

Shenzhen QixinTongda Technology Co., Ltd

Antenna test data report

Client: Och

project: S138B

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

FDD-1/2/3/4/5/7/8/12/17/18/19/20/25/26/28/66+TDD-34/38/39/40/41+

NR-N1/N3/N7/N8/N28/N38/N41/N77/N78

Engineering: Horsemen (134 1821 8312)

date: 2025-05-17

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

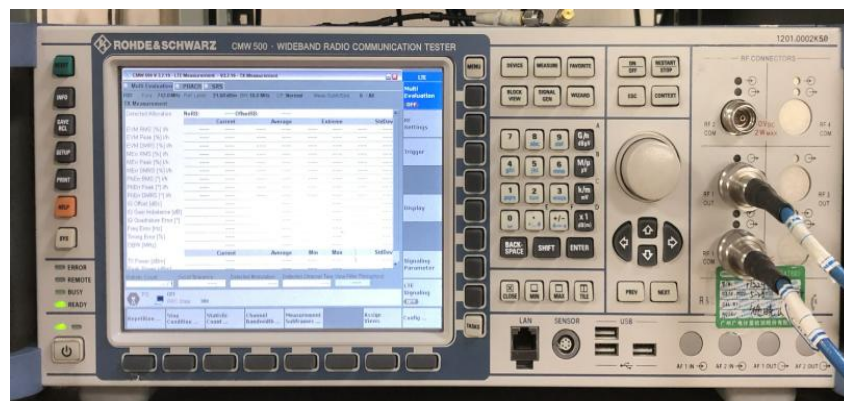
2. Test Equipment



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



Agilent 8960 (2G/3GTest Equipment)

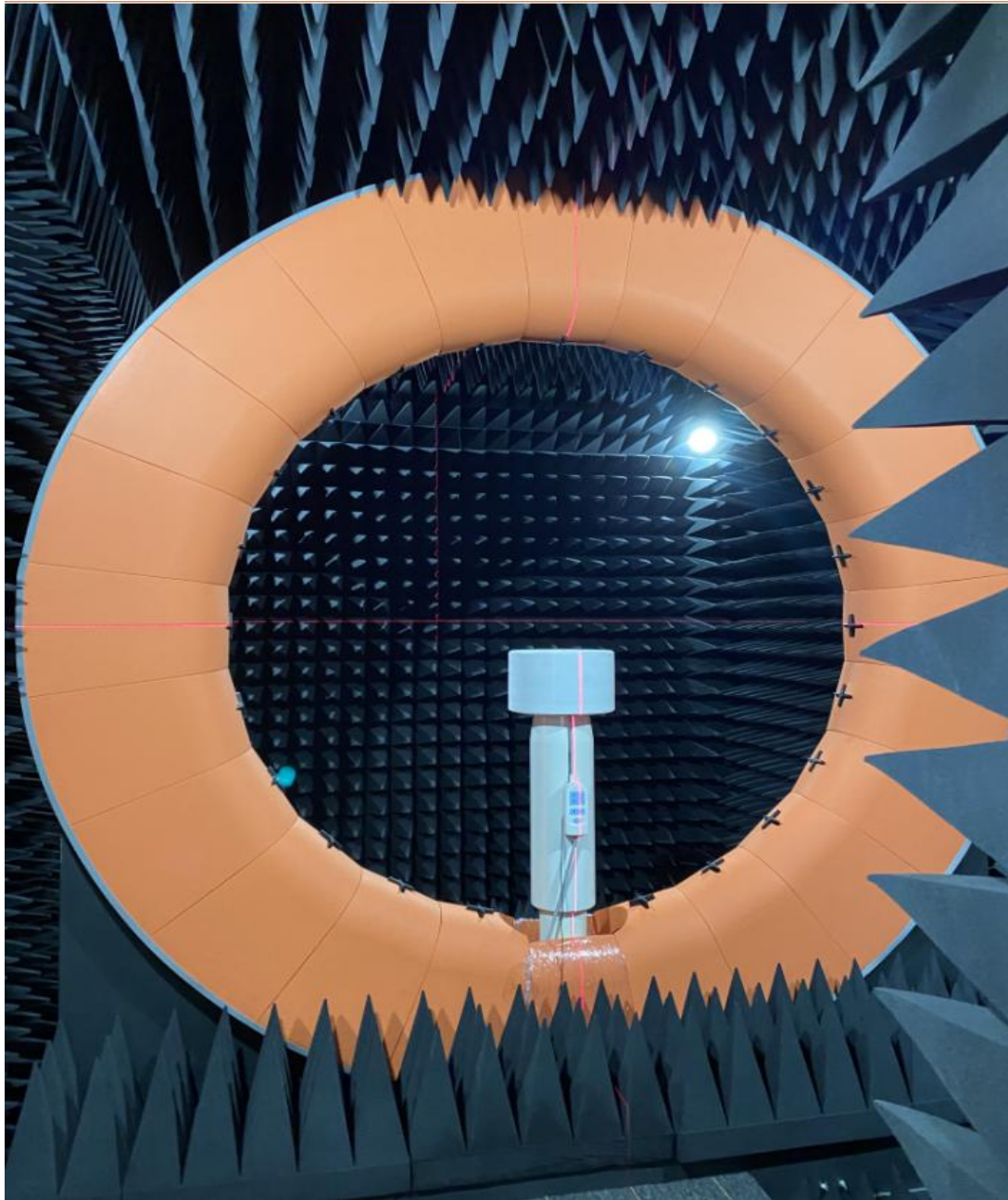


CMW 500 (2G/3G/4GTest Equipment)



SP9500 (5GTest Equipment)

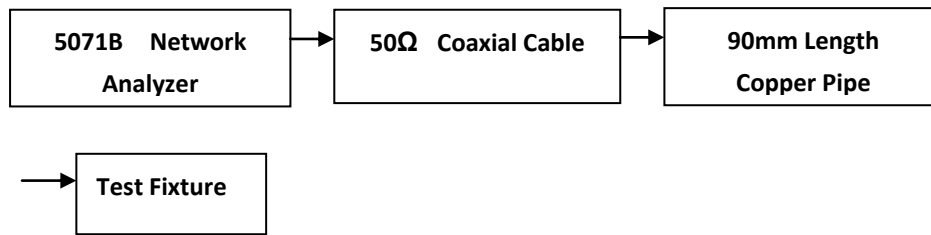
3. TestEnvironment



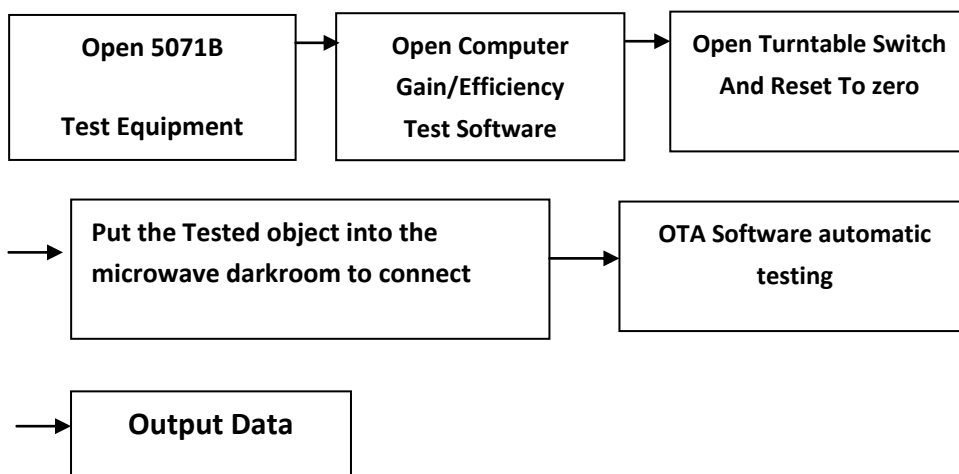
Microwave Anechoic Chamber

4.Test Steps

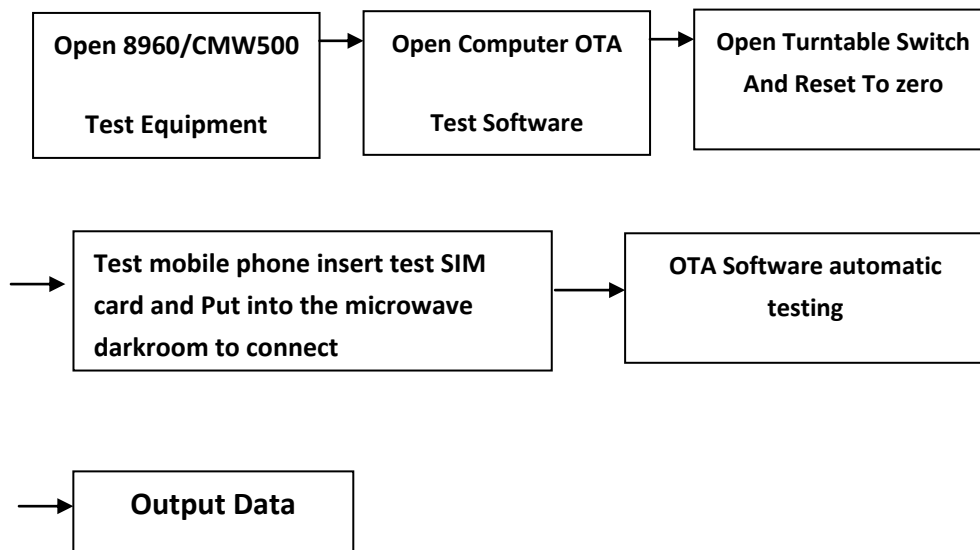
Passive VSWR/RL Test Steps:



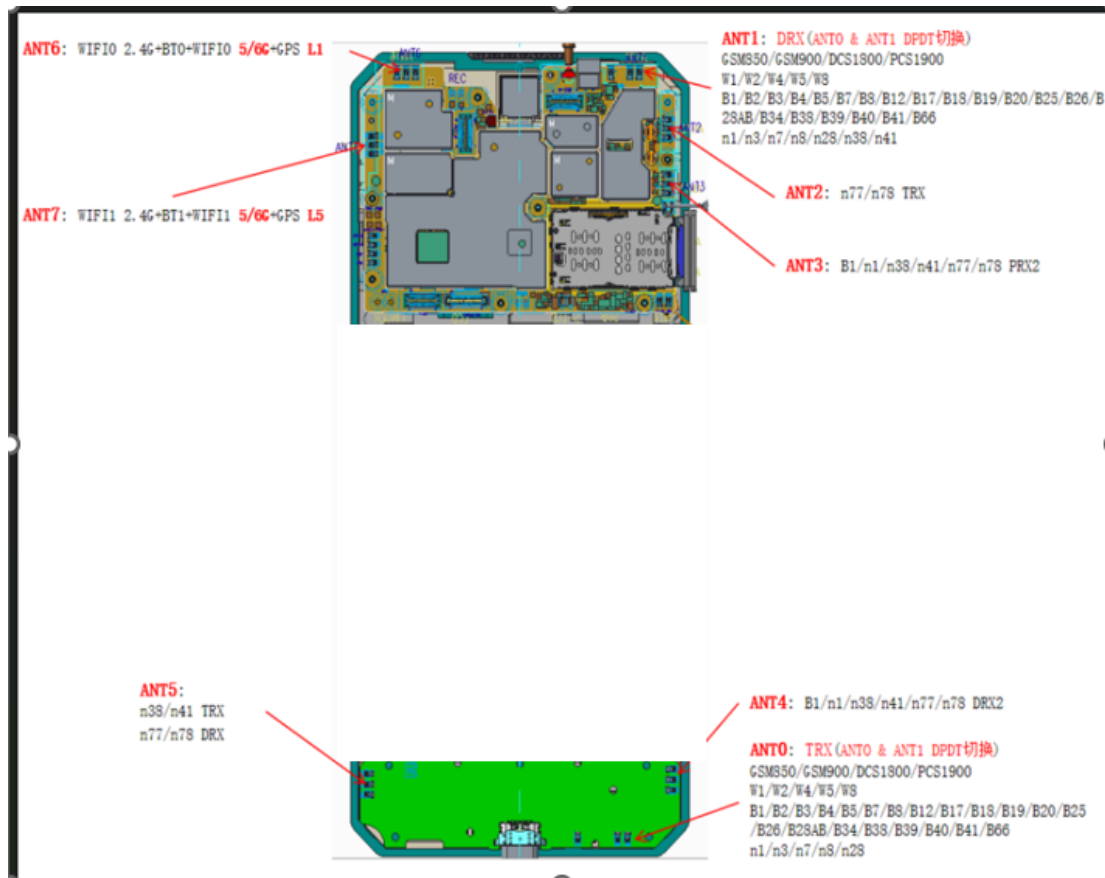
Gain/Efficiency Test Steps:



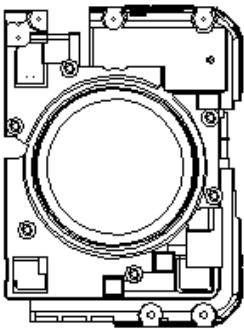
Active TRP/TIS Test Steps:



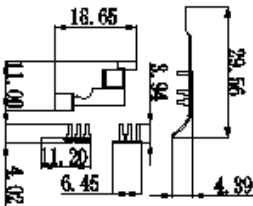
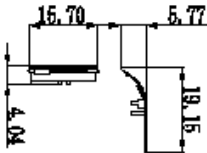
5. Antenna distribution diagram



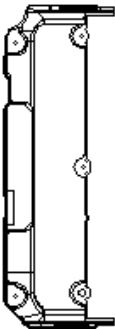
6. Antenna size diagram



antenna assembly



LDS antenna

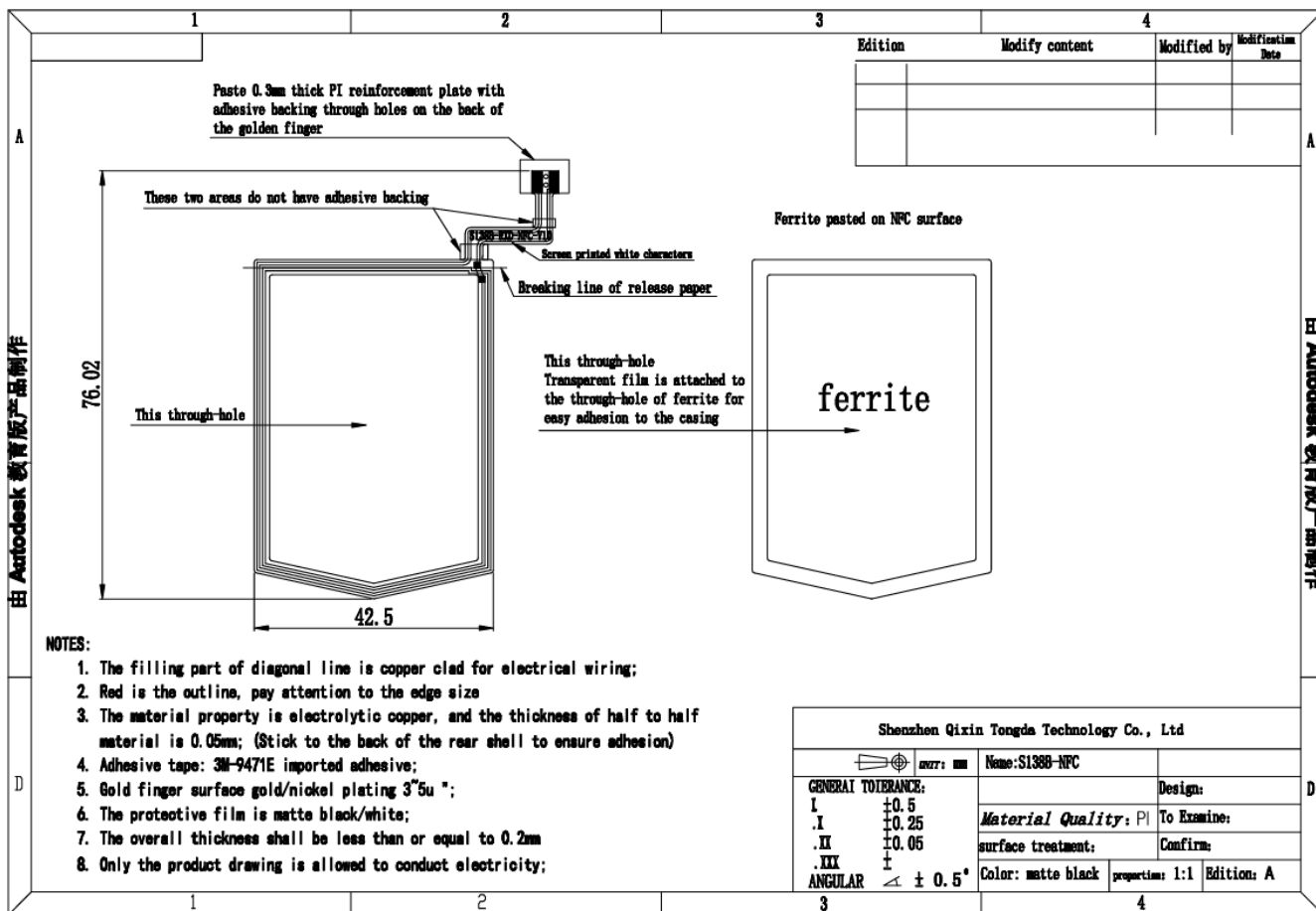


size of the horn according sure that there are no appearance ve glue, lack of glue, dirt, closely, etc. must meet the material requirements. ic: 11354. t break wires, and chemical plating cannot ing and dust. hundred grid requirements, then inspect treaments. quired before shipping the route.				BLACK	Shenzhen Qixin Tongda Technol						
				11354	 general tolerances: I ±0.5 II ±0.25 III ±0.15 IV ±0.05 ANGULAR ≤ ± 0.5°	unit: mm	Name: S1388 LDS	Laser engraving	Surface treatment: Clean	colour	processor
				Shabik							
	NO.	name	quantity	material							
2				3							

article of the horn according
sure that there are no appearance
ve blue, lack of blue, dirt, clock, etc.
s must meet the material requirements.
ik: 11354.
t break wires, and chemical plating cannot
ing and dust.
hundred grid requirements, then inspect
irements.
quired before shipping the route.

7.NFC Passive





8. Antenna Gain

Band	Max Gain	Band	Max Gain
GSM850 (824-894MHZ)	-2.85	LTE-B40 (2300-2400MHZ)	0.6

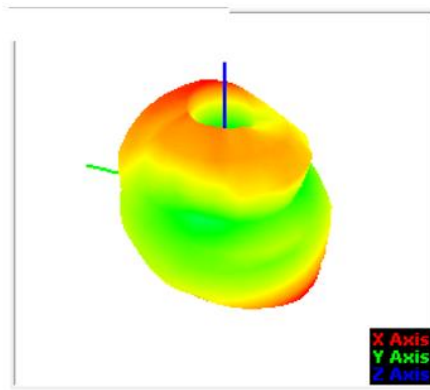
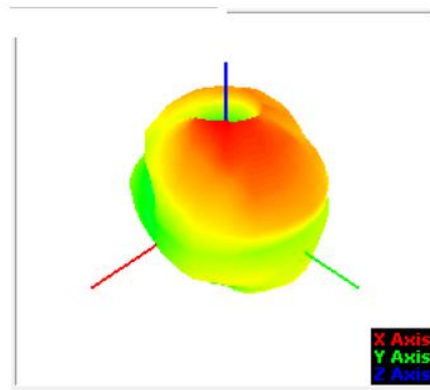
GSM900 (880-960MHZ)	-2.46	LTE-B41 (2496-2690MHZ)	1.04
DCS1800 (1710-1880MHZ)	-0.65	NR-N1(1920-2170MHZ)	0.13
PCS1900 (1850-1990MHZ)	-0.3	NR-N3(1710-1880MHZ)	-0.65
WCDMA1 (1920-2170MHZ)	0.13	NR-N7(2500-2690MHZ)	1.04
WCDMA2 (1950-1990MHZ)	-0.3	NR-N8(880-960MHZ)	-2.57
WCDMA4 (1710-2155MHZ)	-0.65	NR-N28(703-803MHZ)	-3.11
WCDMA5 (824-894MHZ)	-2.85	NR-N38(2570-2620MHZ)	1.04
WCDMA8 (880-960MHZ)	-2.46	NR-N41(2496-2690MHZ)	1.04
LTE-B1 (1920-2170MHZ)	0.13	NR-N77(3300-4200MHZ)	0.82
LTE-B2 (1850-1990MHZ)	-0.3	NR-N78(3300-3800MHZ)	0.47
LTE-B3 (1710-1880MHZ)	-0.65	ANT6-Bluetooth (2400-2483.5MHZ)	0.63
LTE-B4 (1710-2155MHZ)	-0.65	ANT6-WIFI-2.4G (2400-2495MHZ)	0.63
LTE-B5 (824-894MHZ)	-2.85	ANT6-WIFI-5.2G (5.17-5.33GHZ)	-1.57
LTE-B7 (2500-2690MHZ)	1.04	ANT6-WIFI-5.8G (5.490-5.835GHZ)	-1.42
LTE-B8 (880-960MHZ)	-2.46	ANT6-GPS -L1(1575.4MHZ)	0.26
LTE-B12 (699-746MHZ)	-3.11	ANT7-GPS -L5(1176.4MHZ)	-1.07
LTE-B17 (704-746MHZ)	-3.11	ANT7-Bluetooth (2400-2483.5MHZ)	0.56
LTE-B18 (815-875MHZ)	-2.85	ANT7-WIFI-2.4G (2400-2495MHZ)	0.56
LTE-B19 (830-8790MHZ)	-2.85	ANT7-WIFI-5.2G (5.17-5.33GHZ)	-2.34
LTE-B20 (791-862MHZ)	-2.85	ANT7-WIFI-5.8G (5.490-5.835GHZ)	-1.82
LTE-B25 (1850-1995MHZ)	-0.3		
LTE-B26 (814-894MHZ)	-2.85		
LTE-B28 (703-803MHZ)	-3.11		
LTE-B66 (1715-2170MHZ)	-0.65		
LTE-B34 (2010-2025MHZ)	0.13		
LTE-B38 (2570-2620MHZ)	1.04		
LTE-B39 (1880-1920MHZ)	-0.3		

9.2D&3D Lobe Diagram

GSM850



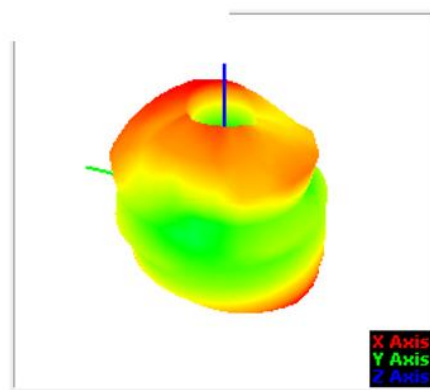
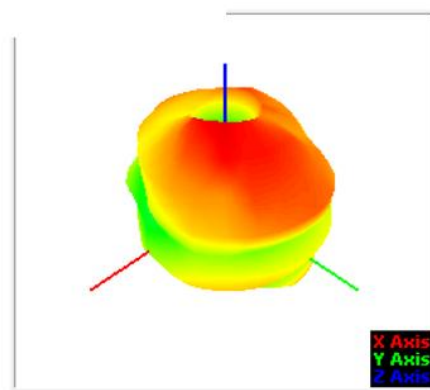
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-63.13
-68.61
-74.08
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-85.04
-90.51
-95.99



GSM900



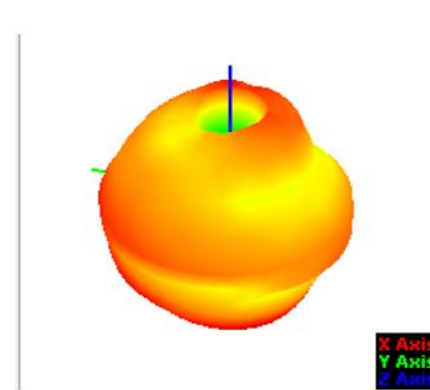
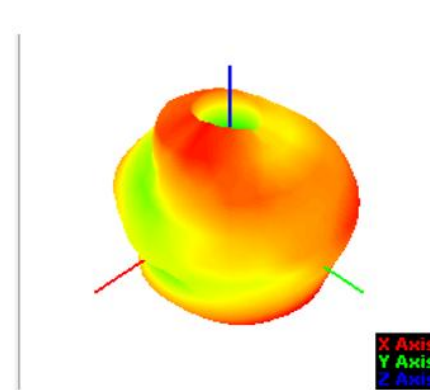
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-85
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-95.99



DSC1800



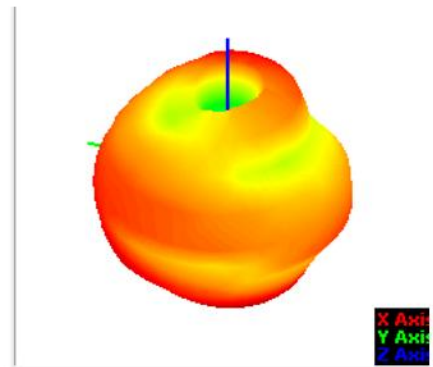
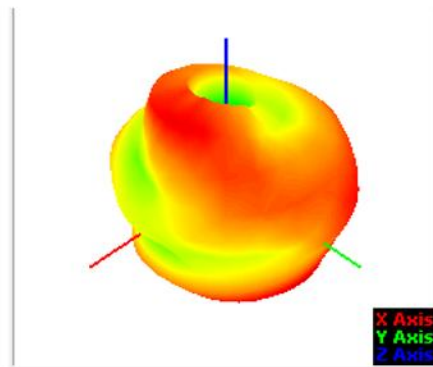
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-90.4
-95.99



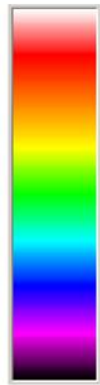
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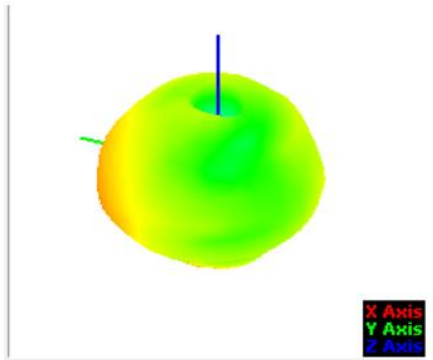
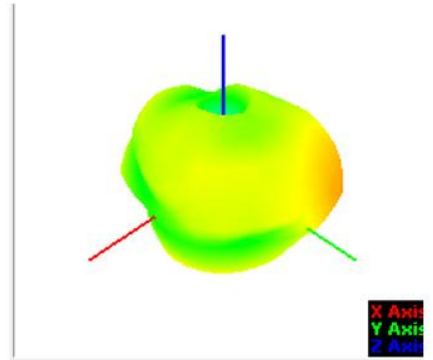
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-34
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-73.45
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-84.72
-90.35
-95.99



W1



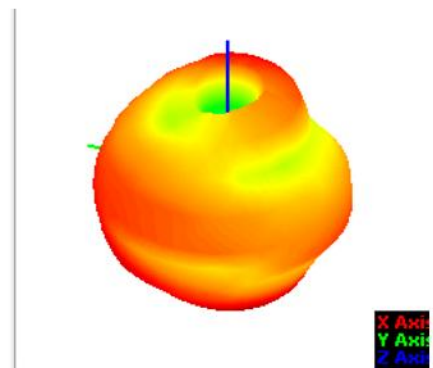
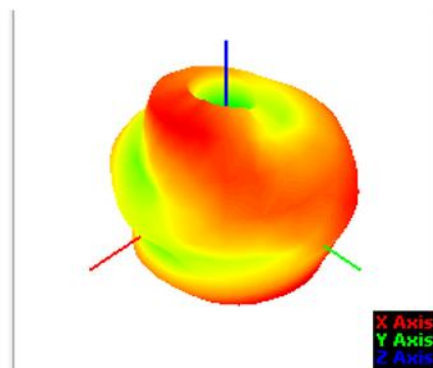
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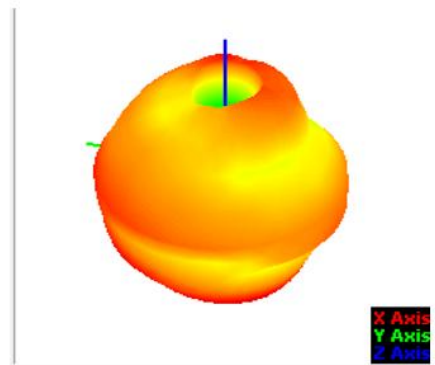
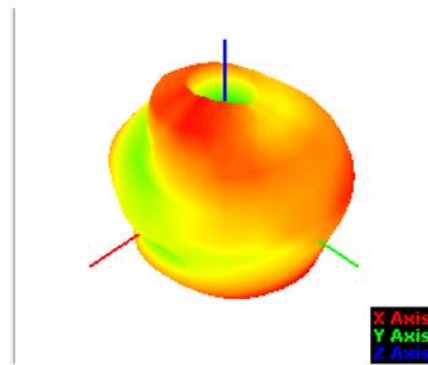
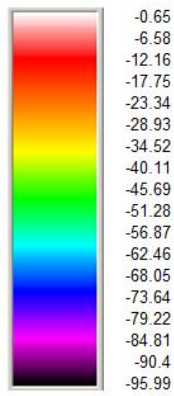
W2



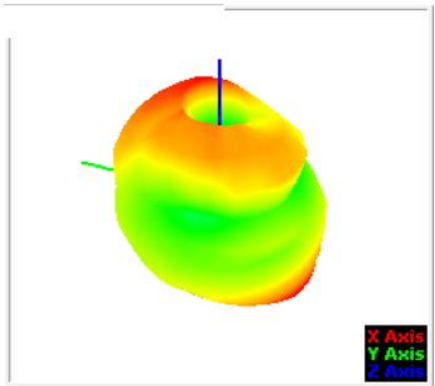
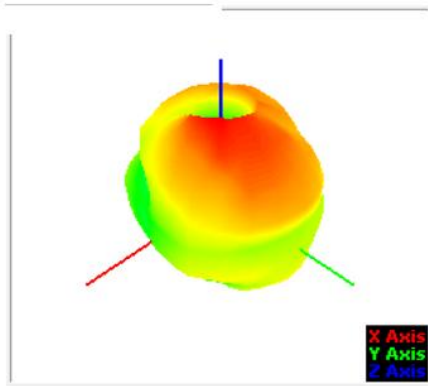
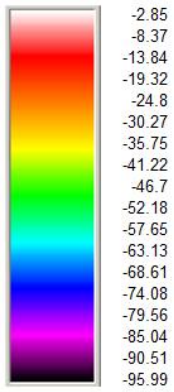
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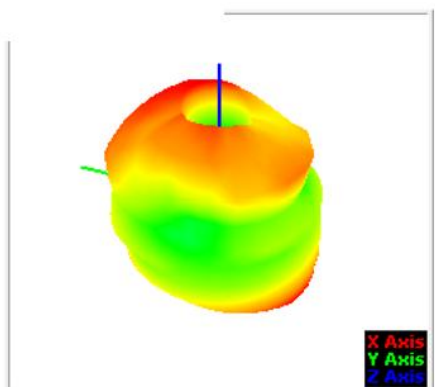
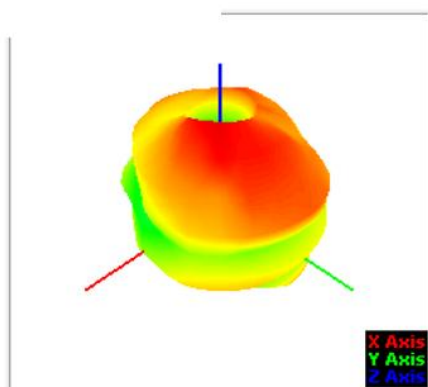
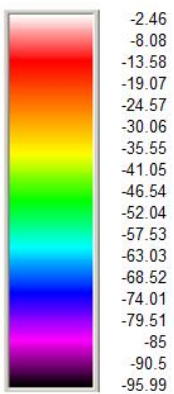
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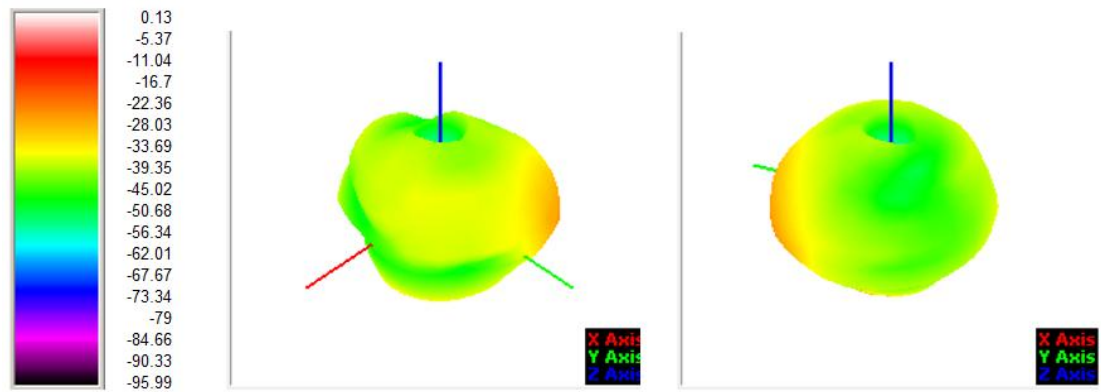
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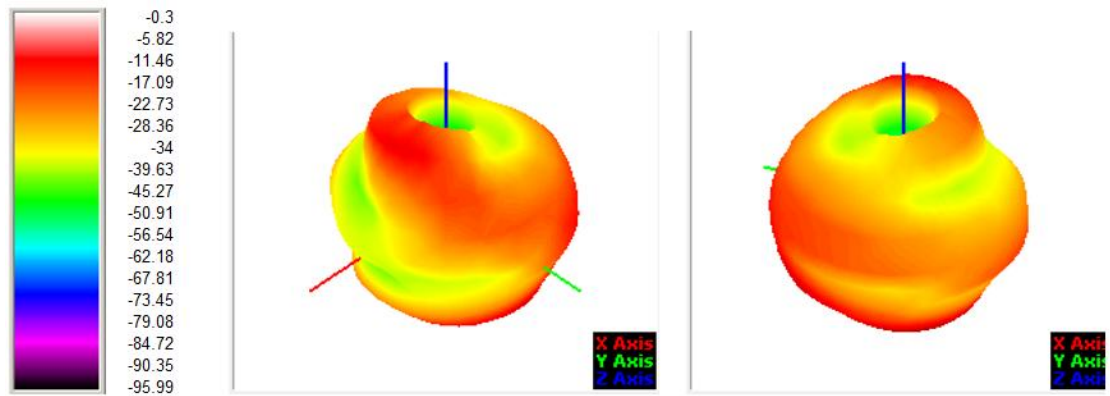
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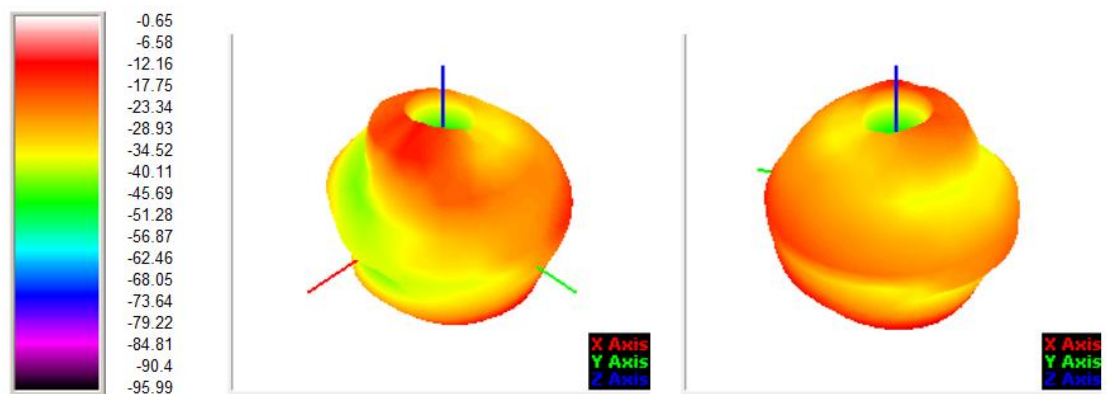
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FDD-B2



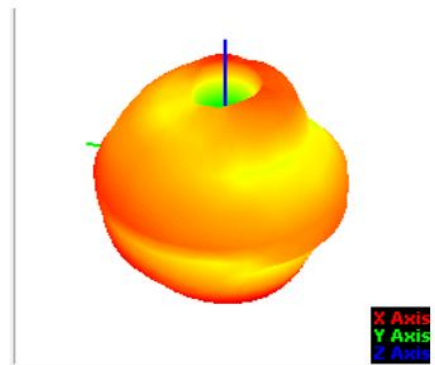
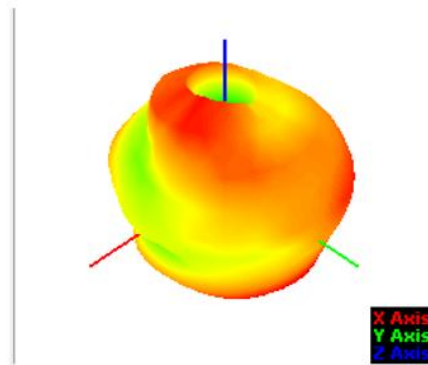
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FDD-B4



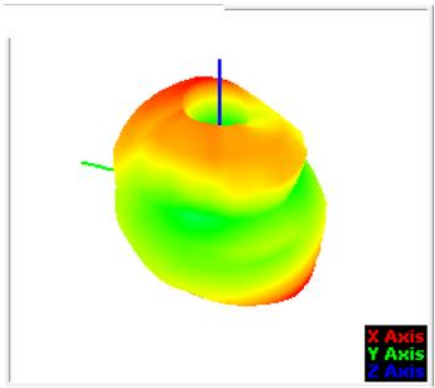
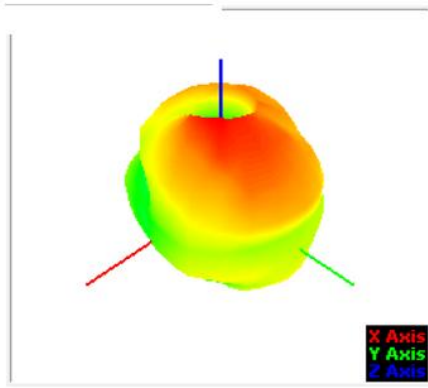
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FDD-B5



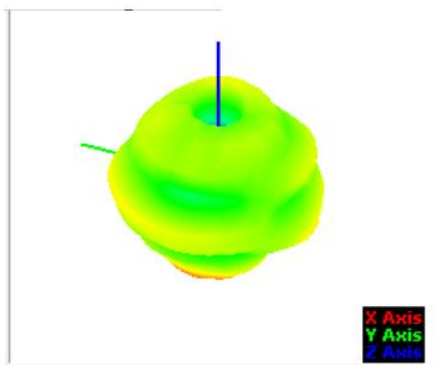
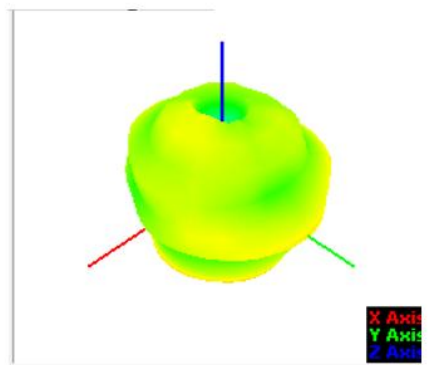
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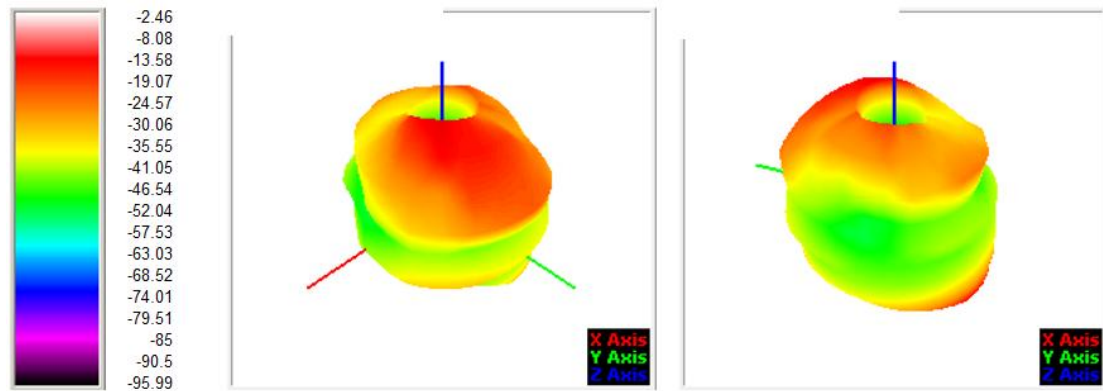
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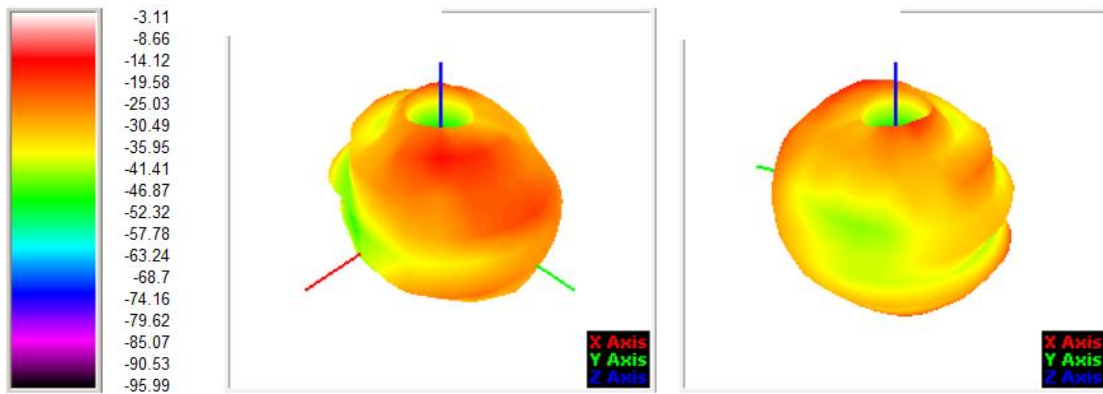
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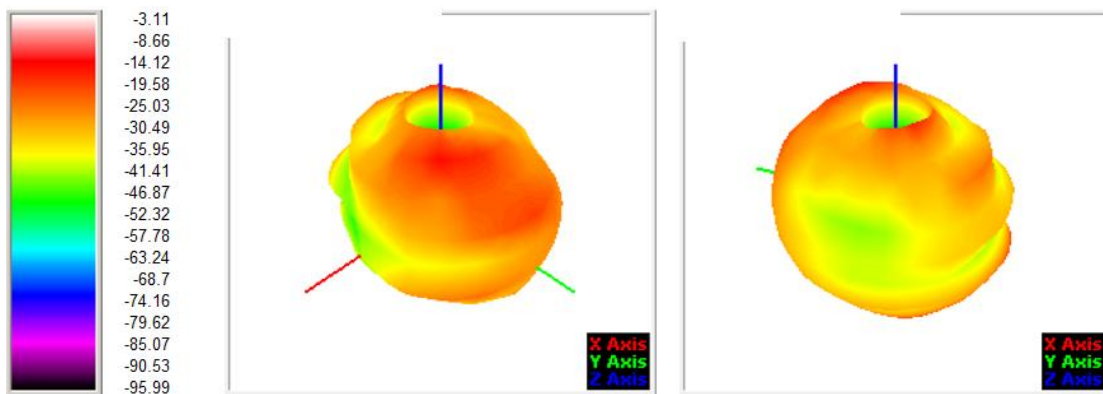
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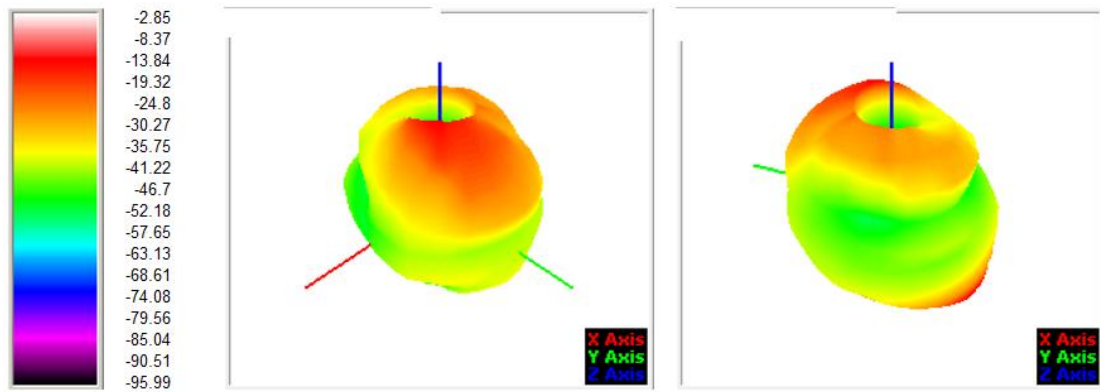
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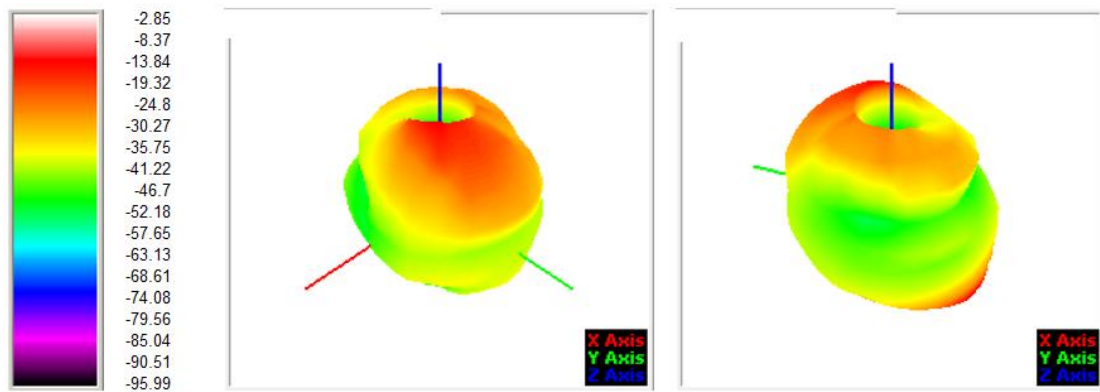
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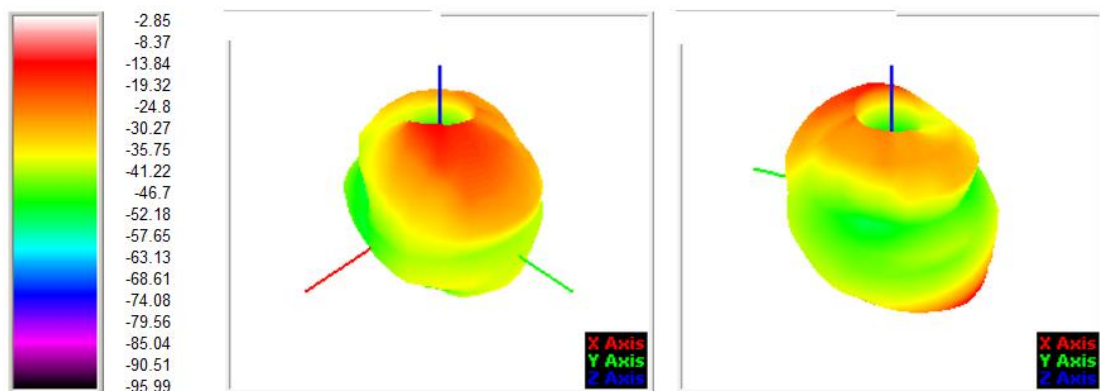
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FDD-B19



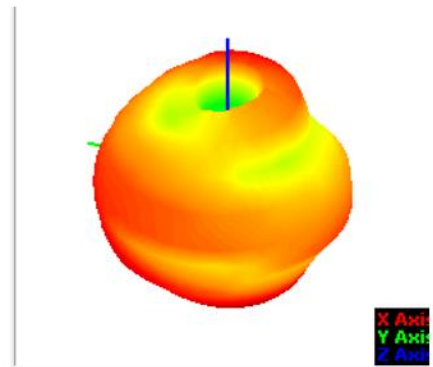
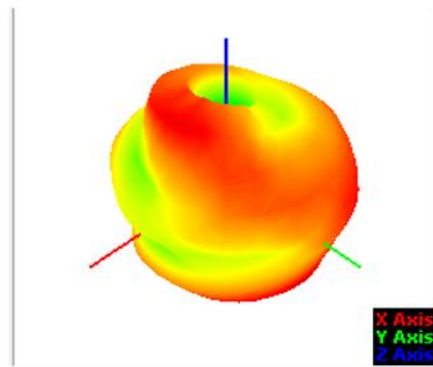
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FDD-B25



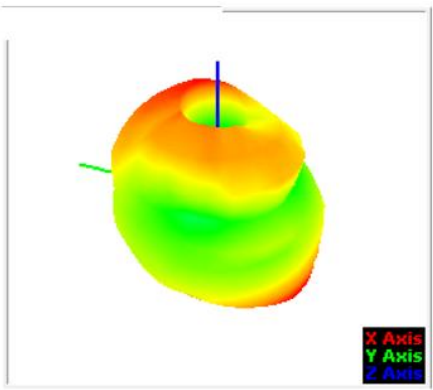
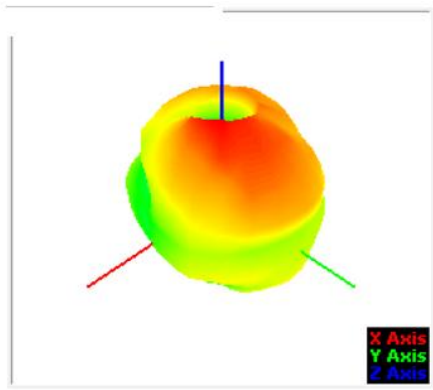
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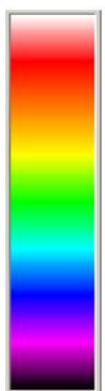
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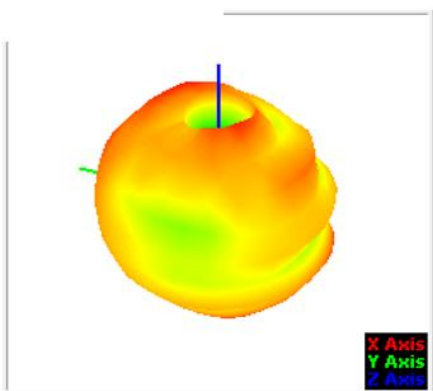
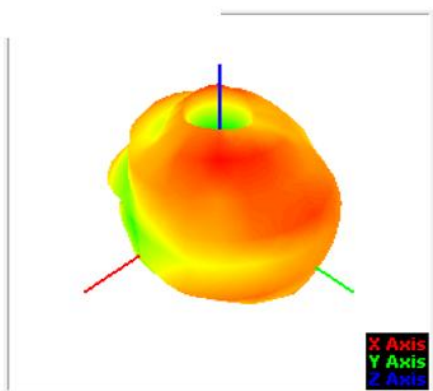
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FDD-B28



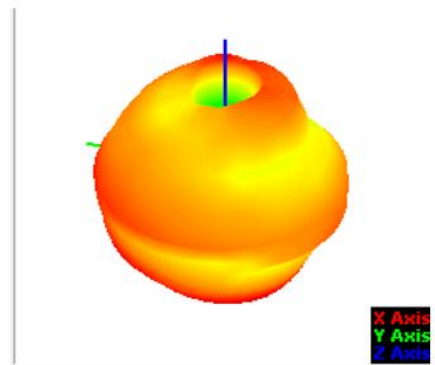
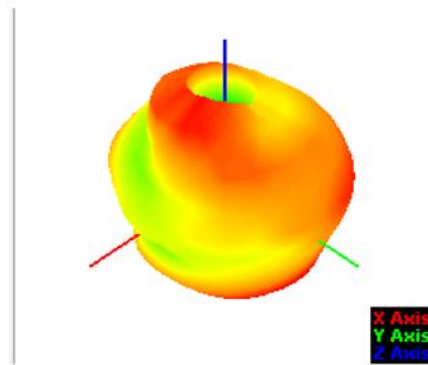
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FDD-B66



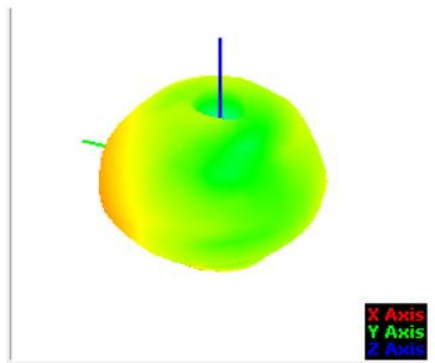
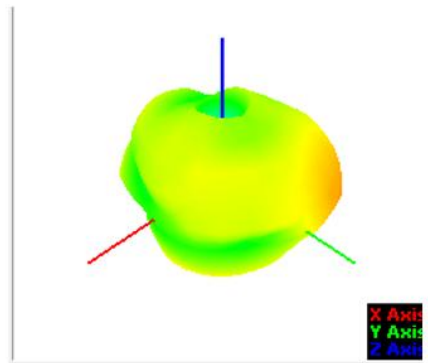
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-73.64
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-84.81
-90.4
-95.99



TDD-B34



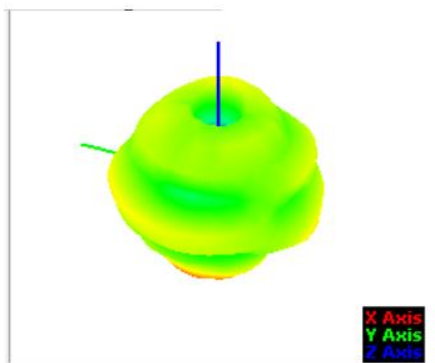
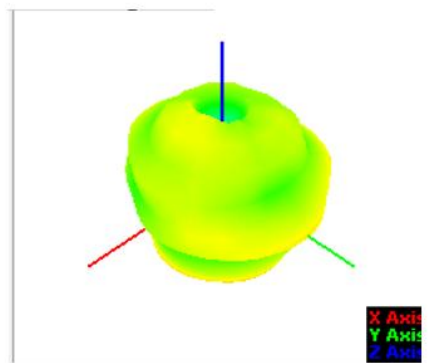
0.13
-5.37
-11.04
-16.7
-22.36
-28.03
-33.69
-39.35
-45.02
-50.68
-56.34
-62.01
-67.67
-73.34
-79
-84.66
-90.33
-95.99



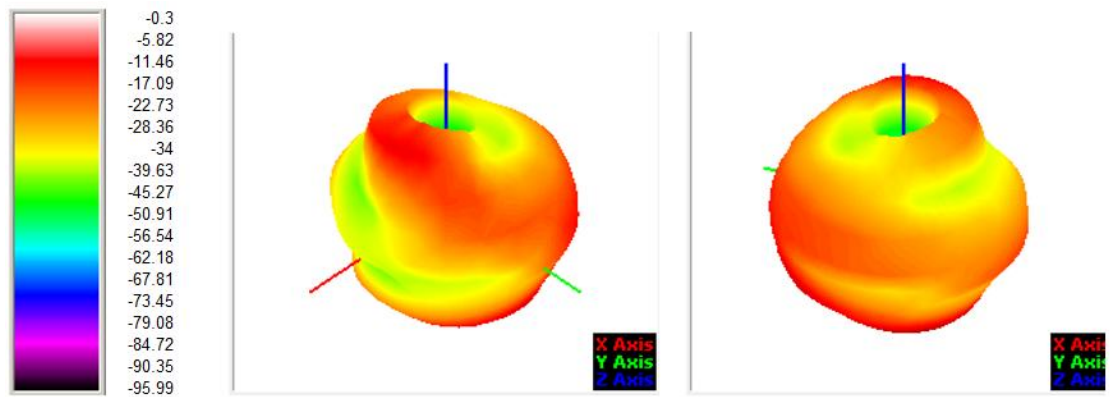
TDD-B38



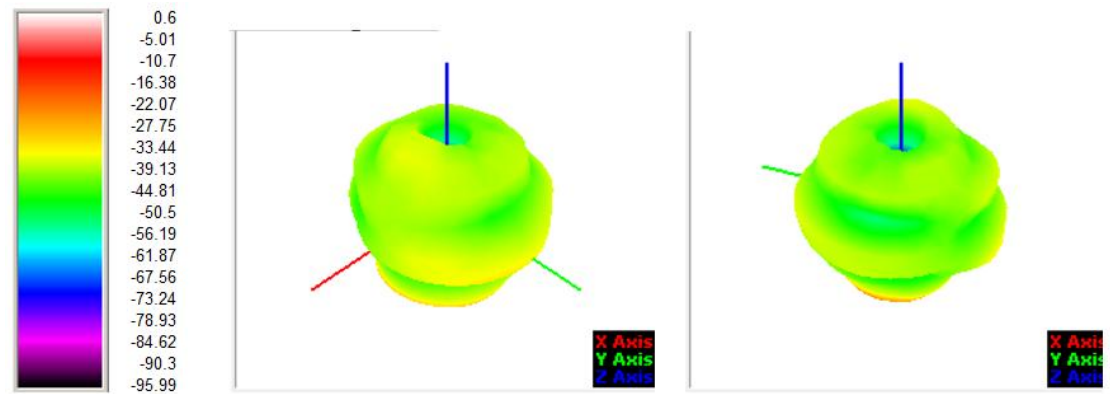
1.04
-4.56
-10.27
-15.99
-21.7
-27.42
-33.13
-38.85
-44.56
-50.27
-55.99
-61.7
-67.42
-73.13
-78.85
-84.56
-90.28
-95.99



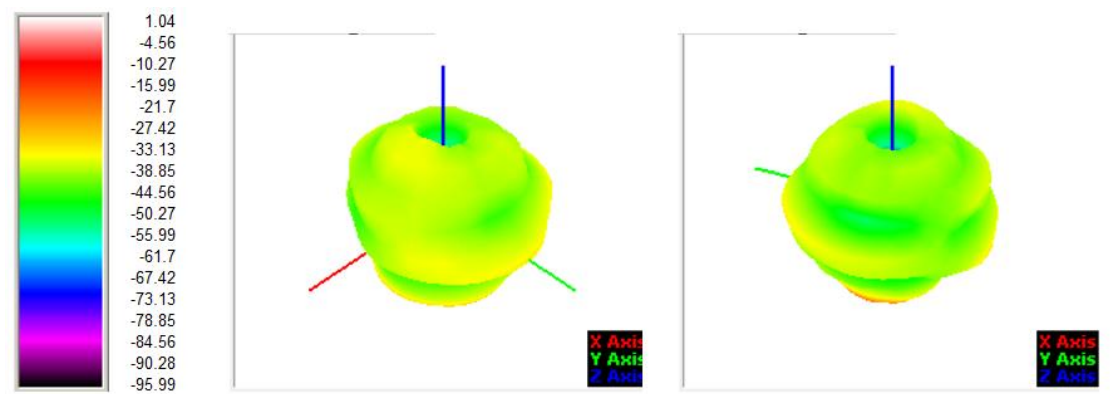
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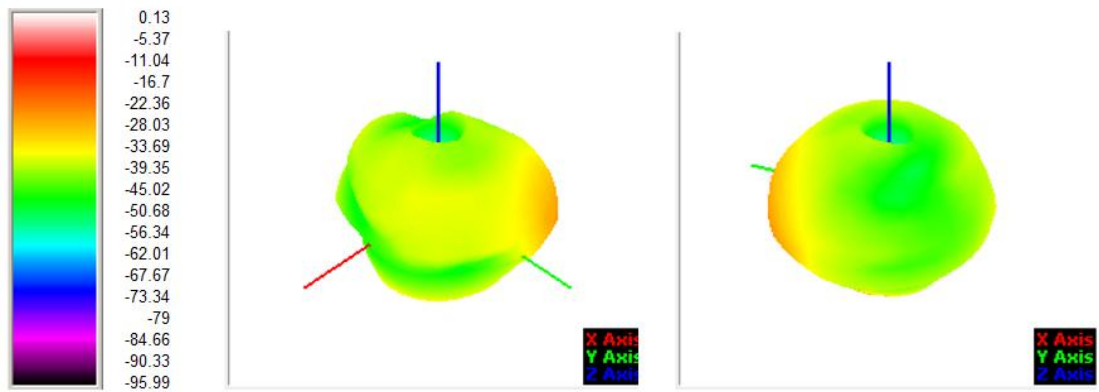
TDD-B40



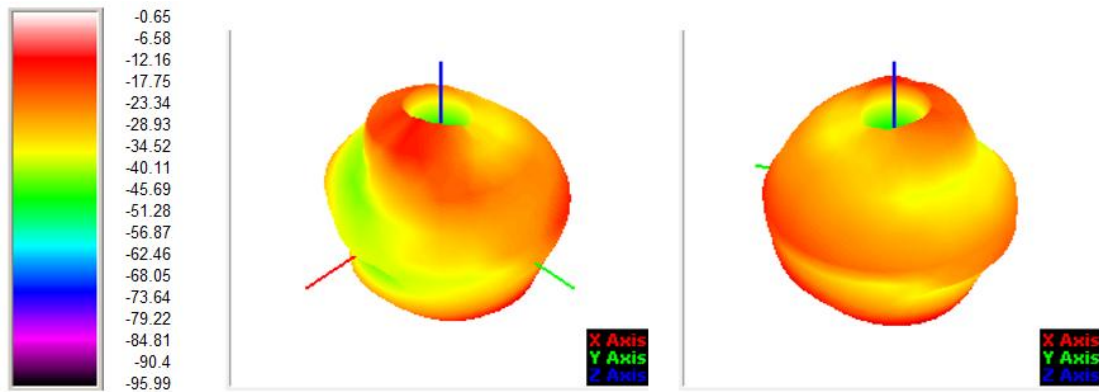
TDD-B41



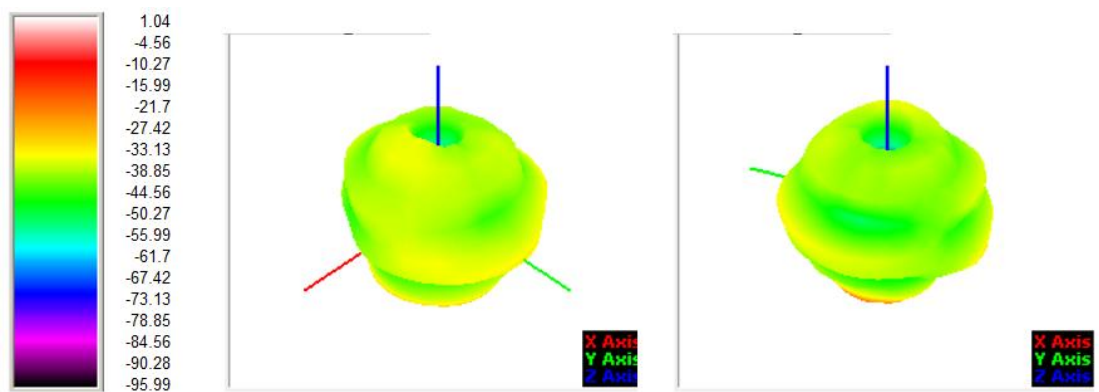
NR-N1



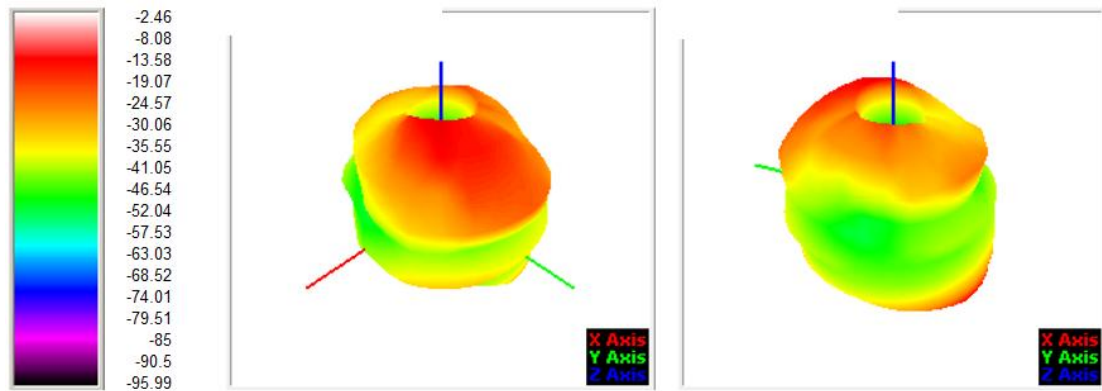
NR-N3



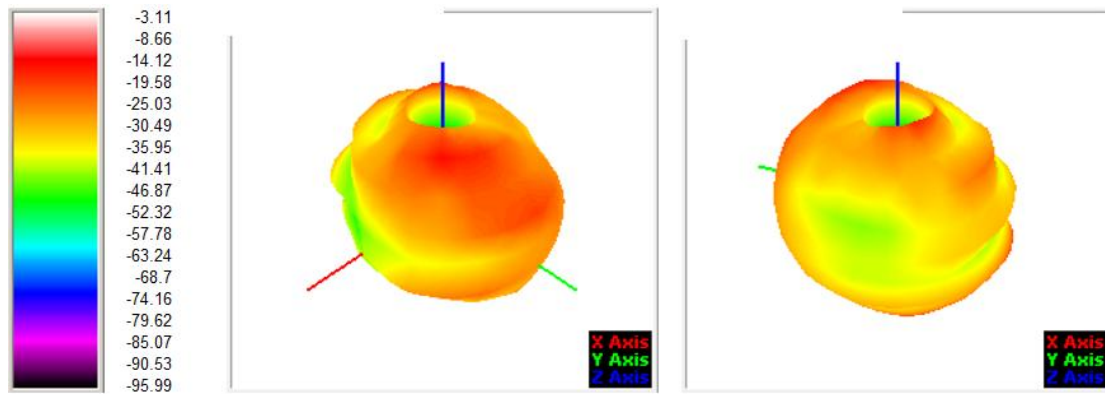
NR-N7



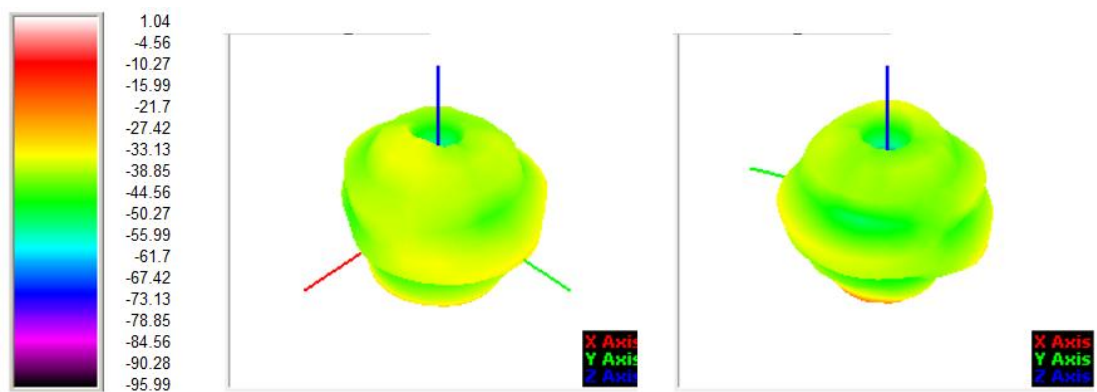
NR-N8



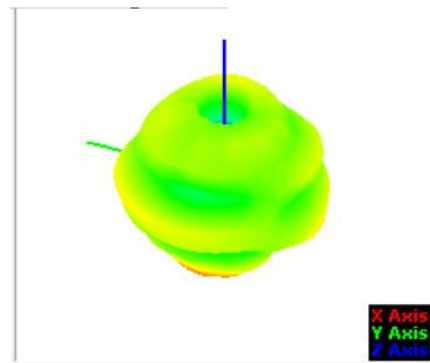
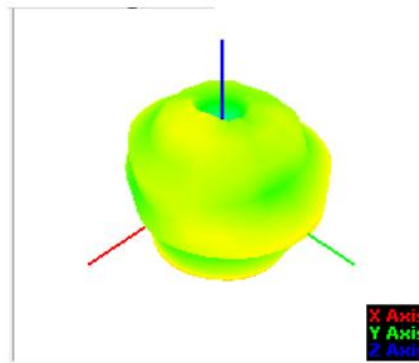
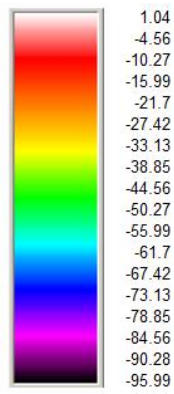
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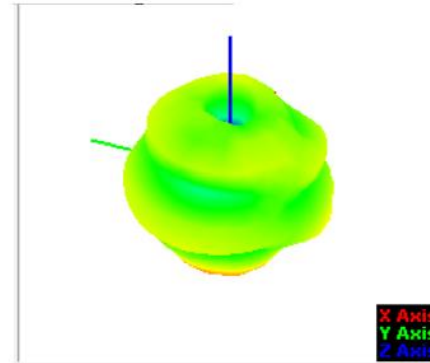
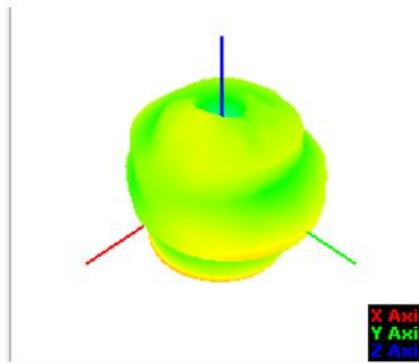
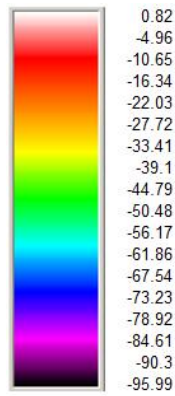
NR-N38



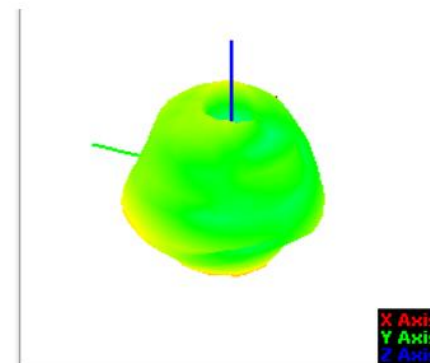
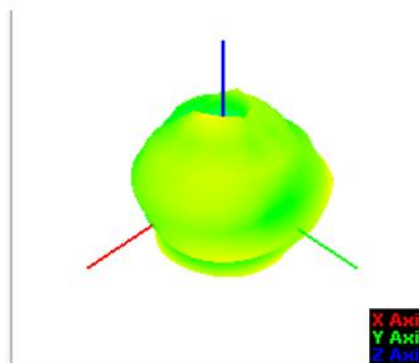
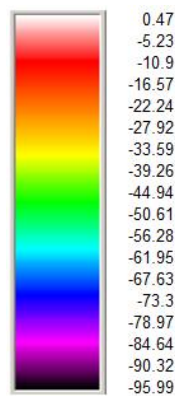
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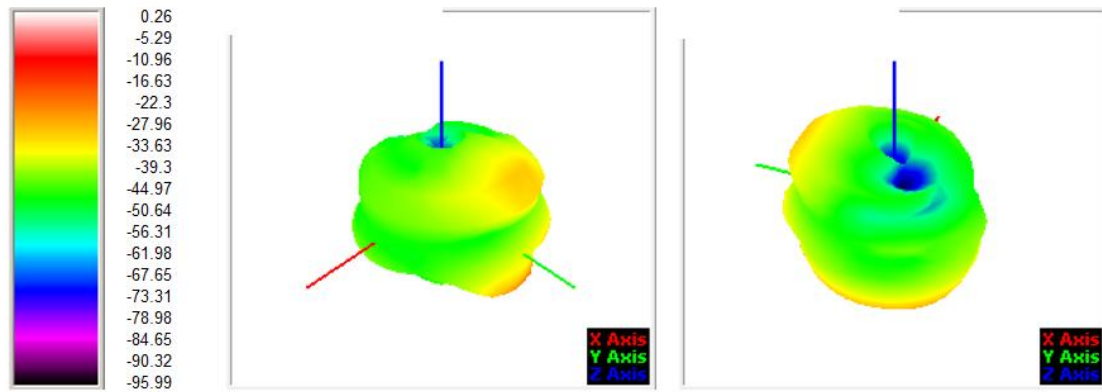
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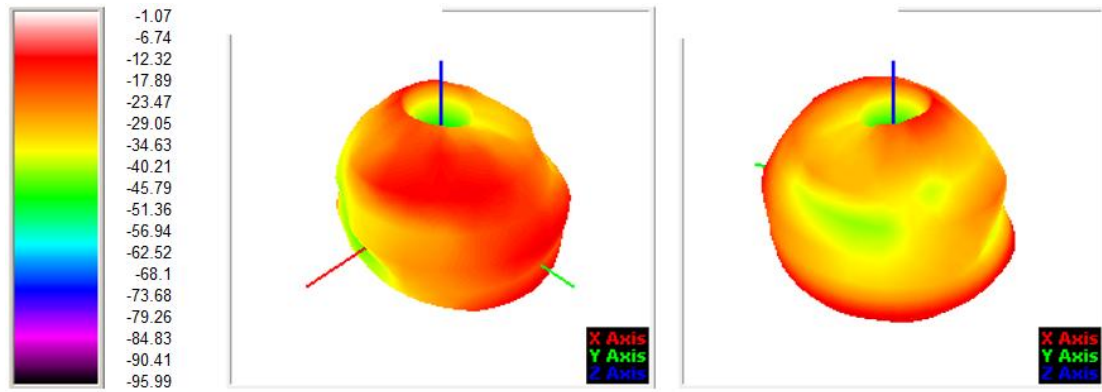
NR-N78



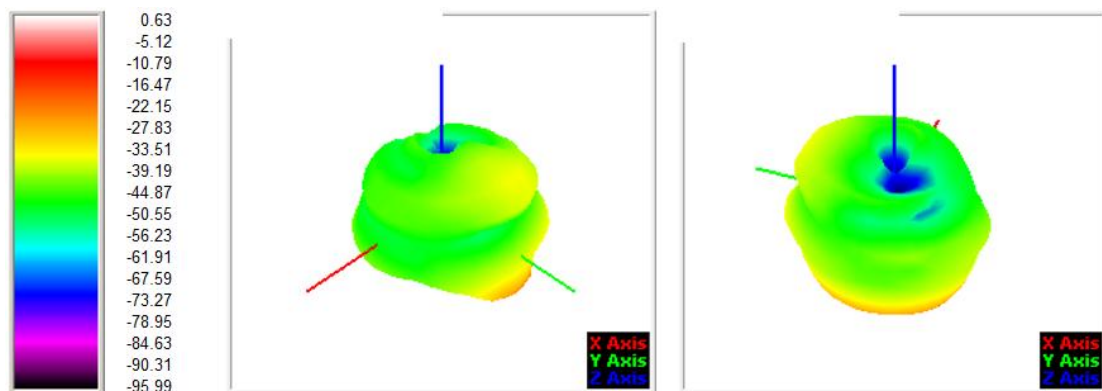
ANT6-GPS-L1



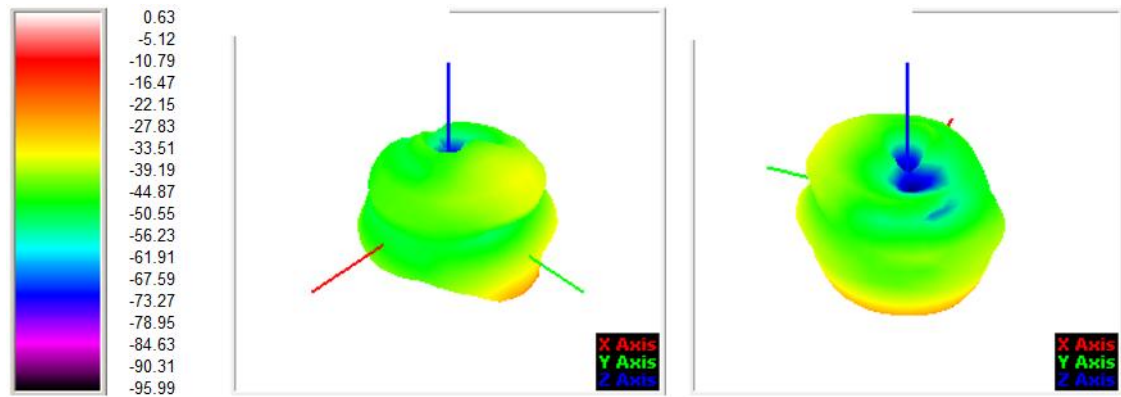
ANT7-GPS-L5



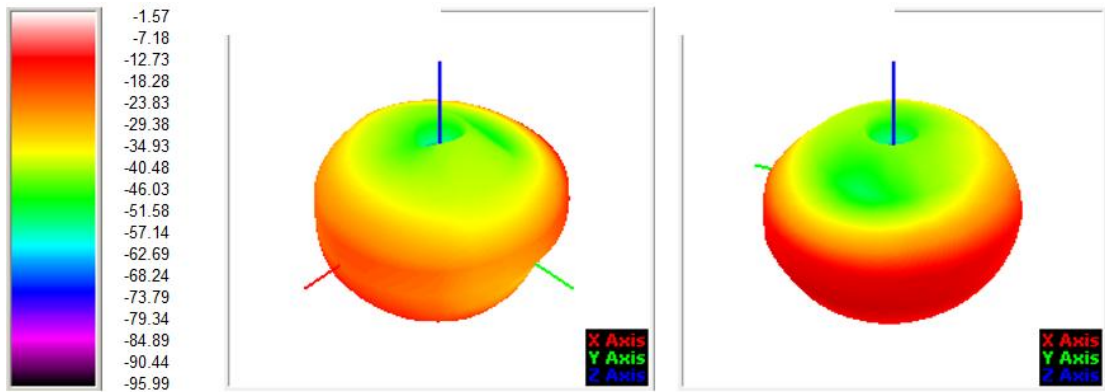
ANT6-BT



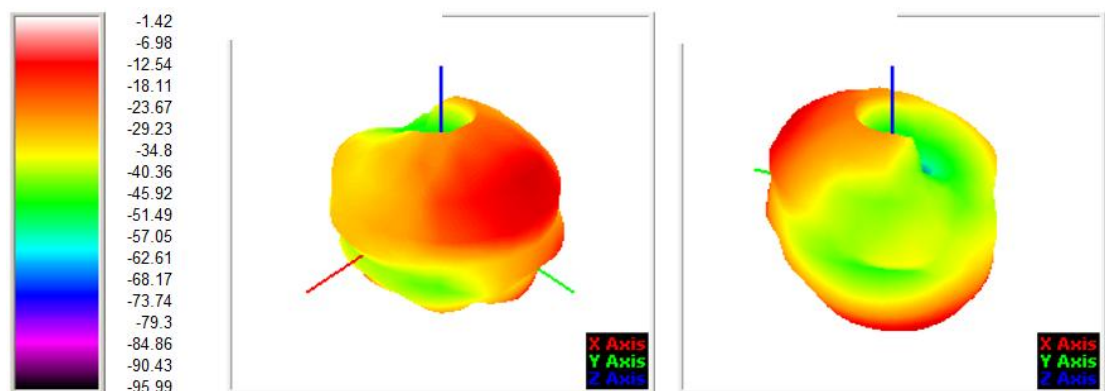
ANT6-2.4G-WIFI



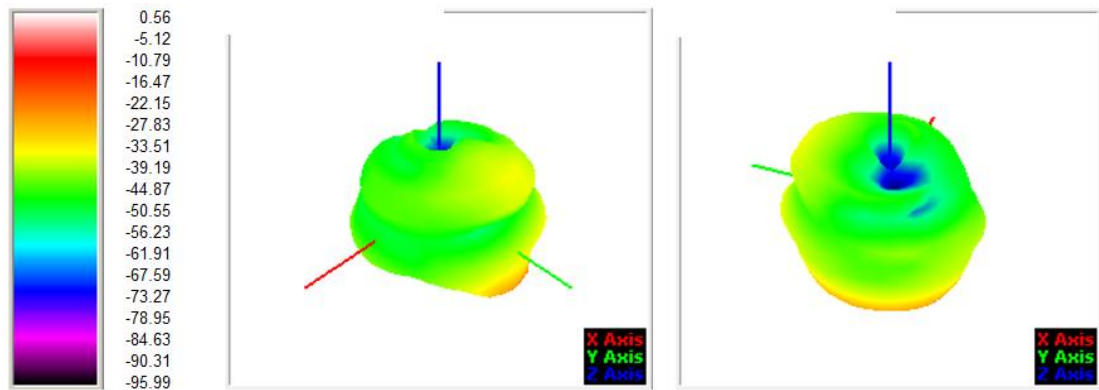
ANT6-5.1G-WIFI



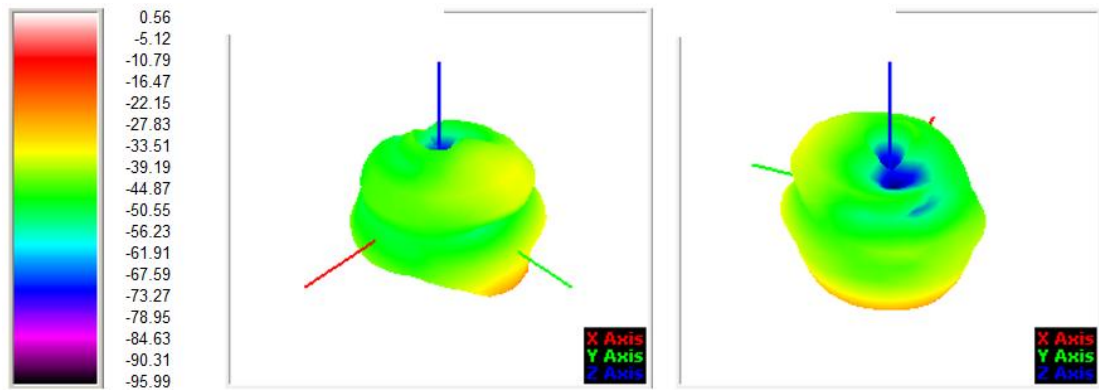
ANT6-5.8G-WIFI



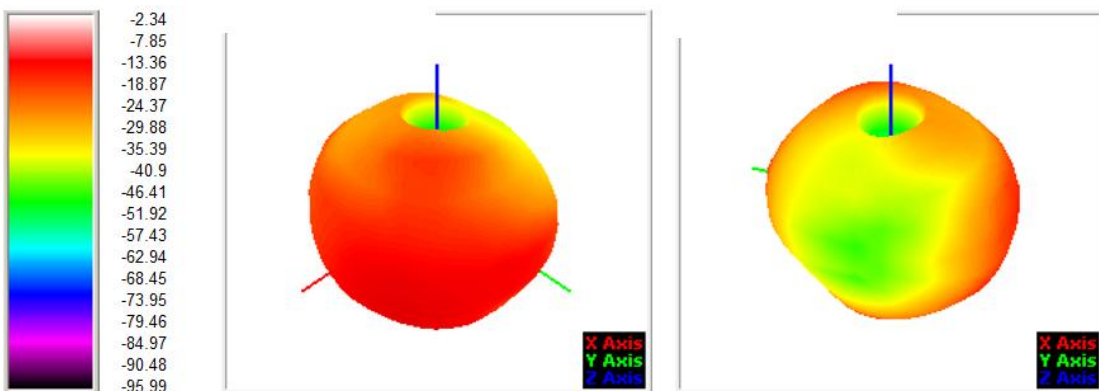
ANT7-BT-WIFI

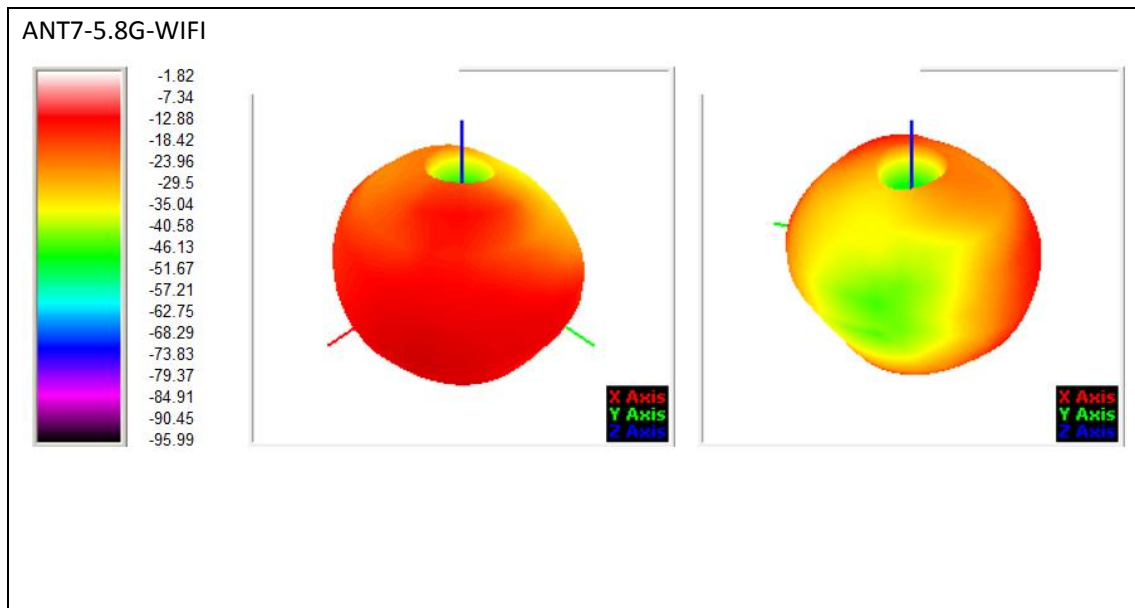


ANT7-2.4G-WIFI



ANT7-5.1G-WIFI





10.Introduction to Antenna Information

S138B	
Antenna type and frequency band	MAIN ANTENNA(<u>PIFA</u>):2G/3G/4G/5G DIV ANTENNA(<u>PIFA</u>):2G/3G/4G/5G GPS/WIFI/BT ANTENNA(<u>PIFA</u>):L1/L5/2.4GWIFI/ 5GWIFI/BT
Antenna materia	FPC