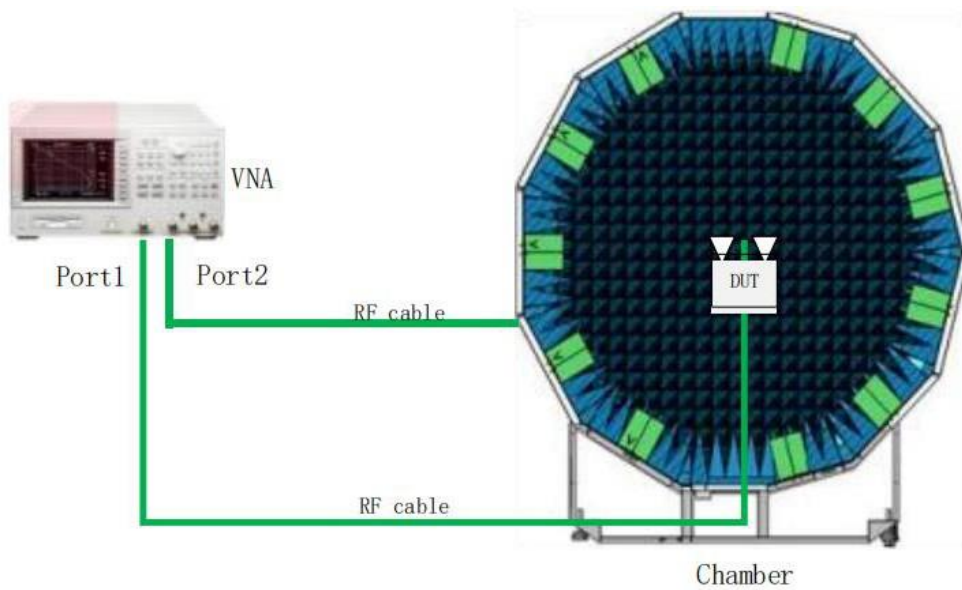


Type and shape of antenna	IFA Antenna/LOOP Antenna
Directional characteristics	Omni-directional
Deflection Characteristics of Antenna	Linear
Type of connection with transmitter	antenna shrapnel
Manufacturer	Welletronics Communication Technology Co., LTD Kunshan Innwave Communication Technology Co., LTD
Measuring Organization	Welletronics Communication Technology Co., LTD Kunshan Innwave Communication Technology Co., LTD

## 1.EUT Reference Setup

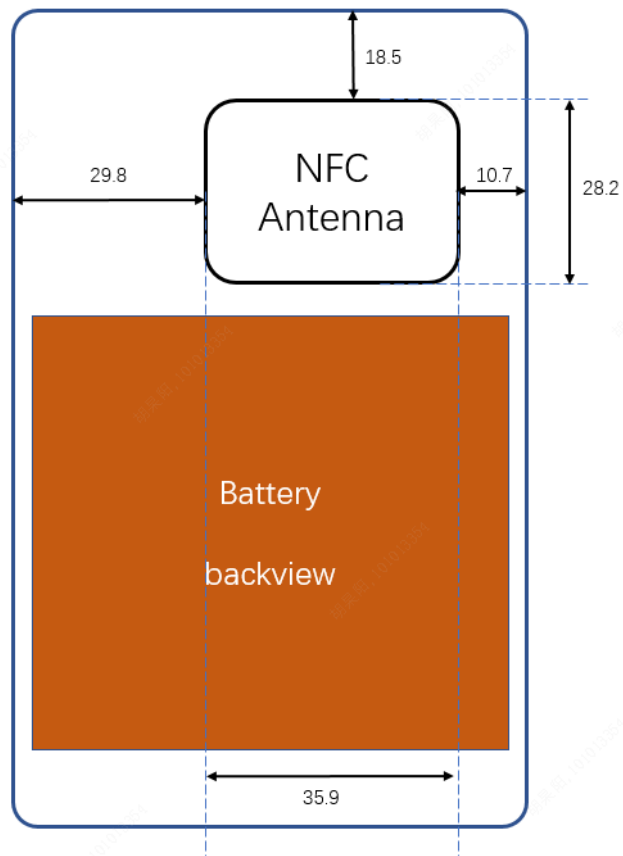
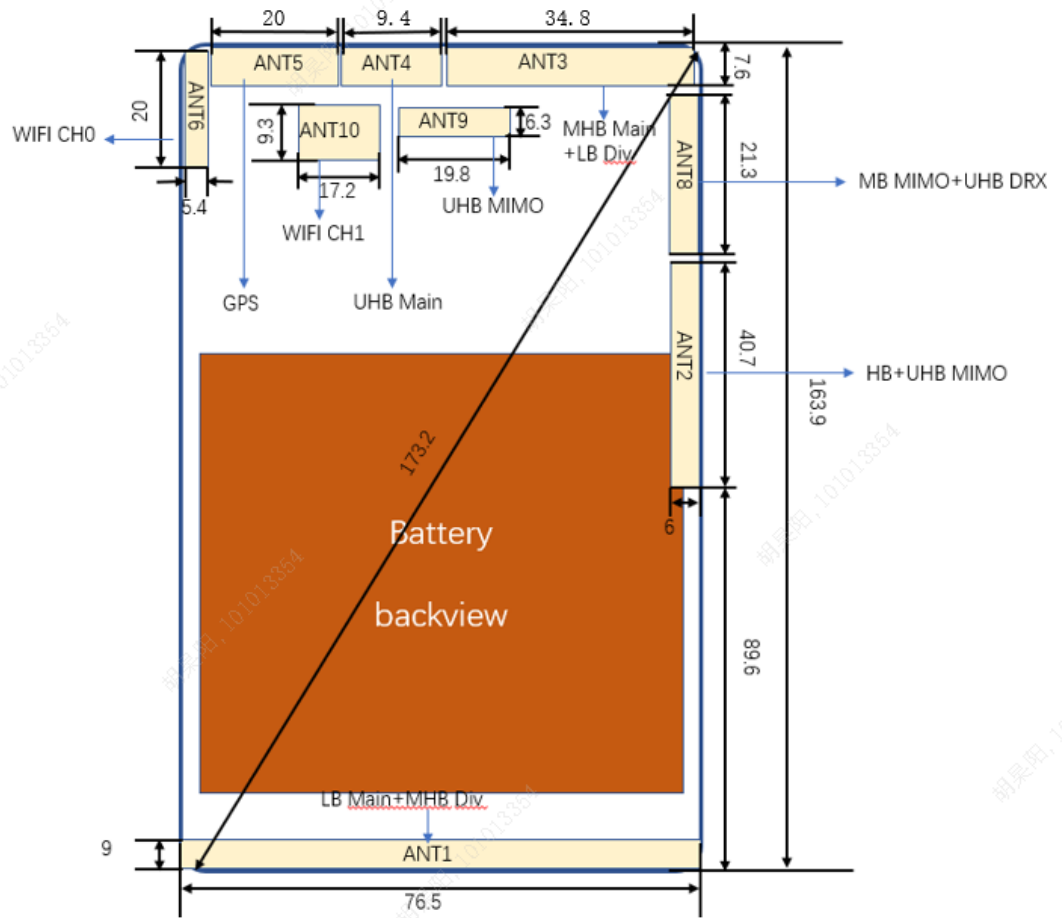


<b>Tester</b>	Congjiaxin/Zhangzhenxin
<b>Actual date of testing</b>	2024-01-12
<b>Test description</b>	Use an anechoic chamber to measure the radiation pattern and antenna gain. The GTS laboratory operates at 0.6-5.9GHz. The chamber's reflection level in the range of 0.6GHz to 5.9 GHz is typically $\leq 25$ dB. Standard dipoles are used to calibrate for path loss and magnetic ring lines are used to suppress feeder emissions, so we can measure antenna gain.

## Test Equipment List

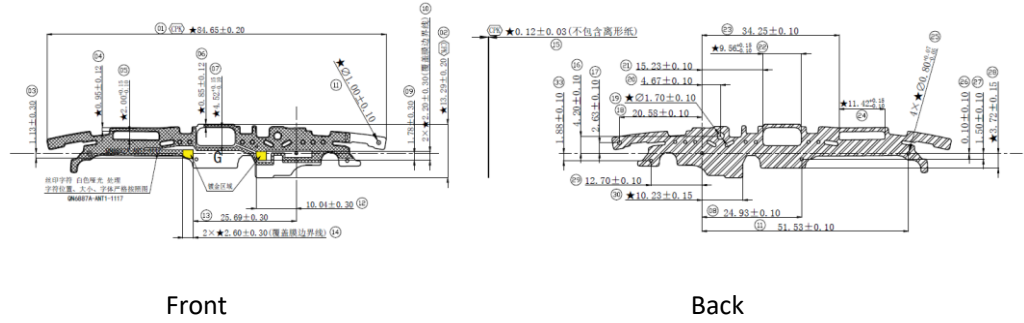
Name of test equipment	Model	Manufacturer	Cal.Due Date	Calibtation Interval
Pattern Measurement Software	General Test	Ray Zone 1800	NA	NA
Network Analyzer	Agilent	E5071C	2024-04-01	One year

## 2. Antenna distribution (Unit:mm)

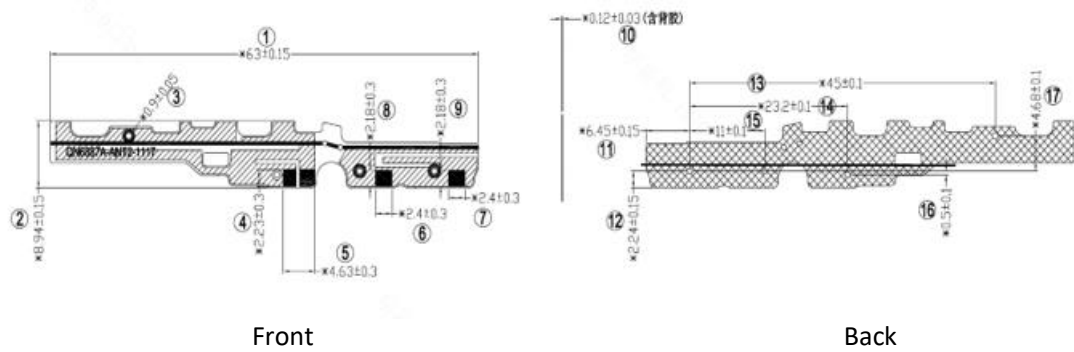


### 3. Antenna Pattern

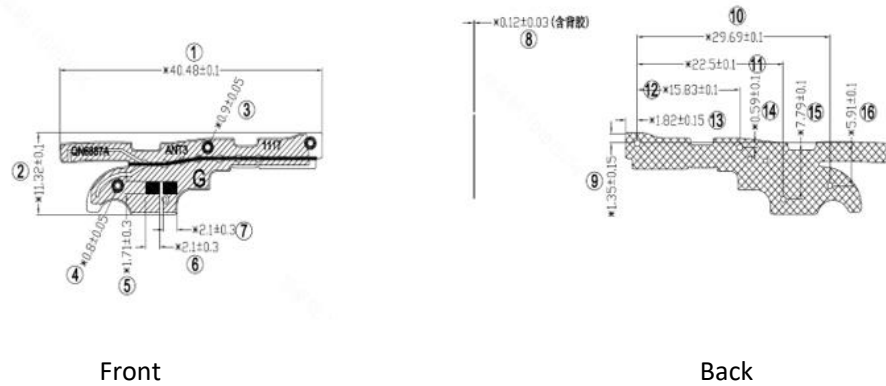
#### ANT1



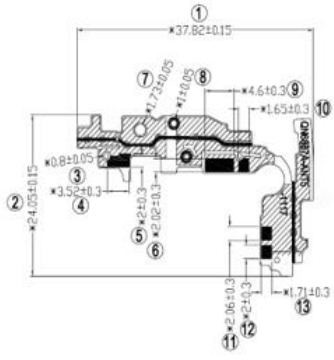
#### ANT2+8



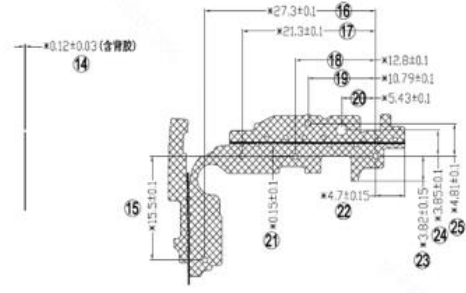
#### ANT3



#### ANT4+5+6



Front



Back





	2	-0.7dBi
	3	-1.0dBi
	4	-1.0dBi
	5	-3.5dBi
	7	-2.0dBi
	8	-2.7dBi
	12	-4.4dBi
	17	-4.7dBi
	20	-3.4dBi
	25	-0.7dBi
	26	-3.5dBi
	28	-4.4dBi
	38	-1.9dBi
	40	-2.3dBi
	41	-1.7dBi
	66	-1.0dBi
MAIN NR	1	-0.7dBi
	3	-1.0dBi
	5	-3.5dBi
	7	-2.0dBi
	8	-2.7dBi
	20	-3.4dBi
	28	-4.4dBi
	38	-1.9dBi
	40	-2.3dBi
	41	-1.7dBi
	66	-1.0dBi
	77	-1.0dBi
	78	-0.9dBi
gps		-0.7dBi
WiFi 2.4G/BT CH0		-2.2dBi
WiFi 5G CH0		-1.8dBi
WiFi 2.4G/BT CH1		-5.8dBi
WiFi 5G CH1		-2.5dBi
DIV GSM	900	-4.8dBi
	1800	-0.8dBi
	850	-4.5dBi
	1900	-0.6dBi
DIV UMTS	1	-1.6dBi
	2	-0.6dBi
	4	-1.6dBi
	5	-4.5dBi
	8	-4.8dBi
DIV LTE	1	-1.6dBi
	2	-0.6dBi
	3	-0.8dBi
	4	-1.6dBi

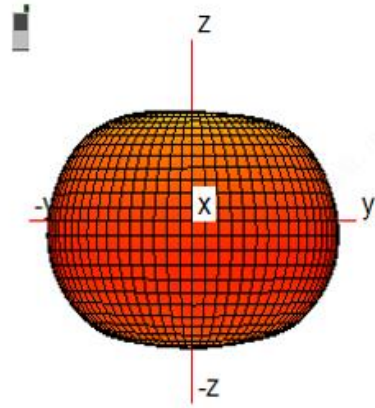
	5	-4.5dBi
	7	-2.7dBi
	8	-4.8dBi
	12	-5.1dBi
	17	-5.1dBi
	20	-5.5dBi
	25	-0.6dBi
	26	-4.5dBi
	28	-5.1dBi
	38	-2.2dBi
	40	-1.1dBi
	41	-1.8dBi
	66	-1.6dBi
DIV NR	1	-1.6dBi
	3	-0.8dBi
	5	-4.5dBi
	7	-2.7dBi
	8	-4.8dBi
	20	-5.5dBi
	28	-5.1dBi
	38	-2.2dBi
	40	-1.1dBi
	41	-1.8dBi
	66	-1.6dBi
	77	-2.4dBi
	78	-3.1dBi
PRX MIMO LTE	7	-2.8dBi
	38	-3.7dBi
	41	-3.5dBi
PRX MIMO NR	7	-2.8dBi
	38	-3.7dBi
	41	-3.5dBi
	77	-2.8dBi
	78	-3.6dBi
DRX MIMO LTE	7	-3.0dBi
	38	-3.1dBi
	41	-3.4dBi
DRX MIMO NR	7	-3.0dBi
	38	-3.1dBi
	41	-3.4dBi
	77	-4.4dBi
	78	-3.2dBi



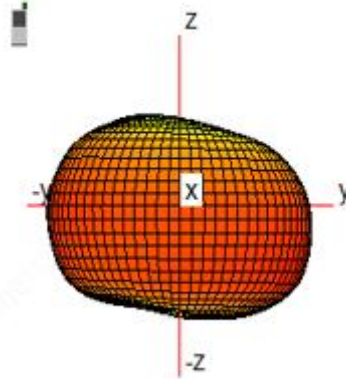
Regards NFC , all measurements were performed radiated and therefore additional antenna gain documentation is not required.

### 5.3D map

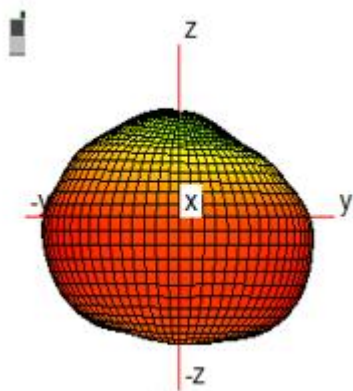
ANT1



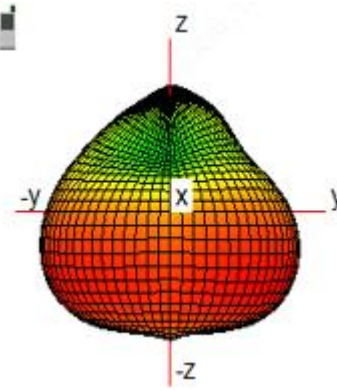
700MHZ



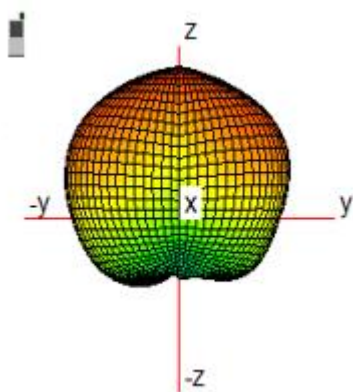
790MHZ



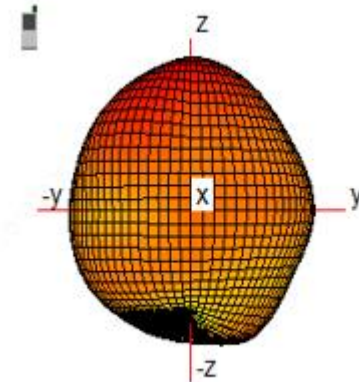
870MHZ



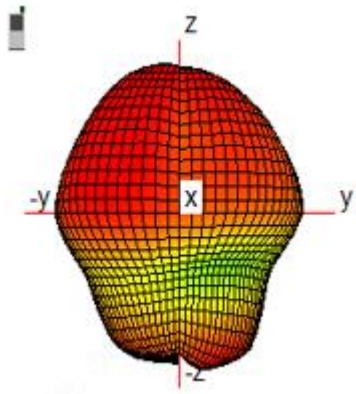
960MHZ



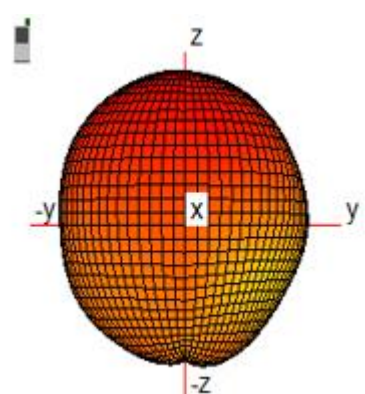
1710MHZ



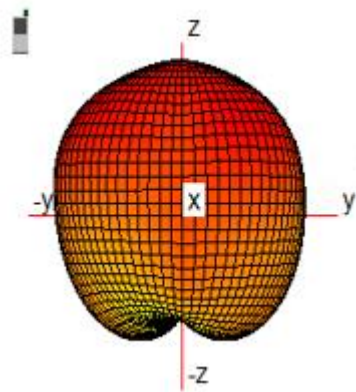
1990MHZ



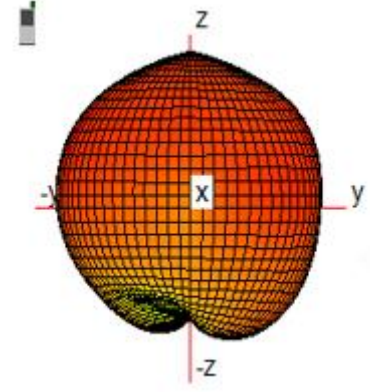
2170MHZ



2300MHZ

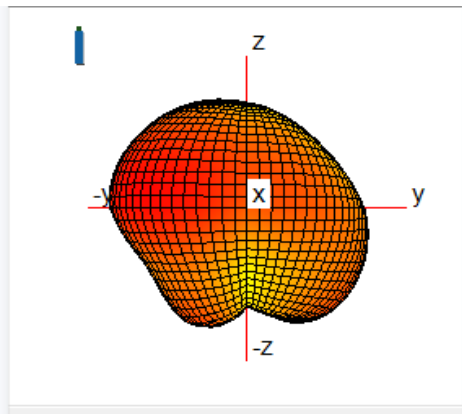


2500MHZ

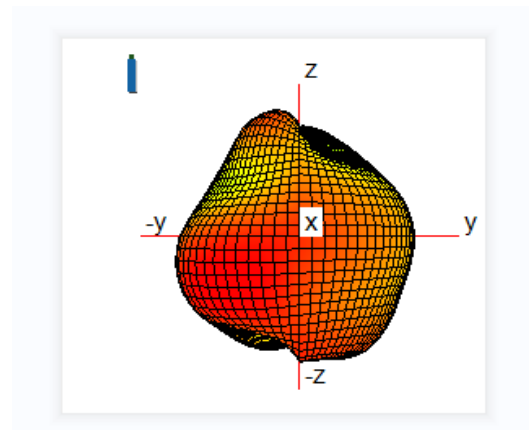


2700MHZ

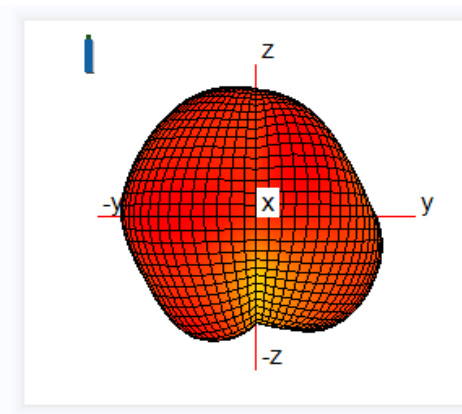
ANT2



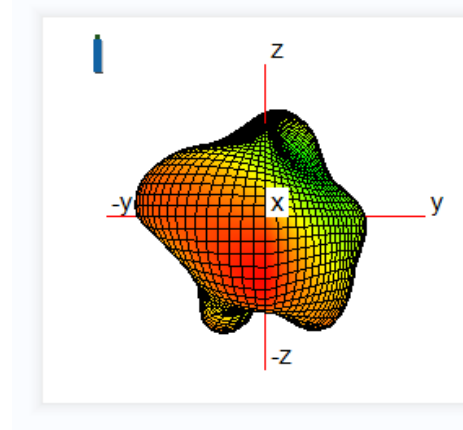
790MHZ



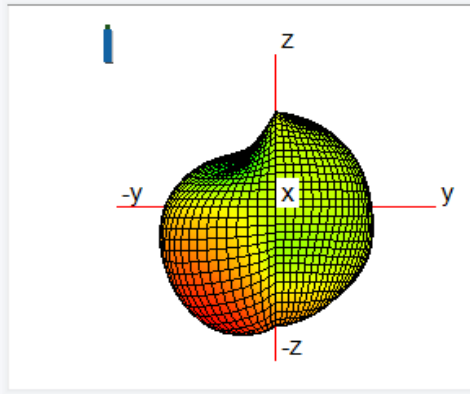
2500MHZ



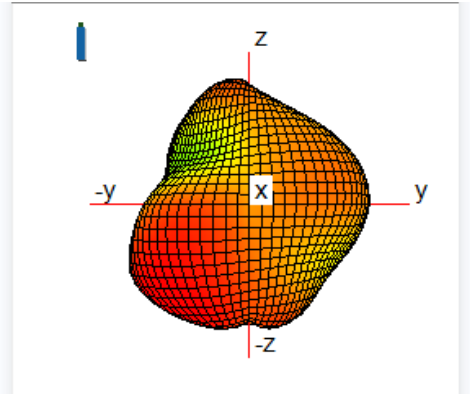
2700MHZ



3300MHZ

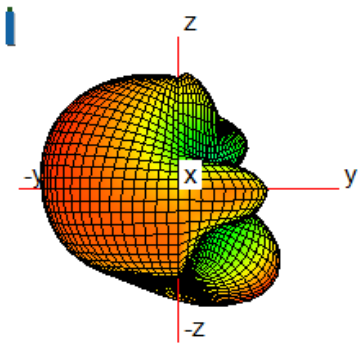


3800MHZ

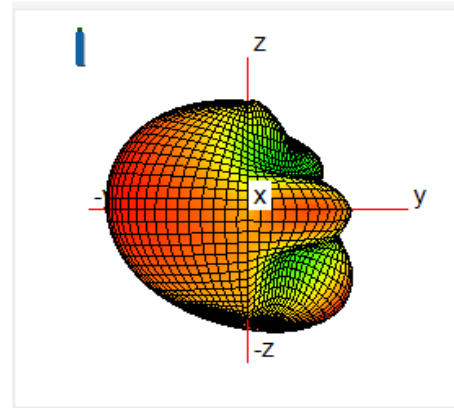


4200MHZ

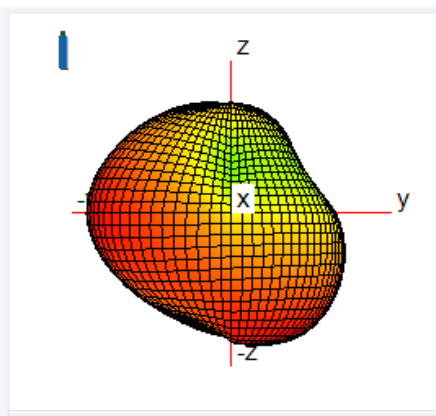
ANT3



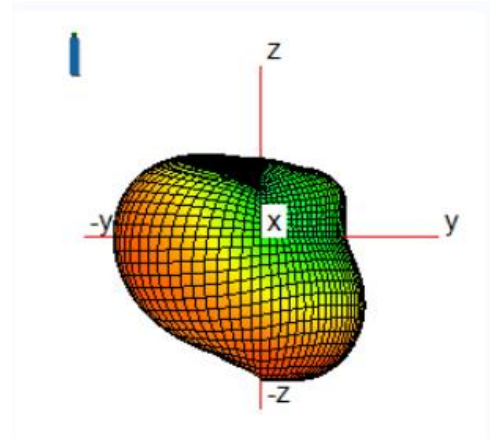
700 MHz



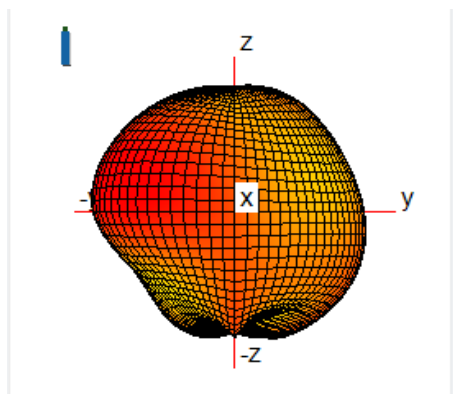
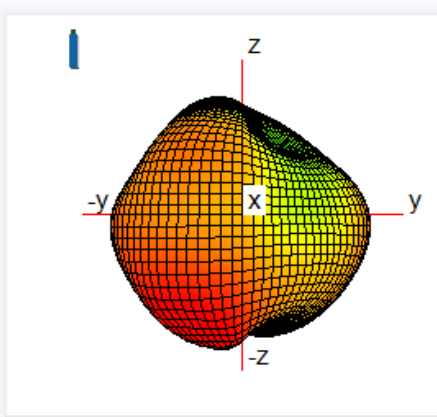
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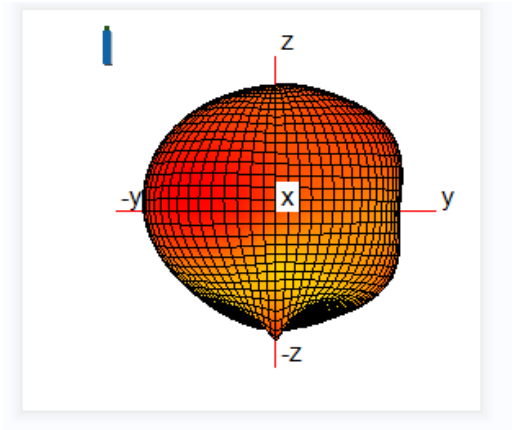
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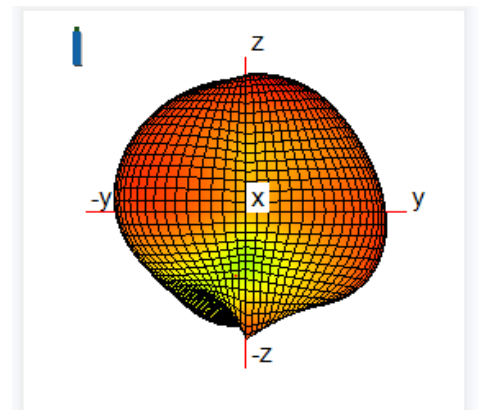
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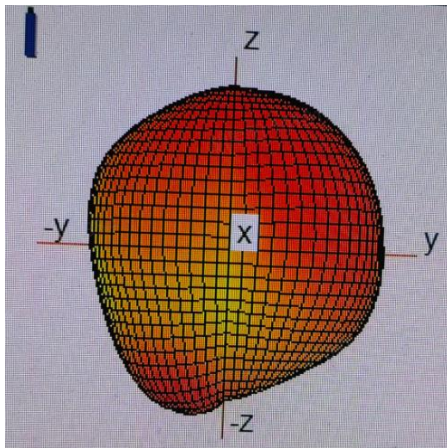
1710 MHz



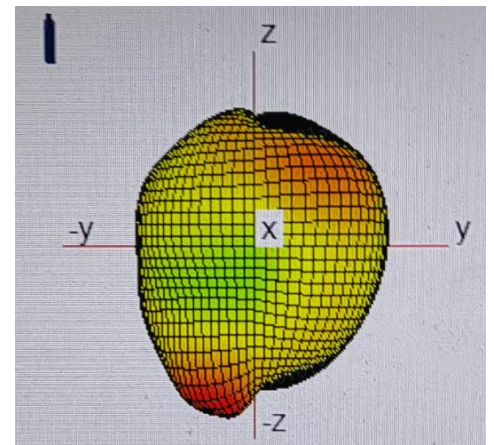
1990MHz



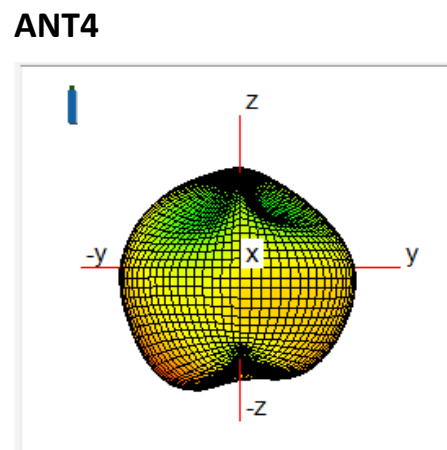
2170 MHz



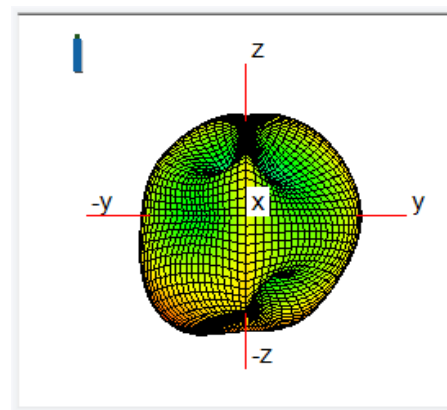
2300MHz



2500MHz

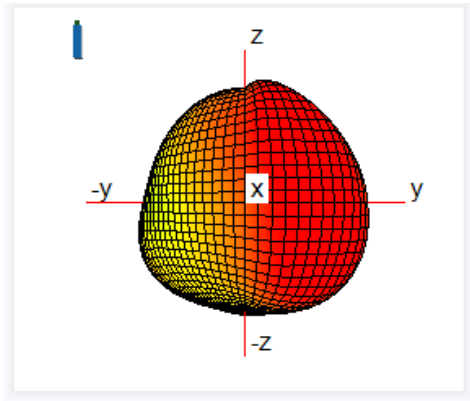


2700MHz



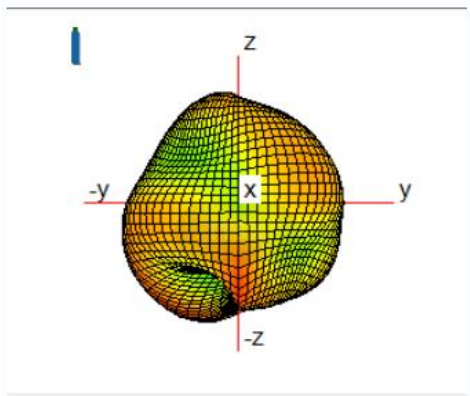
3300MHz

3800MHz

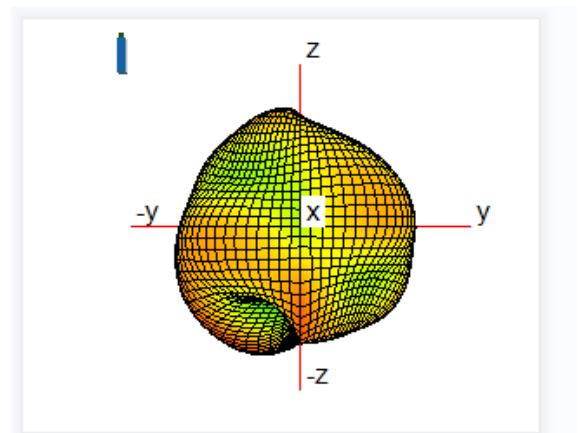


4200MHZ

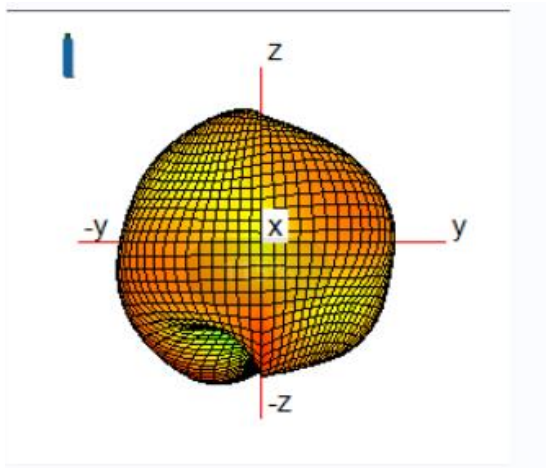
ANT5



1550MHZ

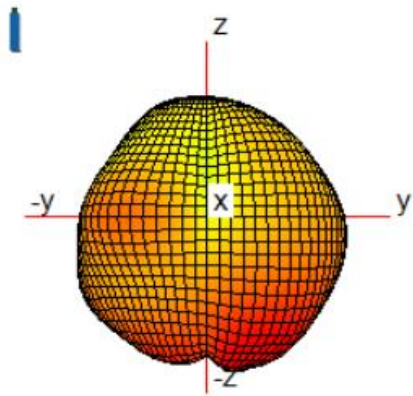


1575MHZ

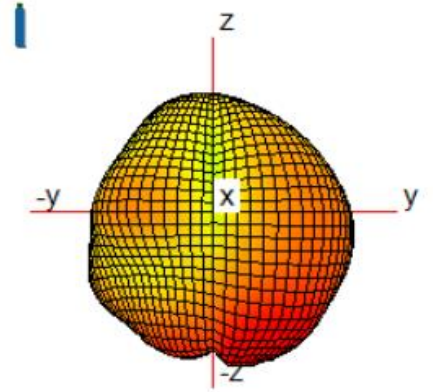


1600MHZ

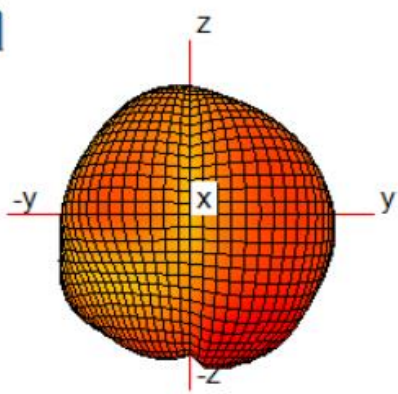
ANT6



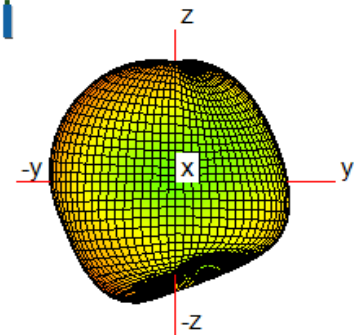
2400MHZ



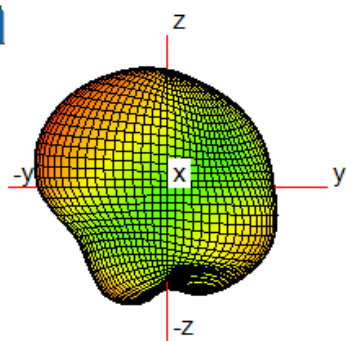
2450MHZ



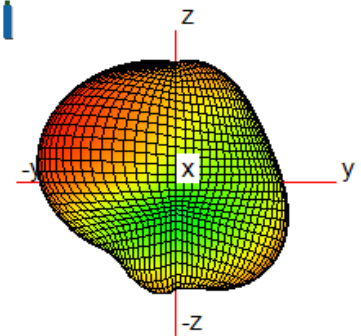
2500MHZ



5150MHZ

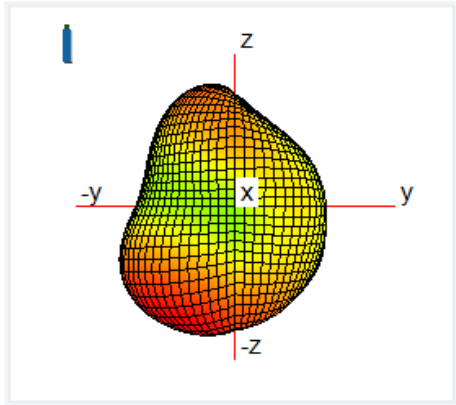


5550MHZ

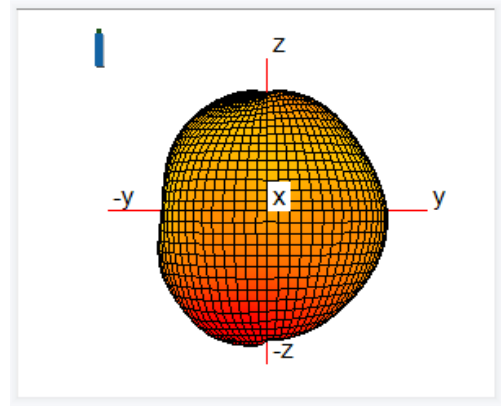


5850MHZ

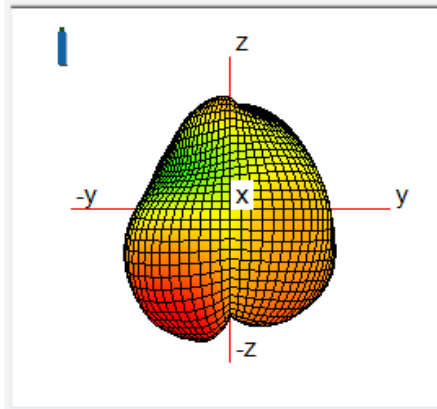
ANT8



3300MHZ

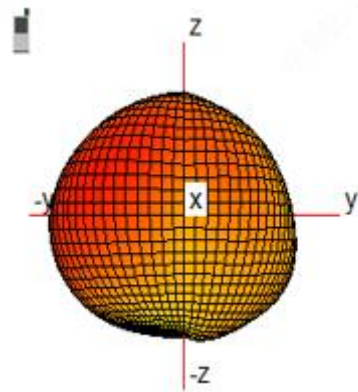


3800MHZ

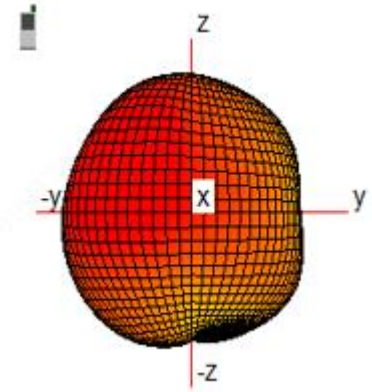


4200MHZ

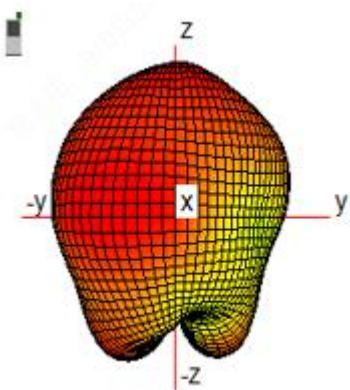
ANT9



3300MHZ

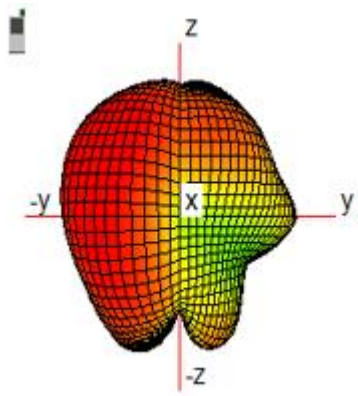


3800MHZ

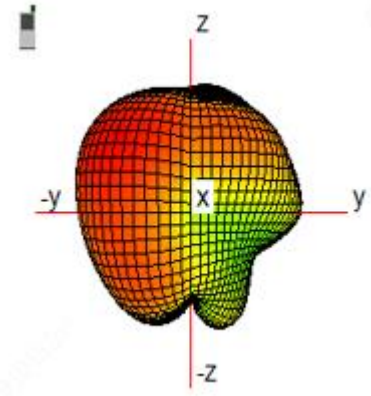


4200MHZ

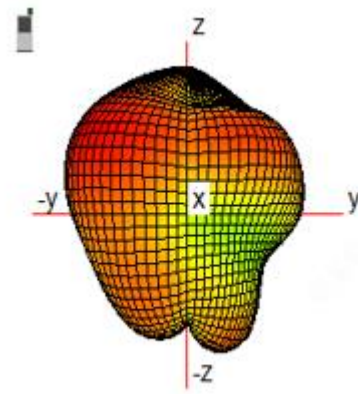
**ANT10**



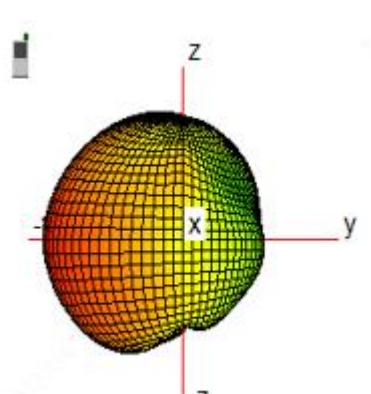
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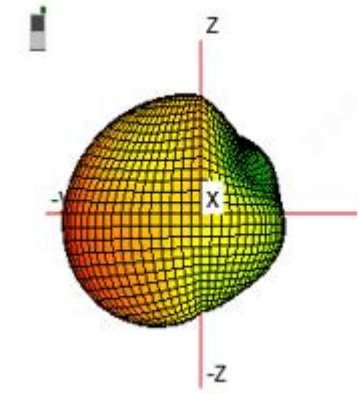
**2450MHZ**



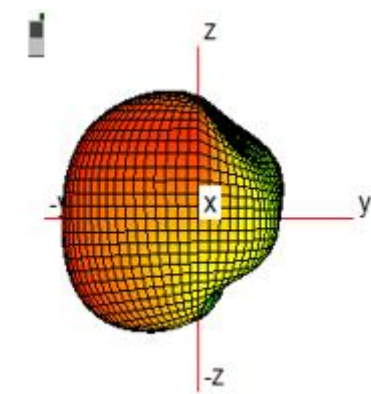
**2500MHZ**



**5150MHZ**



**5550MHZ**



**5850MHZ**