



Project: H1i

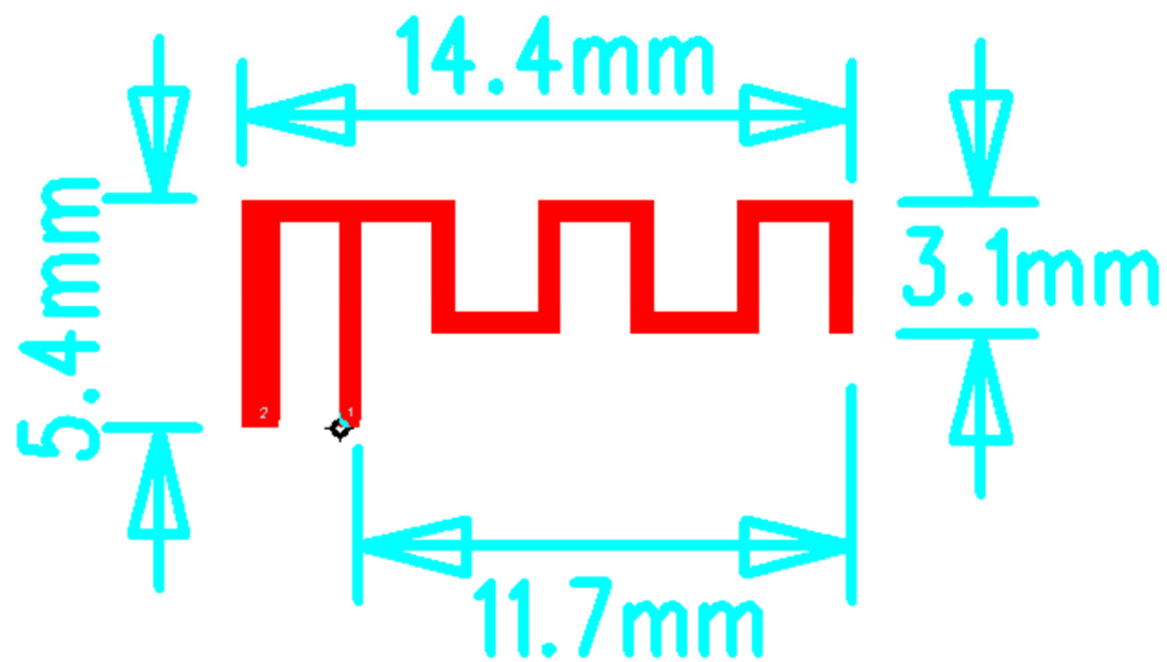
P roducer: peng zhou

Date : 2023.03.16

Baseus H1i RF Test report

Project Resume							
Date	Antenna version	Software version	Hardware version	Reason for change	Change the content	The test person	remarks
20230316						Zhou Peng	

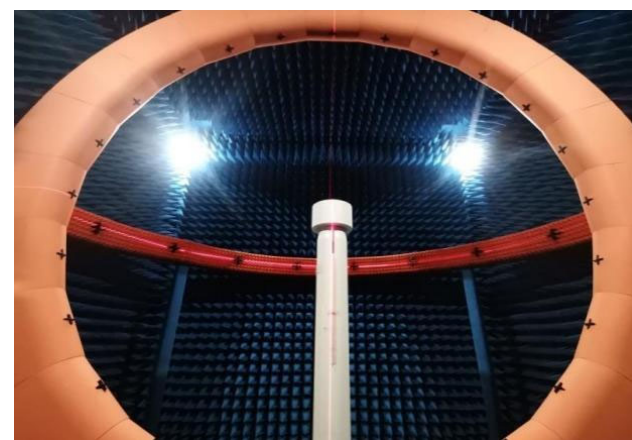
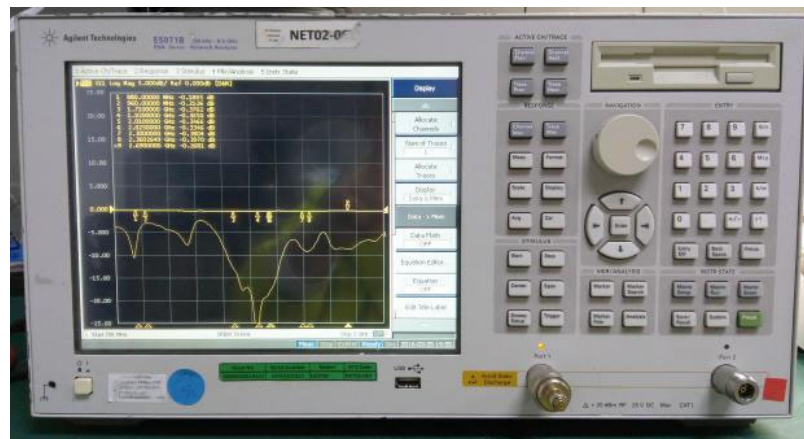
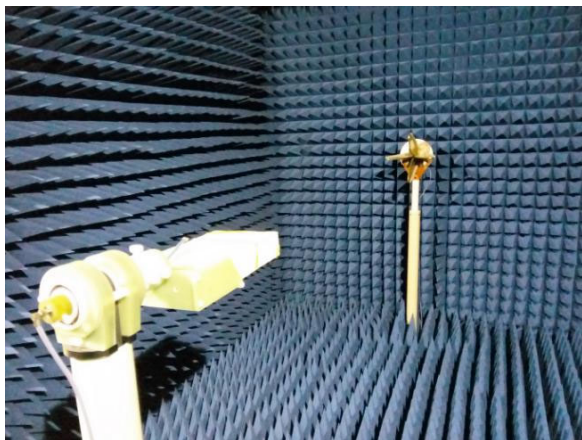
Antenna Photo & Length (mm)



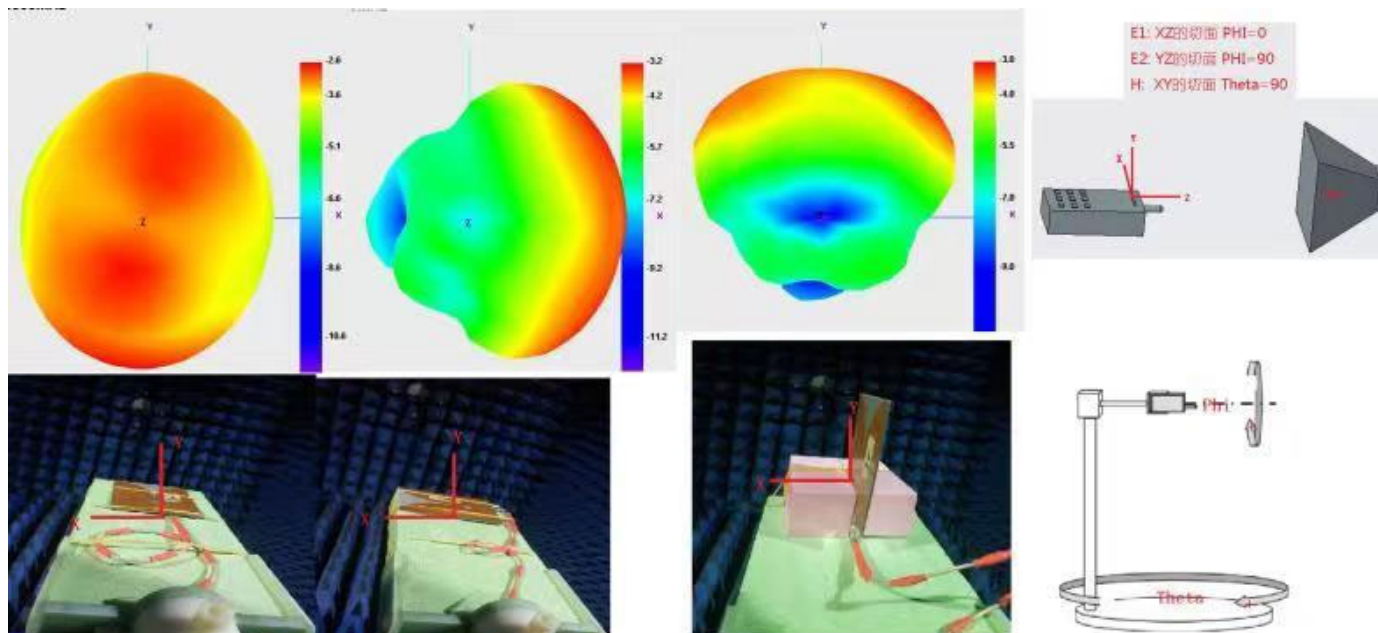
— . Test Instrumentation and item

Class	Test item	Equipment
1. S parameter	1. RL 2. VSWR 3. Smith chart	(VNA) : Agilent E5071B R&S ZVB8 Protek A333
2. Coupling testing	1. MAX Power 2. MIN Sens	1.2G/3G Tester: Agilent 8960 2.The coupling box: TESCOM TC-5060A 3. 3D Chamber: ETS 3D Chamber (5x3x3)
3. 3D Passive Test	1. 3D TRP 2. Gain 3. radiation pattern	1. 3D Chamber: TEM24 3D Chamber (5x5x5) ETS 3D Chamber (5x3x3) 2. (VNA) : Agilent E5071B R&S ZVB8

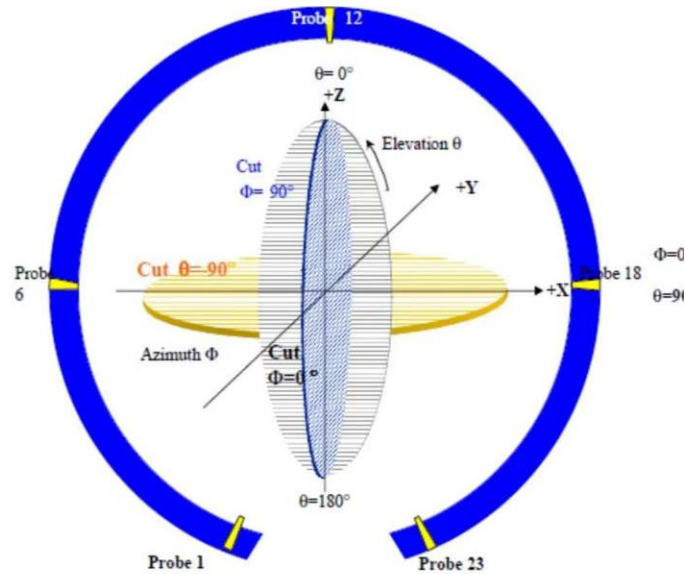
4.3D (Active Test)	1. 3D TRP	1. 3D Chamber: TEM24 3D Chamber (5x5x5) ETS 3D Chamber (5x3x3)
	2. 3D TIS	2.2G/3G Tester: Agilent 8960 3.4G Tester: MT8820C/CMW500 4.WIFI/BT/NB-iot Tester: CMW500
	3. Throughput rate	5. 5G Tester: SP9500-CTS 6.Head: HEAD-P10 (FACE-P10)



二. Chamber coordinate axis



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三. Definitions

VSWR: Voltage Standing Wave Ratio

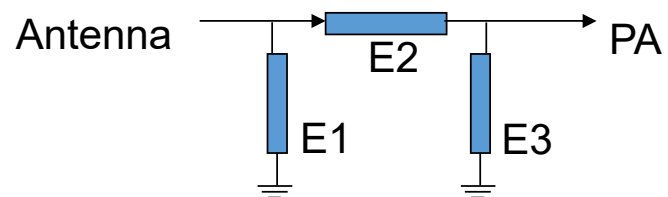
RL: Return loss

TRP: total radiated power

TIS: total isotropic sensitivity

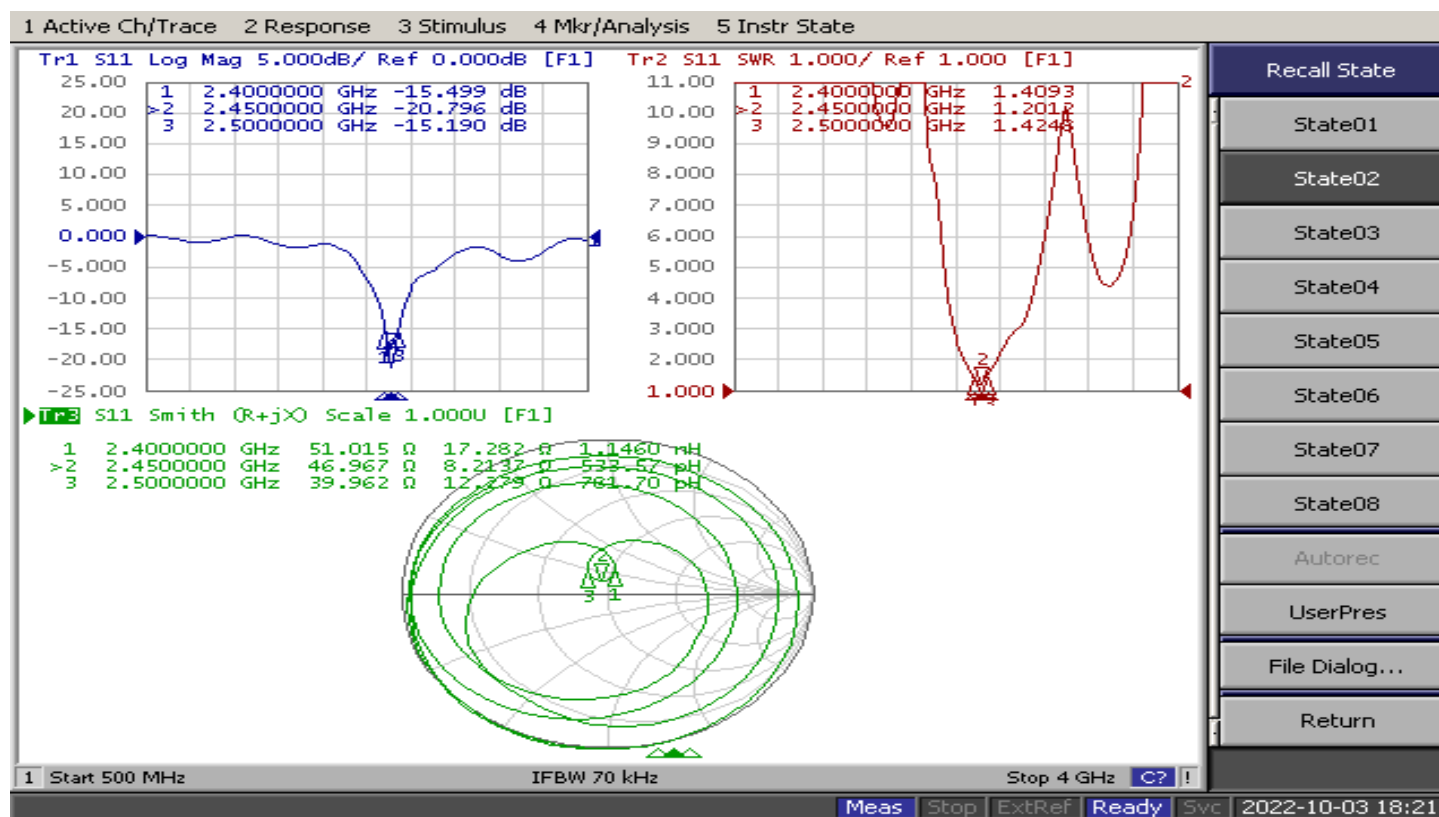


antenna loading coil



item	parameter
E1	NC
E2	0Ω
E3	NC

4.1 LOG MAG@VSWR@SMITH@



4.2 Passive efficiency

free space

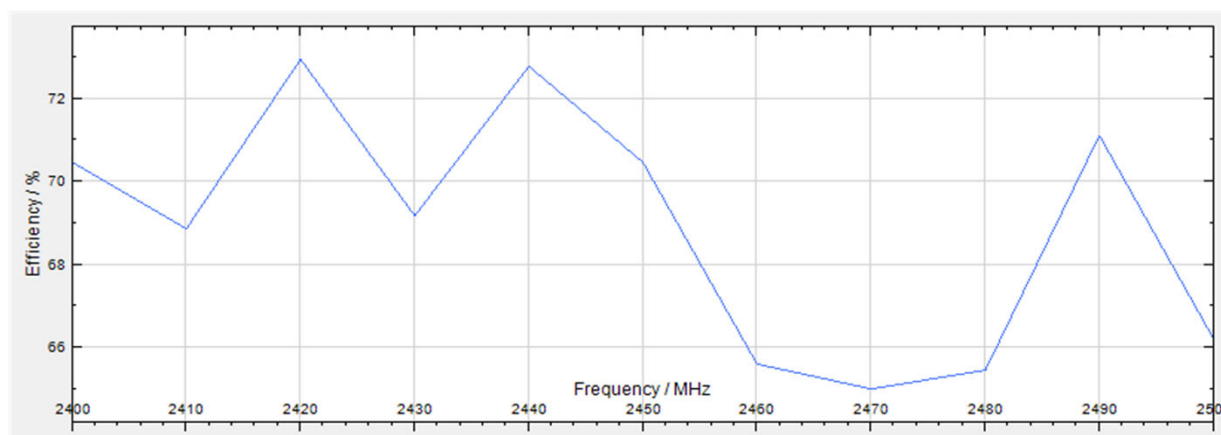
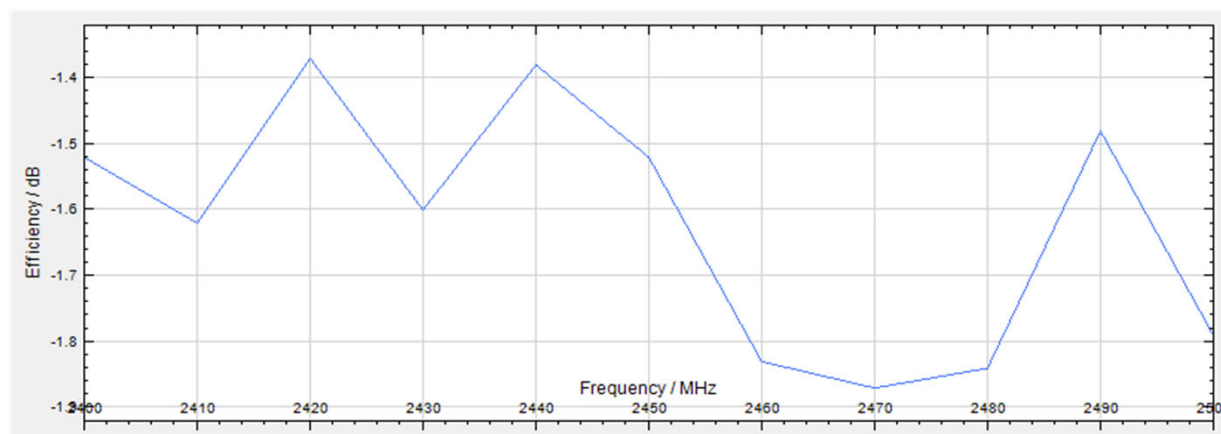


free.et



head.et

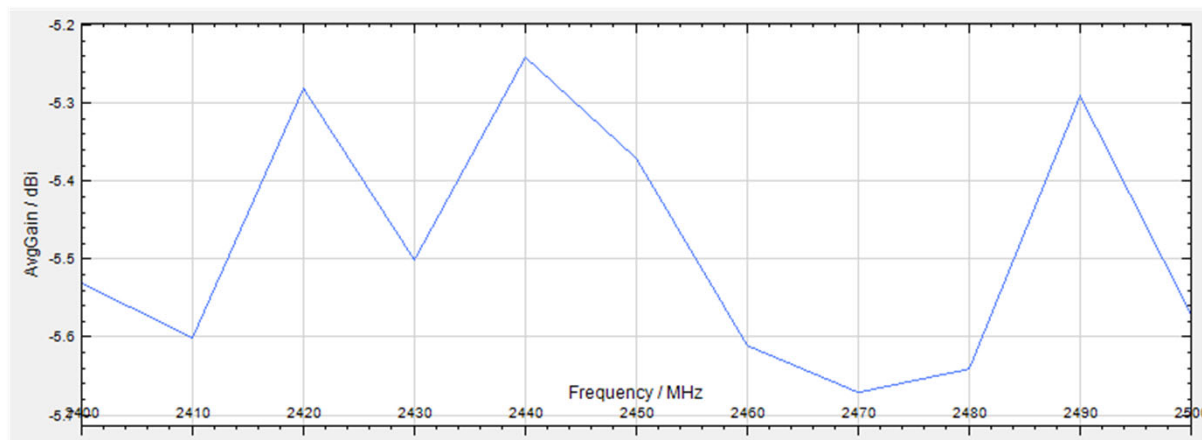
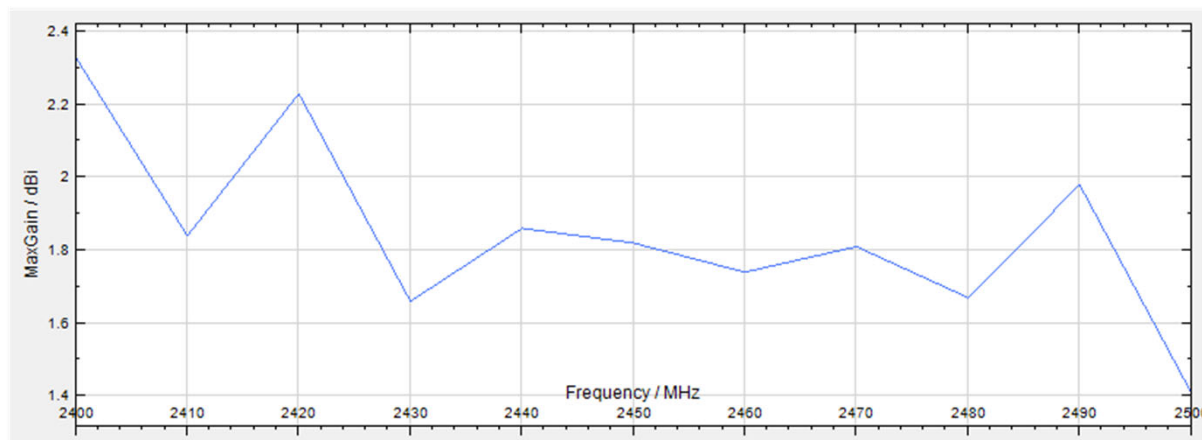
Frequency MHz	Efficiency dB	Efficiency %	Gain dB
2400	-1.52	70.47	4.13
2410	-1.62	68.87	3.57
2420	-1.37	72.95	3.81
2430	-1.6	69.18	3.14
2440	-1.38	72.78	3.2
2450	-1.52	70.47	3.33
2460	-1.83	65.61	3.08
2470	-1.87	65.01	3.36
2480	-1.84	65.46	3.33
average value	-1.61	68.97	3.43

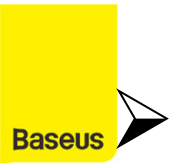


Note: None rate needs to be tested before PV

headform

Frequency MHz	Efficiency dB	Efficiency %	Gain dB
2400	-5.53	27.99	2.33
2410	-5.6	27.54	1.84
2420	-5.28	29.65	2.23
2430	-5.5	28.18	1.66
2440	-5.24	29.92	1.86
2450	-5.37	29.04	1.82
2460	-5.61	27.48	1.74
2470	-5.67	27.1	1.81
2480	-5.64	27.29	1.67
average value	-5.49	28.24	1.88





OTA data

Main board conduction test

	Channel	TX Power (dBm)	RX Sens (dBm)
	CH 0	8.0	-93
	CH39	8.6	-93
	CH78	8.5	-93

OTA test

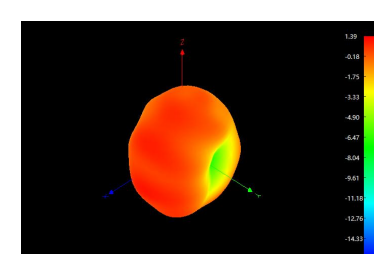
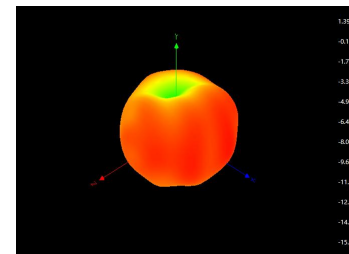
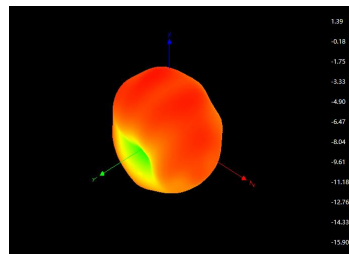
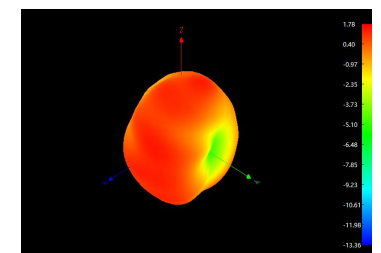
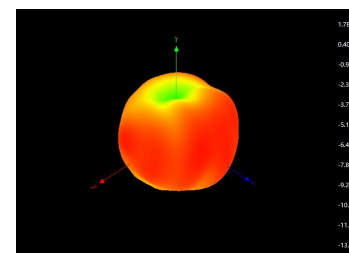
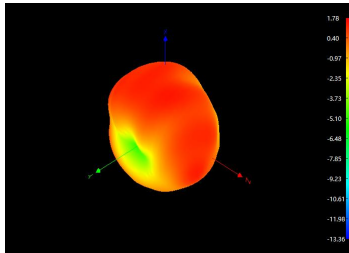
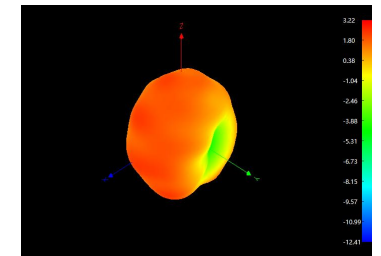
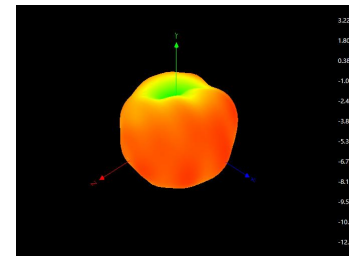
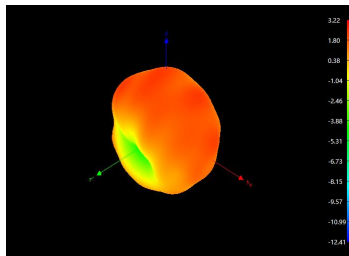
freedom	Channel	TRP (dBm)	TIS (dBm)
	CH 0	4.02	-90.72
	CH39	4.69	-91.32
	CH78	4.55	-90.69
headform	Channel	TRP (dBm)	TIS (dBm)
	CH 0	1.53	-88.43
	CH39	3.05	-89.07
	CH78	3.24	-89.08

Item	Measurement	Azimuths	Elevations	Standard	Band	Channel	Frequency	Max	Min	Total
1	TRP	Every30	Every30	BLUETOOTH	BLUETOOTH	0	2402	7	-7.92	4.02
2	TRP	Every30	Every30	BLUETOOTH	BLUETOOTH	39	2441	8.4	-6.51	4.69
3	TRP	Every30	Every30	BLUETOOTH	BLUETOOTH	78	2480	8.68	-5.59	4.55
1	TIS(EIRP)	Every30	Every30	BLUETOOTH	BLUETOOTH	0	2402	-83.27	-95.2	-90.72
2	TIS(EIRP)	Every30	Every30	BLUETOOTH	BLUETOOTH	39	2441	-79.65	-94.9	-91.32
3	TIS(EIRP)	Every30	Every30	BLUETOOTH	BLUETOOTH	78	2480	-79.99	-95.47	-90.69

Item	Measurement	Azimuths	Elevations	Standard	Band	Channel	Frequency	Max	Min	Total
1	TRP	Every30	Every30	BLUETOOTH	BLUETOOTH	0	2402	8.61	-13.19	1.53
2	TRP	Every30	Every30	BLUETOOTH	BLUETOOTH	39	2441	9.48	-11.56	3.05
3	TRP	Every30	Every30	BLUETOOTH	BLUETOOTH	78	2480	9.2	-12.13	3.24
4	TIS(EIRP)	Every30	Every30	BLUETOOTH	BLUETOOTH	0	2402	-76.45	-94.55	-88.43
5	TIS(EIRP)	Every30	Every30	BLUETOOTH	BLUETOOTH	39	2441	-77.05	-95.53	-89.07
6	TIS(EIRP)	Every30	Every30	BLUETOOTH	BLUETOOTH	78	2480	-76.37	-95.45	-89.08



4.3 3D 方向图



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