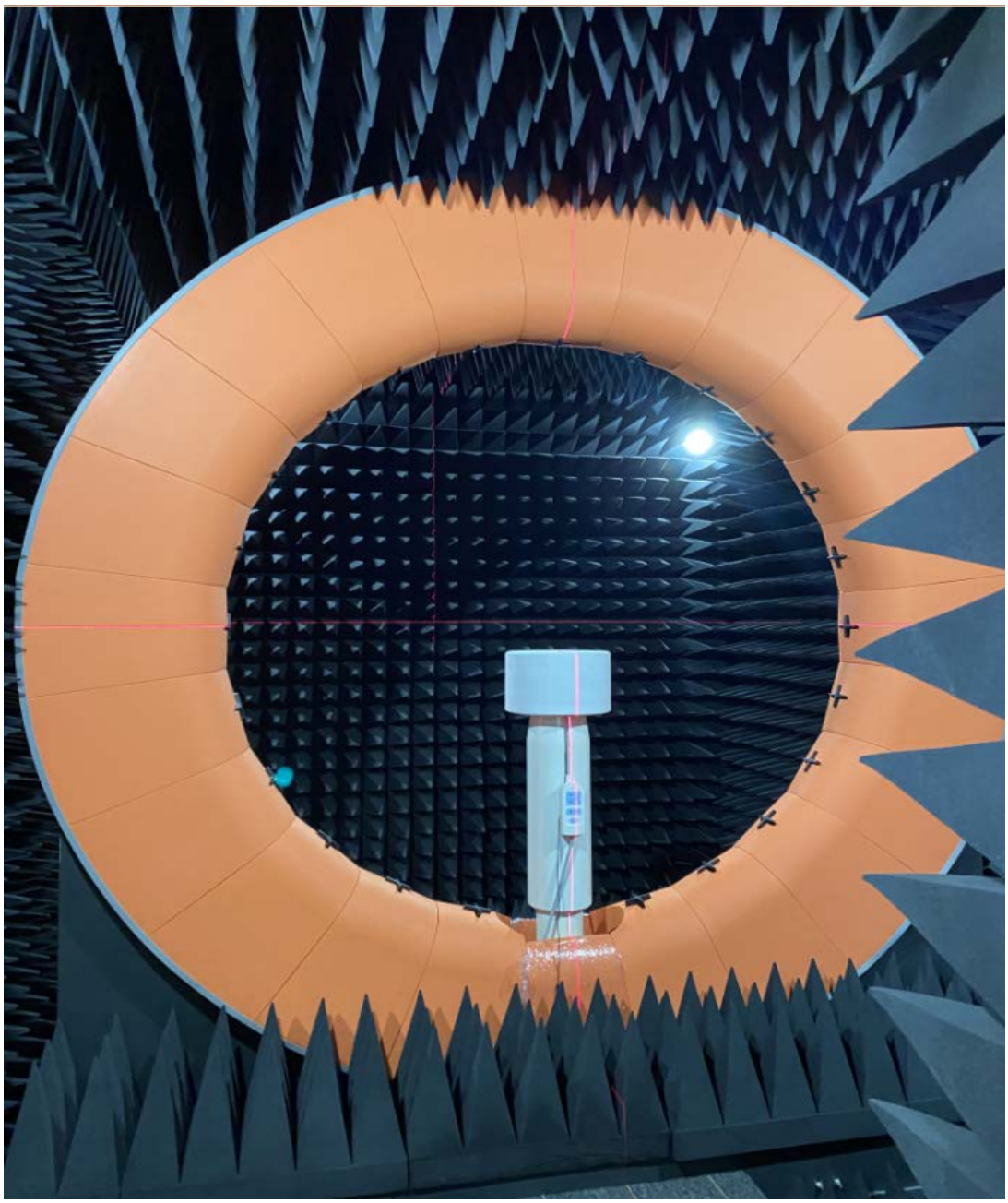
2.Test Equipment

Agilent 5071B （S Parameter（RL/VSWR）Test Equipment）

Agilent 8960 （2G/3GTest Equipment）

CMW 500（2G/3G/4GTest Equipment）

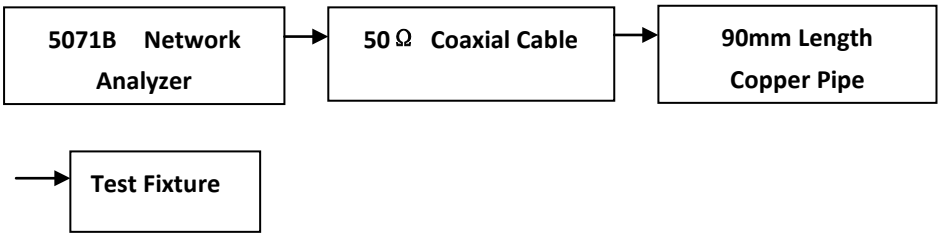
3. TestEnvironment



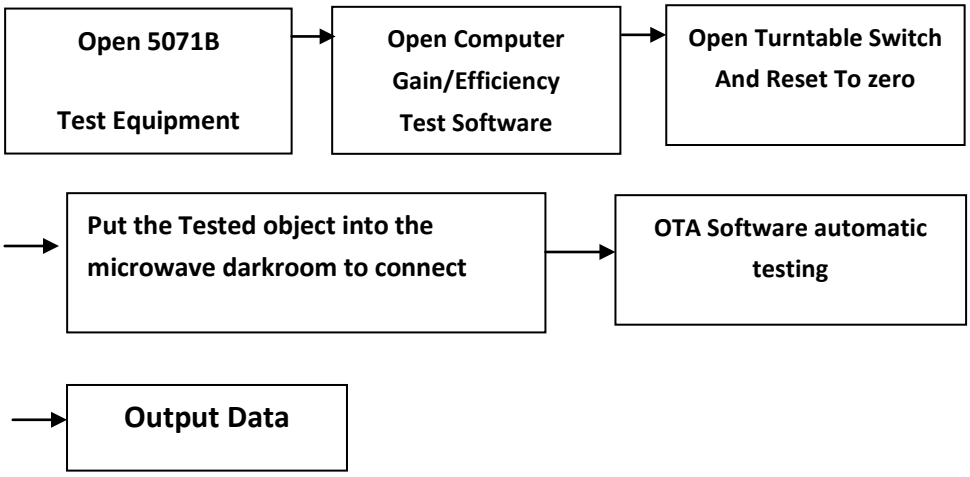
Microwave Anechoic Chamber

4.Test Steps

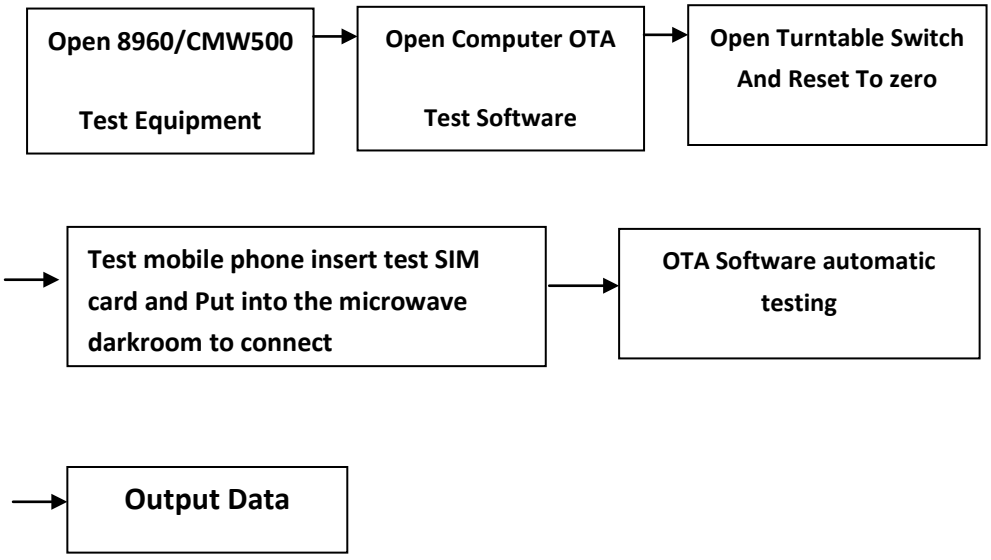
Passive VSWR/RL Test Steps:



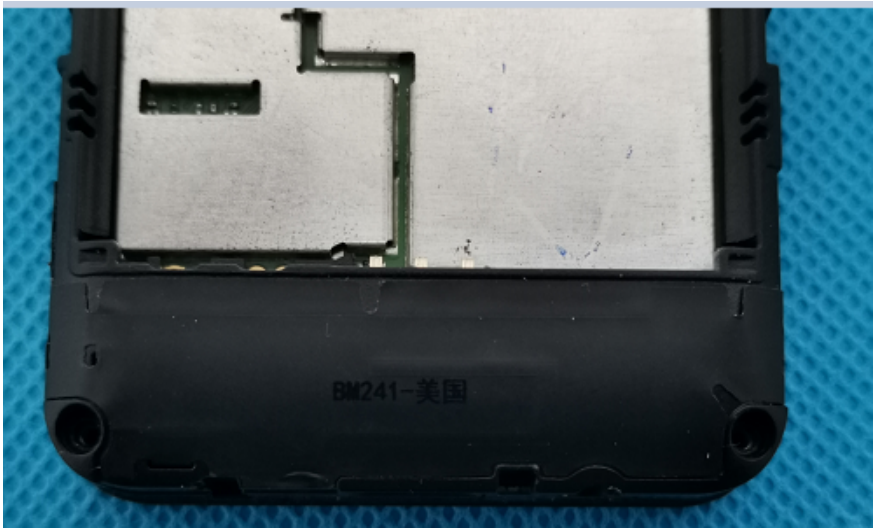
Gain/Efficiency Test Steps:

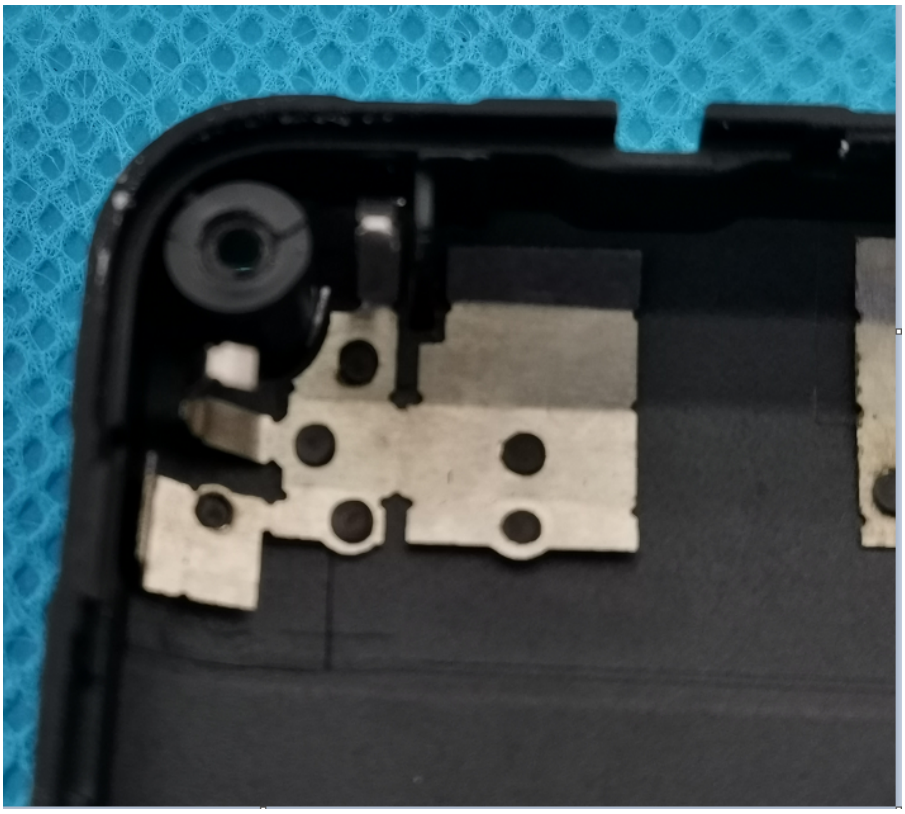


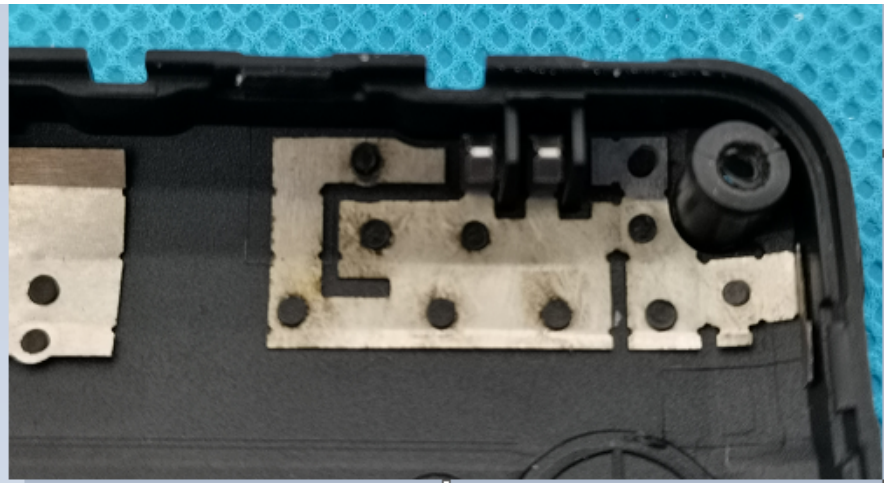
Active TRP/TIS Test Steps：



5.Antenna Photos







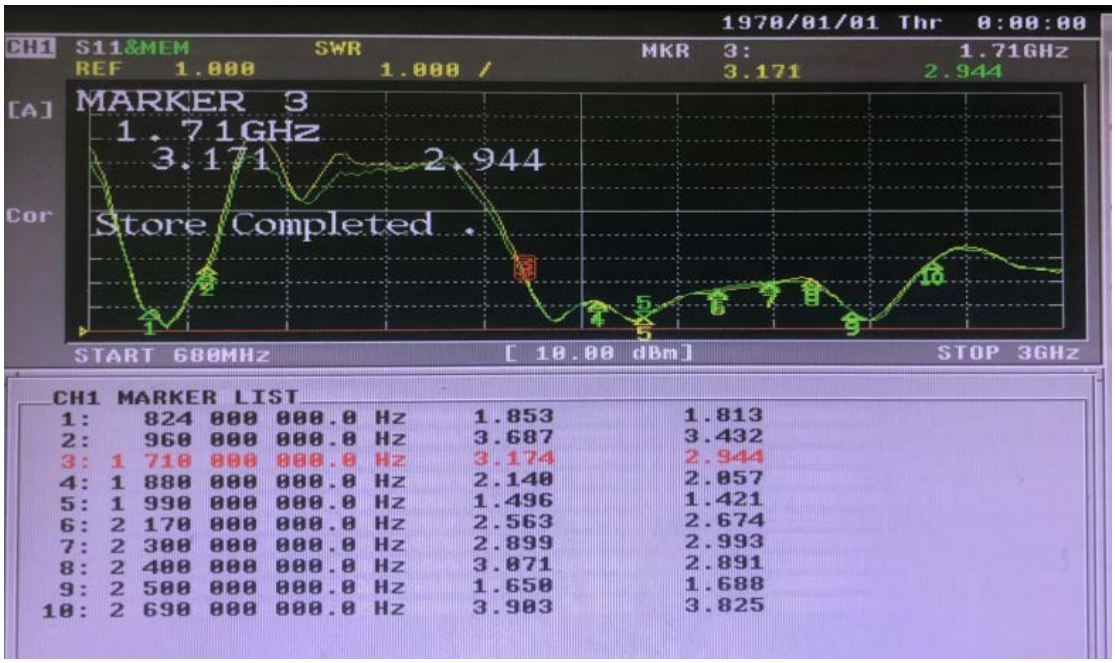
6. Antenna Gain

Band	Max Gain (dBi)	Efficiency
DCS1800	0.12	36%
WCDMA2100	0.15	38%
WCDMA1900	0.13	37%
WCDMA1700	0.15	36%
WCDMA850	-0.13	35%
BAND 2	0.13	37%
BAND 4	0.15	36%
BAND 5	-0.13	35%
BAND 12	-0.30	30%
BAND 13	-0.18	32%
BAND 17	-0.30	30%
BAND 66	0.15	36%

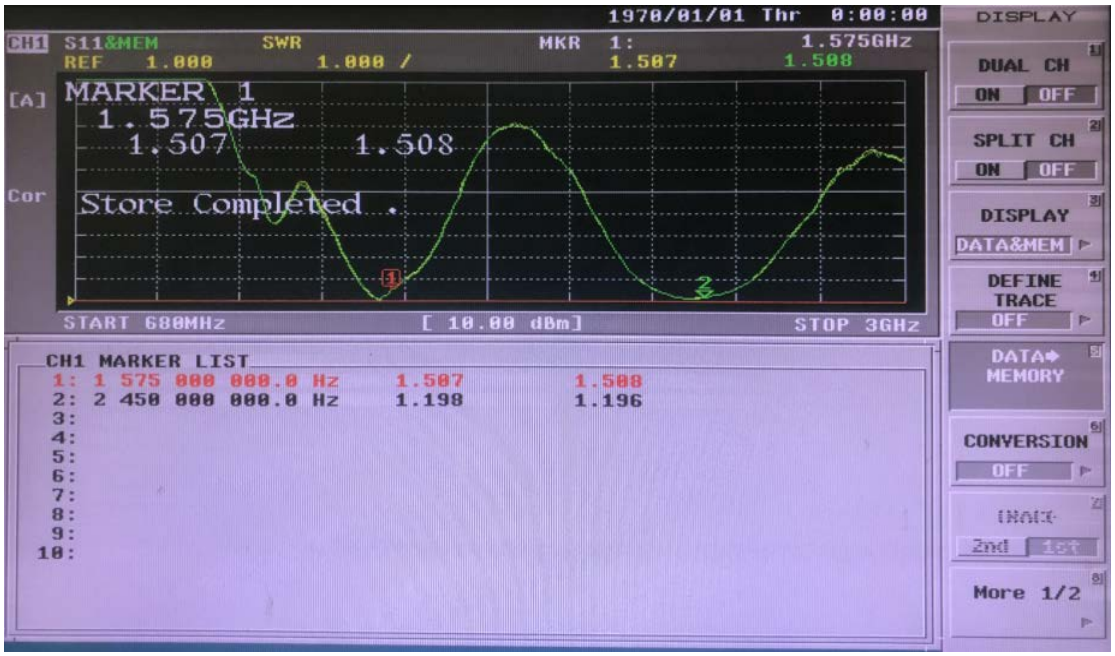
2.4G WIFI/BT							
2400-2500MHZ	Frequency ID	1	2	3	4	5	6
	Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0
	Efficiency (%)	31.00	33.20	35.60	36.80	38.60	39.00
	Gain (dBi)	-0.40	-0.38	-0.19	-0.05	0.19	0.25
	Frequency ID	7	8	9	10	11	6
	Frequency (MHz)	2460.0	2470.0	2480.0	2490.0	2500.0	2450.0
	Efficiency (%)	38.50	36.20	35.10	35.00	34.20	37.10
	Gain (dBi)	0.17	-0.13	-0.25	-0.30	-0.35	0.22

7. Antenna VSWR/S11

Main Ant

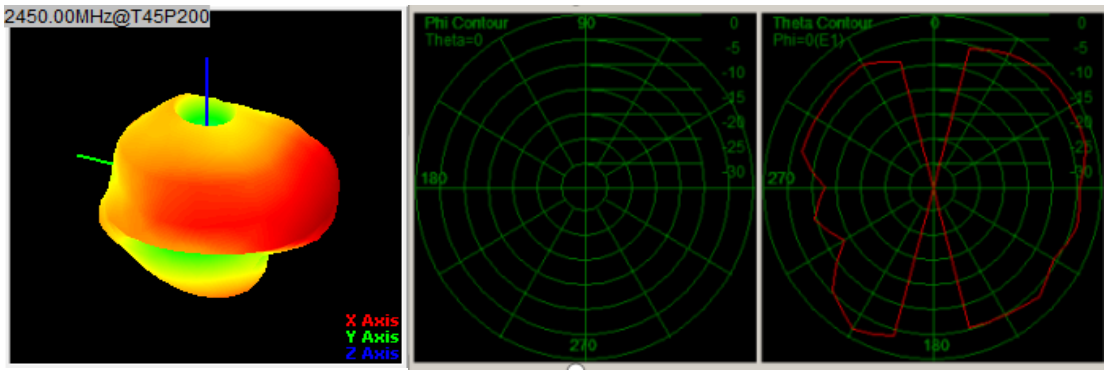


WIFI/BT Ant



8.3D Lobe Diagram

2.4G-WIFI/BT



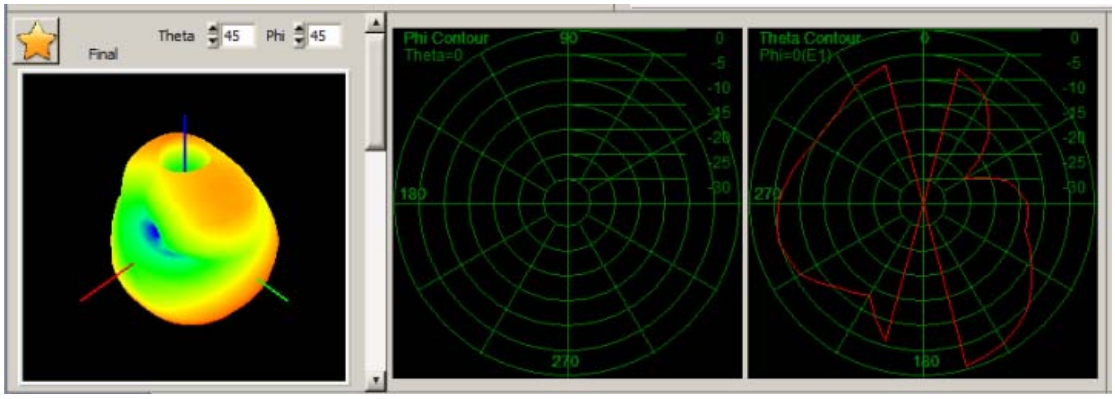
DSC1800

W2100

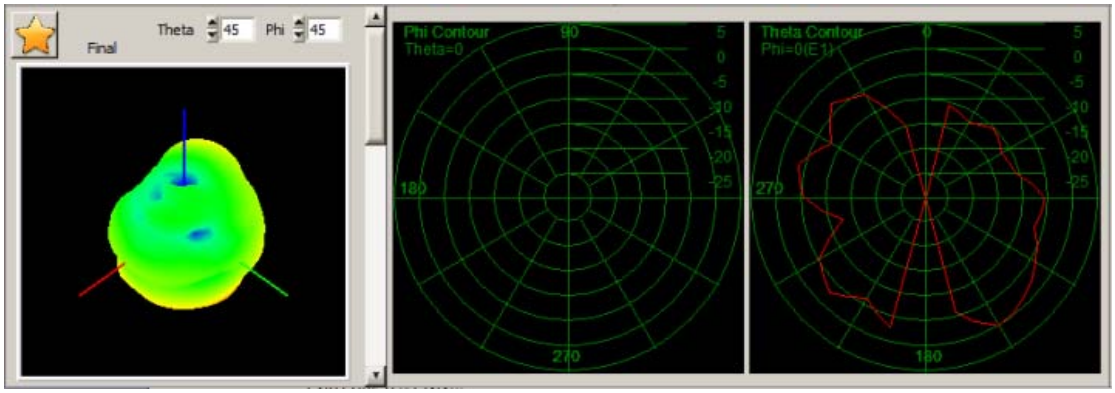
W1900

W1700

W850



FDD-B2

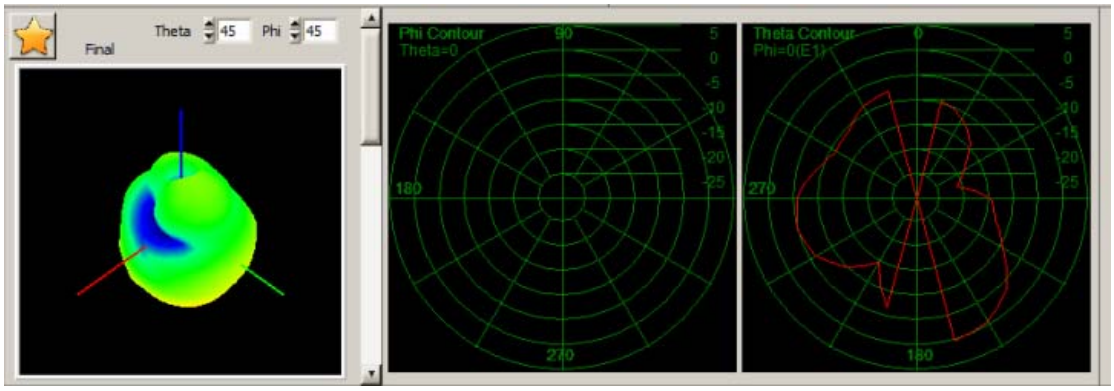


FDD-B4

FDD-B5

FDD-B12

FDD-B13



FDD-B17

FDD-B66

Final
Theta 45
Phi 45
Phi Contour
Theta=0
90
180
270
5
0
-5
-10
-15
-20
-25
Theta Contour
Phi=0(E1)
0
270
180

9.Antenna model and type

Band	Model	Type	Material
BT	BM241-WIFI/BT	PIFA	Stainless steel
2.4G WIFI	BM241-WIFI/BT	PIFA	Stainless steel
Main Ant	BM241-Israel	PIFA	FPC

10.Antenna OTA

FS-OTA									
BAND	DCS1800			WCDMA2100			WCDMA1900		
CHANNEL	L	M	H	L	M	H	L	M	H
TRP(dBm)	24.5	25.5	26.3	19.2	19.3	18.8	19.6	19.8	19.8
TIS(dBm)	-105.3	-105.1	-105.0	-105.5	-105.1	-104.6	-105.6	-105.5	-105.3
BAND	WCDMA1700			WCDMA850			FDD-B2		
CHANNEL	L	M	H	L	M	H	L	M	H
TRP(dBm)	18.3	18.5	18.6	19.3	18.8	18.0	19.8	19.8	19.7
TIS(dBm)	-104.6	-104.2	-104.1	-104.0	-103.7	-102.6	-94.6	-94.3	-94.1
BAND	FDD-B4			FDD-B5			FDD-B12		
CHANNEL	L	M	H	L	M	H	L	M	H
TRP(dBm)	18.5	18.6	18.8	18.8	18.3	17.8	15.2	15.6	16.1
TIS(dBm)	-94.0	-93.6	-93.3	-91.8	-91.3	-90.6	-92.5	-92.3	-92.1
BAND	FDD-B13			FDD-B17			FDD-B66		
CHANNEL	L	M	H	L	M	H	L	M	H
TRP(dBm)	18.6	18.8	18.8	15.1	15.5	16.0	18.3	18.2	18.1
TIS(dBm)	-93.3	-93.0	-92.8	-92.3	-91.8	-91.6	-92.9	-92.6	-92.3