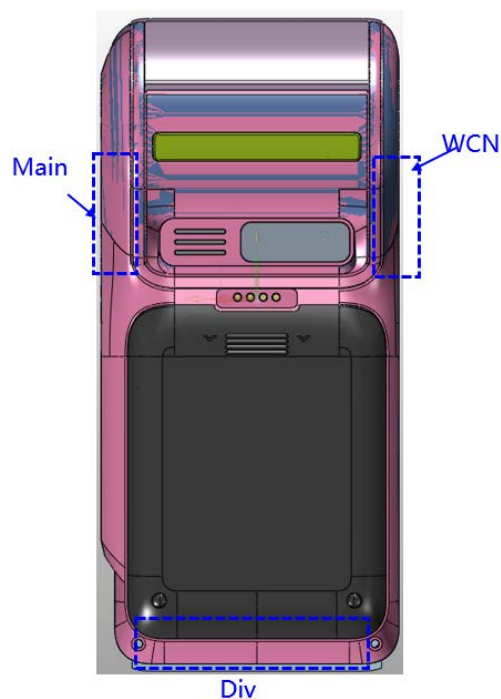


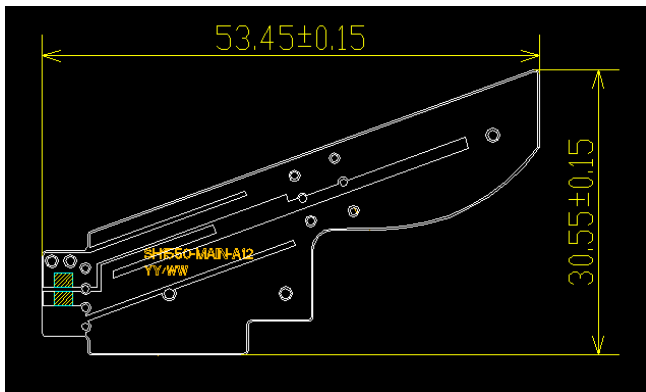
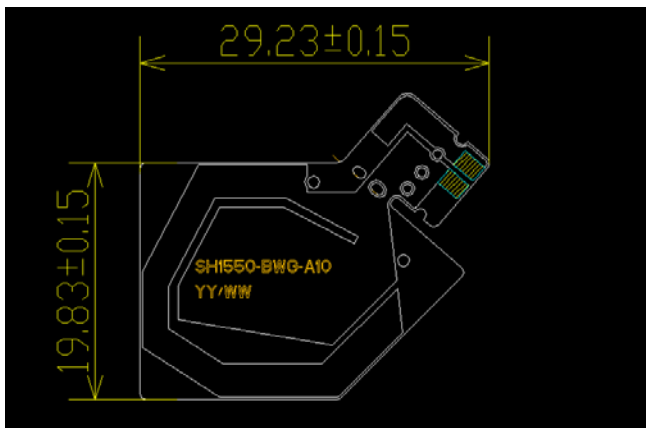
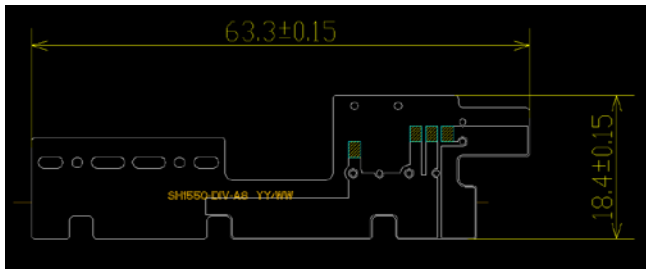
Antenna Product Specification

Entry Name	SP7088A
Frequency Channel	GSM:850/900/1800/1900 WCDMA:W I / II /IV/V/VIII/19 FDD-LTE: B1/2/3/4/5/7/8/18/19/20/25/26/28/66 TDD-LTE:B38/40/41 WCN: GPS/BT/2.4G/5G
Supplier Name	Zhejiang Haitong communication electronic Limited by Share Ltd Shanghai Branch
Supplier Address	1F, Building C5, Caohejing Kangqiao Business Oasis, No. 2555 Xiupu Road, Kangqiao Town, Pudong New Area, Shanghai

1. Type of Antenna: MONOPOLE

Antenna attachment type: Fixed/Internal mounted



Main ANT pattern:**WCN ANT pattern:****Div ANT pattern:**

2. Efficiency and Gain

Main Antenna - Efficiency and Gain:

BAND	Peak Gain(dBi)	Average Gain(dBi)
GSM 850	-0.64	-5.2
GSM 900	-0.66	-4.9
GSM 1800	-1.38	-3.2
GSM 1900	-0.99	-2.5
WCDMA B1	-0.54	-2.6
WCDMA B2	-0.99	-2.5
WCDMA B4	-1.01	-3.2
WCDMA B5	-0.64	-5.2
WCDMA B8	-0.66	-4.9
WCDMA B19	-0.64	-5.2

LTE B1	-0.54	-2.6
LTE B2	-0.99	-2.5
LTE B3	-1.38	-3.2
LTE B4	-1.01	-3.2
LTE B5	-0.64	-5.2
LTE B7	-1.62	-3.6
LTE B8	-0.66	-4.9
LTE B18	-0.64	-5.2
LTE B19	-0.64	-5.2
LTE B20	-0.77	-5.6
LTE B25	-0.99	-2.5
LTE B26	-0.64	-5.2
LTE B28	-1.20	-5.9
LTE B38	-1.62	-4.1
LTE B40	-2.11	-2.6
LTE B41	-1.62	-3.6
LTE B66	-1.01	-3.2

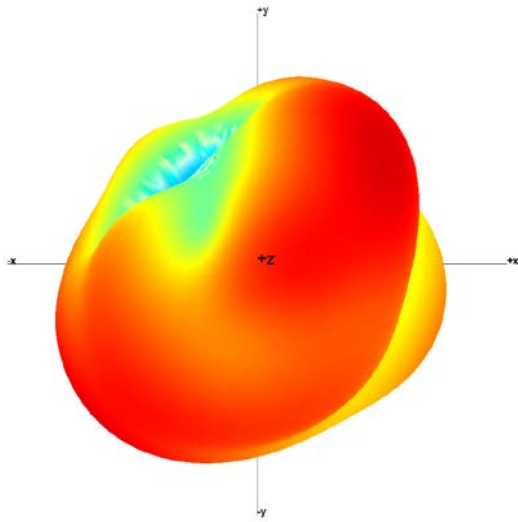
WCN - Efficiency and Gain

Freq (MHz)	Peak Gain(dBi)	Average Gain(dBi)
2400~2483.5MHz	-1.2	-2.6
5150~5250MHz	-1.1	-3.3
5250~5350MHz	-2.1	-3.3
5470~5725MHz	-1.4	-3.4
5725~5850MHz	-1.9	-3.4
1575MHz	-1.4	-3.1

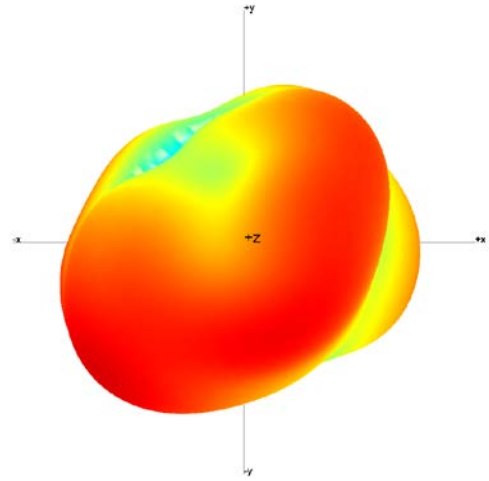
3. 3D Directional Pattern

Main Antenna

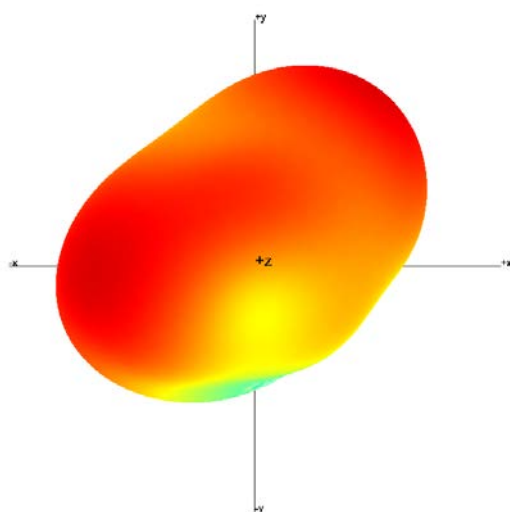
710MHZ



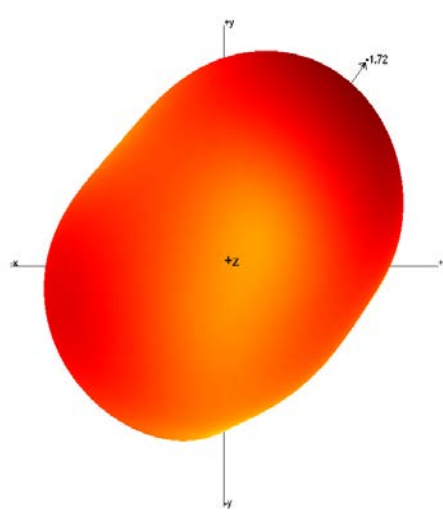
740MHZ



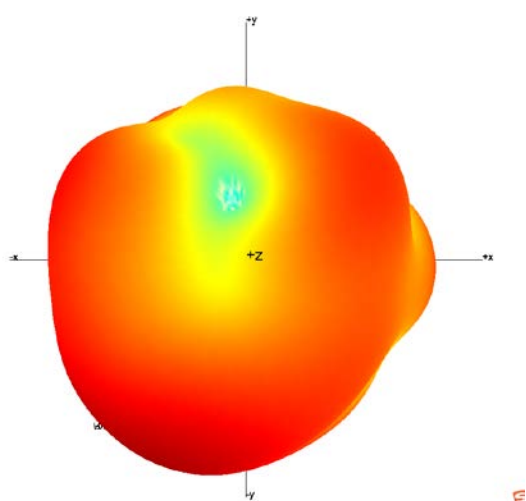
760MHZ



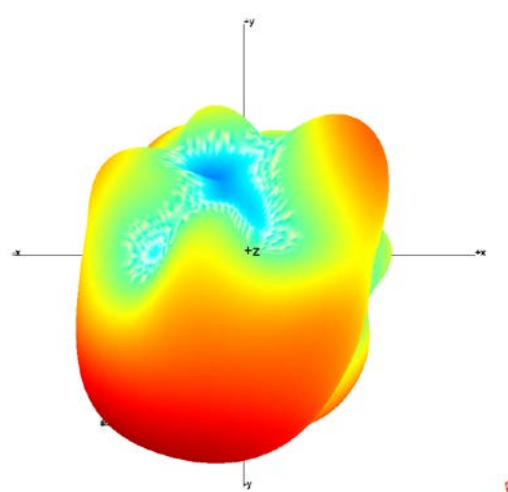
790MHZ



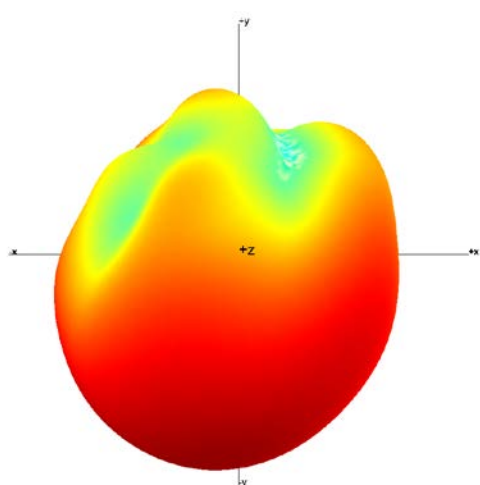
830MHZ



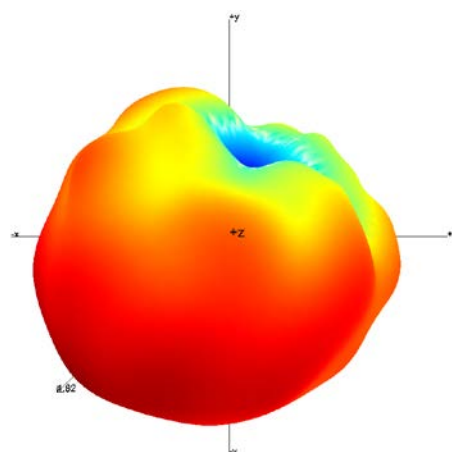
860MHZ



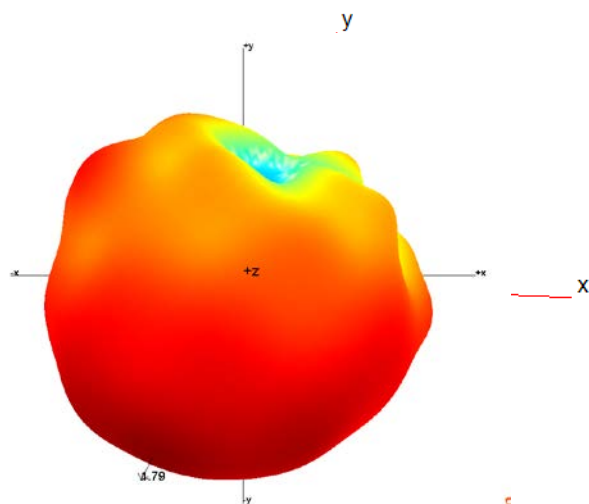
900MHZ



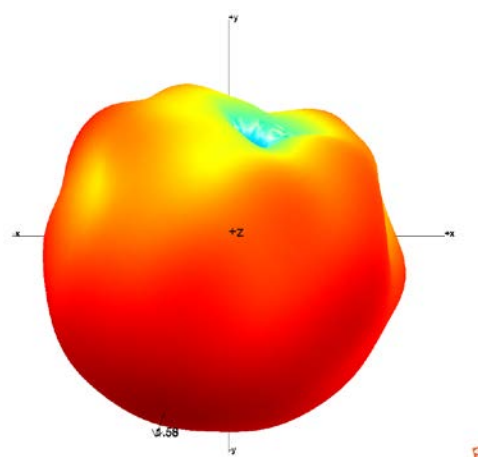
1710MHZ



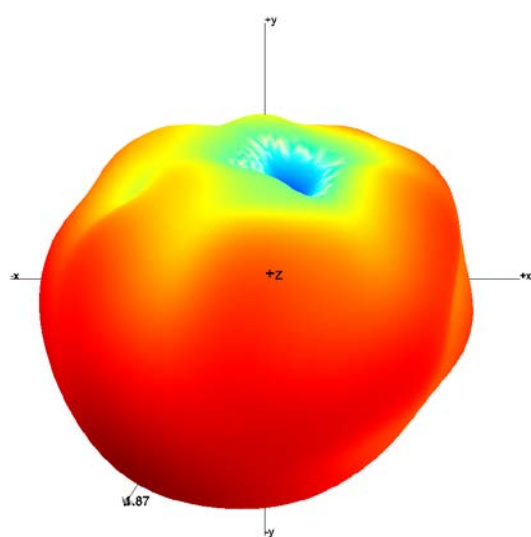
1760MHZ



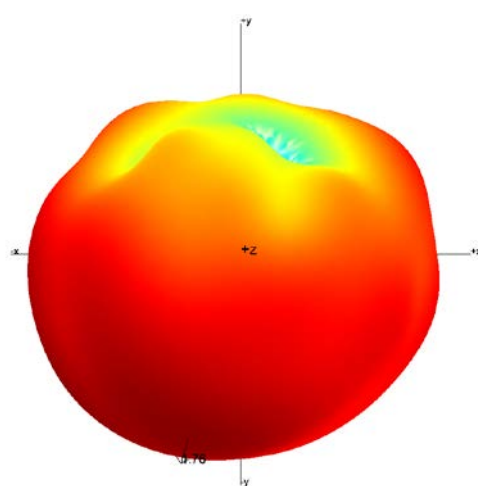
1840MHZ



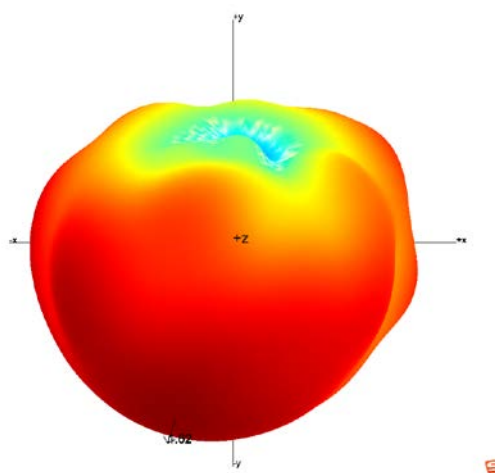
1900MHZ



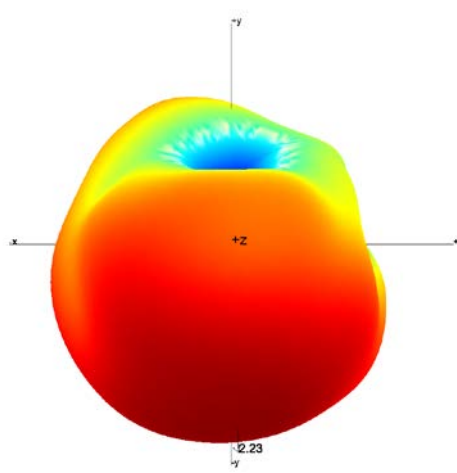
1940MHZ



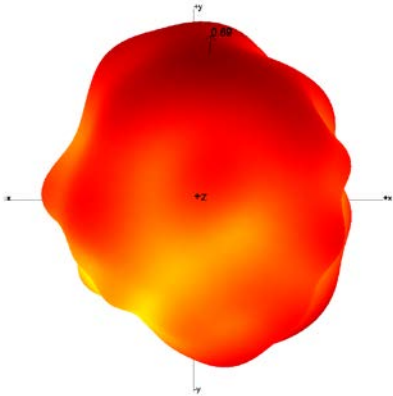
1980MHZ



2100MHZ

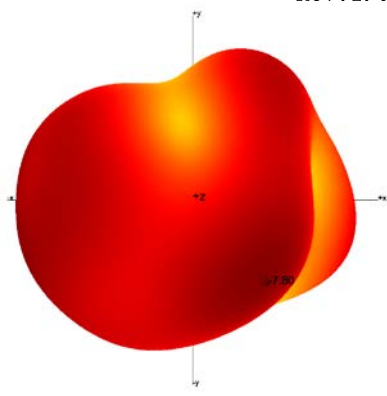


2160MHZ

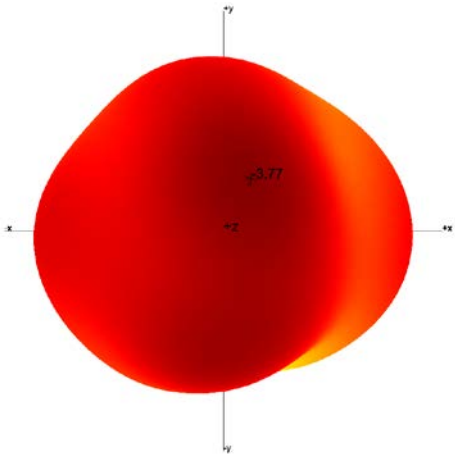


2230MHZ

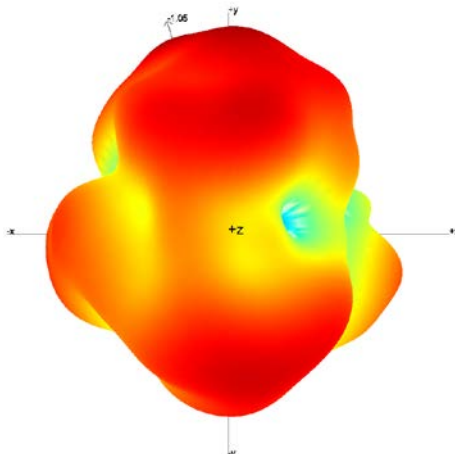
Rev:1.0



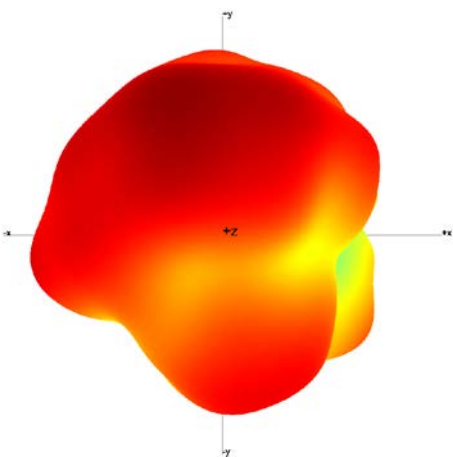
2300MHZ



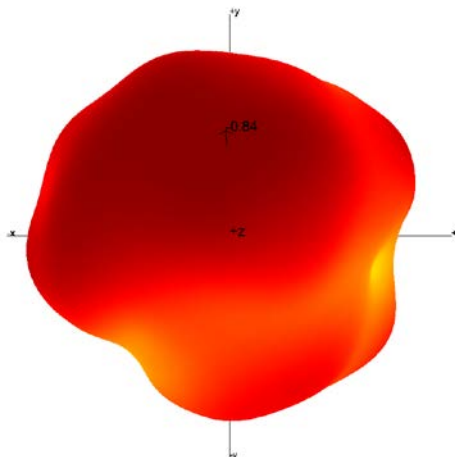
2370MHZ



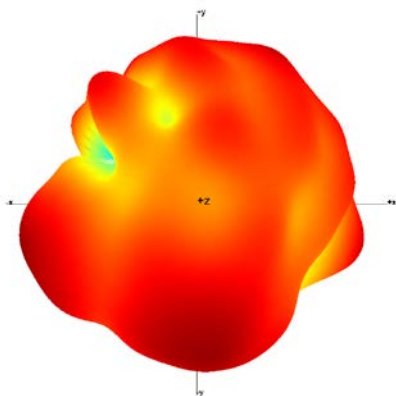
2440MHZ



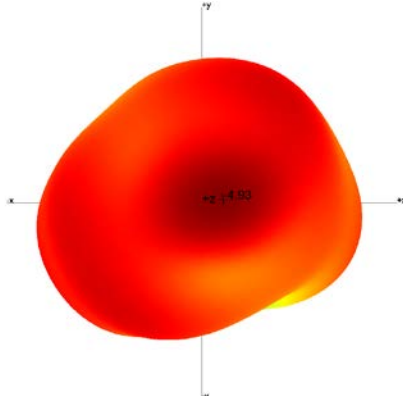
2510MHZ

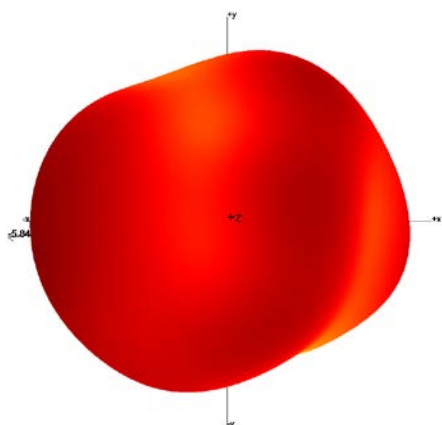
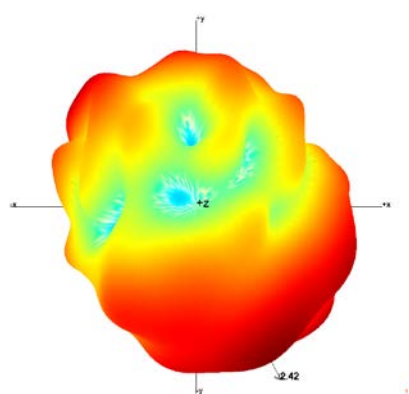
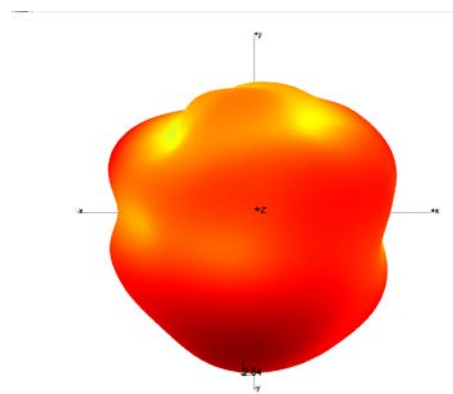


2580MHZ

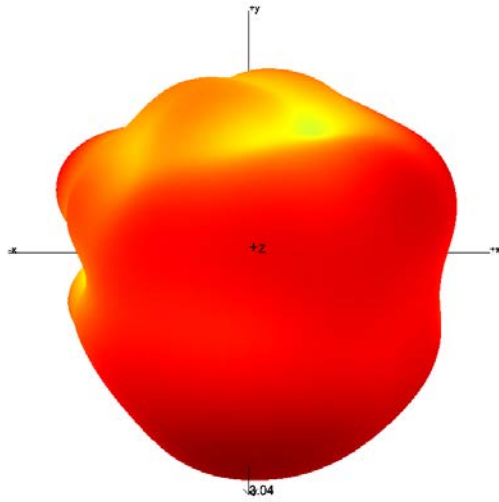


2650MHZ

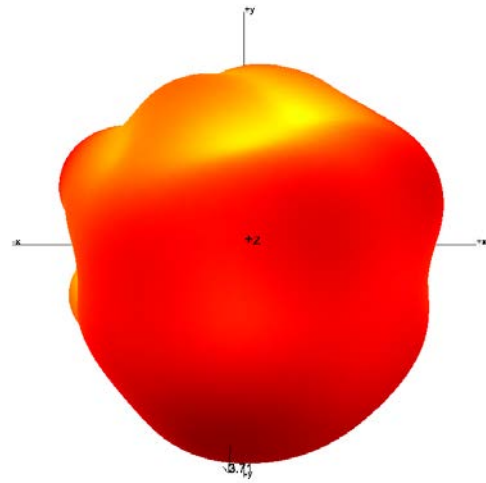


2720MHZ**WCN Antenna****1575MHZ****2400MHZ**

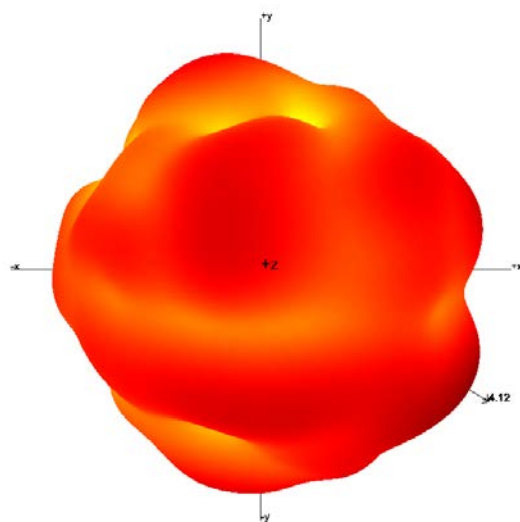
2480MHZ



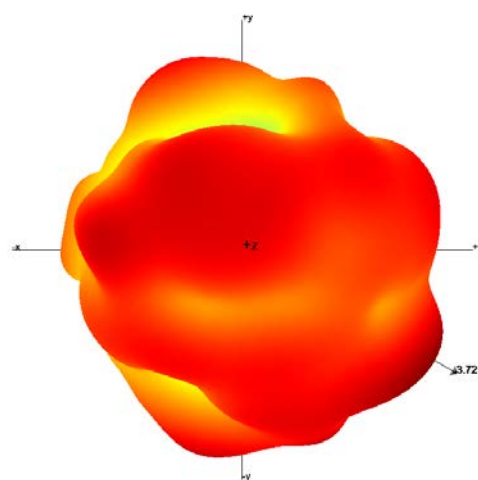
2500MHZ



5150MHZ



5350MHZ



5850MHZ

