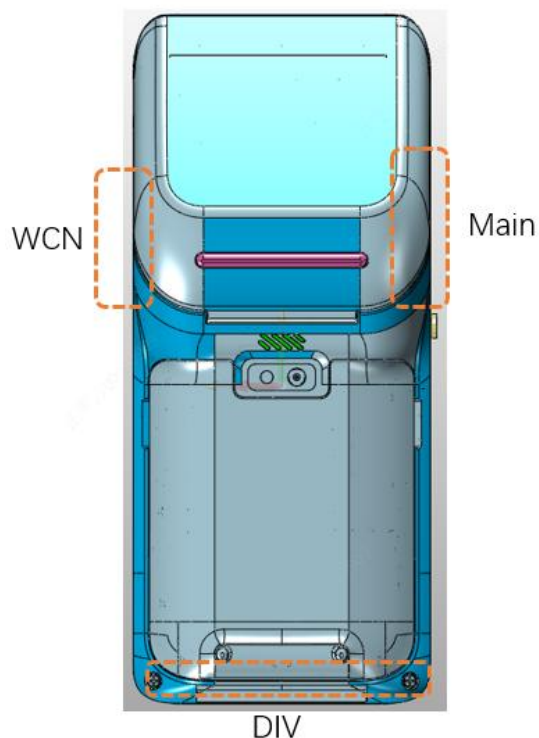


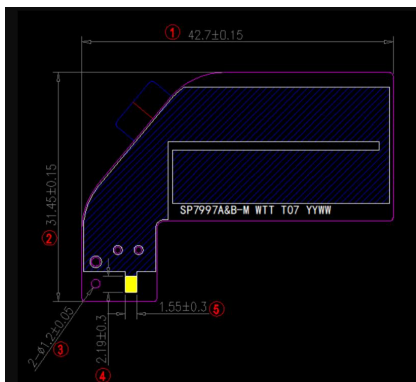
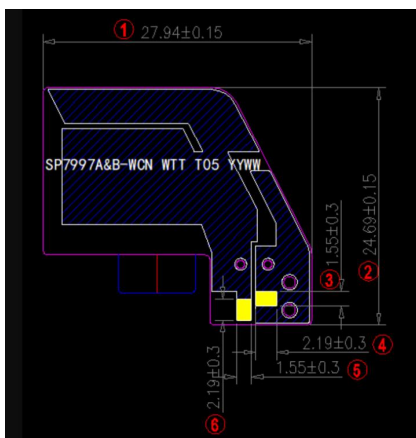
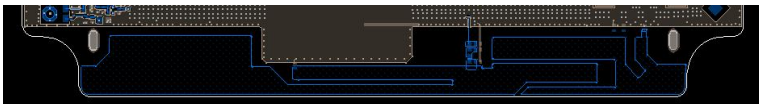
Antenna Product Specification

Entry Name	SP7997A&B
Frequency	GSM:850/900/1800/1900
Channel	WCDMA:W I / II /V/VIII FDD-LTE: B1/3/5/7/8/28 TDD-LTE:B40 WCN: GPS/BT/2.4G/5G
Supplier Name	Welletronics Communication Technology Co. , Ltd.
Supplier Address	No.110, Building 5, Nanxiang Land Phase III, Jiading District, 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	-2.98	-5.72
GSM 900	-2.51	-5.29
GSM 1800	-0.27	-3.97
GSM 1900	-0.78	-4.03
WCDMA B1	-0.81	-3.16
WCDMA B2	-0.78	-4.03
WCDMA B5	-2.98	-5.72
WCDMA B8	-2.53	-5.30
LTE B1	-0.81	-3.16
LTE B3	-0.27	-3.97
LTE B5	-2.98	-5.72
LTE B7	0.74	-2.79
LTE B8	-2.53	-5.30
LTE B28	-4.12	-6.57
LTE B40	-0.17	-2.99

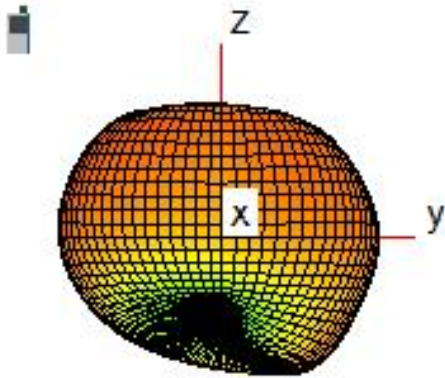
WCN - Efficiency and Gain

Freq (MHz)	Peak Gain(dBi)	Average Gain(dBi)
2400~2483.5MHz	0.20	-3.16
5150~5250MHz	-1.76	-6.56
5250~5350MHz	-1.69	-6.42
5470~5725MHz	-1.54	-6.88
5725~5850MHz	-1.17	-6.77
1575MHz	1.84	-3.32

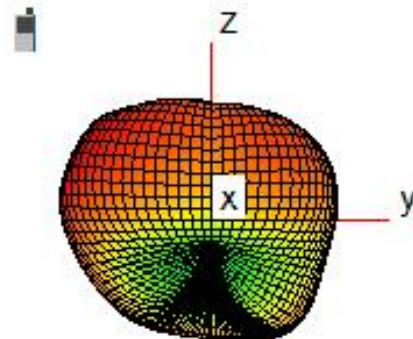
3. 3D Directional Pattern

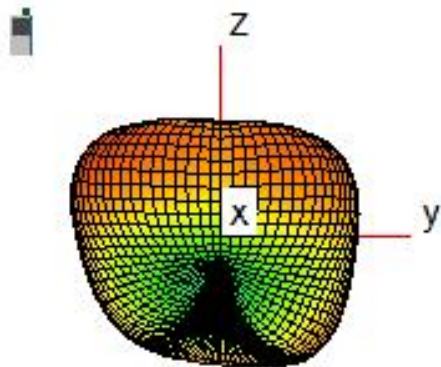
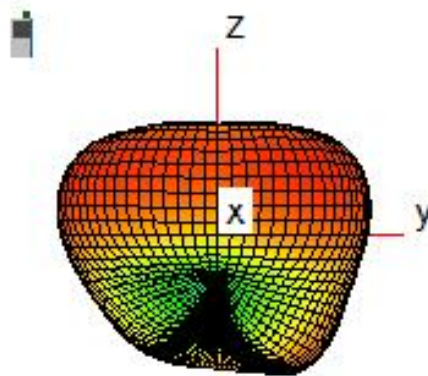
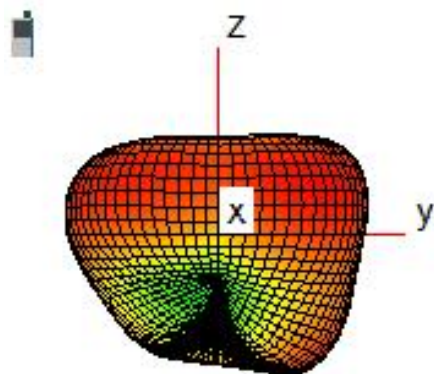
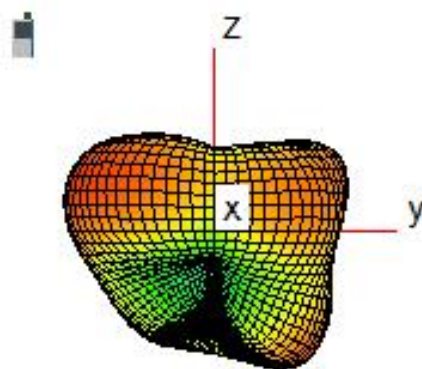
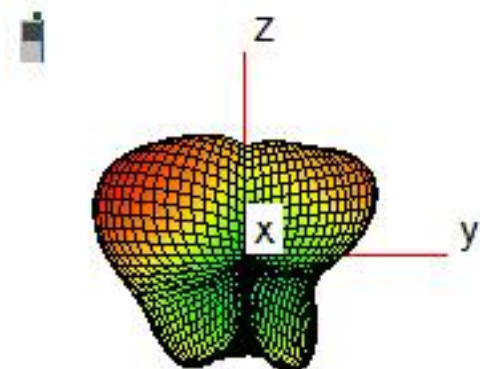
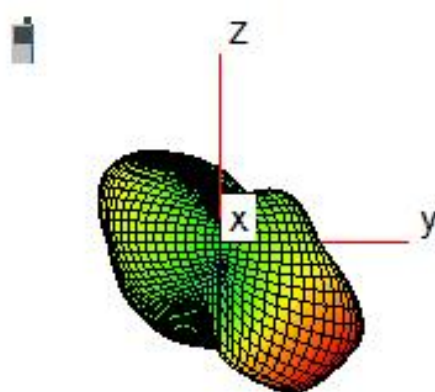
Main Antenna

710MHZ

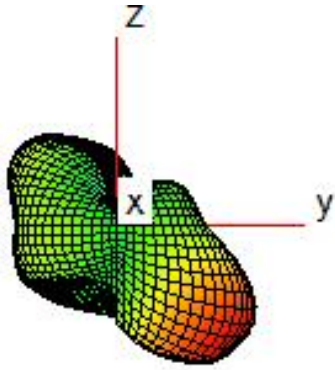


740MHZ



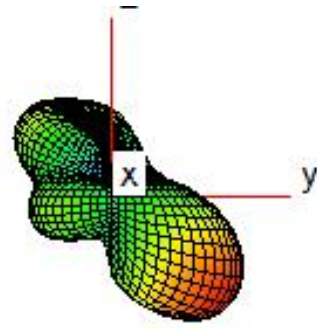
760MHZ**790MHZ****830MHZ****860MHZ****900MHZ****1710MHZ**

1760MHZ

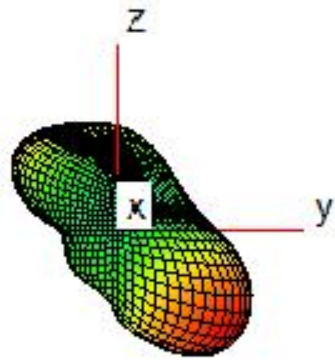


1840MHZ

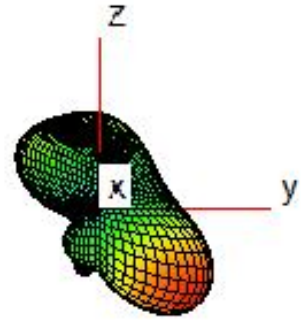
Rev: 1.0



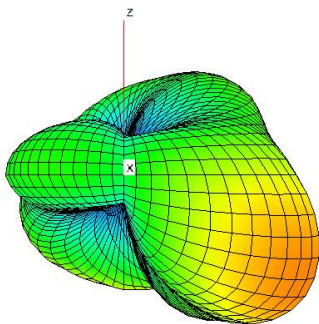
1900MHZ



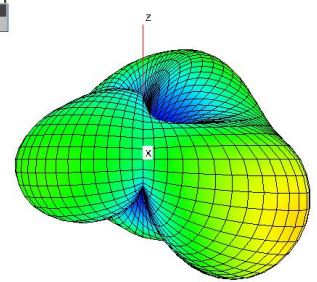
1940MHZ



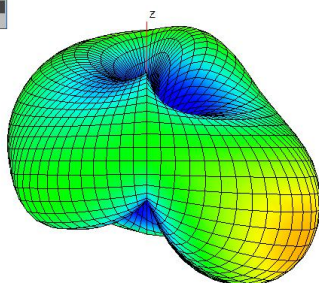
1980MHZ



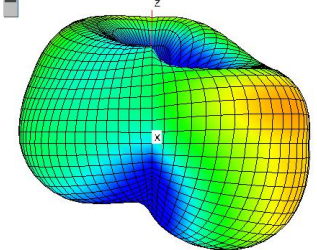
2100MHZ



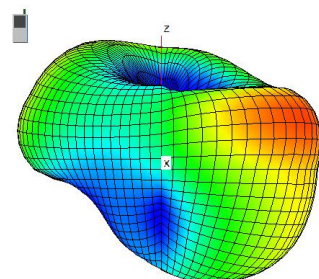
2160MHZ



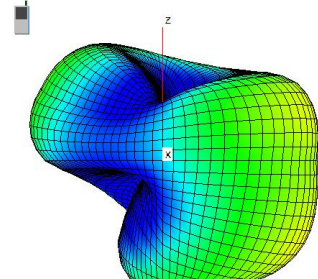
2230MHZ



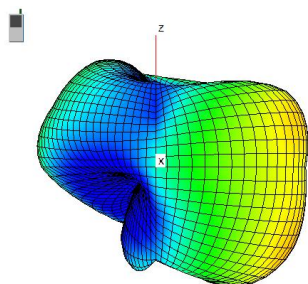
2300MHZ



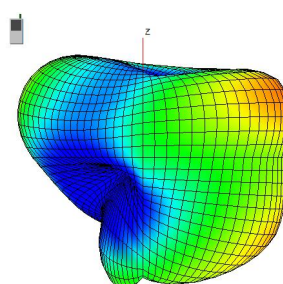
2370MHZ



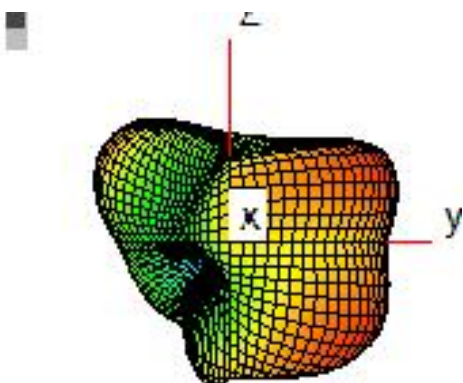
2580MHZ



2650MHZ

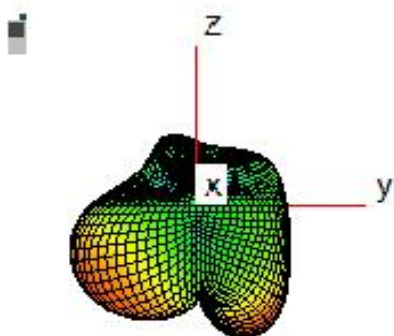


2720MHZ

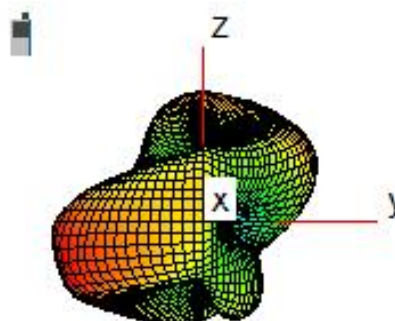


WCN Antenna

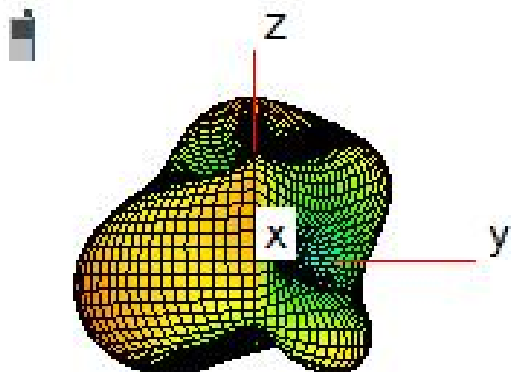
1575MHZ



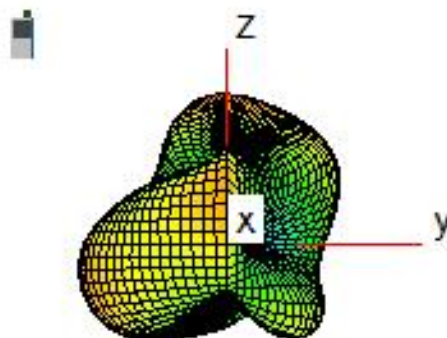
2400MHZ



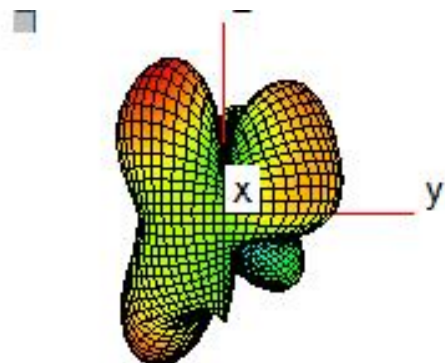
2480MHZ



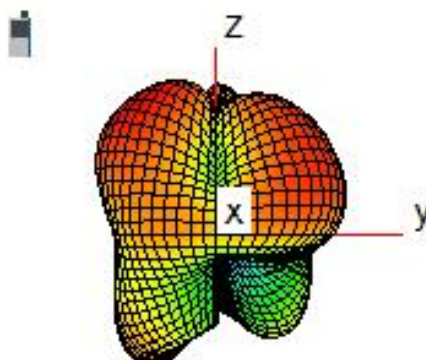
2500MHZ



5150MHZ



5350MHZ



5850MHZ

