

Measurement of Antenna for i33 Project

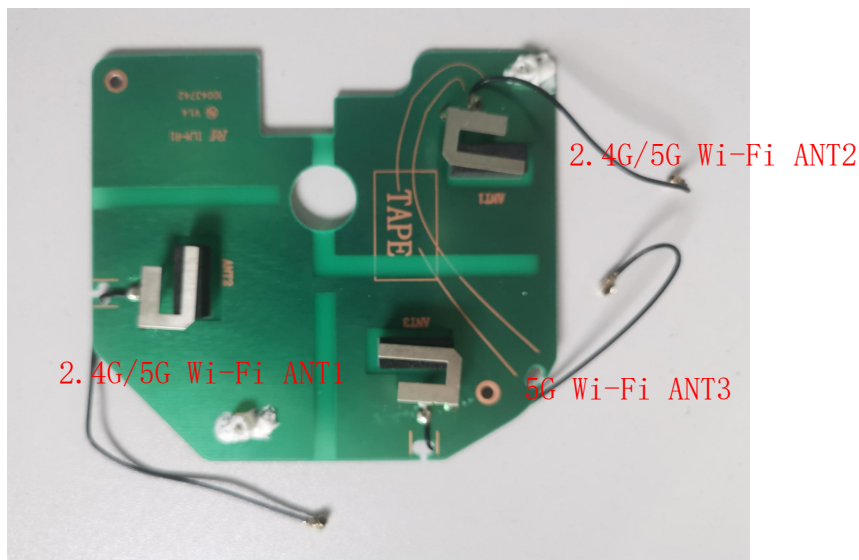
Manufacture: SHENZHEN TENDA TECHNOLOGY CO., LTD.

ADD: 6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road,

Nanshan District, Shenzhen, China. 518052

Model: i33 Antenna

1. Antenna Appearance:



2. Electrical performance test results at normal temperature

a) Antenna 1

No	Test Item	Unit	Demand Performance	Test Result		Judgement
1	Frequency Range	MHz	2400-2500/5150-5850	2400-2500/5150-5850		OK
2	Gain	dBi	4	2410	4.45	OK
				2450	4.80	OK
				2490	4.71	OK
				5150	4.63	OK
				5500	5.11	OK
				5850	5.06	OK
3	Isolation	dB	≤ -15	2400	-23	OK
				2450	-22	OK
				2500	-21	OK
				5150	-22	OK
				5500	-25	OK
				5850	-26	OK
4	Return loss	dB	≤ -10	2400	-12	OK
				2450	-15	OK
				2500	-15	OK
				5150	-11	OK
				5500	-17	OK
				5850	-12	OK

b) Antenna 2

No	Test Item	Unit	Demand Performance	Test Result		Judgement
1	Frequency Range	MHz	2400-2500/5150-5850	2400-2500/5150-5850		OK
2	Gain	dBi	4	2410	4.31	OK
				2450	4.34	OK
				2500	4.17	OK
				5150	4.89	OK
				5500	4.88	OK
				5850	4.58	OK
3	Isolation	dB	≤ -15	2400	-24	OK
				2450	-23	OK
				2500	-22	OK
				5150	-22	OK
				5500	-25	OK

				5850	-26	OK
4	Return loss	dB	≤ -10	2400	-13	OK
				2450	-15	OK
				2500	-14	OK
				5150	-11	OK
				5500	-15	OK
				5850	-13	OK

c) Antenna 3

No	Test Item	Unit	Demand Performance	Test Result		Judgement
1	Frequency Range	MHz	5150-5850	5150-5850		OK
2	Gain	dBi	4	5150	4.76	OK
				5500	5.26	OK
				5850	4.49	OK
3	Isolation	dB	≤ -15	5150	-22	OK
				5500	-25	OK
				5850	-26	OK
4	Return loss	dB	≤ -10	5150	-11	OK
				5500	-17	OK
				5850	-12	OK

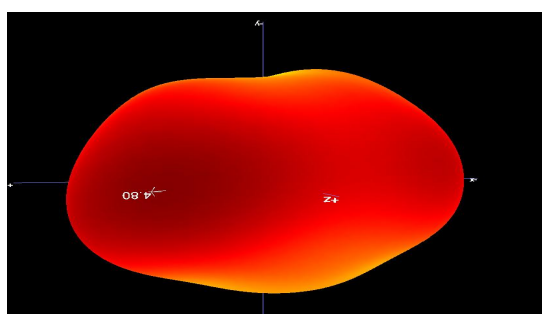
3. Radiation parameter test

Antenna 1:

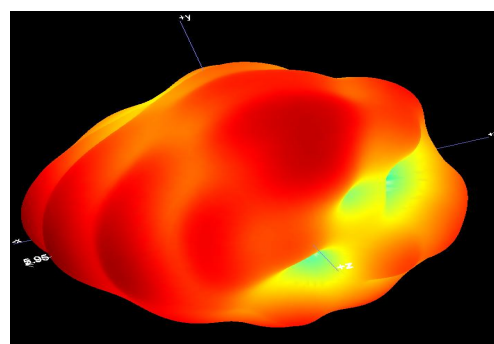
Frequency	E Total. dB(dBi)	Efficiency()
2410MHz	4.45	78%
2450MHz	4.80	81%
2490MHz	4.71	79%
5150MHz	4.63	65%
5500MHz	5.11	76%
5850MHz	5.06	69%

3D Radiation patterns

2.4G

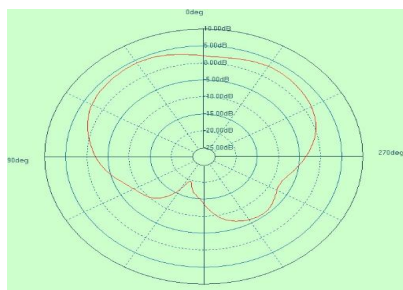


5G

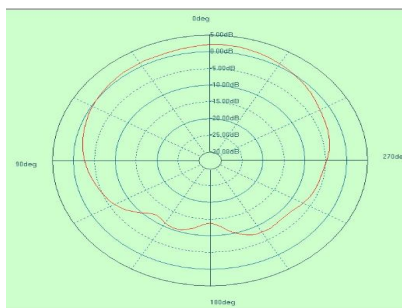


2D Radiation patterns

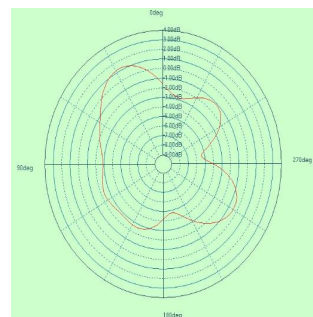
2.4G Phi=0 Phi=0



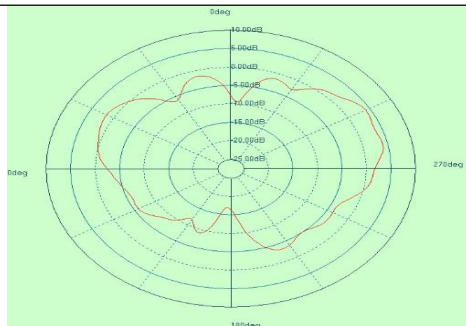
2.4G Phi=90



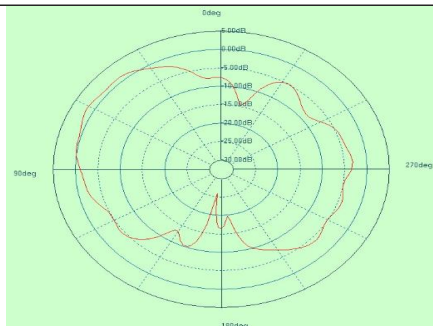
2.4G Theta=90



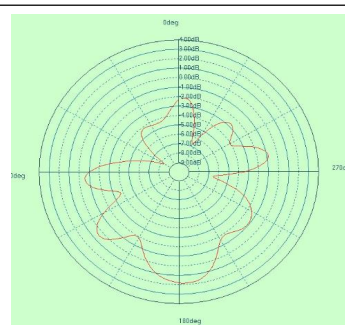
5G Phi=0 Phi=0



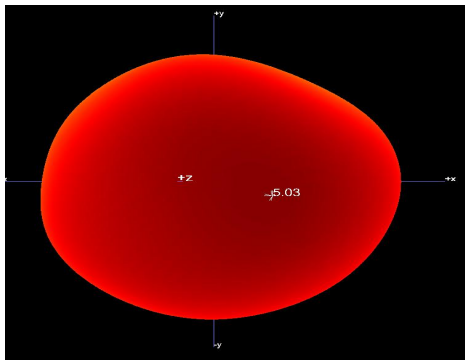
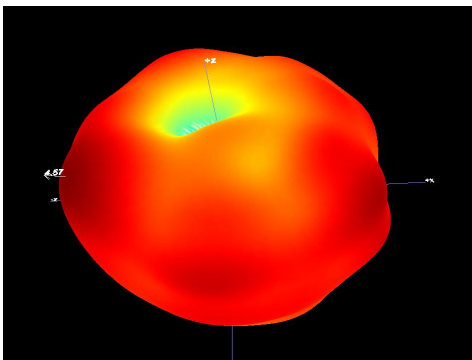
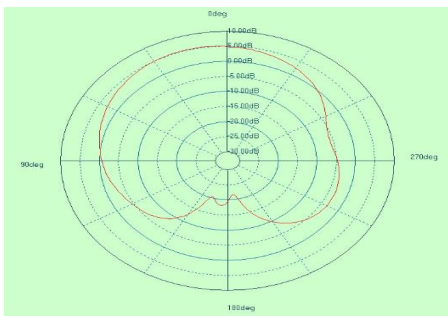
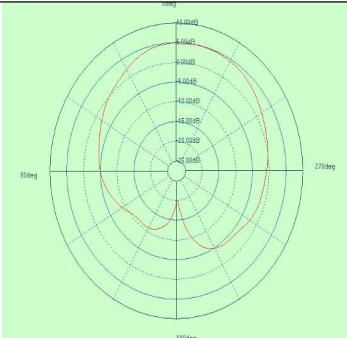
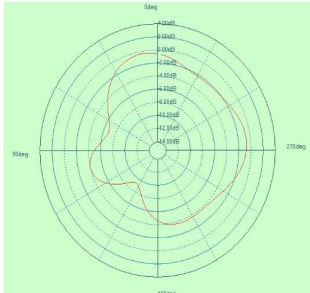
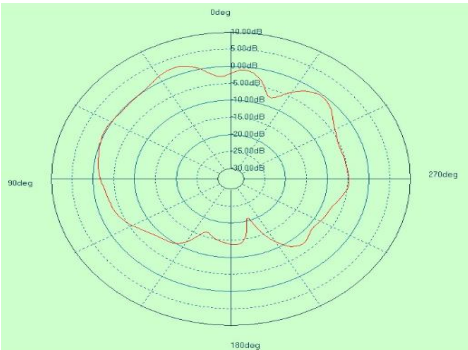
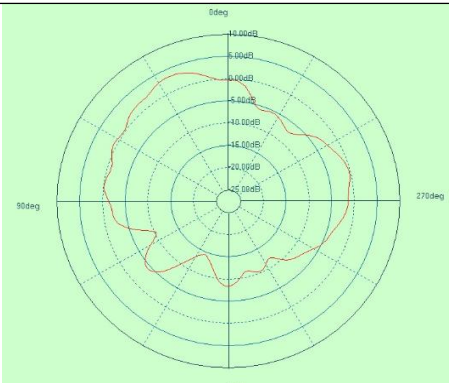
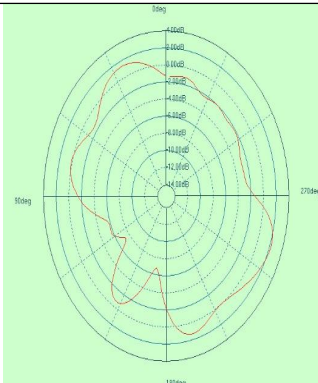
5G Phi=90



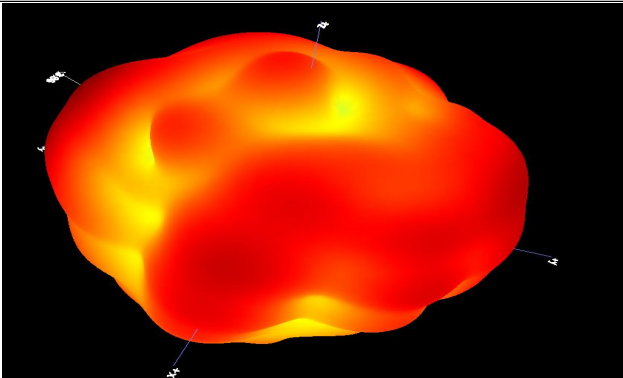
5G Theta=90



Antenna 2

Frequency	E Total. dB(dBi)	Efficiency()
2410MHz	4.31	80%
2450MHz	4.34	74%
2500MHz	4.17	70%
5150MHz	4.89	65%
5500MHz	4.88	74%
5850MHz	4.58	67%
3D Radiation patterns		
2. 4G		5G
		
2D Radiation patterns		
2. 4G Phi=0 Phi=0	2. 4G Phi=90	2. 4G Theta=90
		
5G Phi=0 Phi=0	5G Phi=90	5G Theta=90
		

Antenna 3:

Frequency	E Total. dB(dBi)	Efficiency()
5150MHz	4.76	72%
5500MHz	5.26	69%
5850MHz	4.49	70%
3D Radiation patterns		
5G		
		
2D Radiation patterns		
5G Phi=0 Phi=0	5G Phi=90	5G Theta=90
