Antenna specifications

1. General Information

1.1 General Information of testing institutions
Multi-probe OTA Measurement System

2.Test System

Sequence Number	Test Item	equipment
S parameter	VSWR	Agilent 5071C & Agilent 5062A
OTA Test	TRP&TIS	CMW500 &CMW270 ETS&SATIMO
Gain & Efficiency	Gain & Efficiency	ETS&SATIMO Agilent 5071C

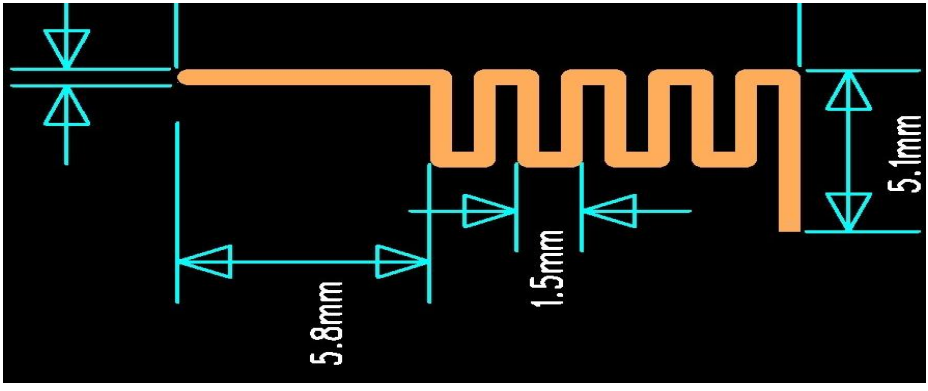
1.2 Test equipment

Equipment	Model No.	Serial No.	Manufacturer	Calibration date	Next calibration date
24 probe microwave chamber	4*3*3	NA	FEITU	2023.10.29	2024.1.31
Network Analyzer	5071C	NA	Agilent	2023.10.29	2024.1.31

1.3 Test environment

Temperature	24℃ ± 1.5℃
Humidity	45%RH
Pressure	101kPa

1.4 Antenna Photo & Lenght(mm)

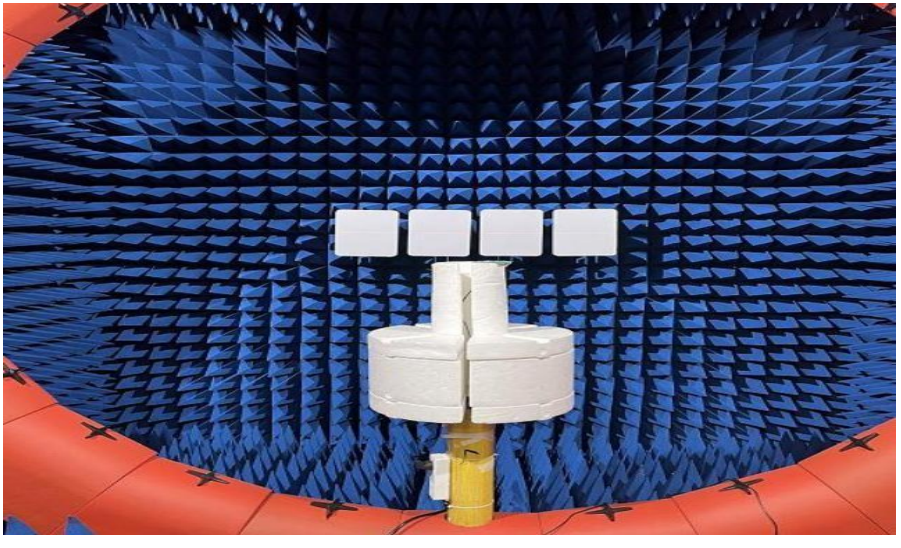


2. Sample Information

2.1 Client information

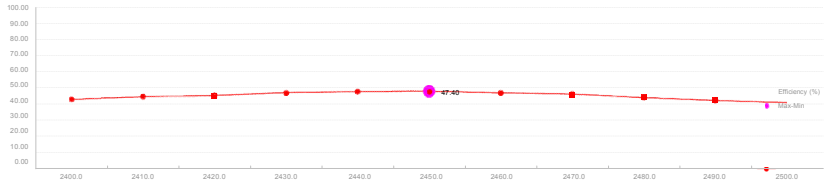
Product Name	PCB BT Antenna
Sample Model	ANT_2G4_1
Antenna Size	5.1*14.3mm
Antenna Type	PCB antenna
Test Item	Antenna Gain, Radiation pattern
Frequency Range	2400-2500MHz
Received Date	2023.12.1
Test Date	2023.12.1
Remark	The length of the RF cable is 50mm

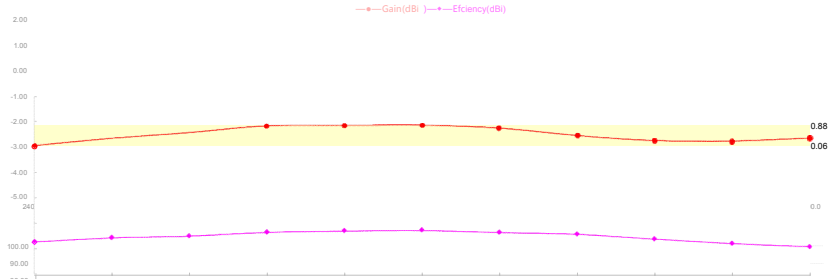
2.2The test potos

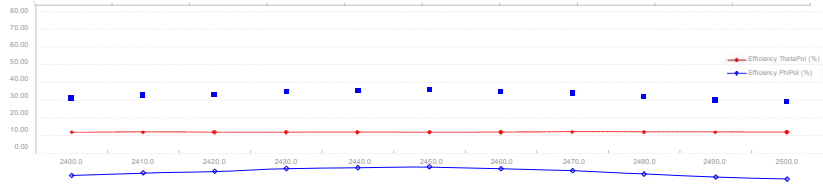


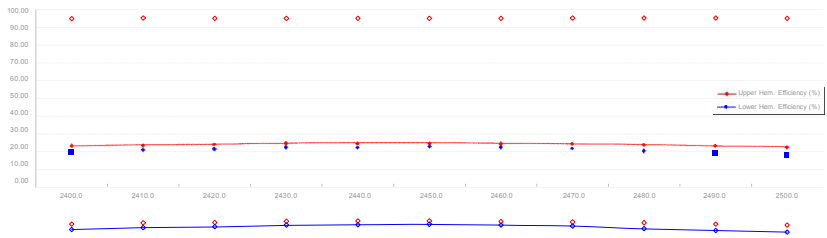
Testdata

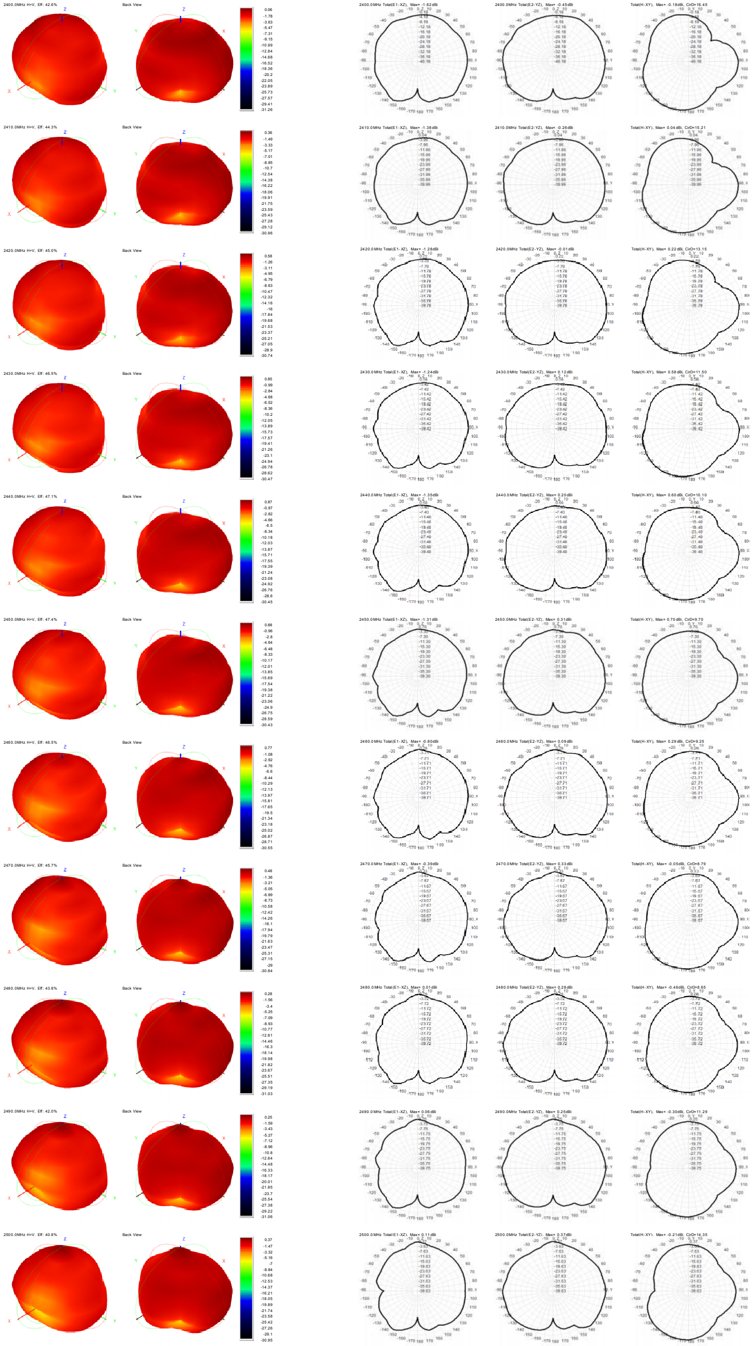
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	**2400.0**	**2410.0**	**2420.0**	**2430.0**	**2440.0**	**2450.0**	**2460.0**	**2470.0**	**2480.0**	**2490.0**	**2500.0**
Efficiency (dBi)	**-3.70**	**-3.54**	**-3.47**	**-3.32**	**-3.27**	**-3.24**	**-3.33**	**-3.40**	**-3.59**	**-3.76**	**-3.90**
Gain (dBi)	0.06	0.36	0.58	0.85	0.87	0.88	0.77	0.48	0.28	0.25	0.37
Efficiency (%)	**42.62**	**44.27**	**44.99**	**46.55**	**47.13**	**47.40**	**46.47**	**45.73**	**43.79**	**42.05**	**40.78**
Directivity (dBi)	3.76	3.90	4.05	4.17	4.14	4.13	4.09	3.88	3.87	4.01	4.26
Peak Gain Position (Theta)	120.00	120.00	120.00	120.00	120.00	105.00	105.00	105.00	135.00	135.00	0.00
Peak Gain Position (Phi)	285.00	285.00	285.00	285.00	285.00	285.00	285.00	285.00	270.00	270.00	90.00
Efficiency ThetaPol (%)	11.37	11.71	11.53	11.53	11.59	11.52	11.56	11.83	11.80	11.70	11.60
Efficiency PhiPol (%)	31.24	32.56	33.45	35.01	35.54	35.89	34.91	33.90	31.99	30.35	29.18
Upper Hem. Efficiency (%)	22.82	23.44	23.72	24.38	24.66	24.69	24.26	23.98	23.57	22.84	22.39
Lower Hem. Efficiency (%)	19.80	20.82	21.27	22.17	22.47	22.71	22.21	21.75	20.23	19.21	18.40
T90(H)圆度	16.45	15.21	13.15	11.50	10.10	9.70	9.25	8.79	8.65	11.29	14.35
Gain 15deg (dBi)											
E1(XZ)波瓣宽度	185.00	181.00	164.00	161.00	163.00	164.00	157.00	104.00	91.00	87.00	79.00
E1(XZ)前后比	2.45	2.22	1.93	1.68	1.48	1.46	2.11	2.25	2.63	3.19	3.79
E2(YZ)波瓣宽度	154.00	145.00	140.00	141.00	150.00	152.00	156.00	156.00	158.00	158.00	157.00
E2(YZ)前后比	3.84	4.00	4.38	4.50	4.70	4.68	4.30	4.49	4.61	4.83	5.18
最大增益处轴比(P)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
仰角10度最差(大)轴比(P)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Hc(XY)波瓣宽度	77.00	78.00	79.00	79.00	80.00	81.00	85.00	87.00	87.00	78.00	72.00
Hc(XY)前后比	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Empty											










2400.0MHz H+V, Eff: 42.6%
Back View
2400.0MHz Total(E1-XZ), Max= -1.62dBi
2400.0MHz Total(E2-YZ), Max= -0.45dBi
Total(H-XY), Max= -0.18dBi, CirD=16.45
2410.0MHz H+V, Eff: 44.3%
Back View
2410.0MHz Total(E1-XZ), Max= -1.38dBi
2410.0MHz Total(E2-YZ), Max= -0.26dBi
Total(H-XY), Max= 0.04dBi, CirD=15.21
2420.0MHz H+V, Eff: 45.0%
Back View
2420.0MHz Total(E1-XZ), Max= -1.28dBi
2420.0MHz Total(E2-YZ), Max= -0.01dBi
Total(H-XY), Max= 0.22dBi, CirD=13.15
2430.0MHz H+V, Eff: 46.5%
Back View
2430.0MHz Total(E1-XZ), Max= -1.24dBi
2430.0MHz Total(E2-YZ), Max= 0.12dBi
Total(H-XY), Max= 0.58dBi, CirD=11.50
2440.0MHz H+V, Eff: 47.1%
Back View
2440.0MHz Total(E1-XZ), Max= -1.35dBi
2440.0MHz Total(E2-YZ), Max= 0.20dBi
Total(H-XY), Max= 0.60dBi, CirD=10.10
2450.0MHz H+V, Eff: 47.4%
Back View
2450.0MHz Total(E1-XZ), Max= -1.31dBi
2450.0MHz Total(E2-YZ), Max= 0.31dBi
Total(H-XY), Max= 0.70dBi, CirD=9.70
2460.0MHz H+V, Eff: 46.5%
Back View
2460.0MHz Total(E1-XZ), Max= -0.80dBi
2460.0MHz Total(E2-YZ), Max= 0.09dBi
Total(H-XY), Max= 0.29dBi, CirD=9.25
2470.0MHz H+V, Eff: 45.7%
Back View
2470.0MHz Total(E1-XZ), Max= -0.39dBi
2470.0MHz Total(E2-YZ), Max= 0.33dBi
Total(H-XY), Max= -0.05dBi, CirD=8.79
2480.0MHz H+V, Eff: 43.8%
Back View
2480.0MHz Total(E1-XZ), Max= 0.01dBi
2480.0MHz Total(E2-YZ), Max= 0.28dBi
Total(H-XY), Max= -0.46dBi, CirD=8.65
2490.0MHz H+V, Eff: 42.0%
Back View
2490.0MHz Total(E1-XZ), Max= 0.06dBi
2490.0MHz Total(E2-YZ), Max= 0.25dBi
Total(H-XY), Max= -0.30dBi, CirD=11.29
2500.0MHz H+V, Eff: 40.8%
Back View
2500.0MHz Total(E1-XZ), Max= 0.11dBi
2500.0MHz Total(E2-YZ), Max= 0.37dBi
Total(H-XY), Max= -0.21dBi, CirD=14.35