



Antenna Approval Sheet

For **CJ22** Project

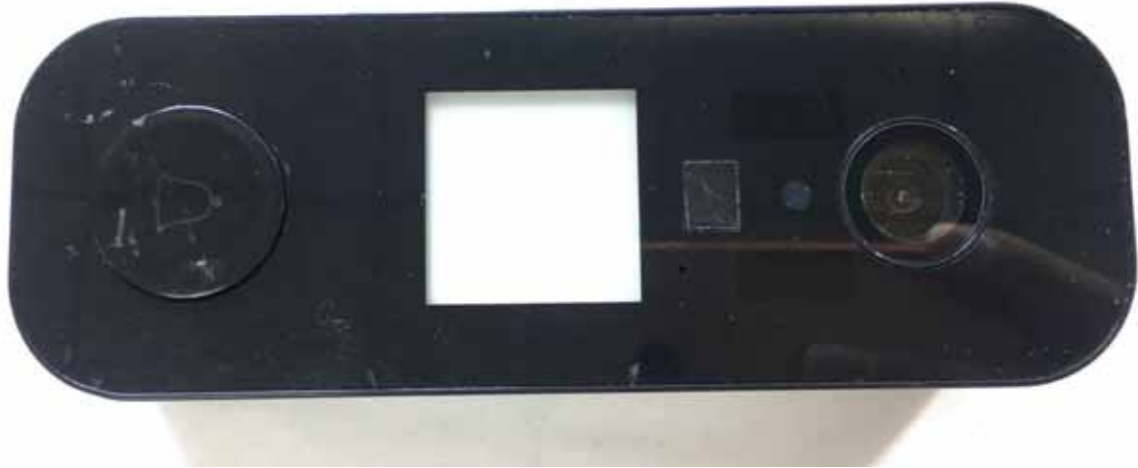
Customer	永福昌	Project	CJ22
Band	WiFi 2.4GHZ/5.8GHZ/433MHZ		
ZC PN	YC027-CA-93/YC027-XD-16		
Version	R:A	Data	2023-5-29

RF		ME	
Checked By			
Confirmed By			
Cust Confirm			



1. Summary of the DUT

CJ22 Picture



WIFI Antenna



433M Antenna



2. Electrical Specification:

Antenna types	Built-in WIFI Antenna/433M Antenna
Frequency	2400-2500 MHz, 5730-5835MHz, 433MHZ
Impedance	50 Ω
VSWR	< 2.0
Gain	2.4GHZ 1.5 dbi, 5.8GHZ 5dbi, 433MHZ 0.8dbi
Efficiency	>35 %
Antenna Material	PCB/Spring coil
Connector Type	WIFI:1.13 MHF-1-Plug, 433:Soldering



3. Test Condition

3.1	测试项目	测试设备和型号	备注
1.有源测试	1.TRP 2.TIS	1. 3D microwave darkroom (Satimo SG24) 2. Comprehensive test instrument (CMW500) 3. Agilent 8960 E5515C	
2.无源测试	1. Antenna Gain 2. S.W.R 3. Return Loss 4. Radiation Pattern	1. Network analyzer (R&S ZVL6) 2. Network analyzer (HP 8753D)	

3.2 Matching Circuit The matching circuit was Default

3.3Antenna installation diagram:



4. RF Performance –WIFI Antenna

4.1.1 Active test data

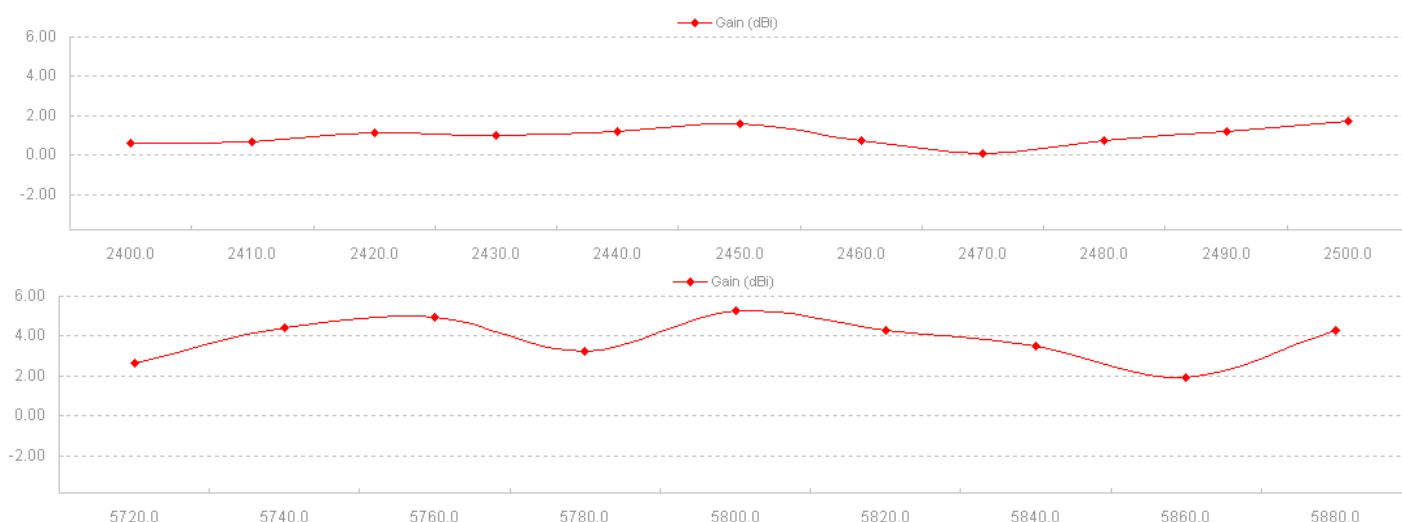
Item	Standard	Band	Channel	Frequency	TRP	TIS
1	WIFI (AP)	WIFI_B (11M)	1	2412	14.31	-84.25
2	WIFI (AP)	WIFI_B (11M)	6	2437	14.16	-81.72
3	WIFI (AP)	WIFI_B (11M)	11	2462	14.08	-81.18
Item	Standard	Band	Channel	Frequency		
1	WIFI (AP)	WIFI_A (54M)	149	5745	17.14	-66.03
2	WIFI (AP)	WIFI_A (54M)	157	5785	17.32	-68.19
3	WIFI (AP)	WIFI_A (54M)	165	5825	17.47	-69.38



4.1.2 Passive parameters

Freq. (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	0.58	0.66	1.1	1.02	1.17	1.59	0.72	0.08	0.72	1.19	1.73
Efficiency (%)	40.3	40.2	40.7	42.4	44.6	48.4	42.2	36.3	40	42.5	45.4

Freq. (MHz)	5720	5740	5760	5780	5800	5820	5840	5860	5880
Gain (dBi)	2.65	4.39	4.95	3.22	5.25	4.26	3.48	1.91	4.32
Efficiency (%)	52.2	57.4	56.4	60.4	60.6	54.3	58.9	53.6	52.4



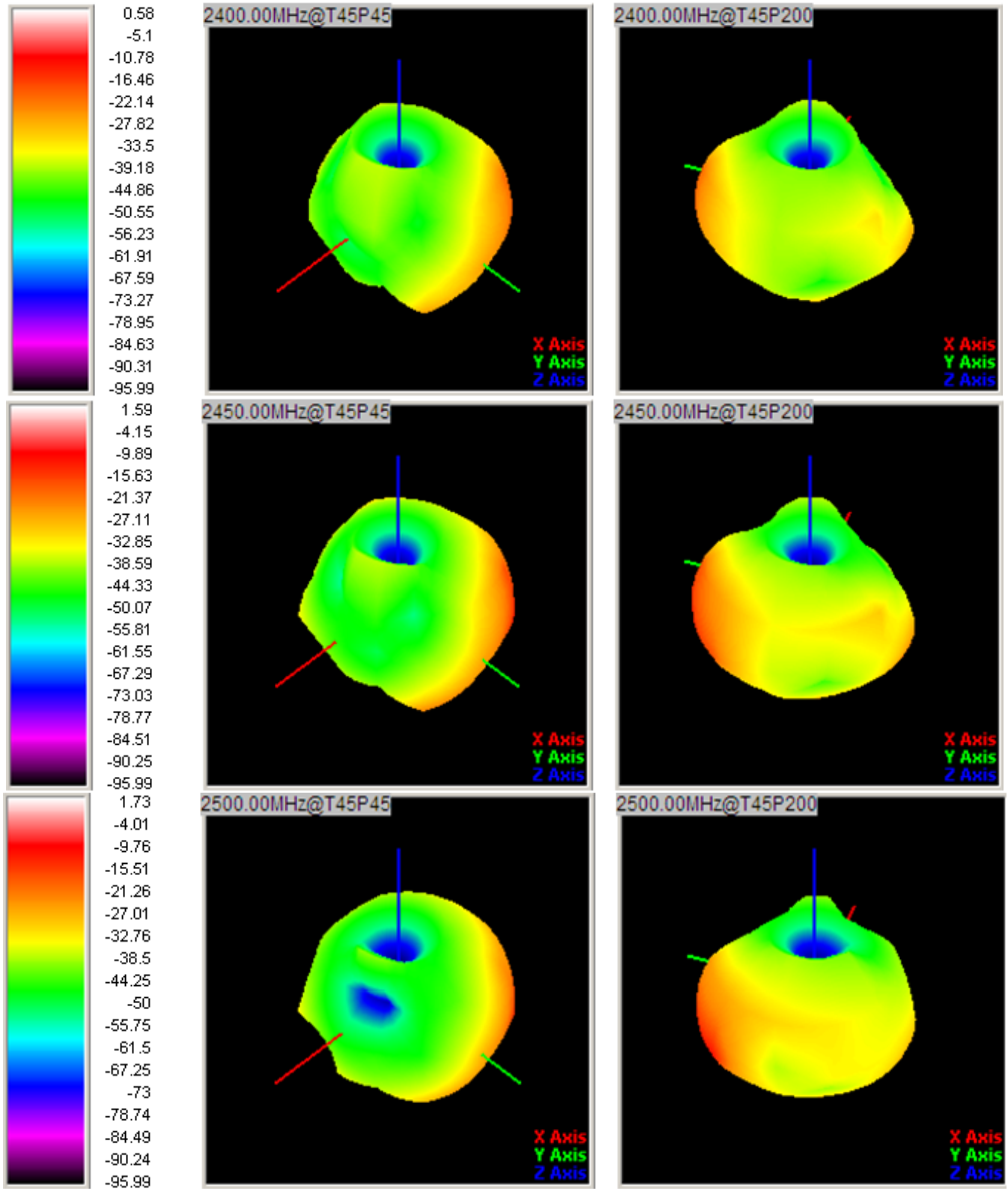
4.1.3 Parameter

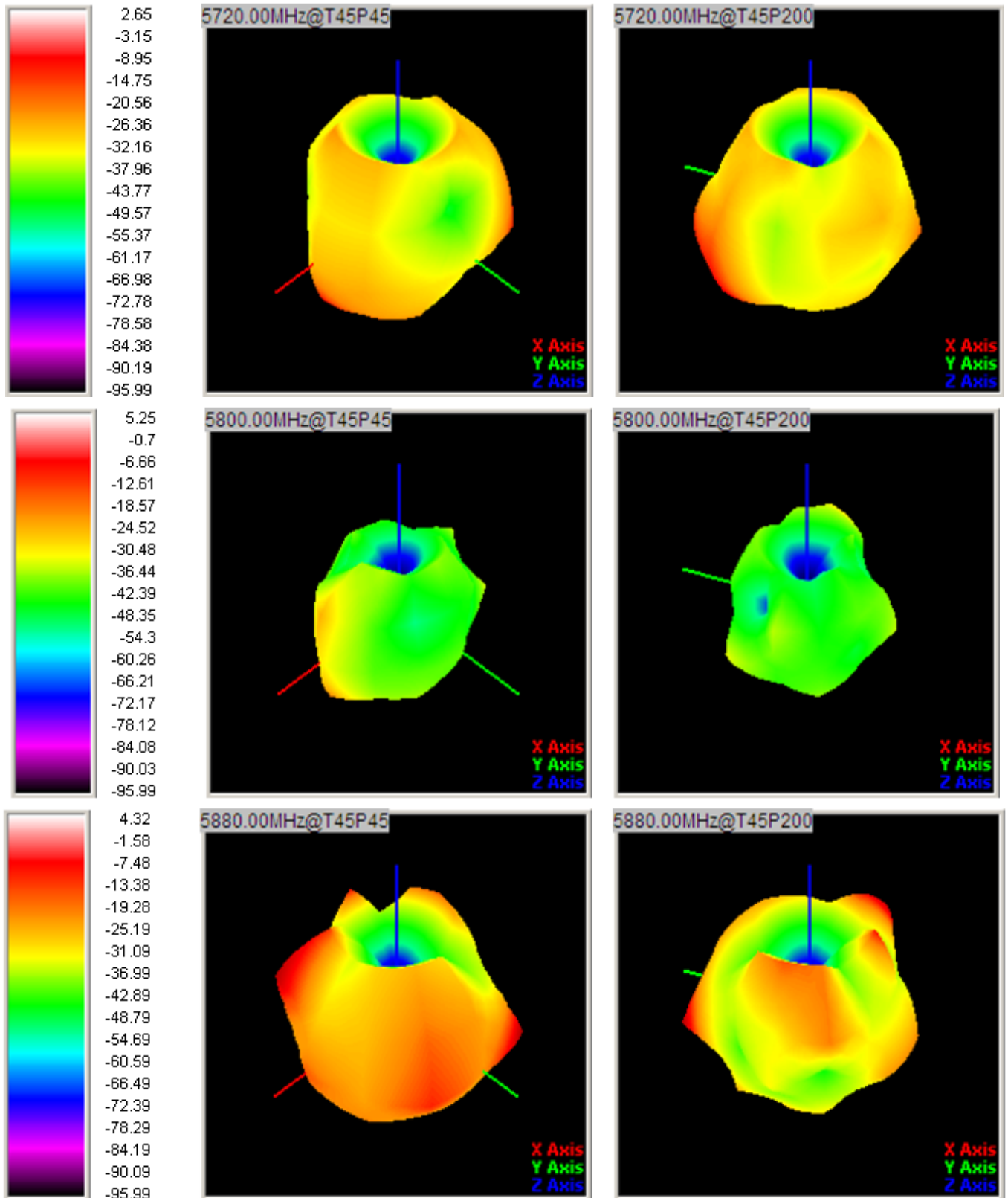
Frequency (MHz)	2400	2450	2480	5725	5875
Return Loss(dB)	-13.2	-20.6	-13.9	-17.5	-17.1
VSWR	1.53	1.27	1.6	1.28	1.33





4.1.4 Antenna 3D Radiation Pattern (Unit:dbi)



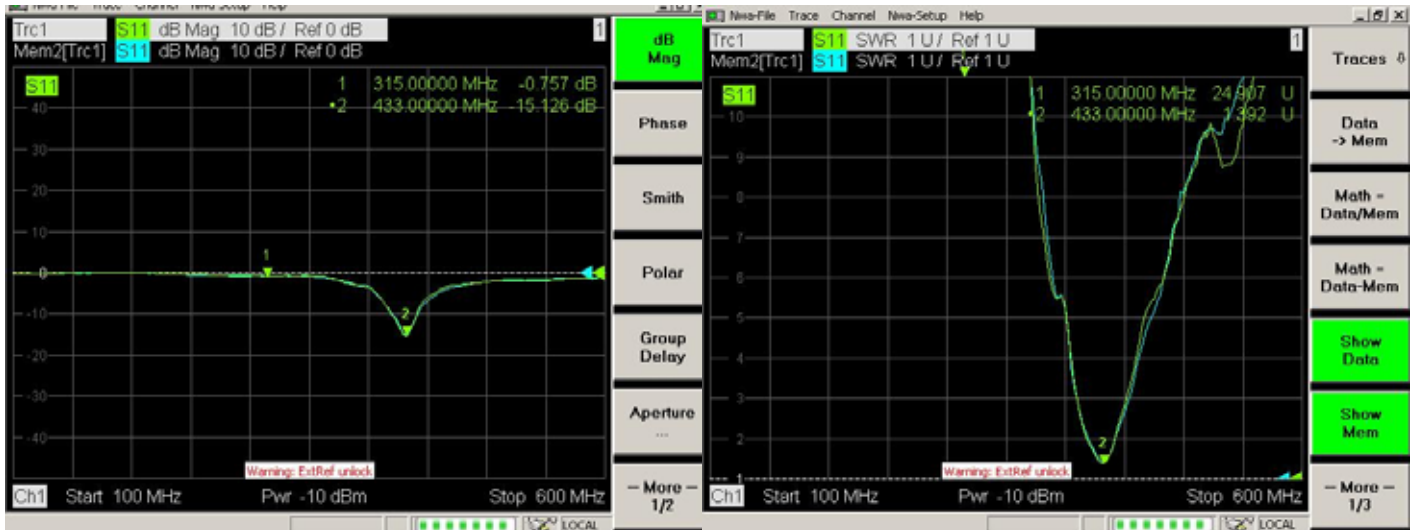




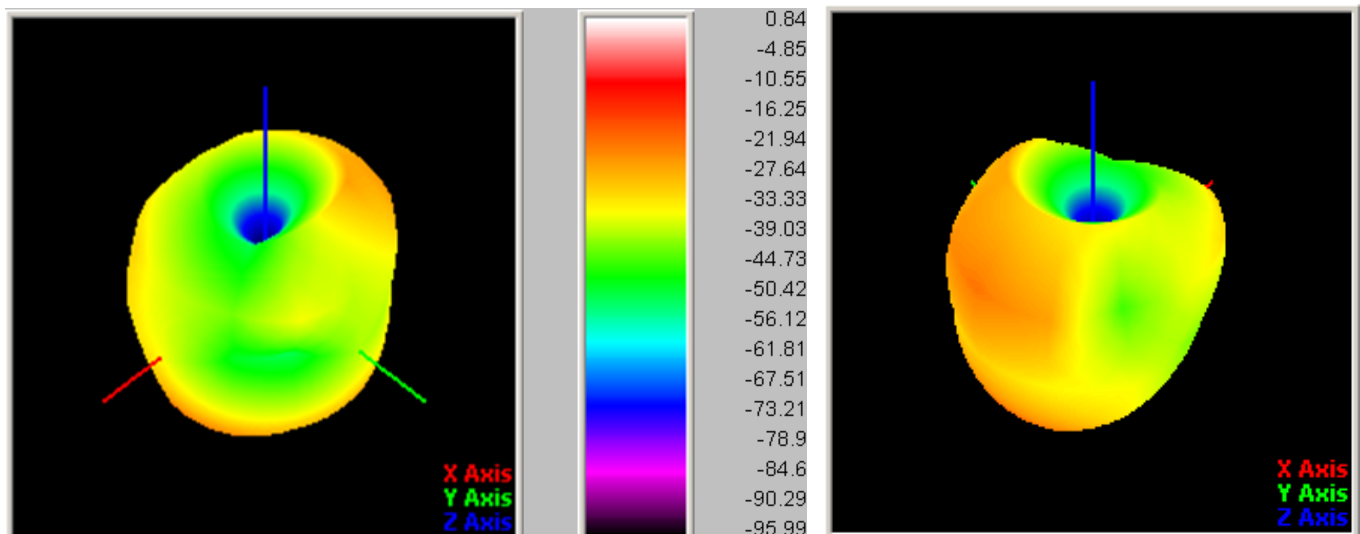
4.2 RF Performance-433MHZ Antenna

4.2.1 Passive parameters

Frequency (MHz)	Return Loss(dB)	VSWR	Gain (dBi)
433	-15.12	1.39	0.84



4.2.2 Antenna 3D Radiation Pattern (Unit:dbi)





5. ME Drawing for the antenna

