

規 格 承 認 書  
SPECIFICATION FOR APPROVAL

客戶名稱：  
CUSTOMER:

客戶料號：  
CUSTOMER NO:

品 名  
PATR NAME: 4G/5G +WIFI+GNSS Combination Antenna

RS 料號  
RS NO: M191.1.9.333

SUPPLIER SIGNATURE (供方確認)		
APPROVAL	CHECK	DESIGN
king	Frank	HZH

CUSTOMER APPROVED BY (客戶確認)		
APPROVAL	CHIEF	SUPERVISOR

产品照片  
Product Photos



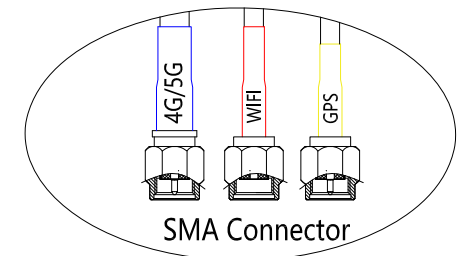
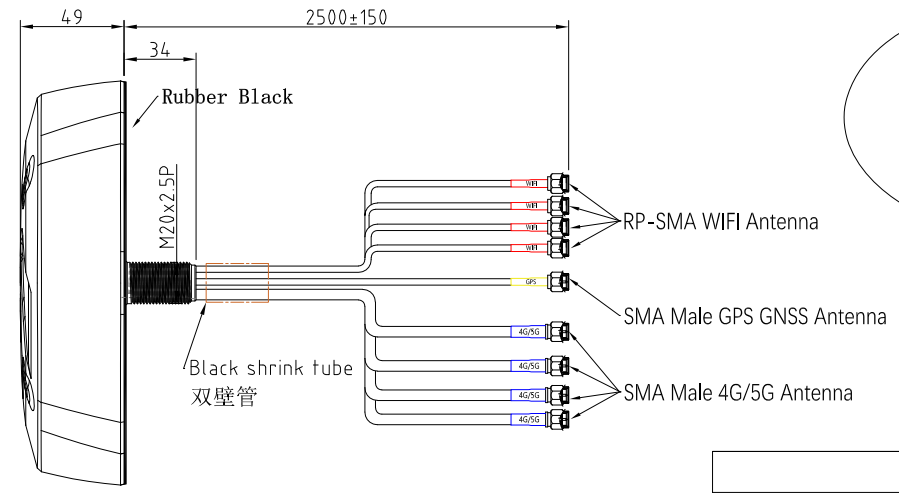
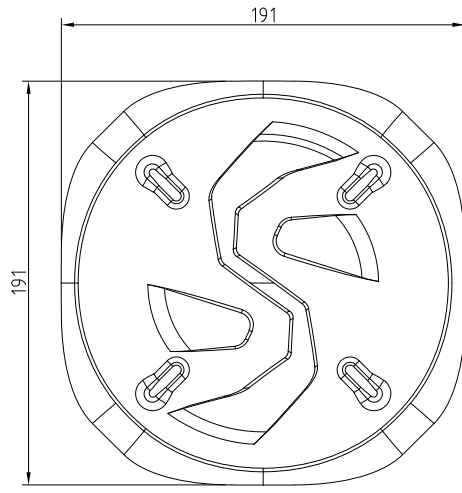
"M" aluminum bracket installation



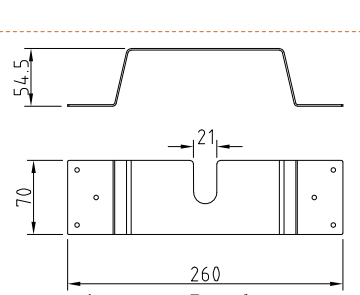
"L" aluminum bracket installation



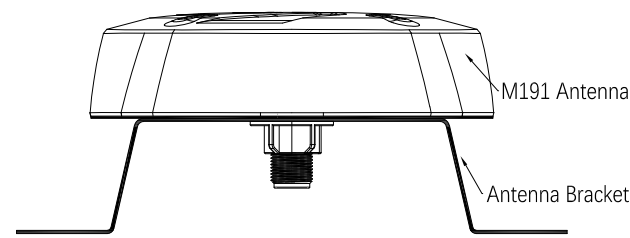
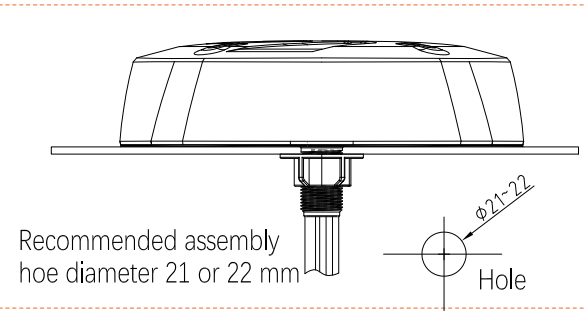
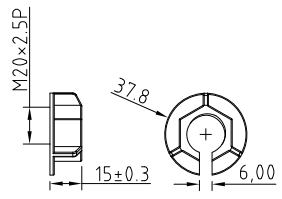
M20 screw installation



4G/5G Blue Shrink tube  
 WIFI RED Shrink tube  
 GPS yellow Shrink tube



Antenna Bracket



M191 Antenna installation methods

Electrical Properties	
Frequency Range	4x 600~6000MHZ 4x 2.4~7.125GHZ 1x 1575.42~1609MHZ
Impedance	50 Ω
V.S.W.R.	5G ≤3.0 WIFI ≤2.0 GPS ≤2.0
Radiation	Omni
Gain	4G/5G:6/7/10dBi WIFI:6/7dBi GPS:28dBi
Polarization	Vertical

Mechanical Properties	
Whip	PC
Standard Connector	SMA
Waterprooflevel	IP67
Operating Temp	-φ40°~ +85°

BOM				
NO	Name	Material	Finish	QTY
1	Housing	PC	BLACK	1
2	RS200 cable(5G)	PVC	BLACK	4
3	RS100 cable (WIFI)	PVC	BLACK	4
4	RG174 cable (GPS)	PVC	BLACK	1
5	5G/4G Antenna	PIFA	Silver	4
6	WIFI Antenna	PIFA	Silver	4
7	GPS Antenna			1
8	SMA Male (5G)	BRASS	GOLD	4
9	RP-SMA Male (WIFI)	BRASS	GOLD	4
10	SMA Male (GPS)	BRASS	GOLD	1
11	Rubber-1	Silicone Rubber	BLACK	1
12	Rubber-2	Silicone Rubber	BLACK	1
13	NUT	PA66	BLACK	1
14	Shrink tube	PET		5

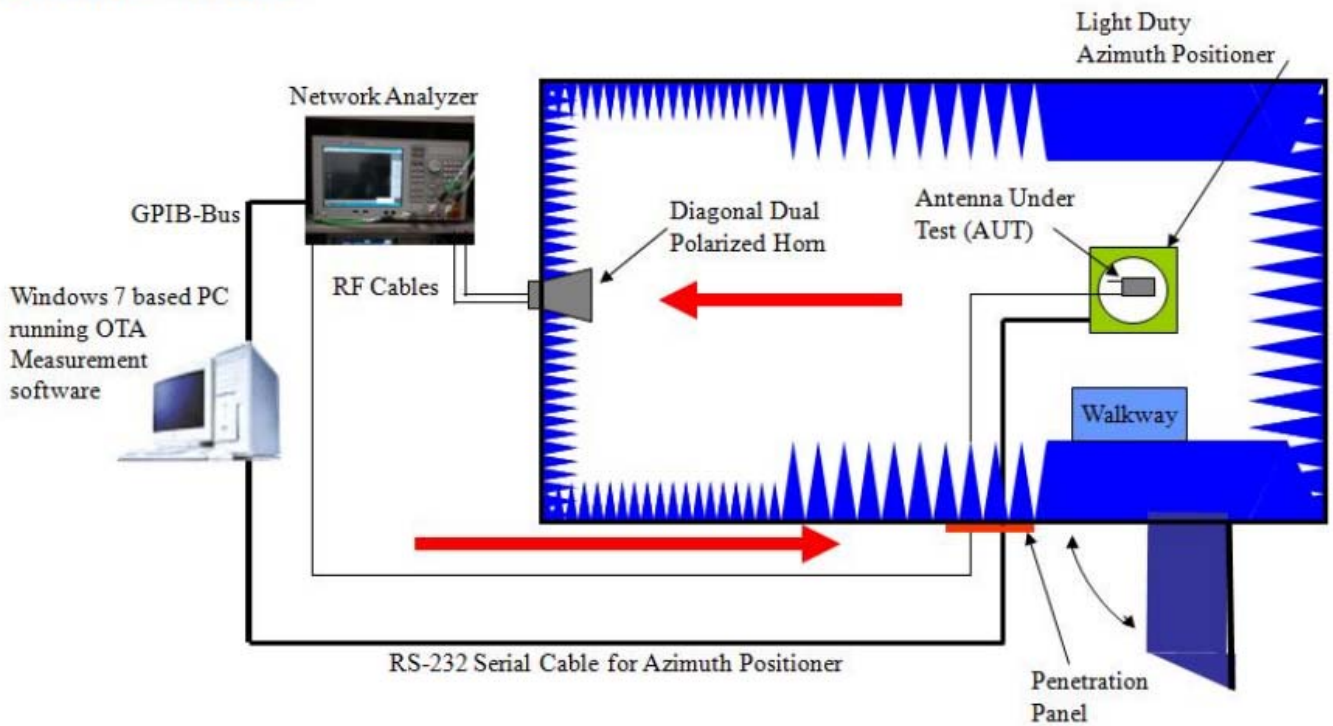
THIRD ANGLE PROJECTION 	DRAWN BY	li	MATERIAL:		PART NO:	M191.M1.9.333
	CHECKED BY		FINISH:	BLACK	TITLE:	5G 4G/WIFI/GPS 9in1 Antenna
	APPROVED BY	King	UNIT:	mm		
Tolerance	.X ±0.1	DATE:	22.12.6	SCALE:	1/1	
	.XX ±0.05					
	.x ±1°					

Dongguan Run Shun /www.rsantenna.com

产 品 规 格 概 述  
Overview of product specification

<b>Electrical properties</b>	
4G/5G Frequency	600~6000MHZ
WiFi Frequency	2.4~2.5GHz/4.9~7.125GHz
GPS/GNSS Frequency	1575~1610MHz
Impedance	50 ohm Nominal
Return Loss	-10 dBi
VSWR Port 1&2	2.5:1 MAX
4G/5G Gain WiFi Gain GPS & GNSS	6/7/10dBi 6/7 dBi 28 dBi
Connector	SMA Male/RP SMAL Male
Cable length	RS031 BLACK 2 Meter
Efficiency (%) 4G/5G	600~2700MHz: 46%~97% 3000~4000MHz:62%~86% 4000~6000MHz:55%~96%
Efficiency (%) WiFi	2.4~2.5GHz :70%~81% 4.9~5.8GHz:55%~63% 6.0~7.3GHz:75%~81%
<b>Mechanical Properties</b>	
Radome	UV Resistant PC
Operating Temp	-40°C to +85°C
Radome Color	Black

## Passive mode

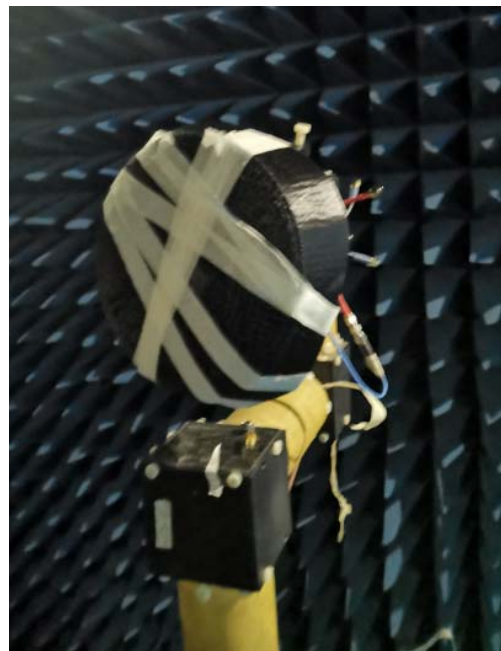
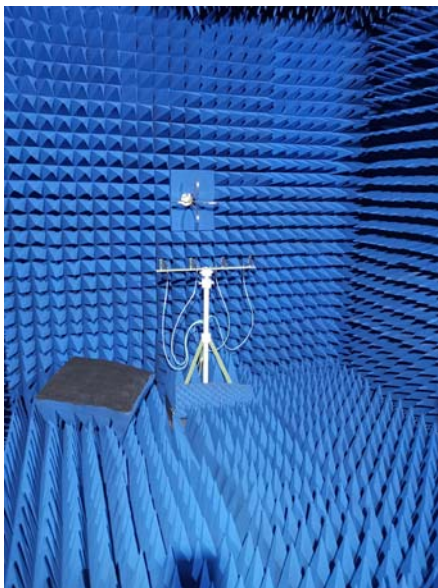


### TEST INSTRUMENT :

1. AGILENT E5071C NETWORK ANALYZER
2. 3D OTA Chamber(WanShih)

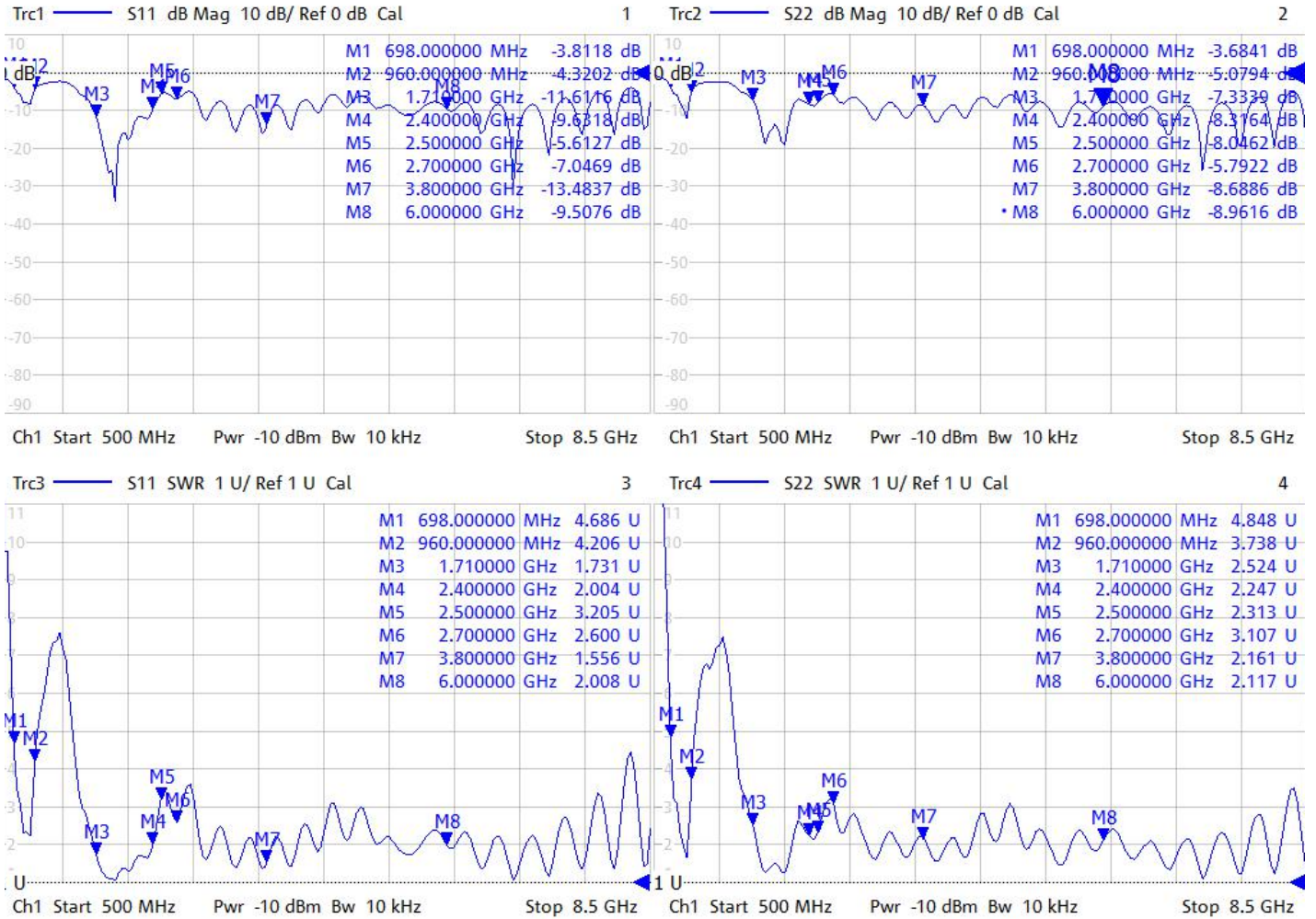
### Anechoic Chamber External Dimensions

(L x W x H): 8m x 4m x 4m



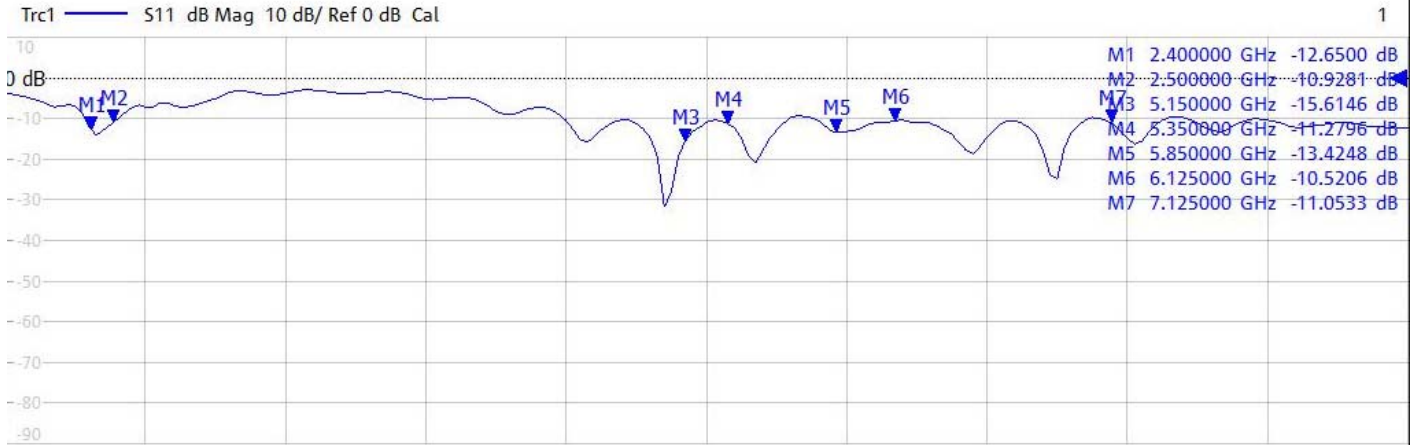
# 4G/5G VSWR Cable length 20CM

12/22/2022 2:39:47 PM  
1328.5170K92-101595-Kd



# WiFi VSWR Cable length 20CM

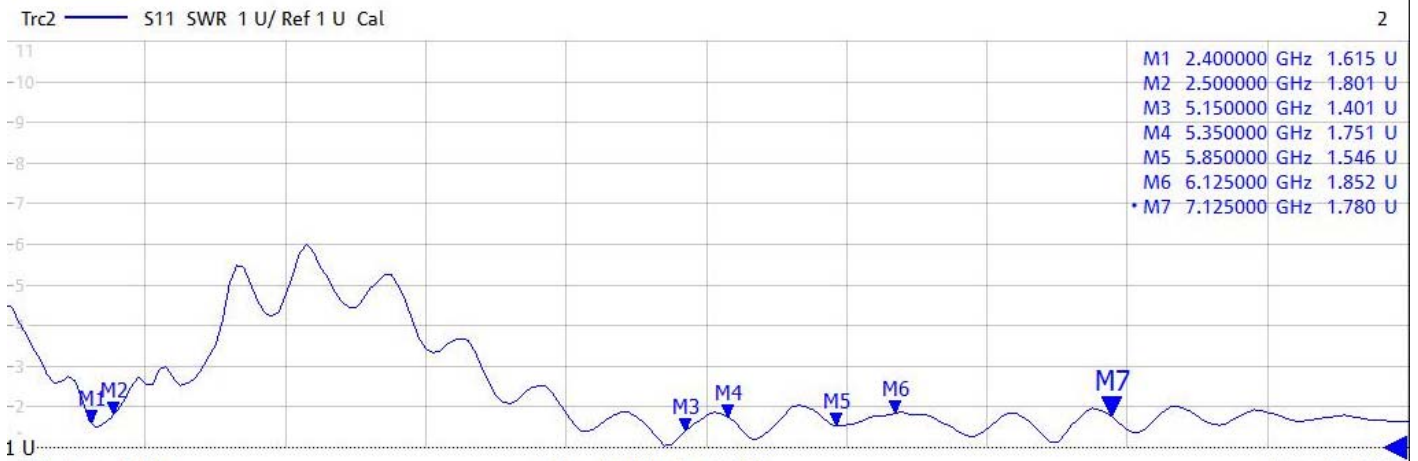
12/22/2022 2:43:42 PM  
1328.5170K92-101595-Kd



Ch1 Start 2 GHz

Pwr -10 dBm Bw 10 kHz

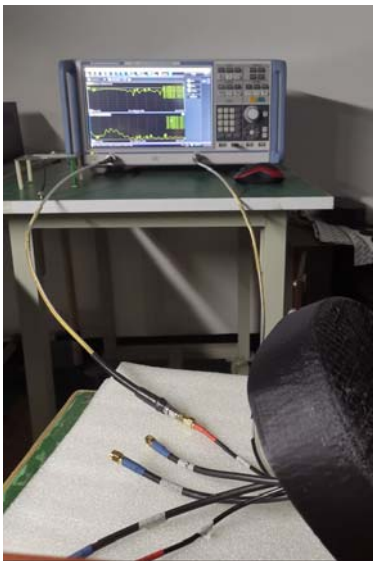
Stop 8.5 GHz



Ch1 Start 2 GHz

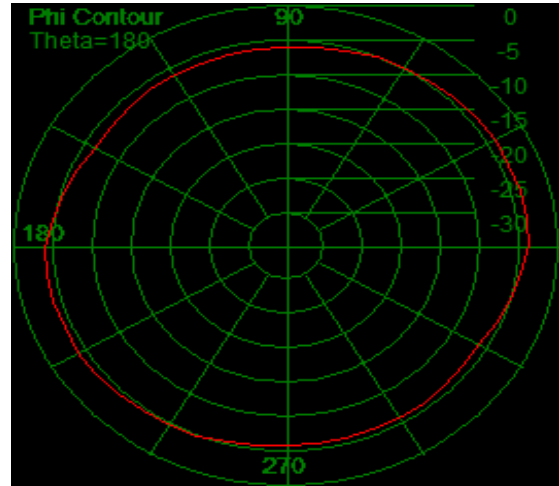
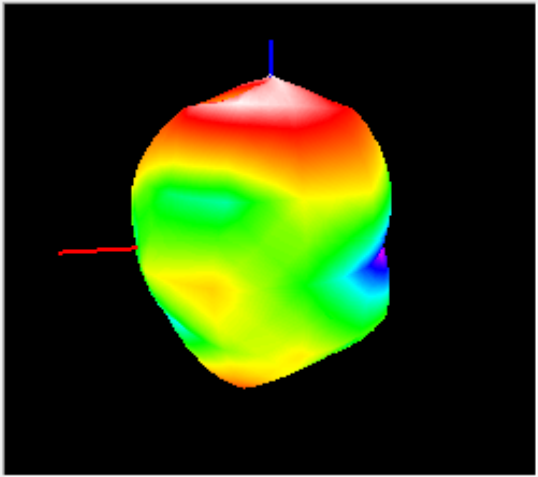
Pwr -10 dBm Bw 10 kHz

Stop 8.5 GHz

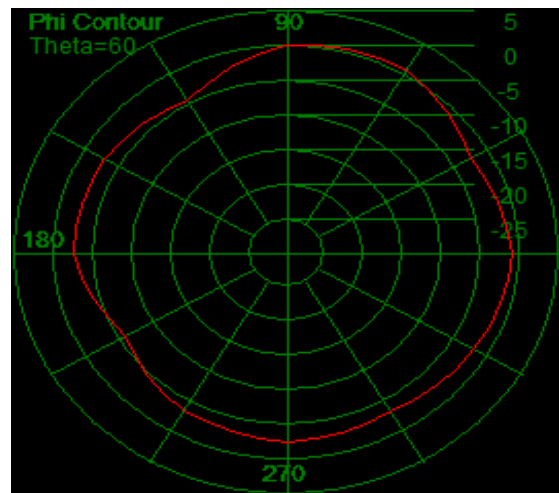
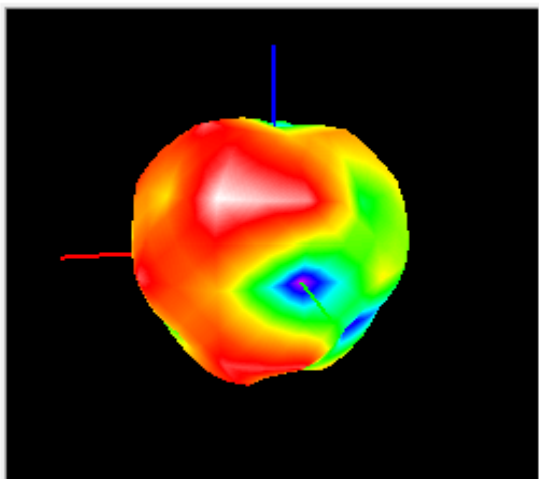


4G/5G Radiation Patterns

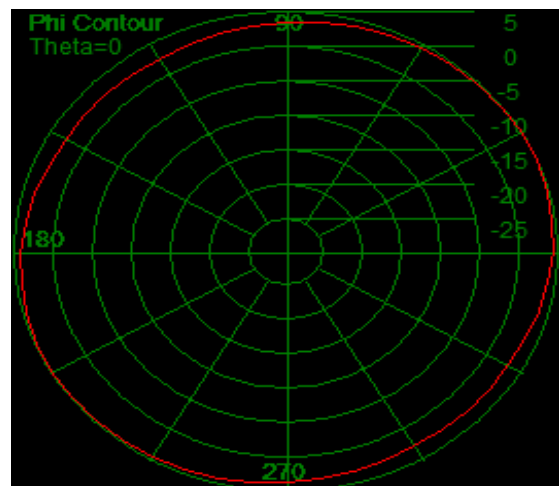
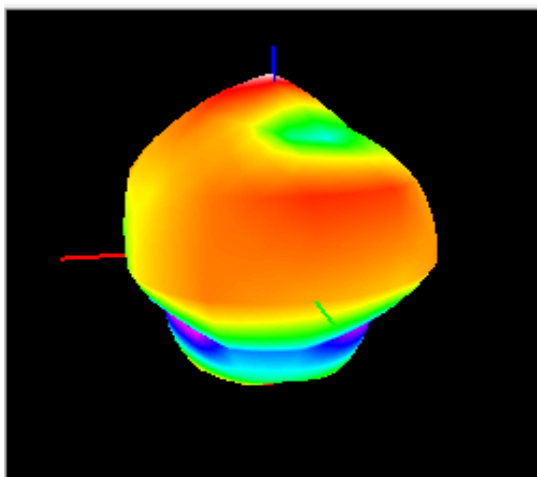
600MHz



698MHz



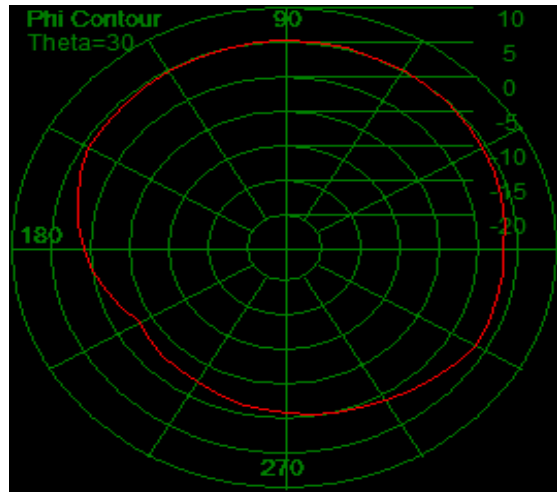
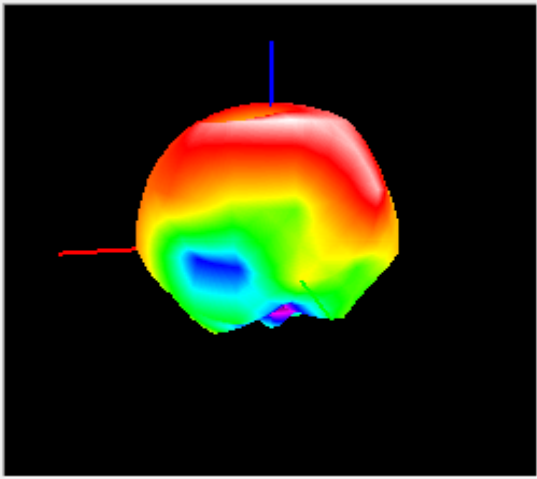
960MHz



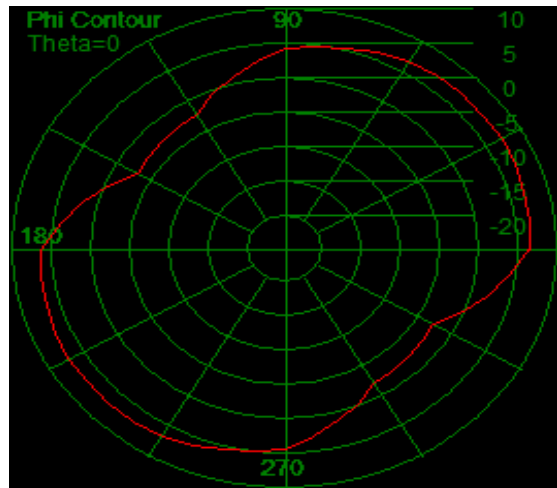
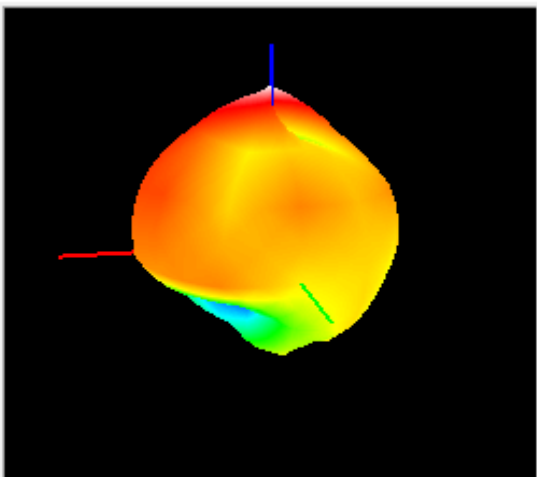


4G/5G Radiation Patterns

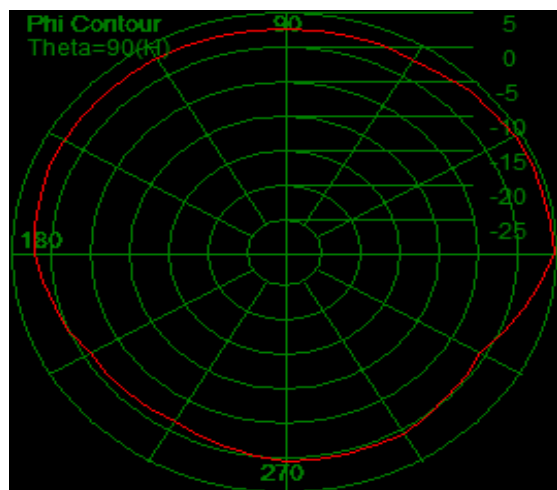
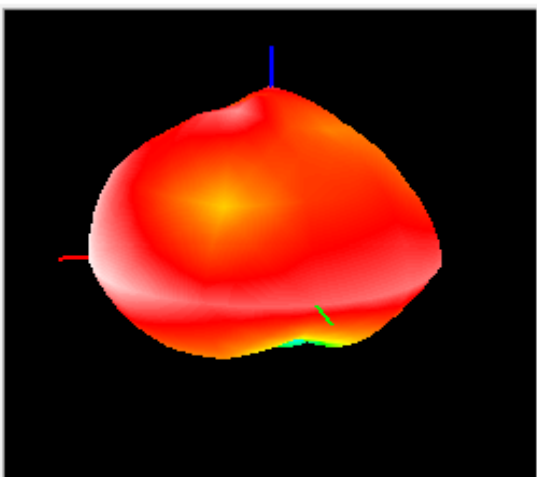
1710MHz



2170MHz

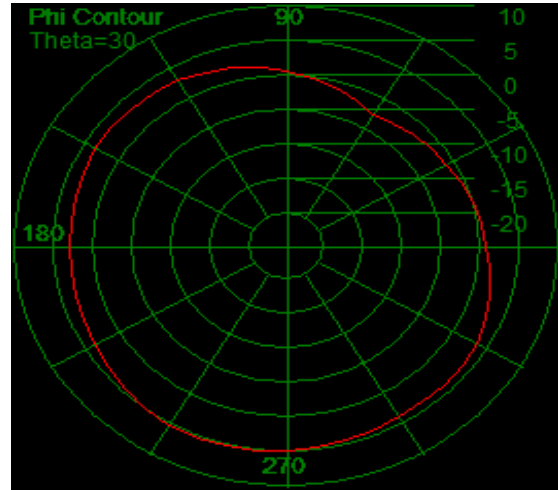
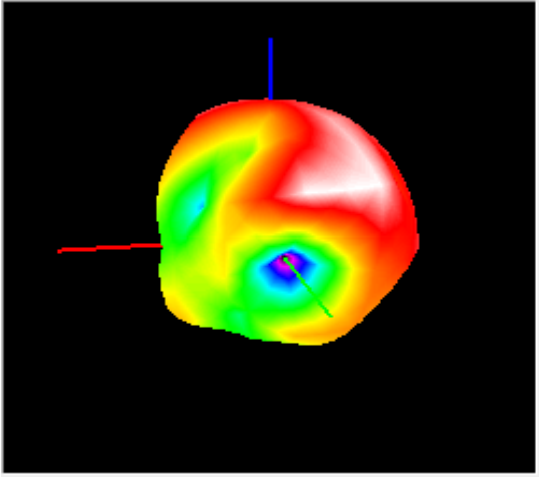


2700MHz

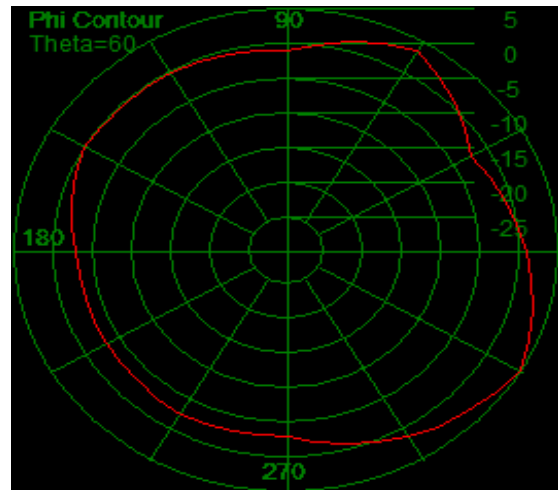
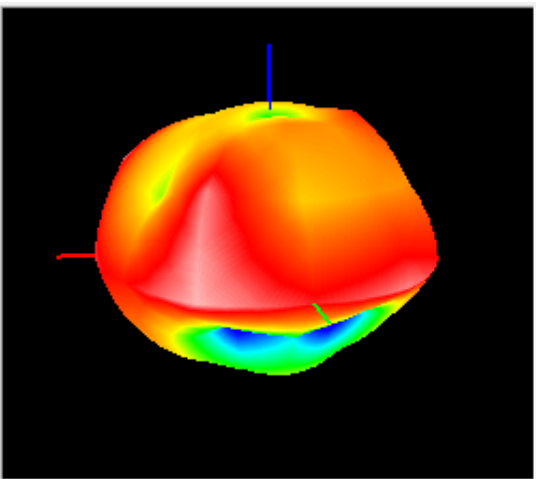


4G/5G Radiation Patterns

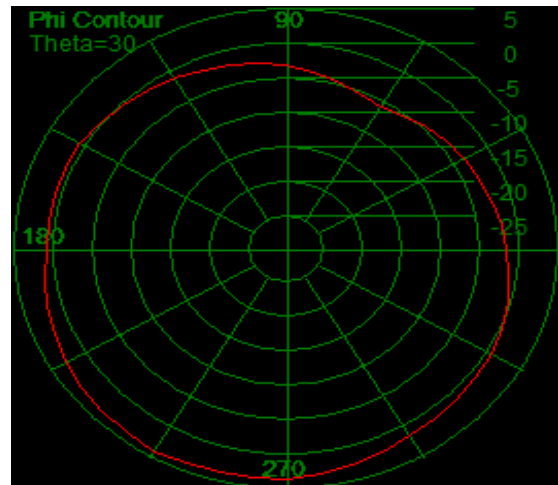
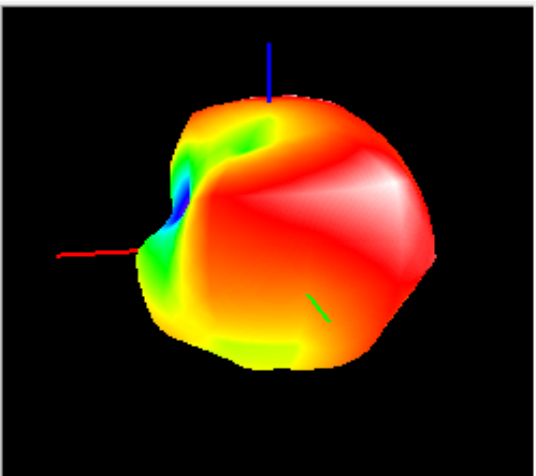
3800MHz



4000MHz

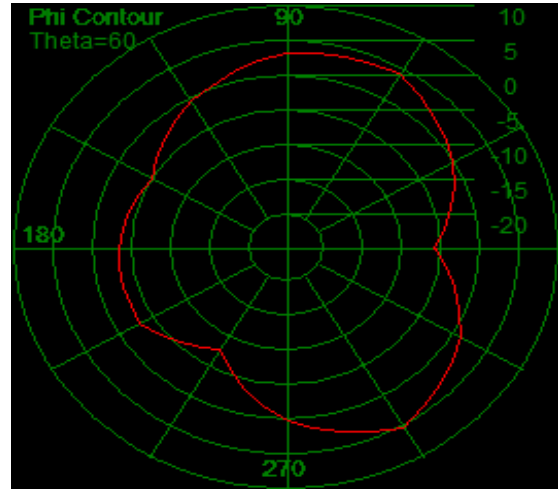
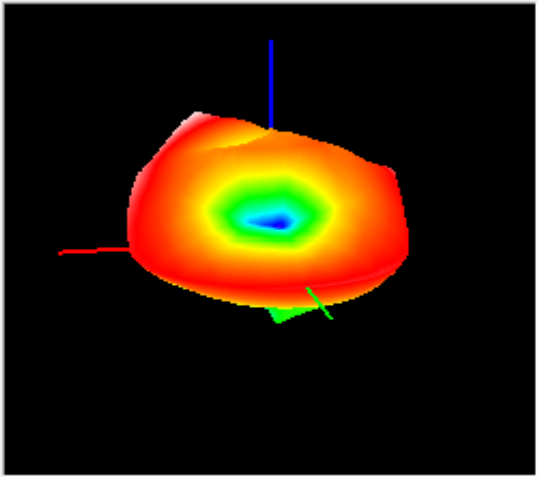


4500MHz

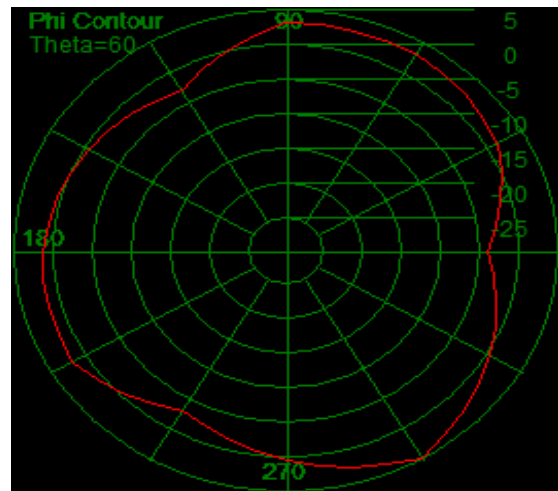
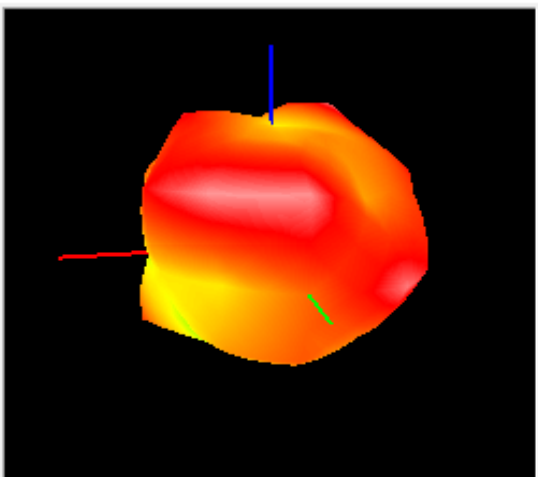


4G/5G Radiation Patterns

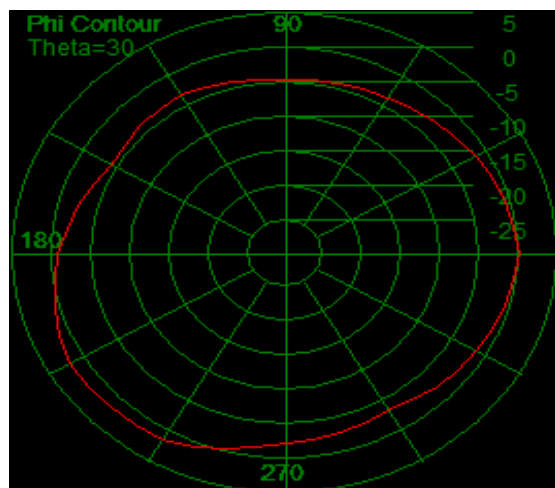
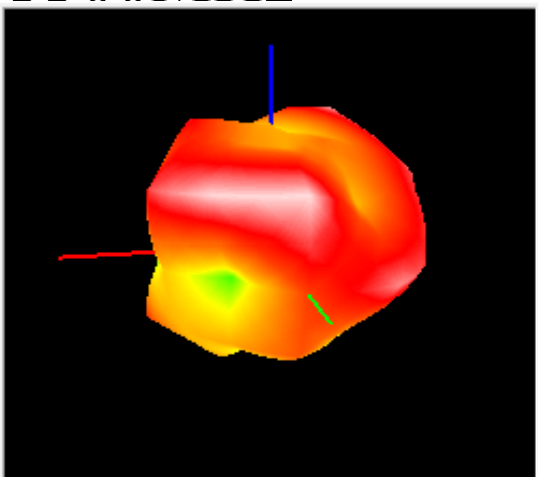
4900MHz



5300MHz

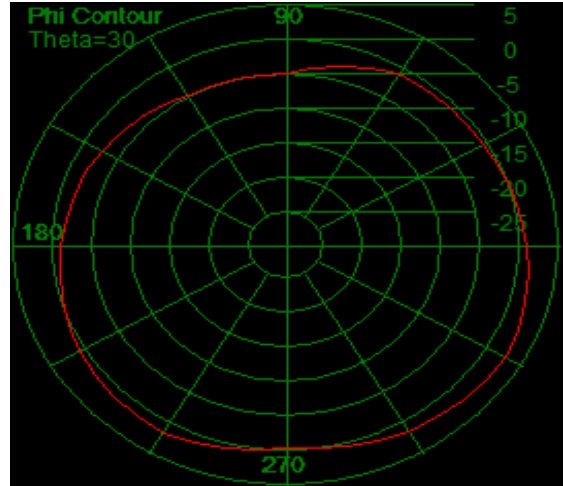
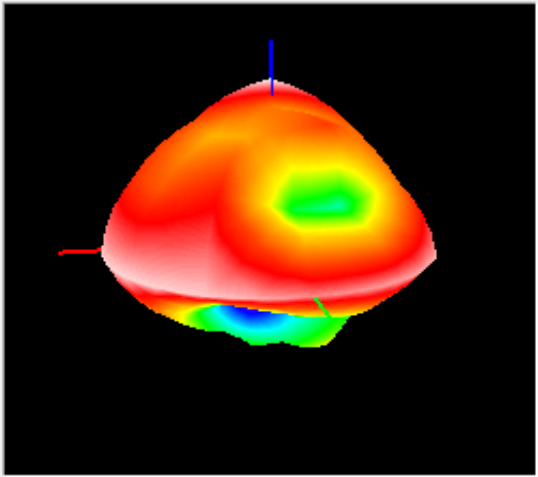


5500MHz

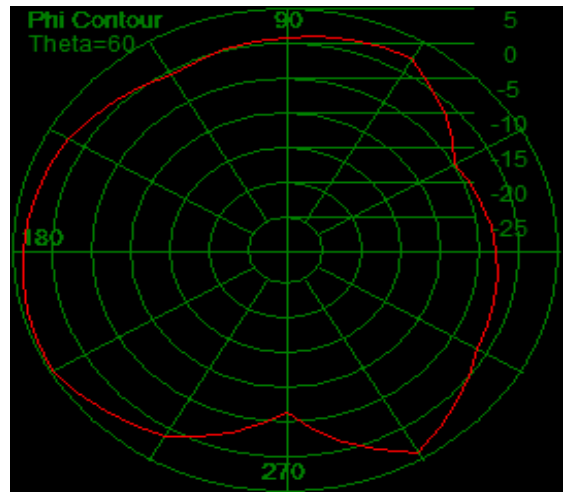
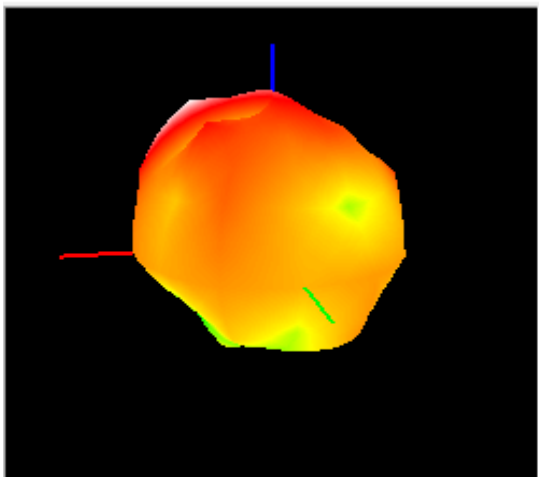


4G/5G Radiation Patterns

5800MHz

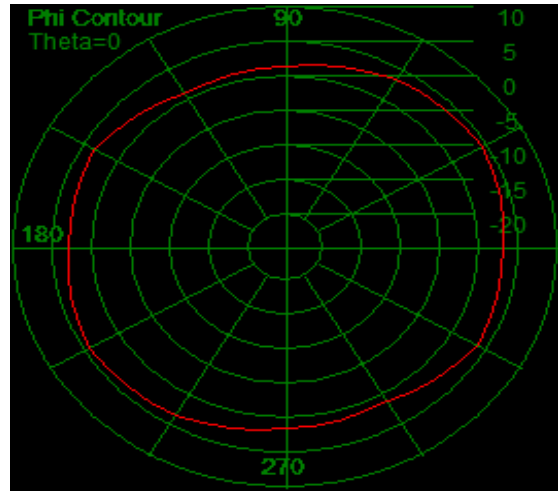
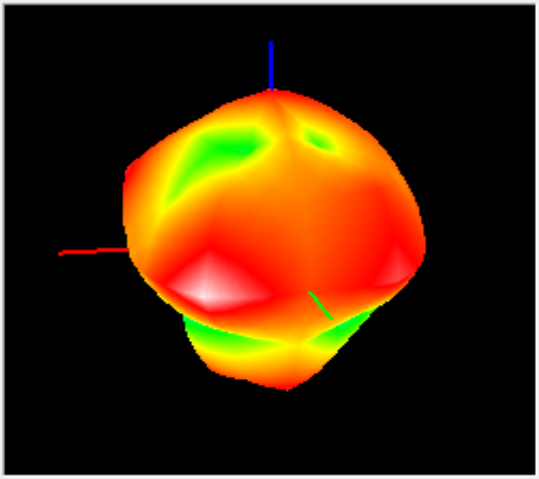


6000MHz

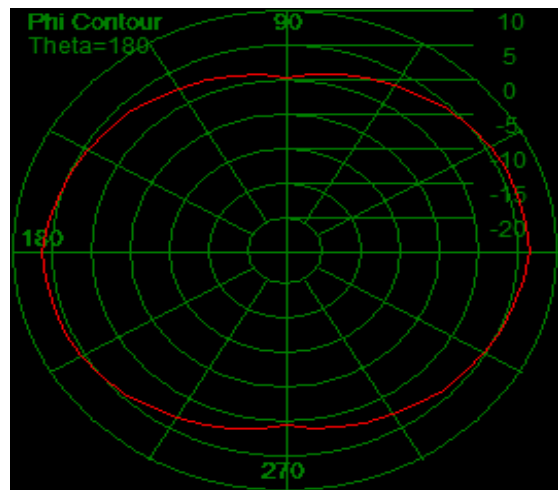
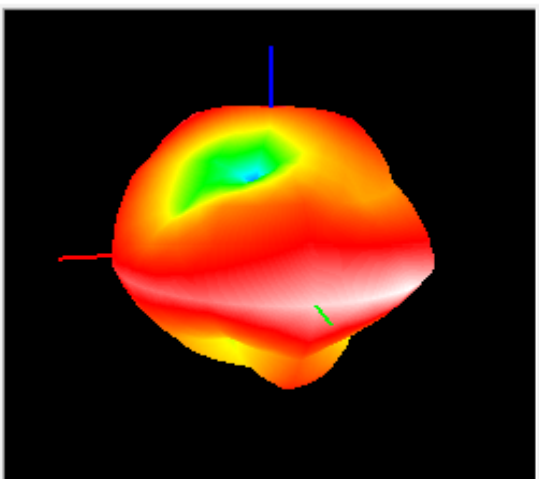


WiFi Radiation Patterns

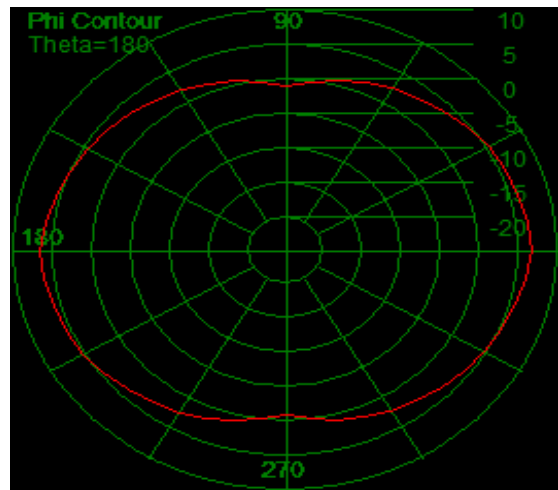
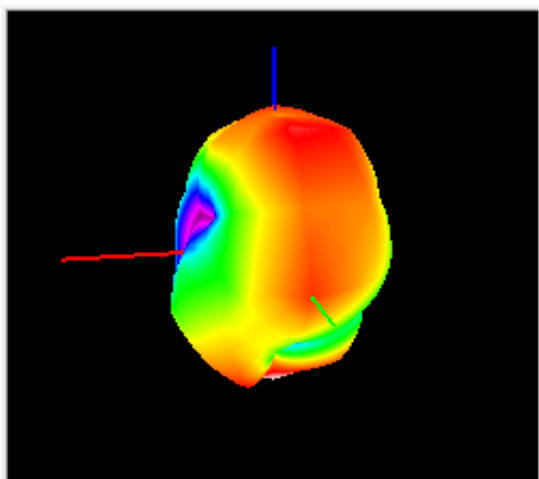
2400MHz



2450MHz

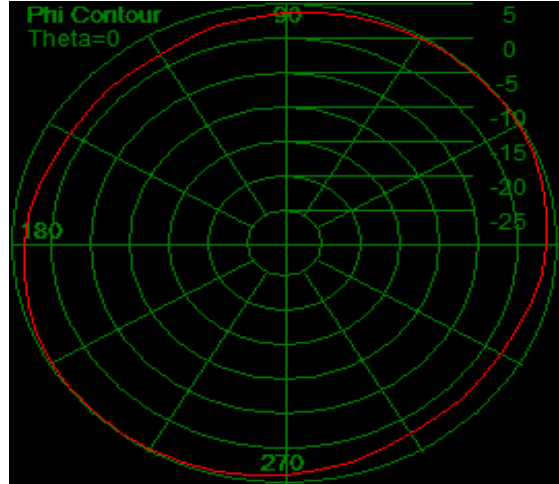
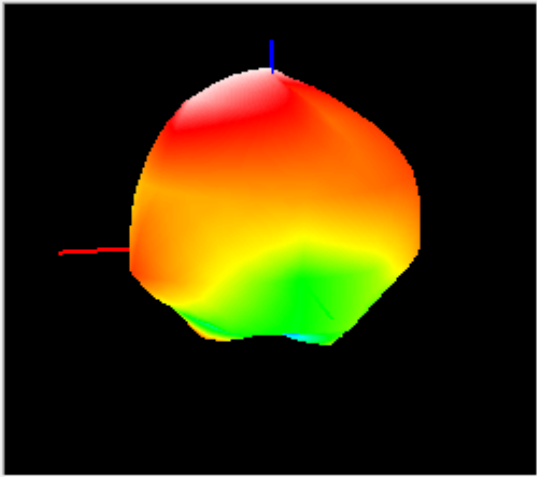


2500MHz

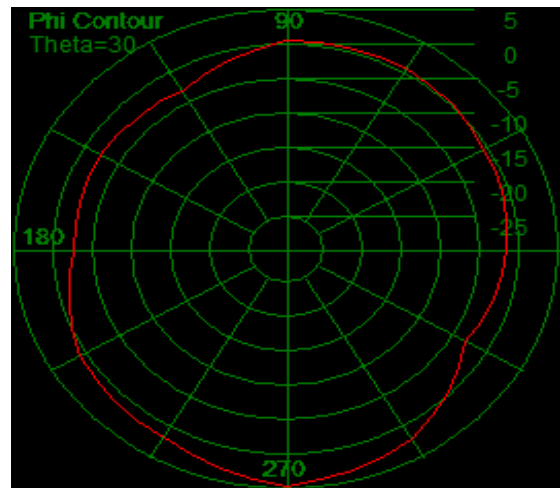
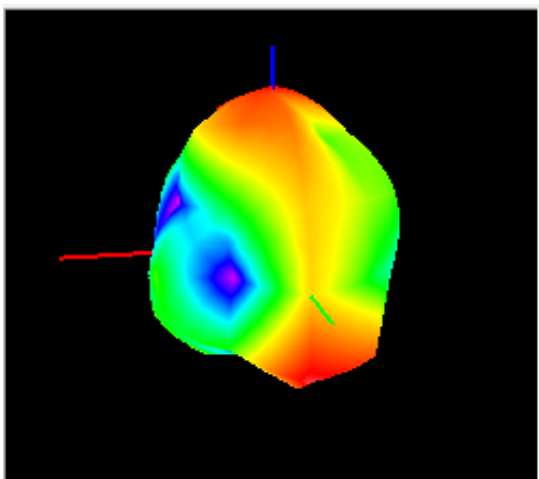


WiFi Radiation Patterns

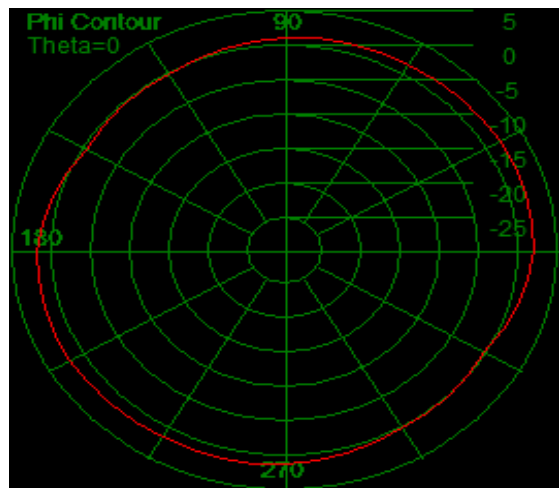
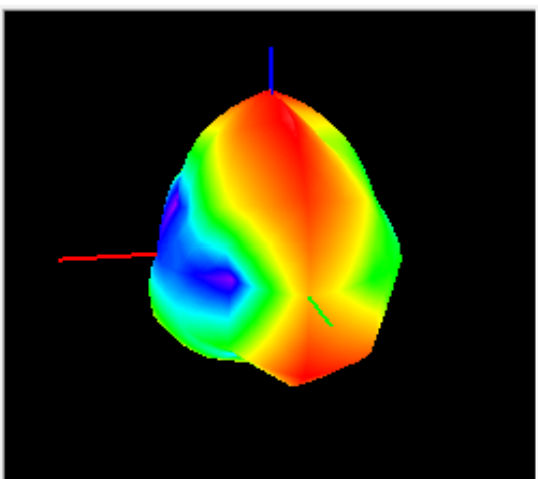
4900MHz



5150MHz

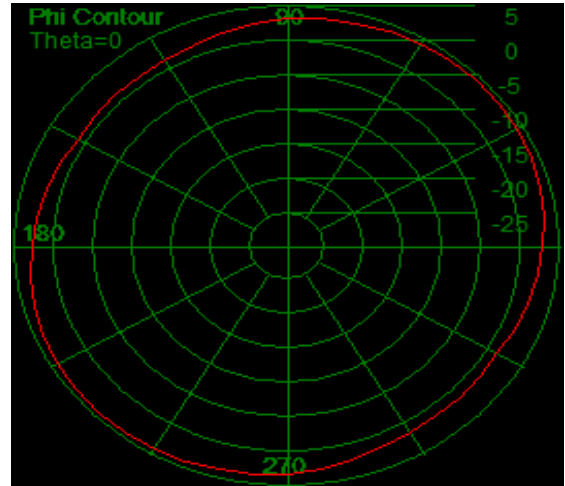
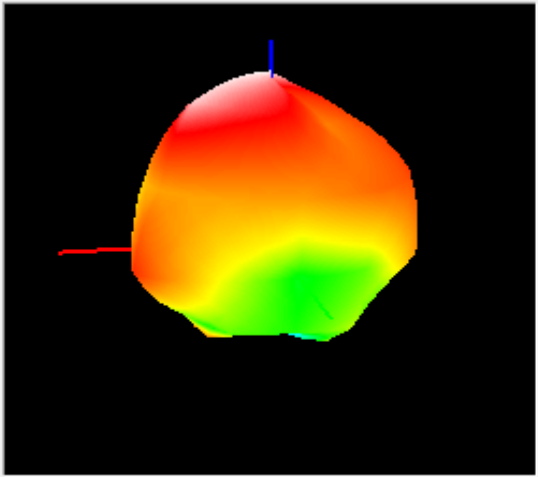


5300MHz

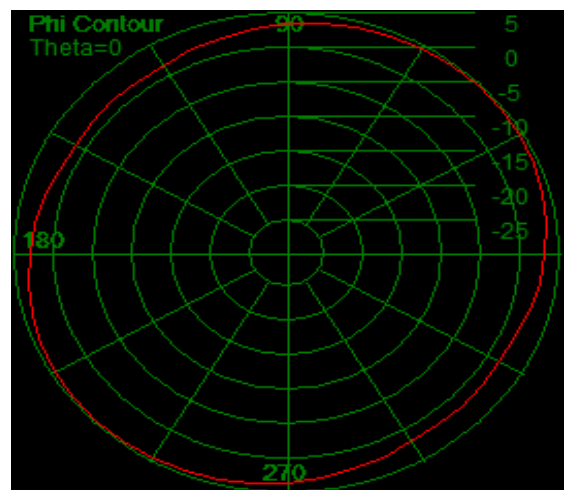
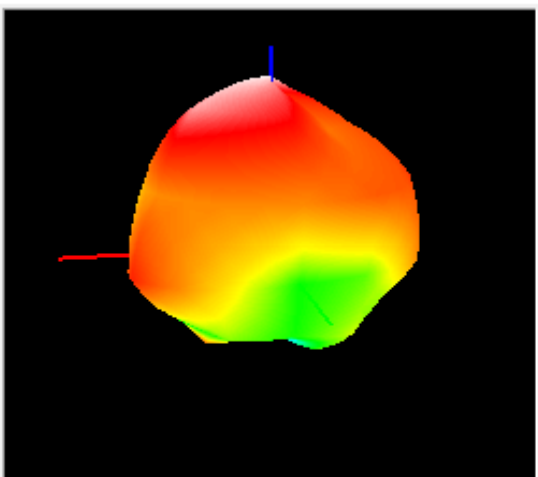


WiFi Radiation Patterns

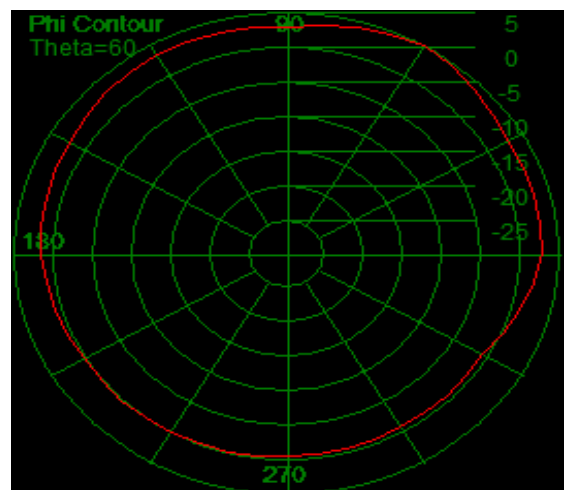
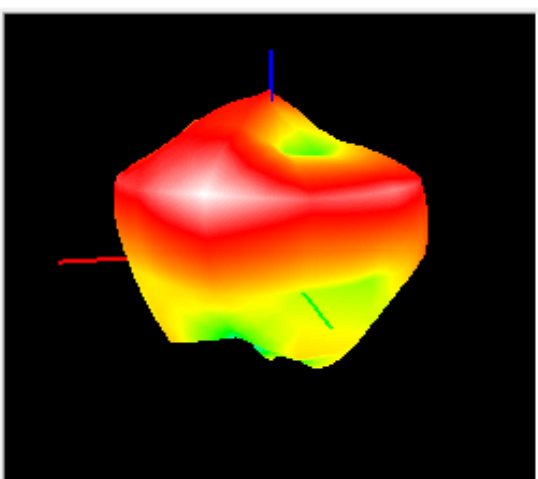
5500MHz



5850MHz



6125MHz



## WIFI Radiation Patterns

7200MHz

