

Shenzhen Qixin Tongda Technology Co., Ltd

Antenna test data report

Client: Och

project: S159

G2/3/5/8+W1/2/4/5/8+

FDD-1/2/3/4/5/7/8/12/17/19/20/25/26/28/66+TDD-34/38/39/40/41

Engineering: Jason (137 6025 5827)

date: 2025-05-09

Factory address: Bao'an District, Shenzhen, Shajing Street, Shayi North

Yongfa Science and Technology Park, the first third floor

1. Test Project

	Test Project	Equipment
1. S Parameter	1. Return Loss (RL) 2. VSWR	Network Analyzer: Agilent 5071B
2. RF Test (2/3/4/5G)	1. power 2. level 3. TRP/TIS	Comprehensive Test: SP9500/CMW500/8960 Test Environment: Anechoic Chamber

2. Test Equipment



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



Agilent 8960 (2G/3G Test Equipment)

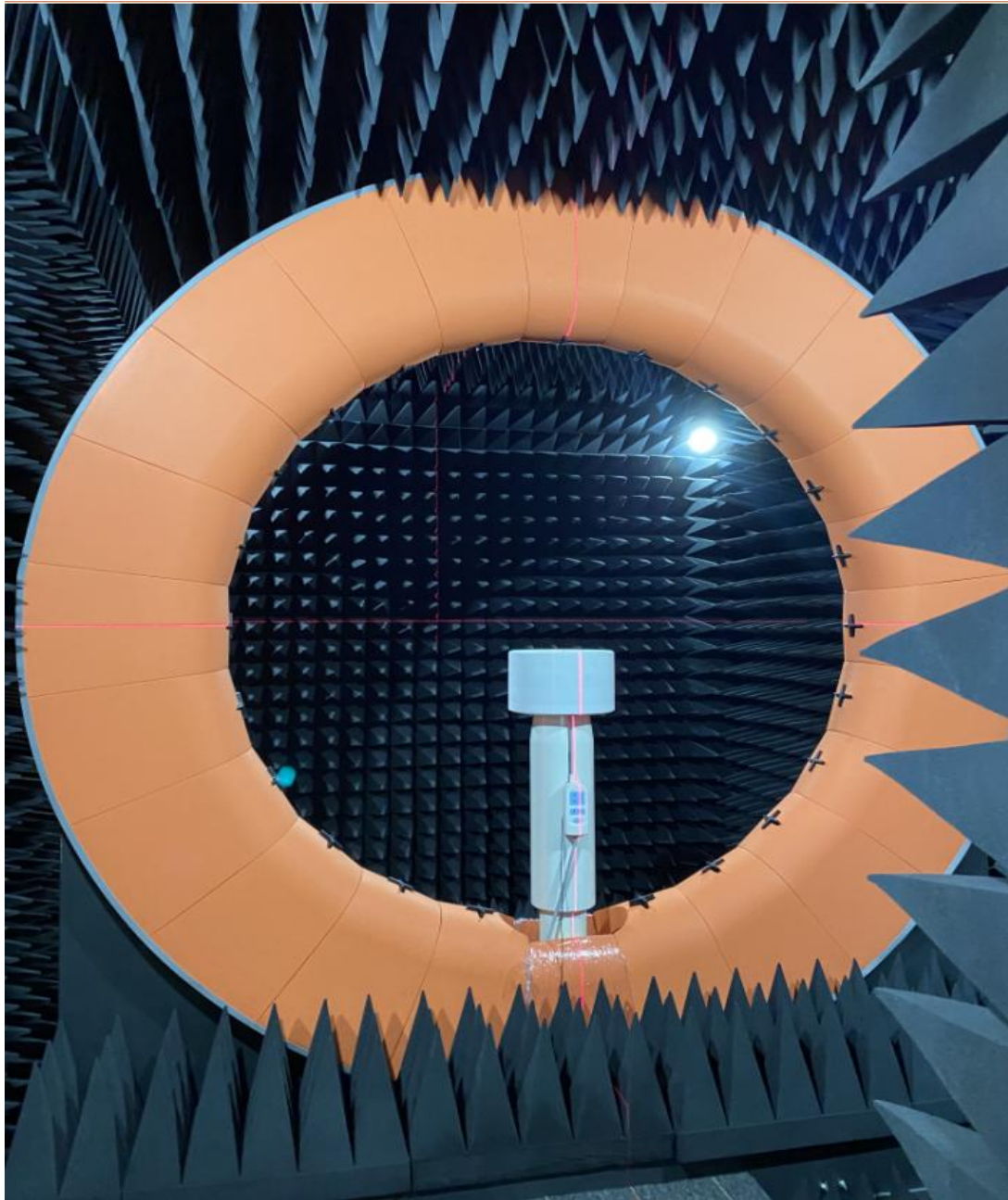


CMW 500 (2G/3G/4G Test Equipment)



SP9500 (5G Test Equipment)

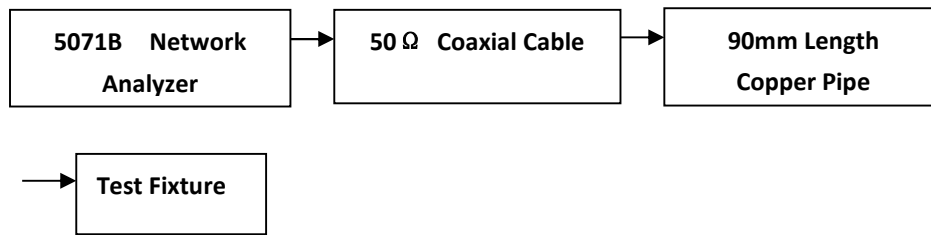
3. TestEnvironment



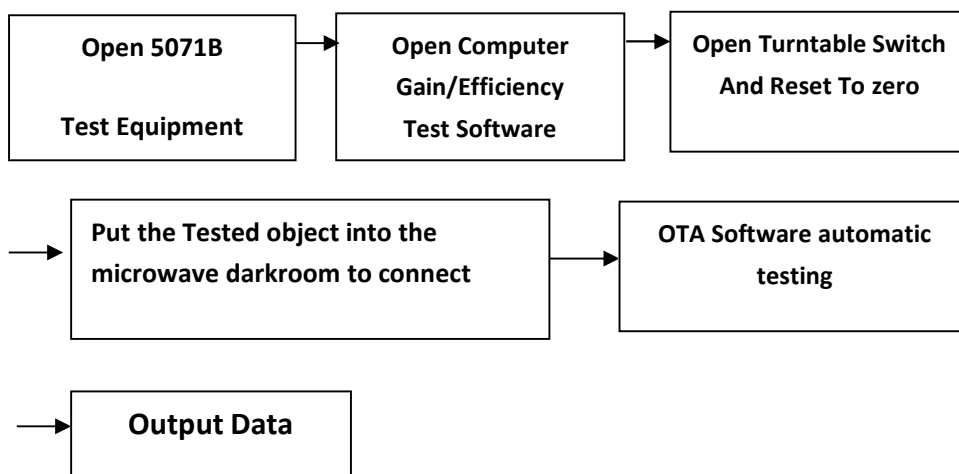
Microwave Anechoic Chamber

4.Test Steps

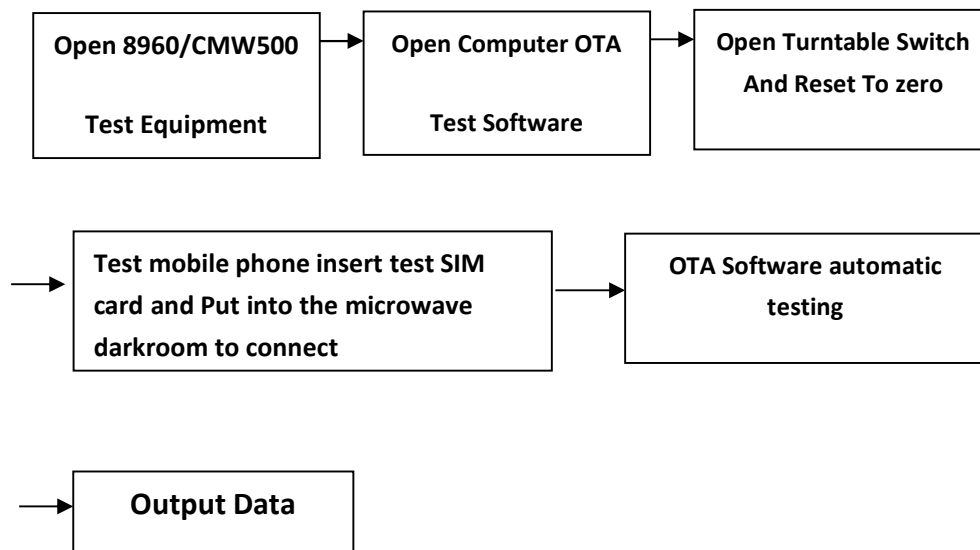
Passive VSWR/RL Test Steps:



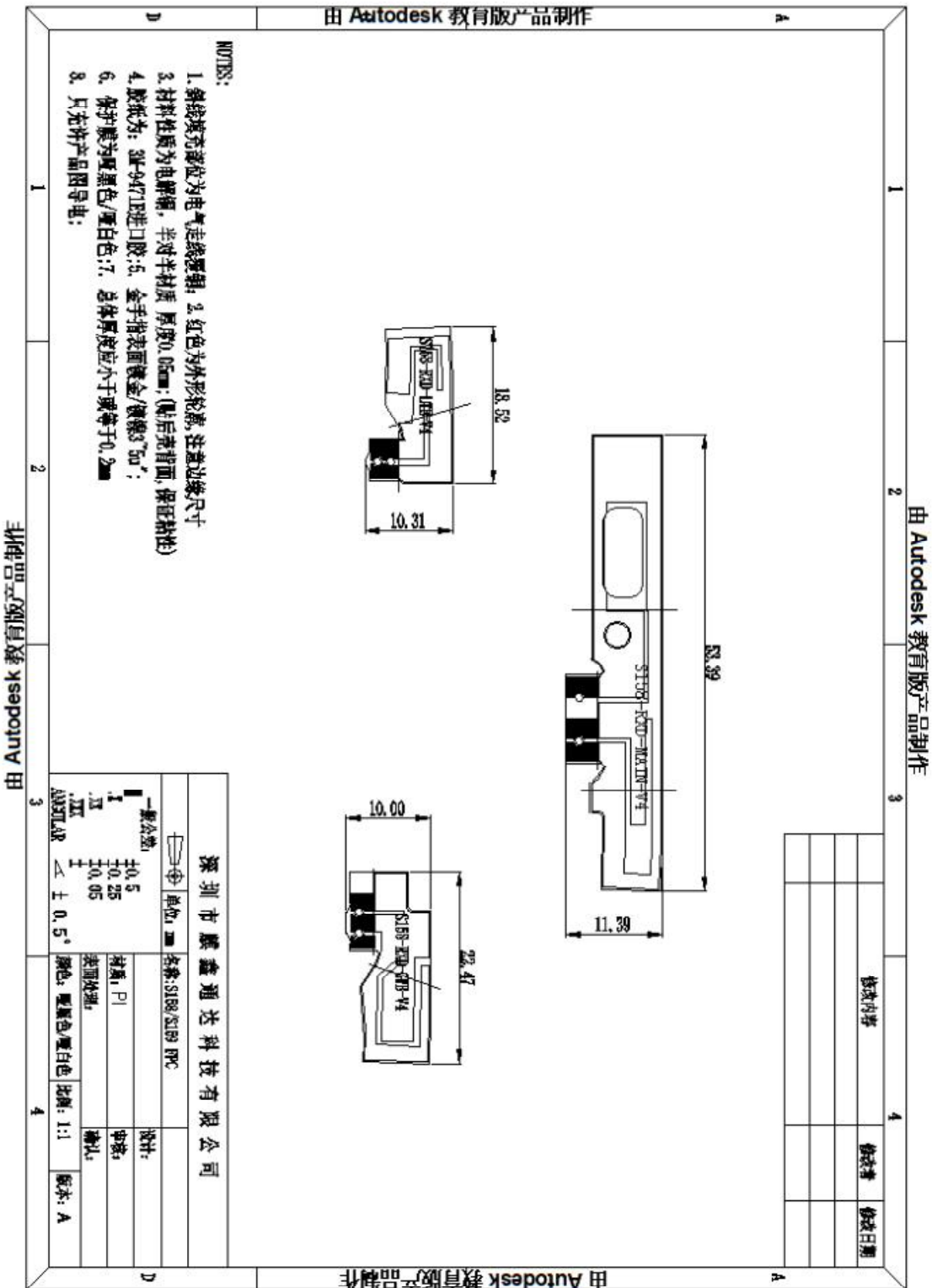
Gain/Efficiency Test Steps:



Active TRP/TIS Test Steps:



5. Antenna size diagram



6. Antenna Gain

Frequency Band	Gain (dBi)
GSM850 (824-894MHz)	-2.30
GSM900 (880-960MHz)	-1.21
DCS1800 (1710-1880MHz)	0.20
PCS1900 (1850-1990MHz)	0.16
WCDMA850 (824-894MHz)	-2.30
WCDMA900 (880-960MHz)	-1.21
WCDMA1700 (1710-2155MHz)	0.21
WCDMA1900 (1850-1990MHz)	0.16
WCDMA2100 (1920-2170MHz)	0.18
FDD B 1 (1920-2170MHz)	0.18
FDD B 2 (1850-1990MHz)	0.16
FDD B 3 (1710-1880MHz)	0.21
FDD B 4 (1710-2155MHz)	0.22
FDD B 5 (824-894MHz)	-2.26
FDD B 7 (2500-2690MHz)	0.35
FDD B 8 (880-960MHz)	-1.16
FDD B 12 (699-746MHz)	-2.47
FDD B 17 (704-746MHz)	-2.46
FDD B 19 (830-890MHz)	-2.28
FDD B 20 (791-862MHz)	-2.28
FDD B 25 (1850-1995MHz)	0.15
FDD B 26 (814-894MHz)	-2.26
FDD B 28 (703-803MHz)	-2.40
FDD B 66 (1700-2200MHz)	0.23
TDD B 34 (2010-2025MHz)	0.22

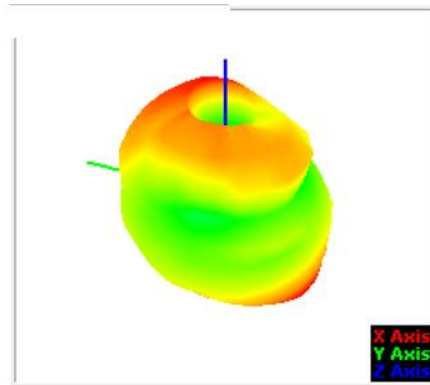
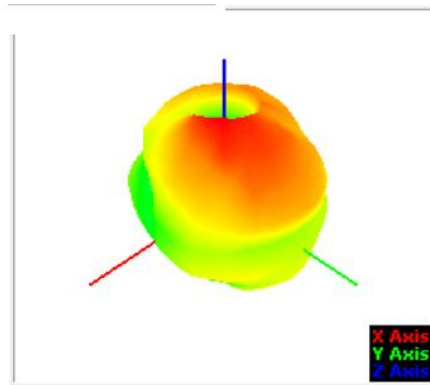
TDD B 38 (2570-2620MHz)	0.35
TDD B 39 (1880-1920MHZ)	0.21
TDD B 40 (2300-2400MHz)	0.36
TDD B 41 (2496-2690MHz)	0.33
Bluetooth	0.28
WIFI-2.4G	0.28
WIFI-5G	0.32
GPS	0.11

8.2D&3D Lobe Diagram

GSM850



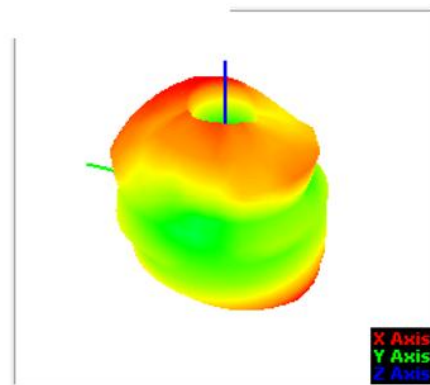
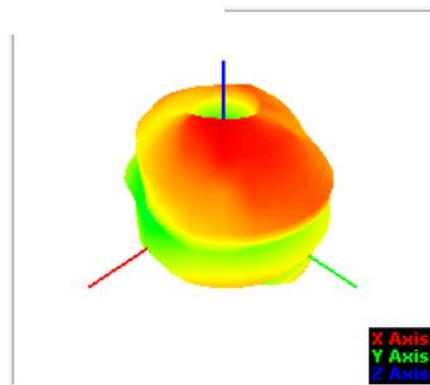
-2.85
-8.37
-13.84
-19.32
-24.8
-30.27
-35.75
-41.22
-46.7
-52.18
-57.65
-63.13
-68.61
-74.08
-79.56
-85.04
-90.51
-95.99



GSM900



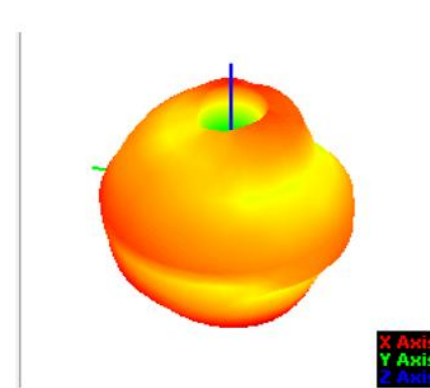
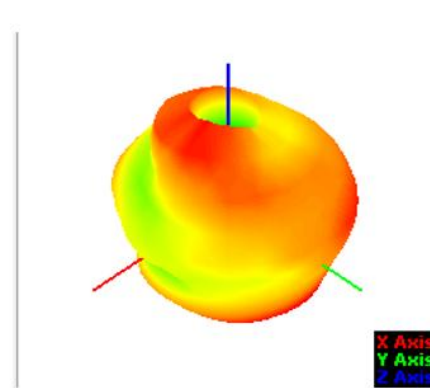
-2.46
-8.08
-13.58
-19.07
-24.57
-30.06
-35.55
-41.05
-46.54
-52.04
-57.53
-63.03
-68.52
-74.01
-79.51
-85
-90.5
-95.99



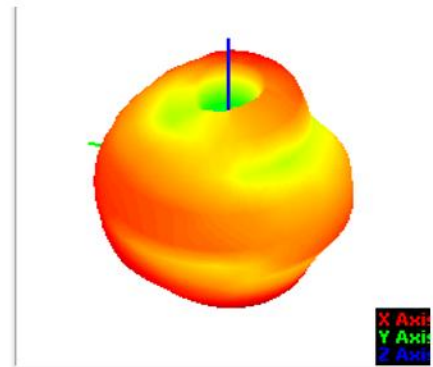
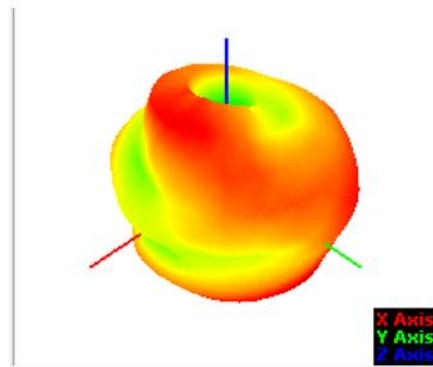
DSC1800



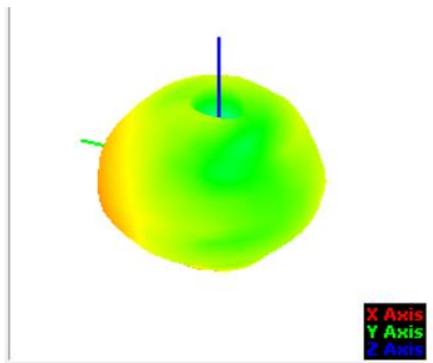
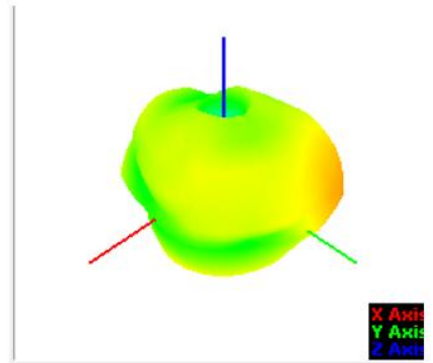
-0.65
-6.58
-12.16
-17.75
-23.34
-28.93
-34.52
-40.11
-45.69
-51.28
-56.87
-62.46
-68.05
-73.64
-79.22
-84.81
-90.4
-95.99



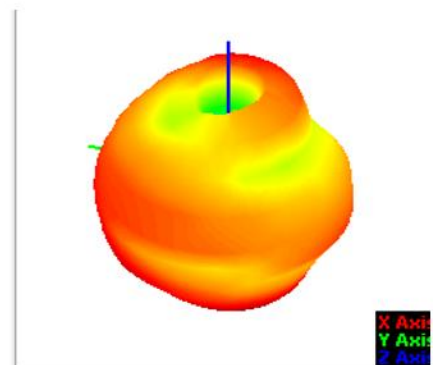
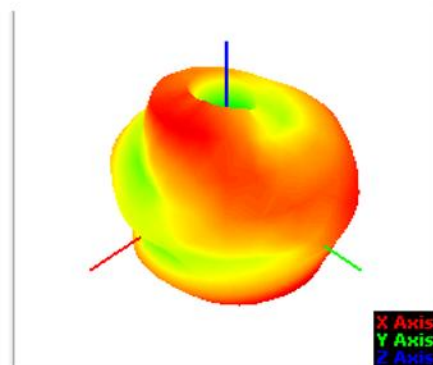
PCS1900



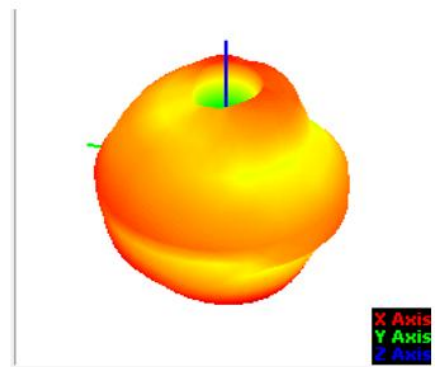
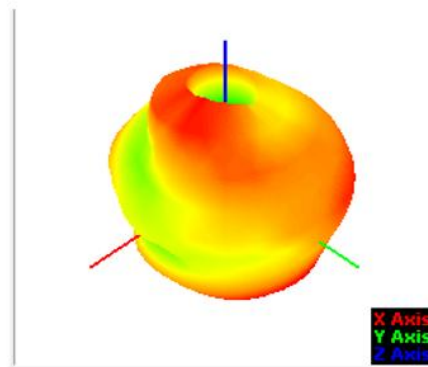
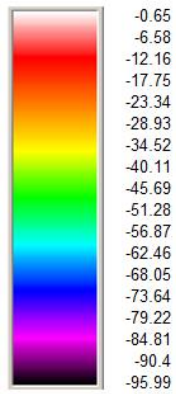
W1



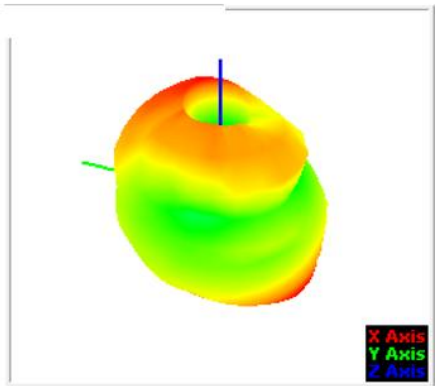
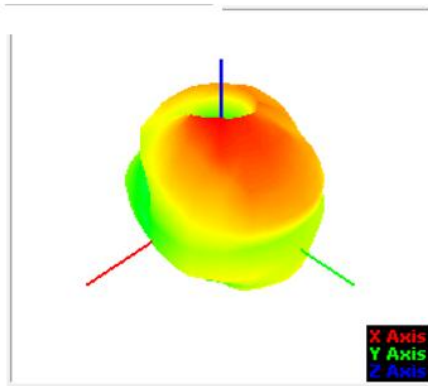
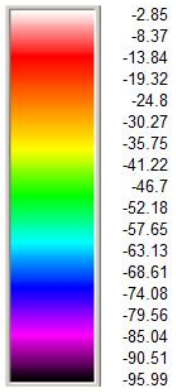
W2



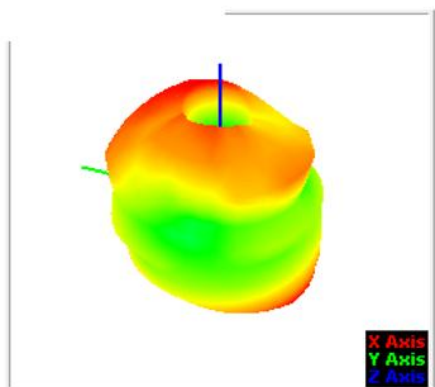
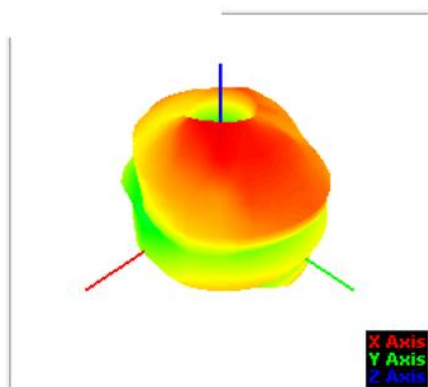
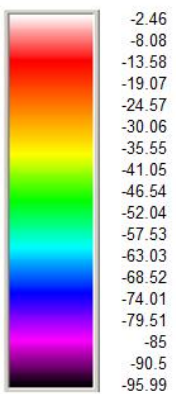
W4



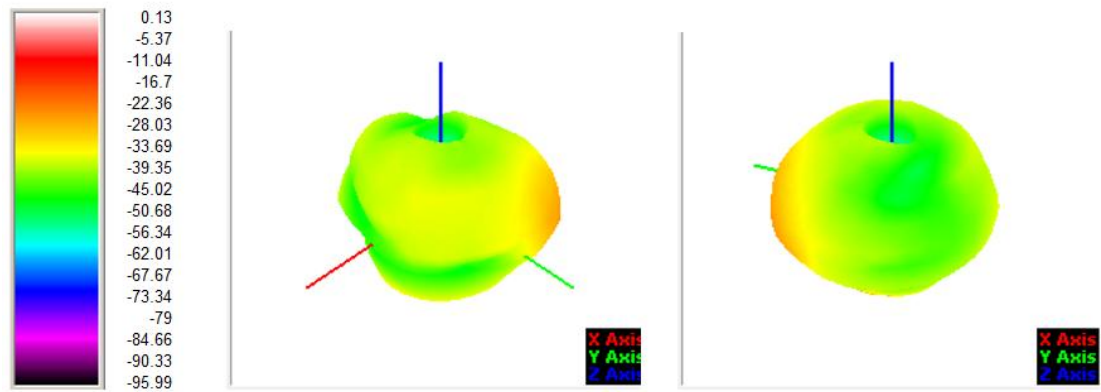
W5



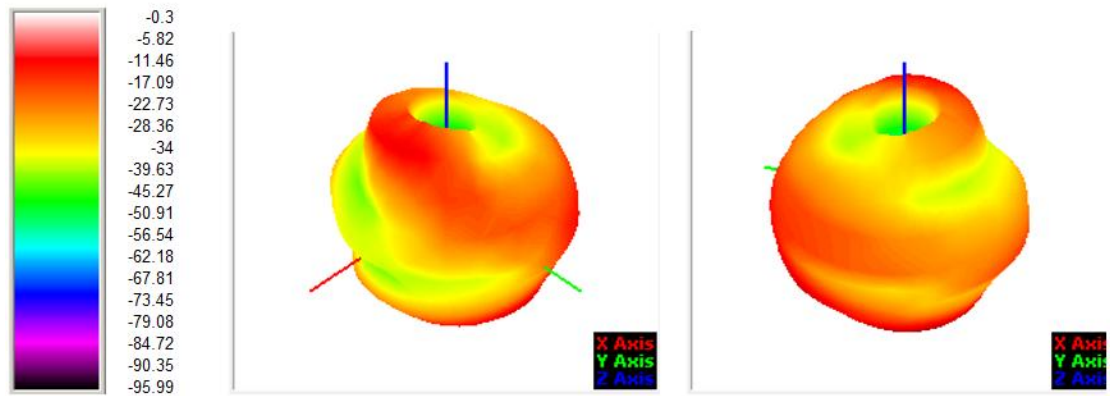
W8



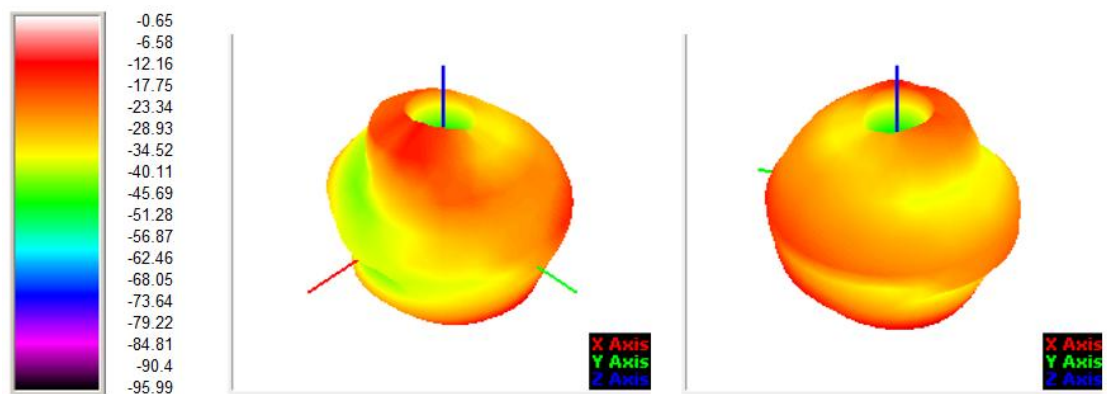
FDD-B1



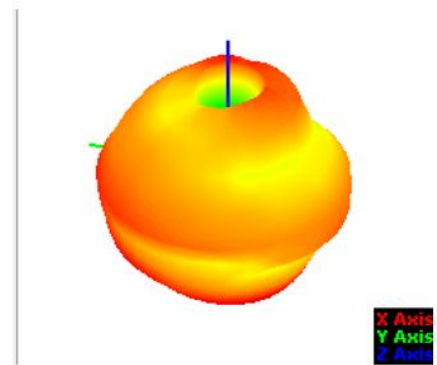
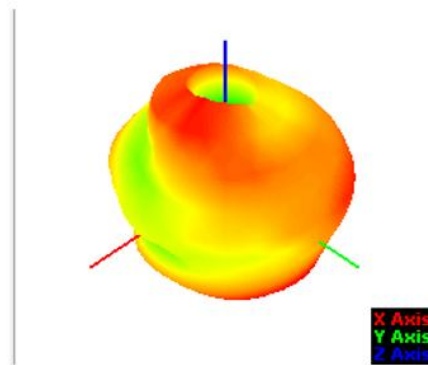
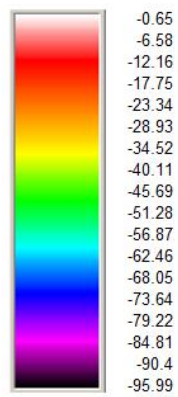
FDD-B2



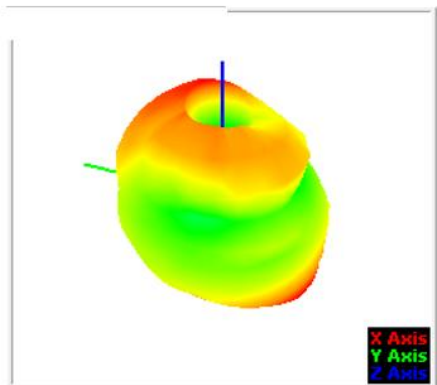
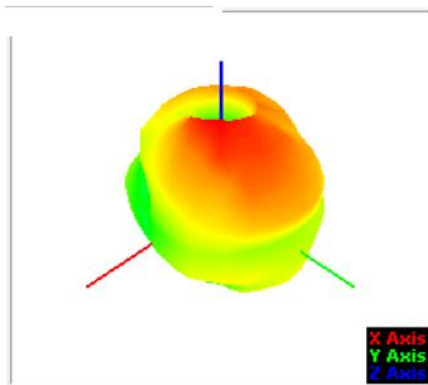
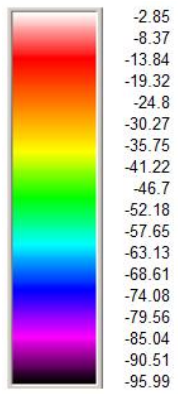
FDD-B3



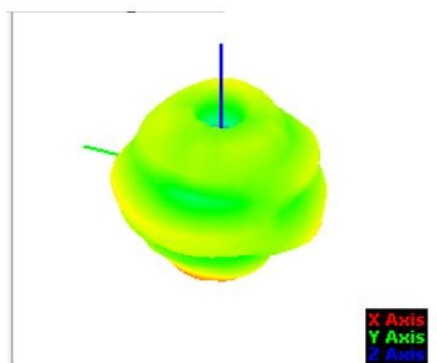
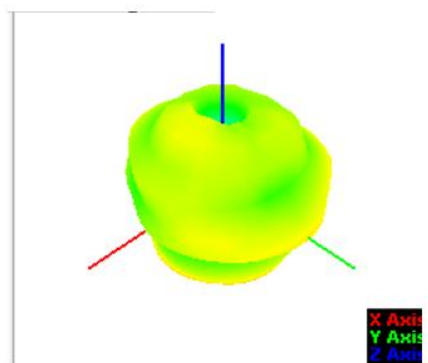
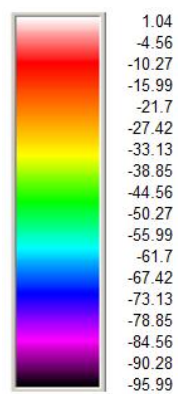
FDD-B4



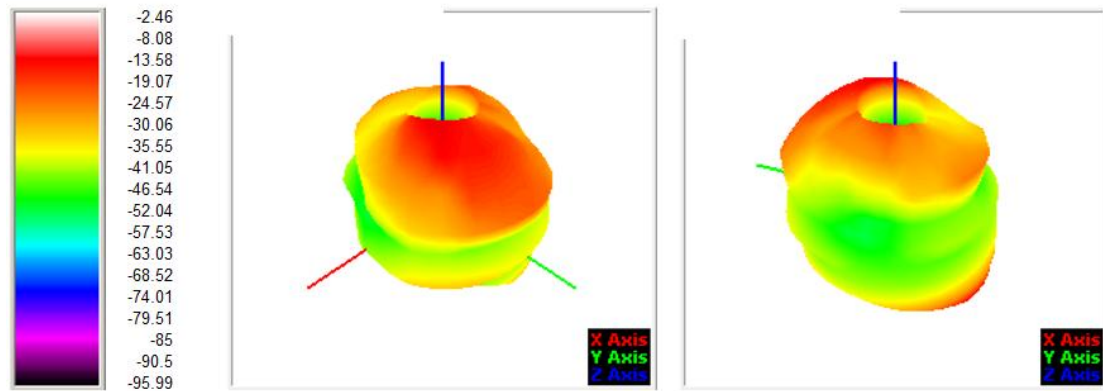
FDD-B5



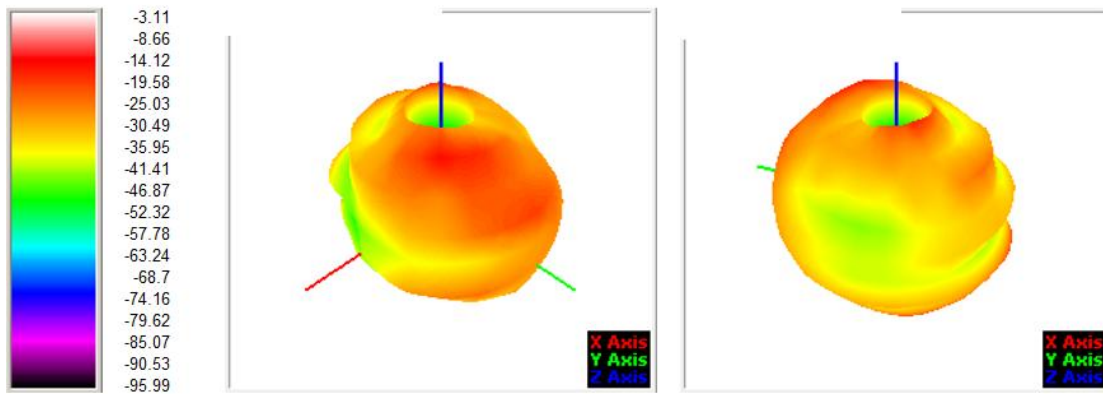
FDD-B7



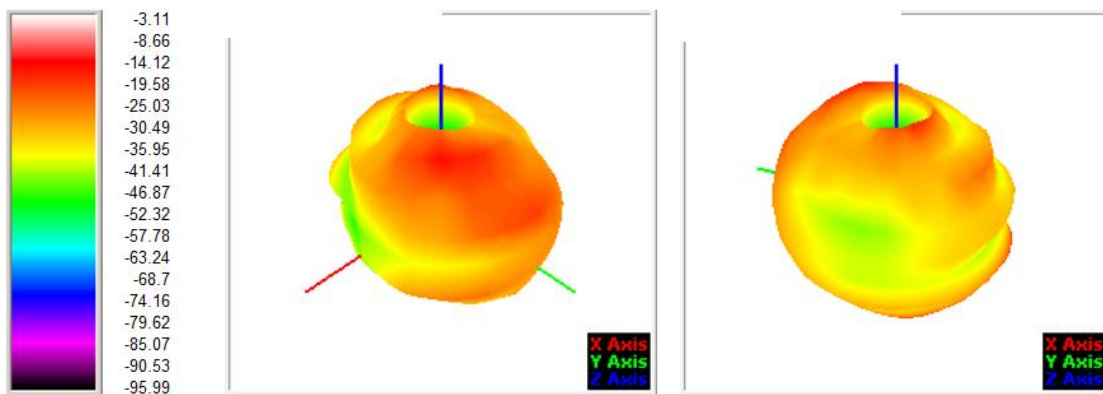
FDD-B8



FDD-B12



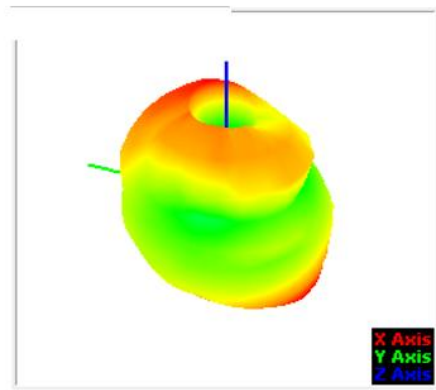
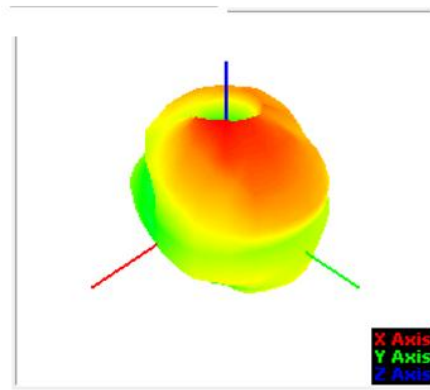
FDD-B17



FDD-B19



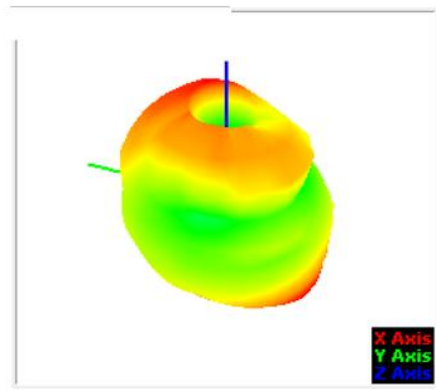
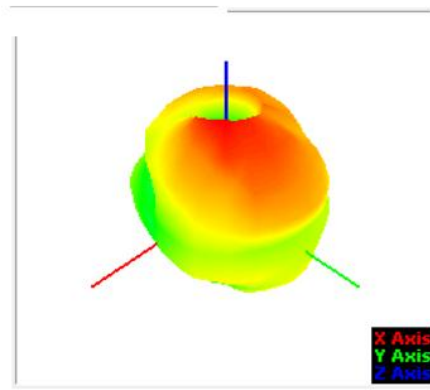
-2.85
-8.37
-13.84
-19.32
-24.8
-30.27
-35.75
-41.22
-46.7
-52.18
-57.65
-63.13
-68.61
-74.08
-79.56
-85.04
-90.51
-95.99



FDD-B20



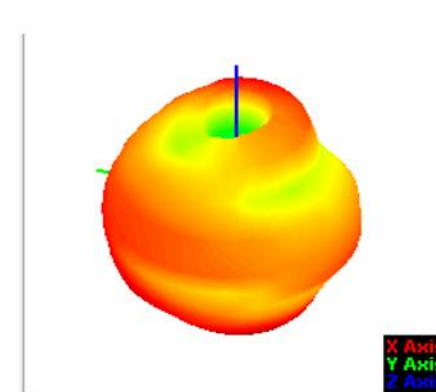
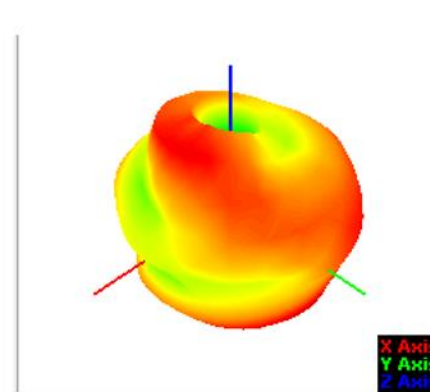
-2.85
-8.37
-13.84
-19.32
-24.8
-30.27
-35.75
-41.22
-46.7
-52.18
-57.65
-63.13
-68.61
-74.08
-79.56
-85.04
-90.51
-95.99



FDD-B25



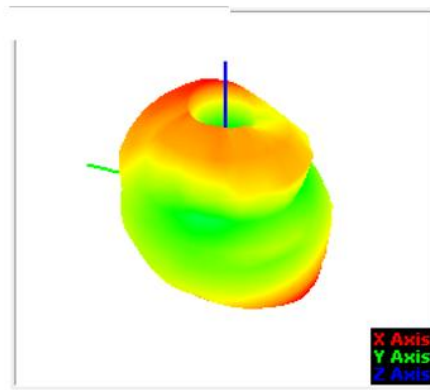
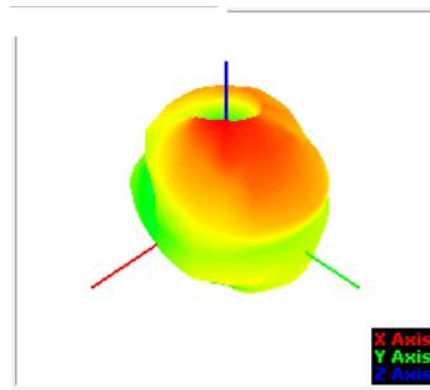
-0.3
-5.82
-11.46
-17.09
-22.73
-28.36
-34
-39.63
-45.27
-50.91
-56.54
-62.18
-67.81
-73.45
-79.08
-84.72
-90.35
-95.99



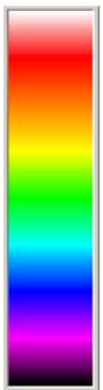
FDD-B26



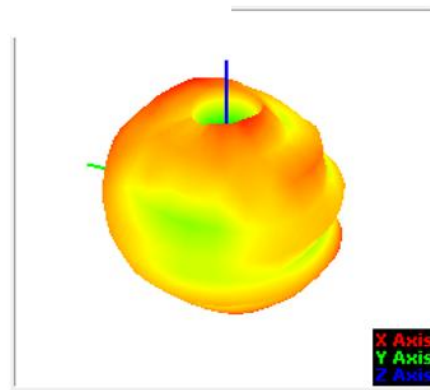
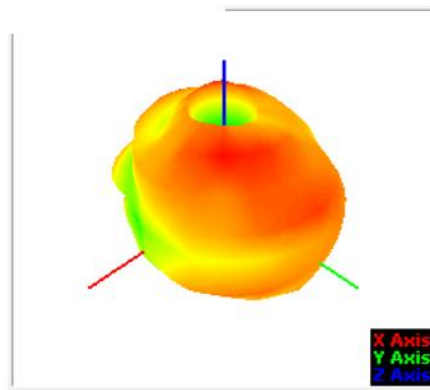
-2.85
-8.37
-13.84
-19.32
-24.8
-30.27
-35.75
-41.22
-46.7
-52.18
-57.65
-63.13
-68.61
-74.08
-79.56
-85.04
-90.51
-95.99



FDD-B28



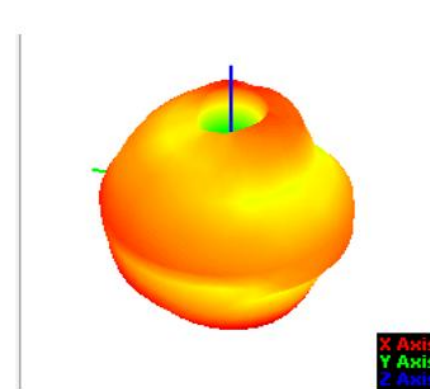
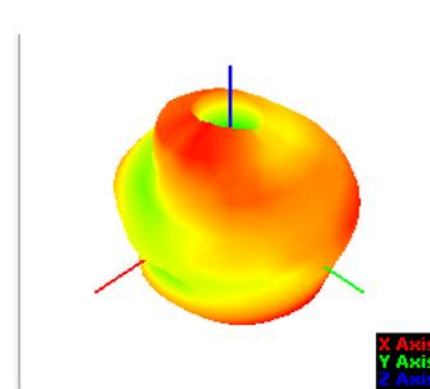
-3.11
-8.66
-14.12
-19.58
-25.03
-30.49
-35.95
-41.41
-46.87
-52.32
-57.78
-63.24
-68.7
-74.16
-79.62
-85.07
-90.53
-95.99



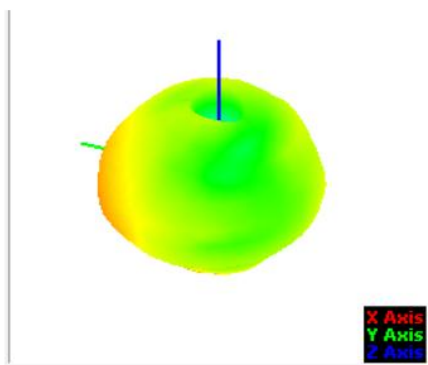
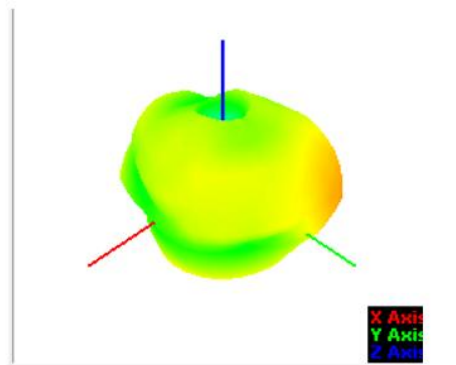
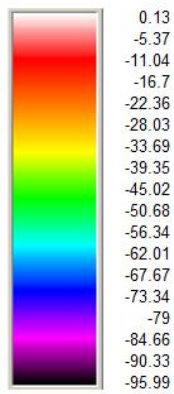
FDD-B66



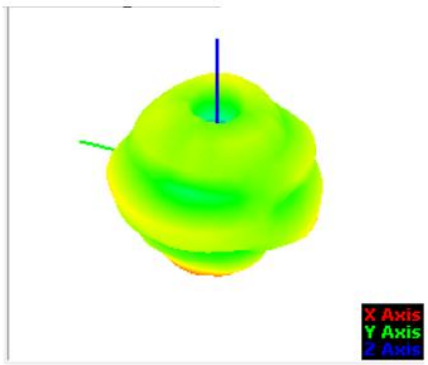
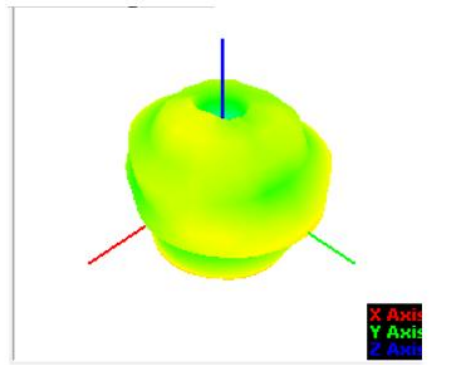
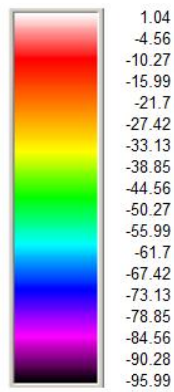
-0.65
-6.58
-12.16
-17.75
-23.34
-28.93
-34.52
-40.11
-45.69
-51.28
-56.87
-62.46
-68.05
-73.64
-79.22
-84.81
-90.4
-95.99



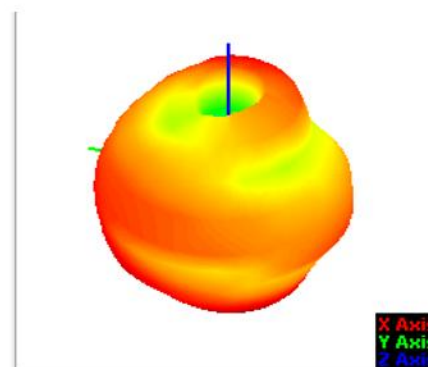
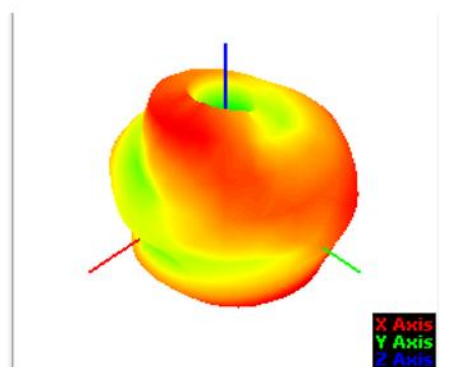
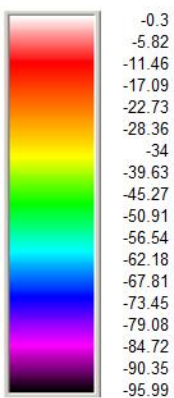
TDD-B34



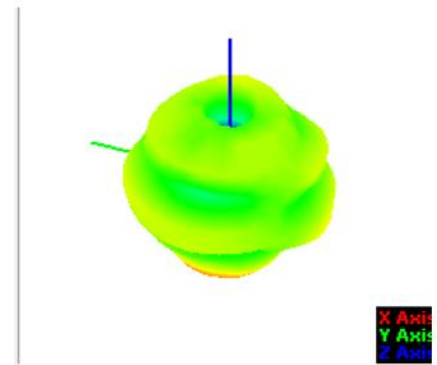
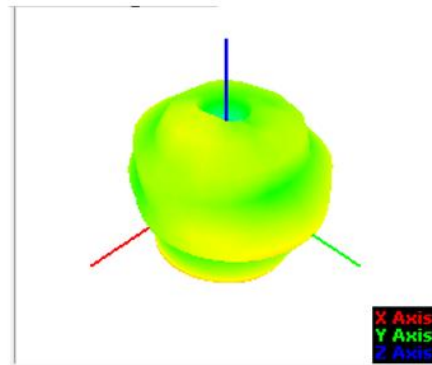
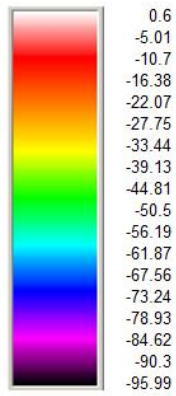
TDD-B38



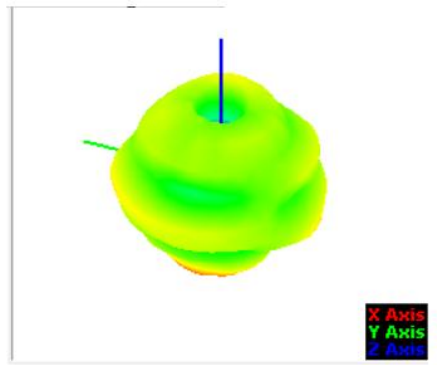
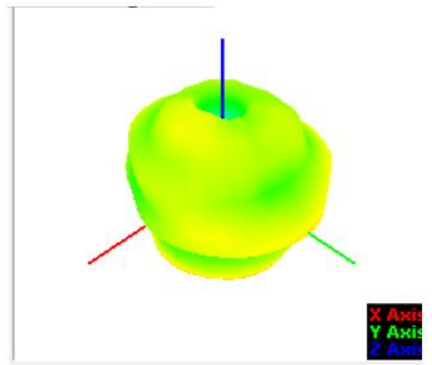
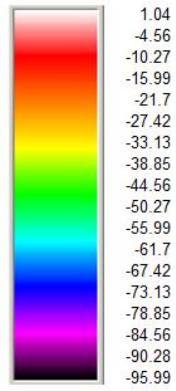
TDD-B39



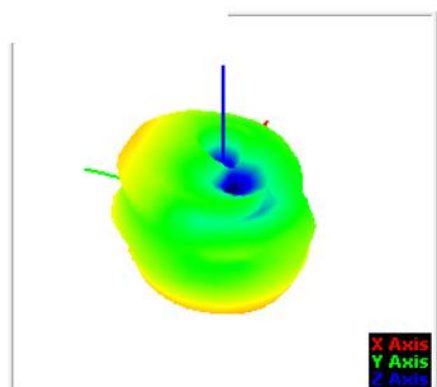
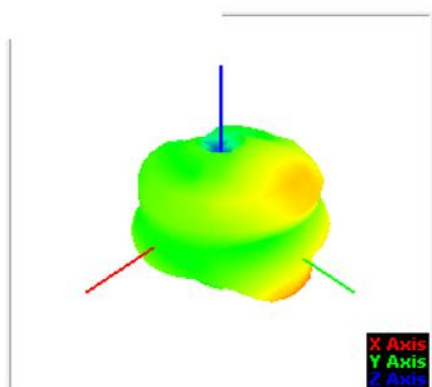
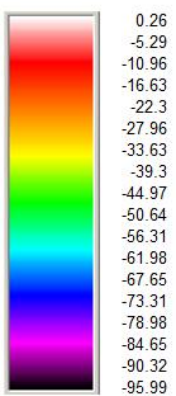
TDD-B40



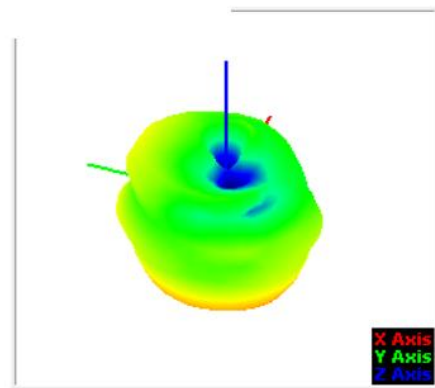
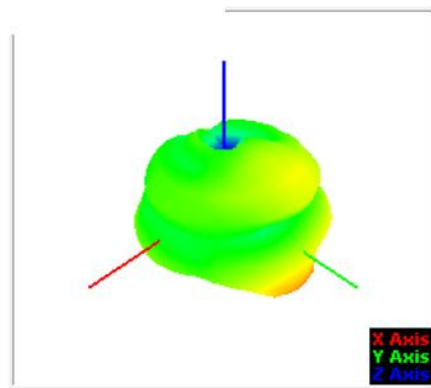
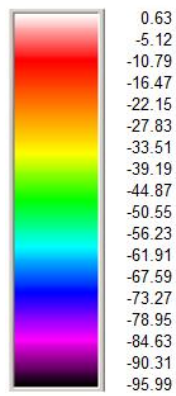
TDD-B41



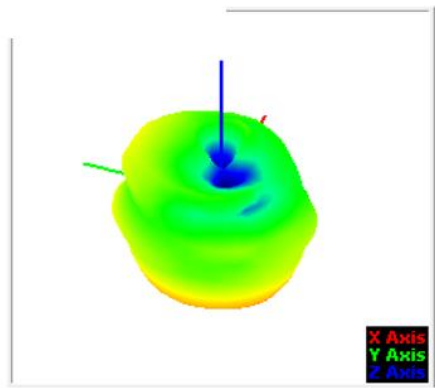
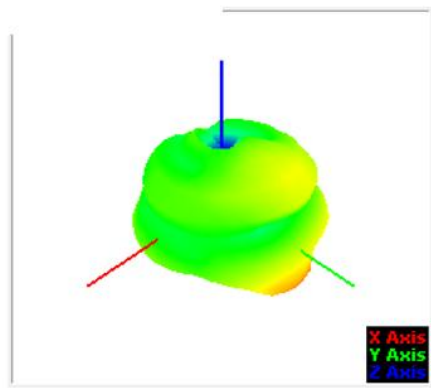
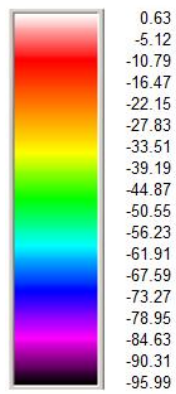
GPS-L1



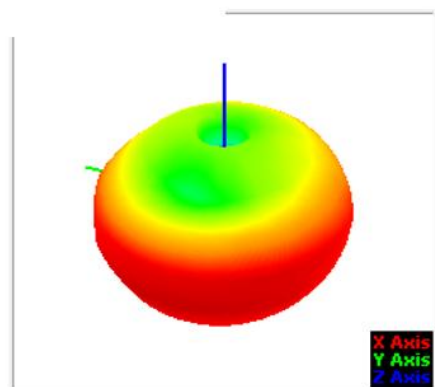
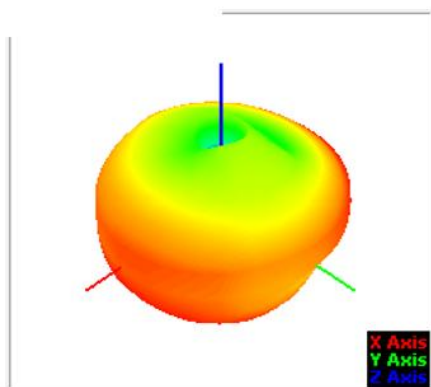
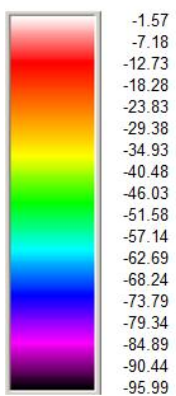
BT

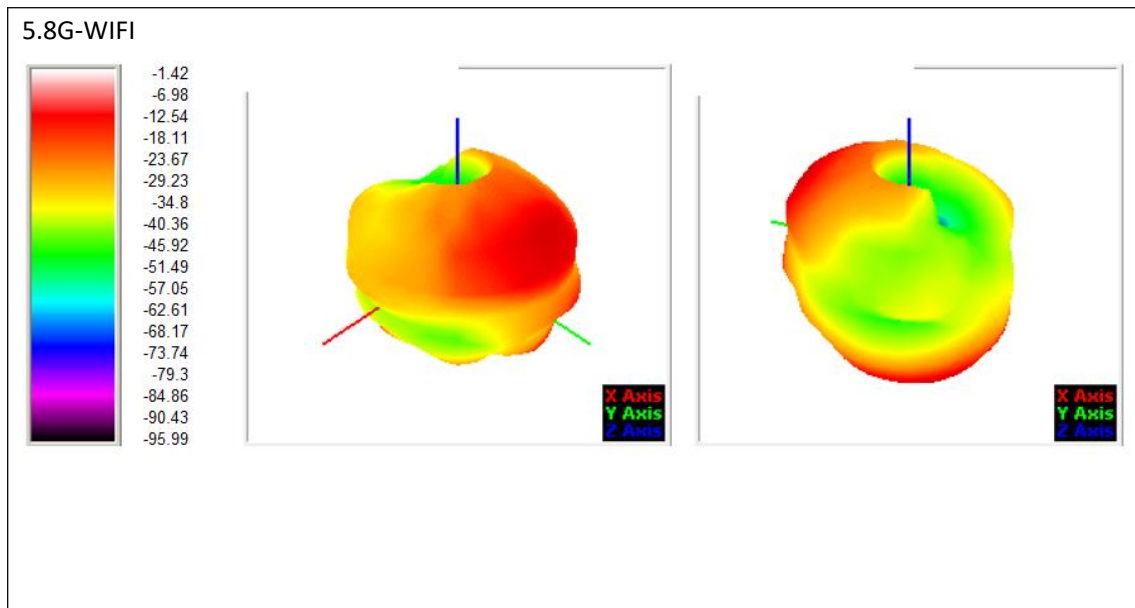


2.4G-WIFI



5.1G-WIFI





9.Introduction to Antenna Information

S158	
Antenna type and frequency band	MAIN ANTENNA(PIFA):2G/3G/4G DIV ANTENNA(PIFA):2G/3G/4G GPS/WIFI/BT ANTENNA(PIFA):L1/2.4GWIFI/5G WIFI/BT
Antenna materia	FPC