



YONG CHENG INTERNATIONAL(OTA)

HK-0003Debugging Report

Antenna Test Report



◆ Date:July 28,2025



Shenzhen Yongcheng International Technology Co., Ltd.
Address: Building F, 709, Yuxing Technology Industrial Park, Nanchang Third Industrial Zone,
Xiangxiang Sub-district, Bao'an District, Shenzhen City

Test item	
1	Matching parameter
2	Network debugging antenna S Parameters
3	Microwave darkroom test OTA active data
4	Measurement of antenna efficiency field pattern in microwave darkroom
5	measuring distance
6	Assembly item
7	summary of commissioning test



Customer	ZW	Project name	HK-0003
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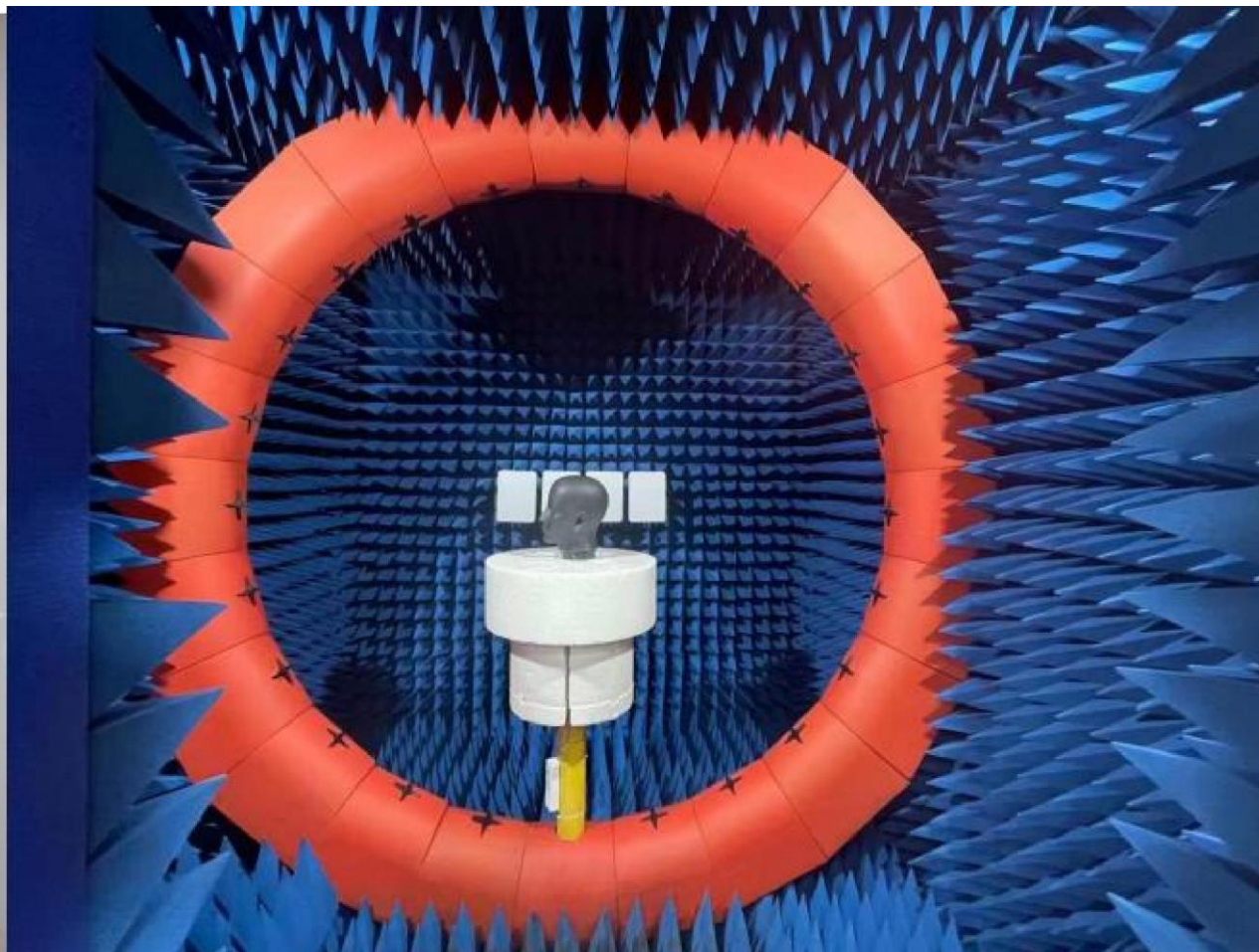
frequency band	2400MHZ-2500MHZ	engineer :	CK
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Date	2025/07/28	phone :	13530560006
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1.Test Tool

Vector Network Analyzer & Comprehensive Tester	Agilent Technologies E5071B & R&s CMW500
Darkroom	Atenlab M3
Test Engineer	CK
Temperature	25°C
Humidity	65% (RH)
Antenna type	PIFA Antenna

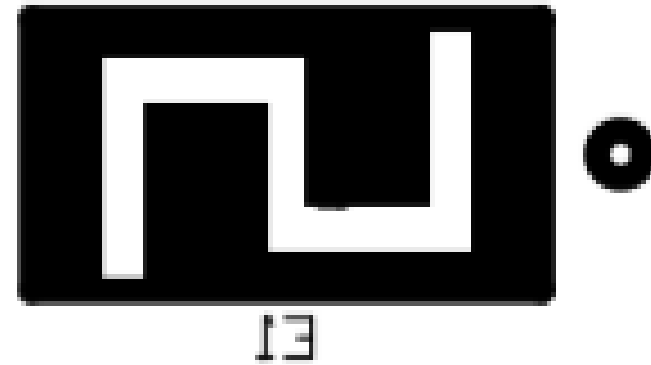
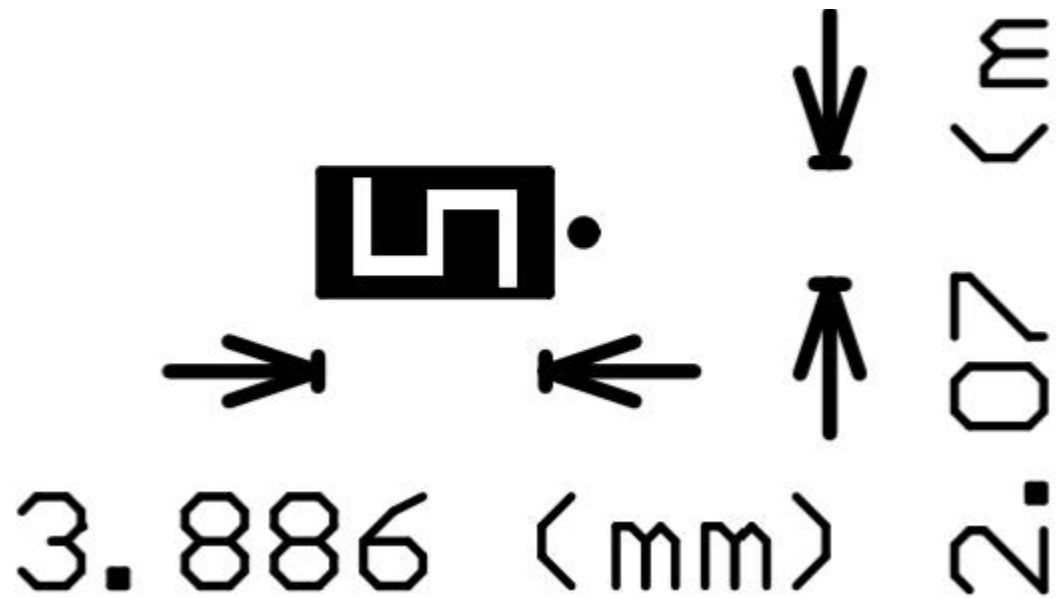




Antenna Placement

ANT:2012F245C07(Yongcheng International)

L/R:Matching Circuit: Left and right parameters





Antenna active test data

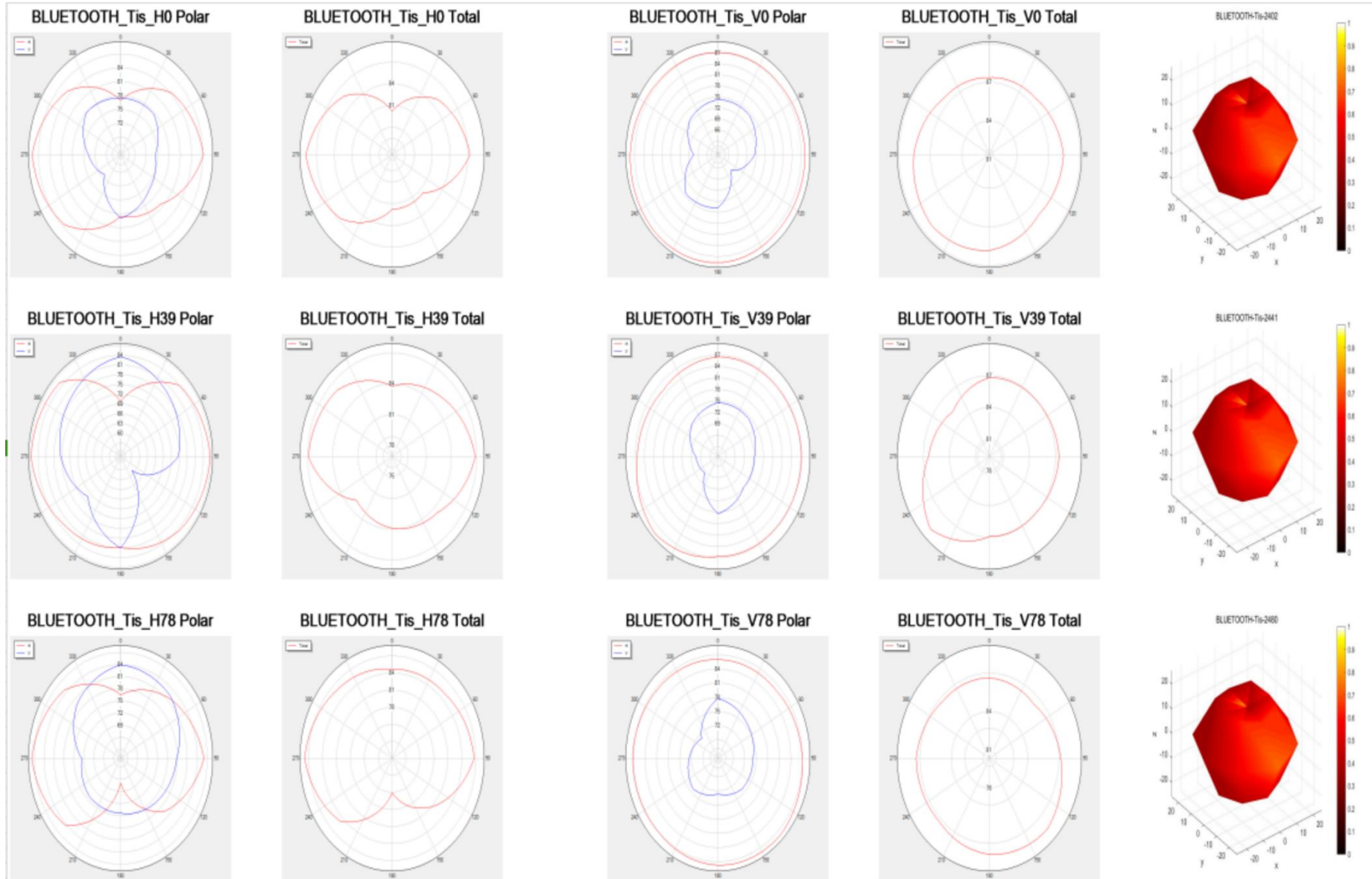
ANT EIRP&EIS parameter Summary (free field)

		Free		Human						Free		Human	
L#	Channel	TRP	TIS	TRP	TIS		R#	Channel	TRP	TIS	TRP	TIS	
	CH 0	3.33	-88.35	0.6	-82.01			CH 0	3.28	-88.06	0.99	-83.01	
	CH 39	3.19	-88.19	0.87	-83.91			CH 39	3.22	-88.68	0.27	-83.79	
	CH 78	3.73	-88.19	0.53	-82.26			CH 78	3.65	-88.88	0.24	-83.94	



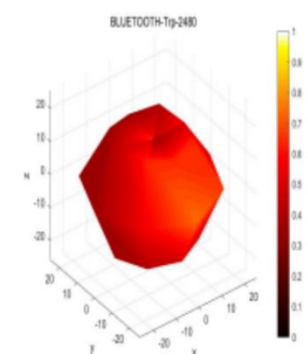
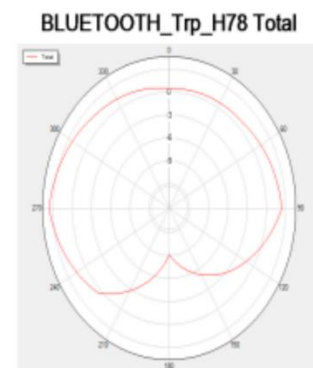
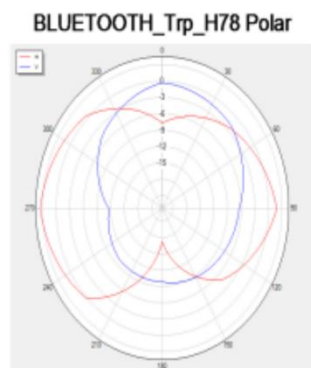
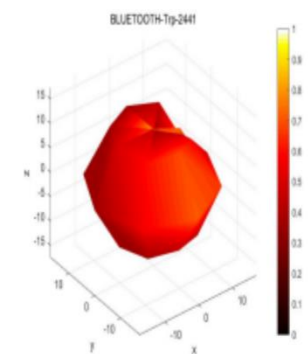
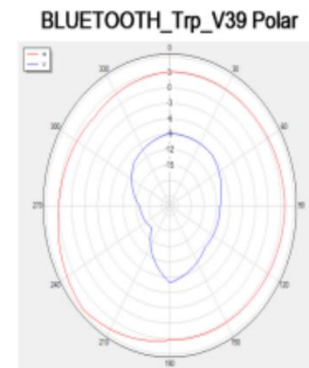
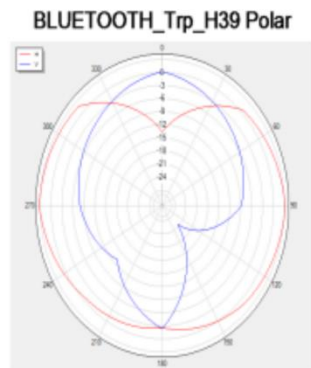
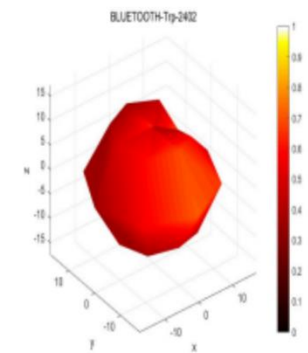
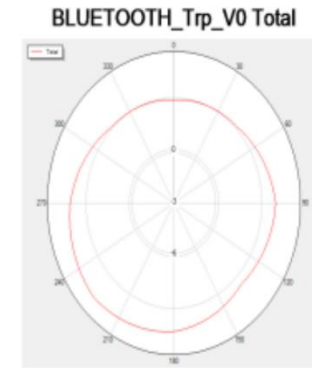
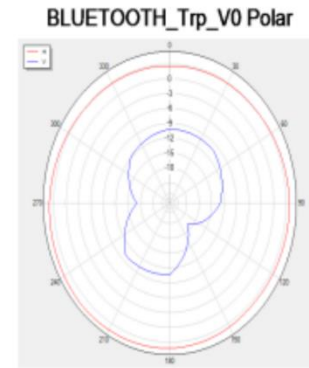
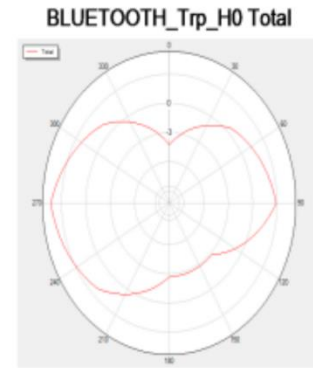
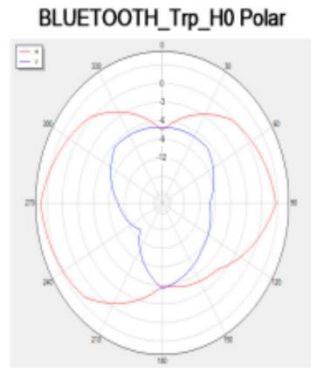
#-L

-L-TIS The antenna pattern of the free field





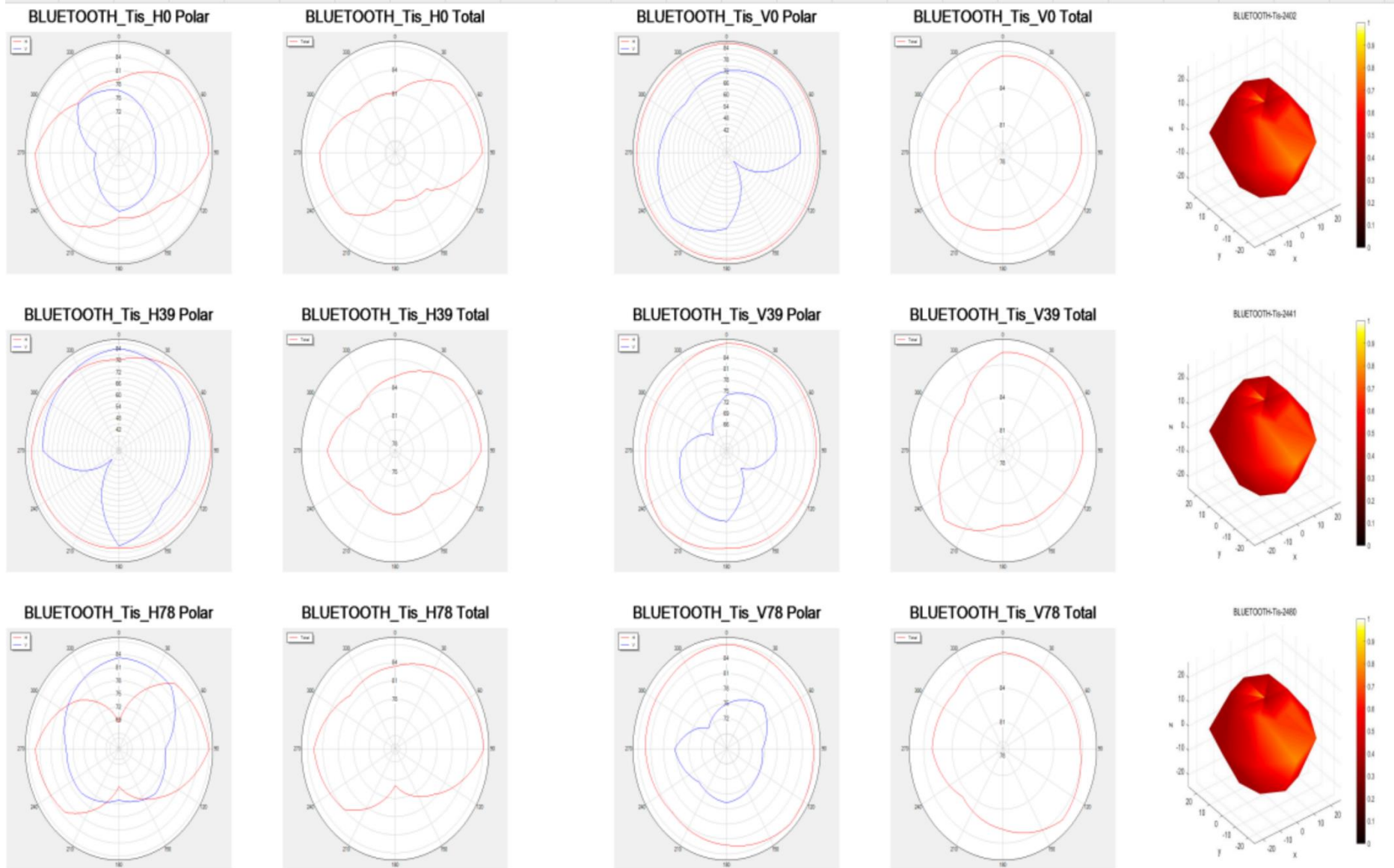
-L-TRP The antenna pattern of the free field





#-R

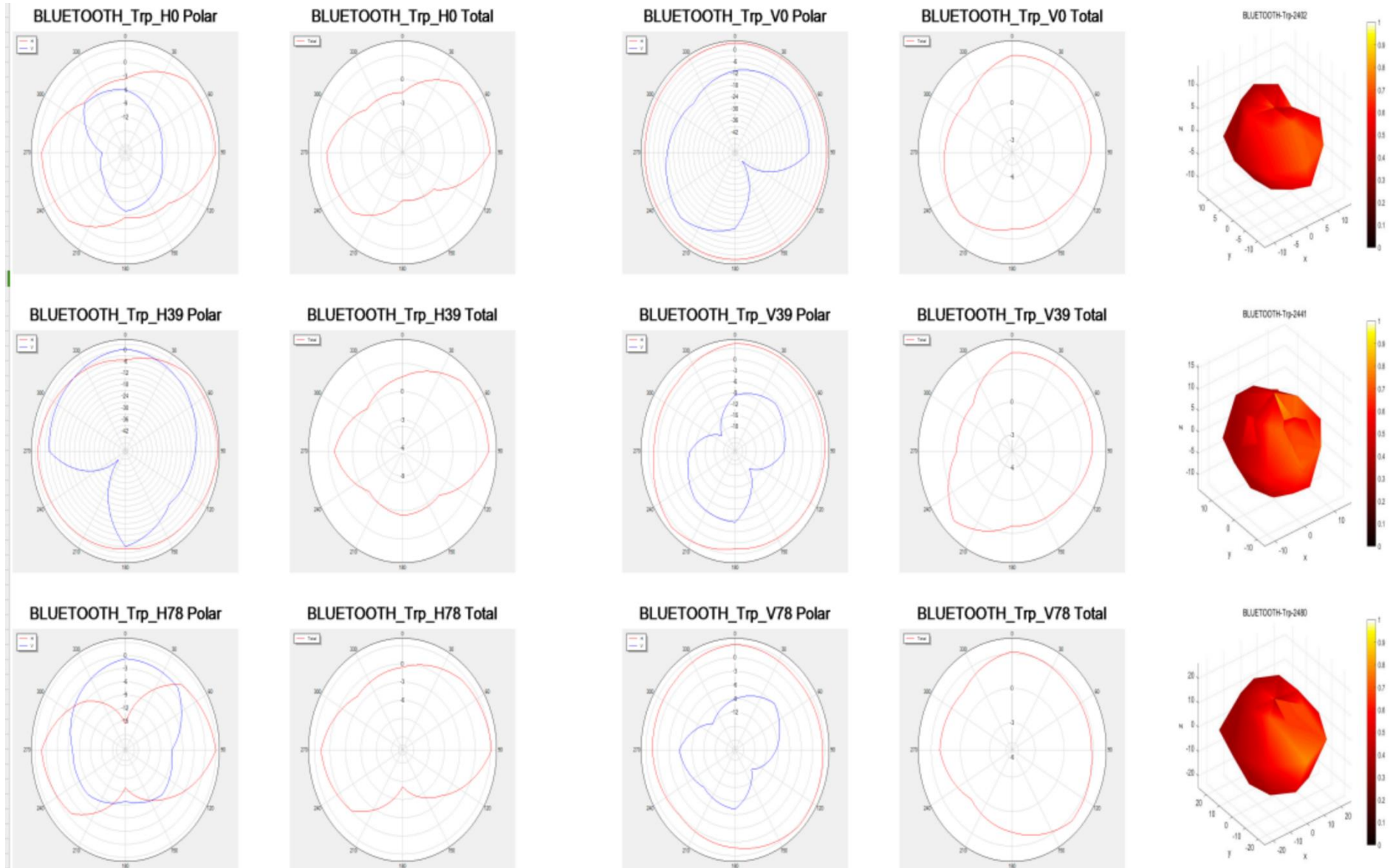
-R-TIS The antenna pattern of the free field





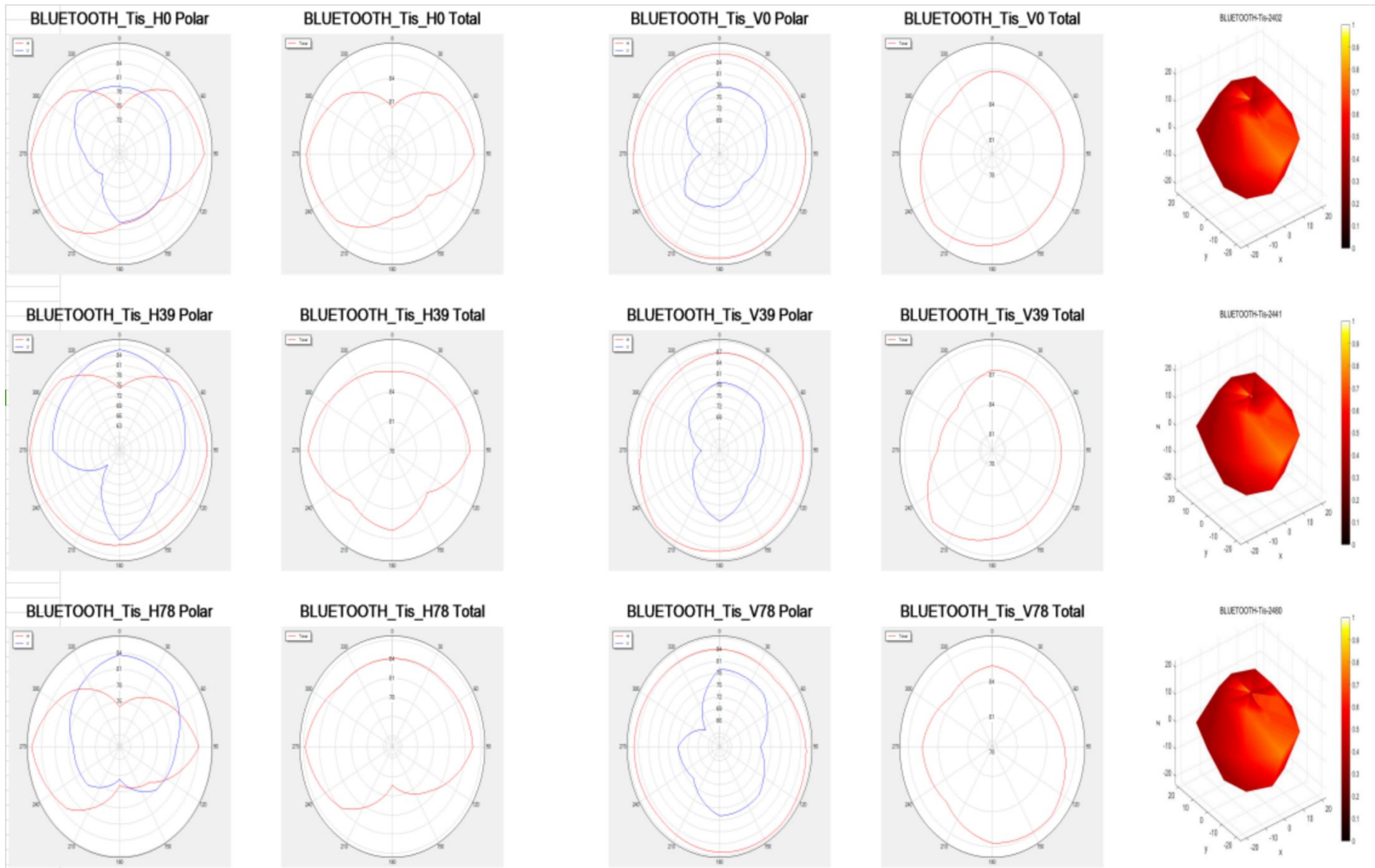
#-R

-R-TRP The antenna pattern of the free field



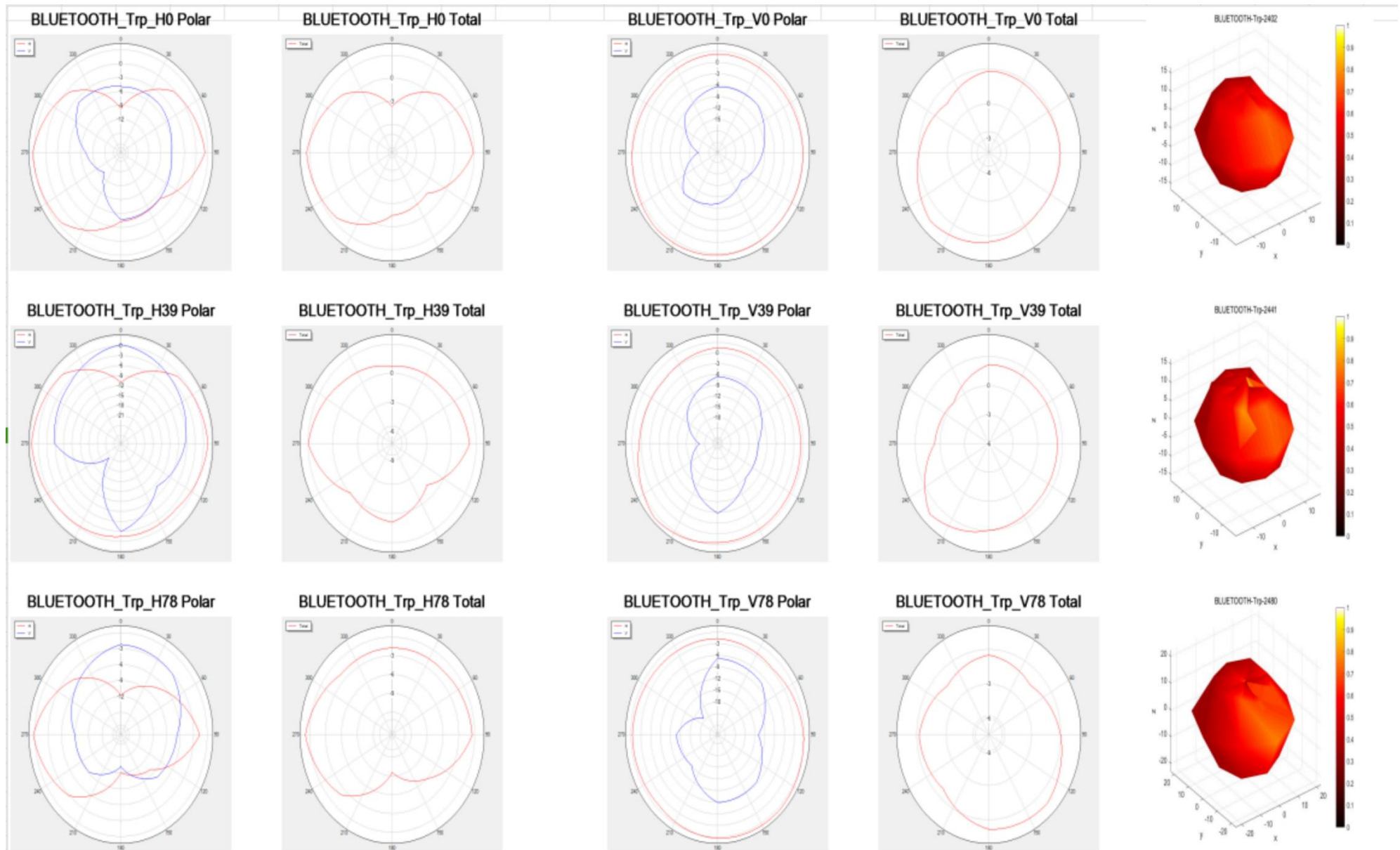
-L-TIS-An antenna pattern simulating a human head

#-L



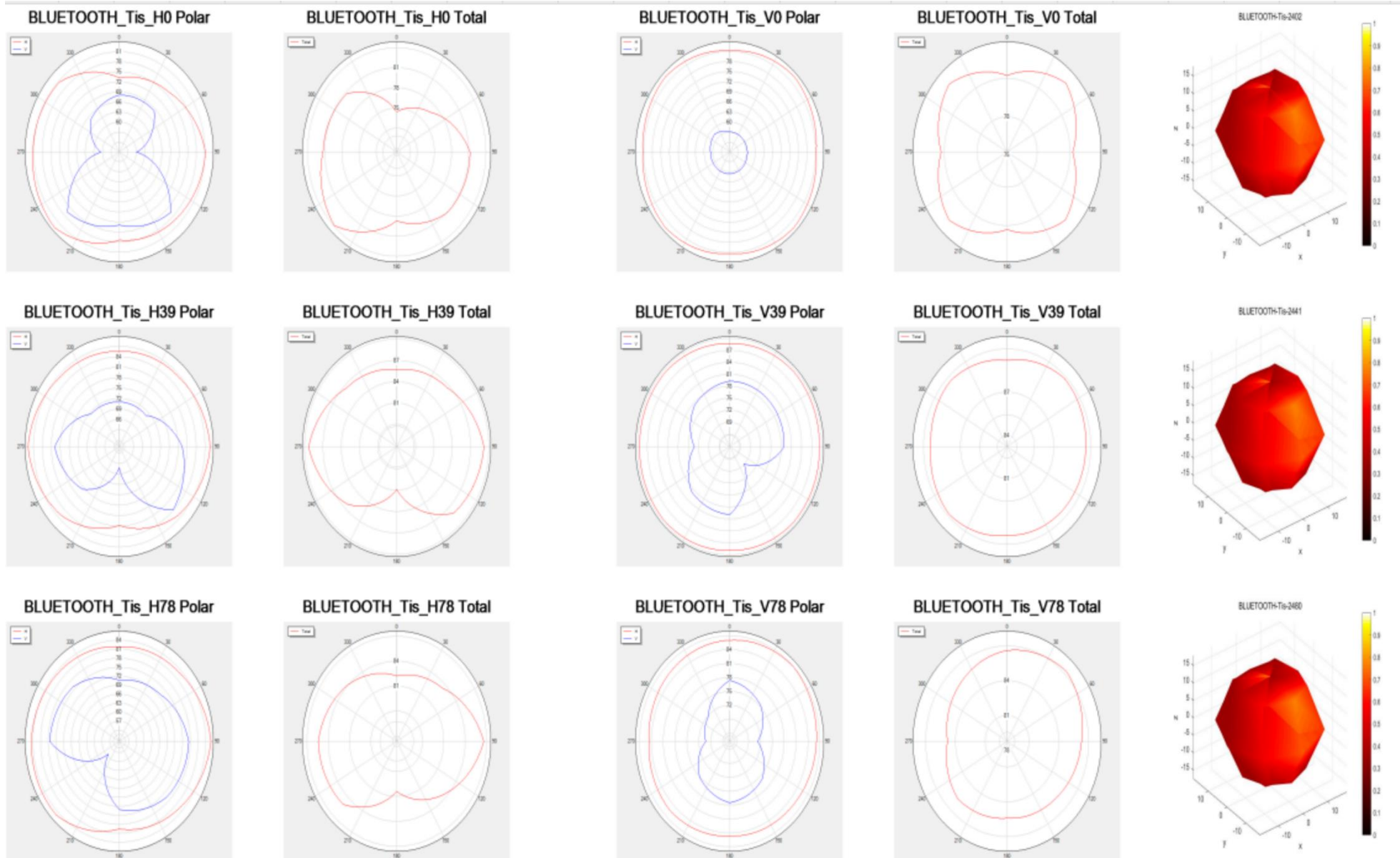
-L-TRP-An antenna pattern simulating a human head

#-L



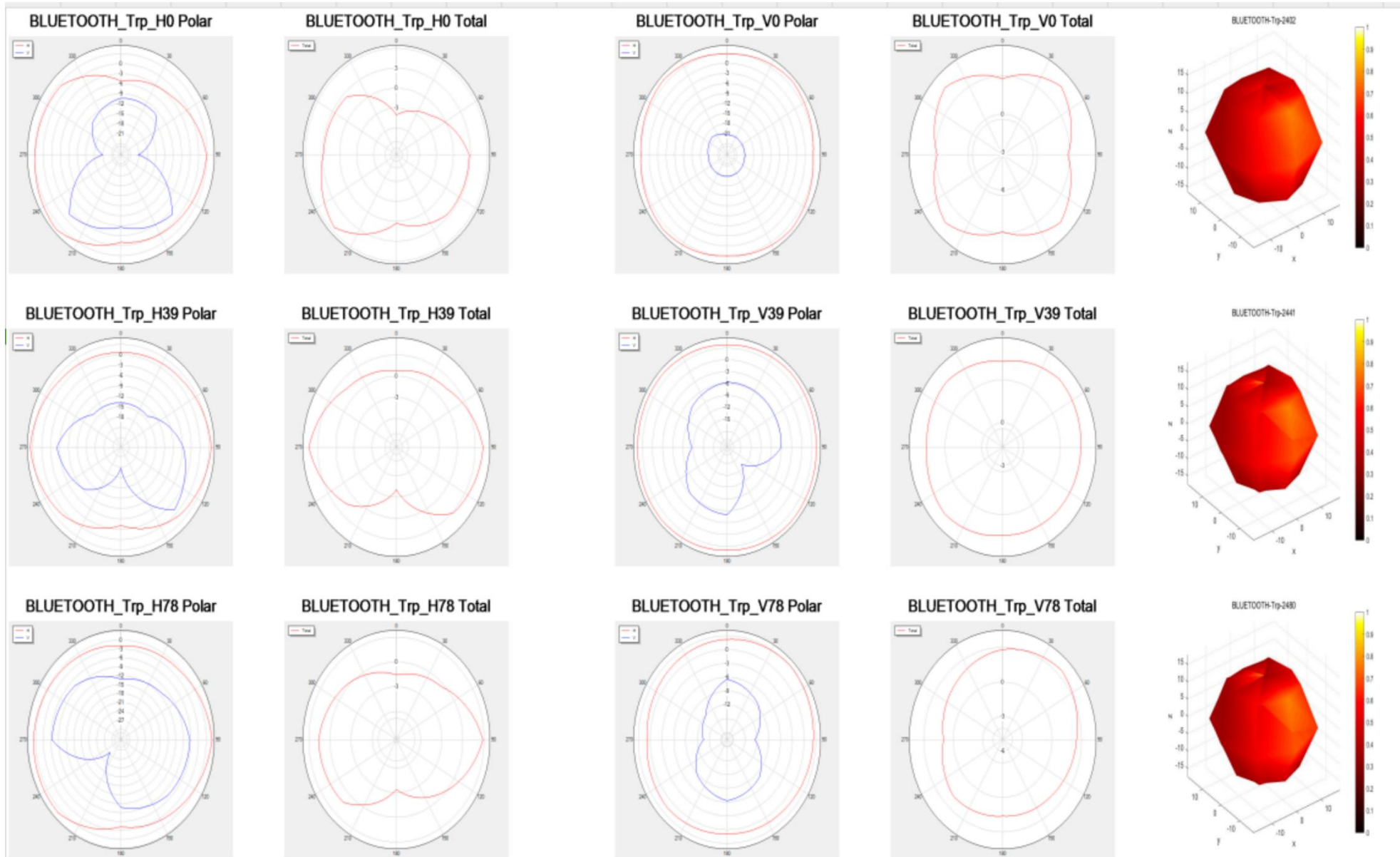
-R-TIS-An antenna pattern simulating a human head

#-R



-L-TRP-An antenna pattern simulating a human head

#-R



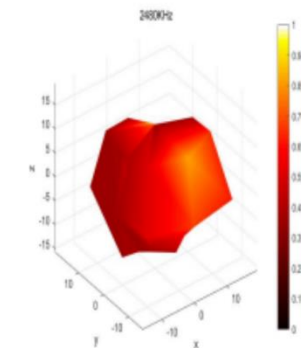
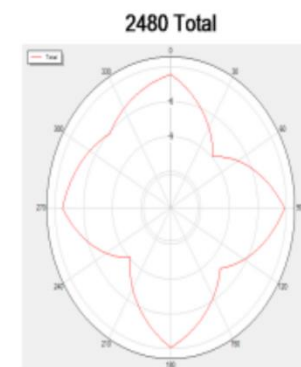
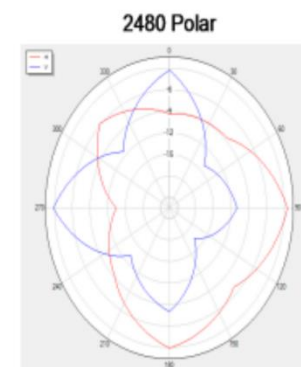
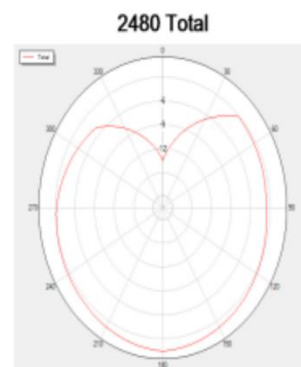
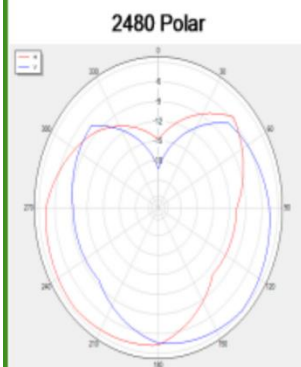
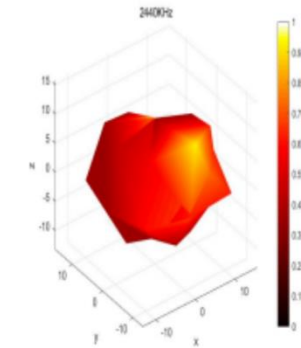
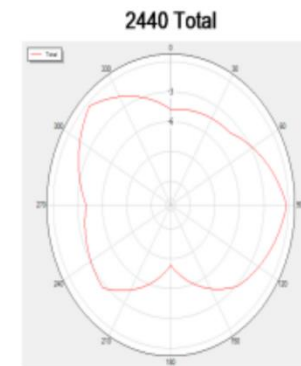
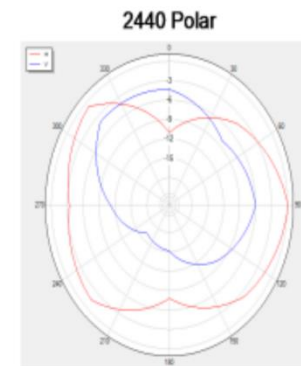
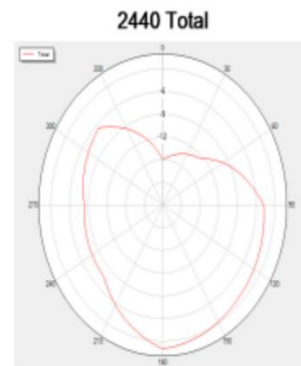
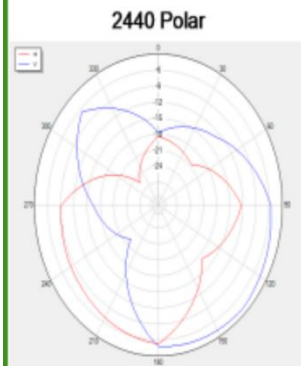
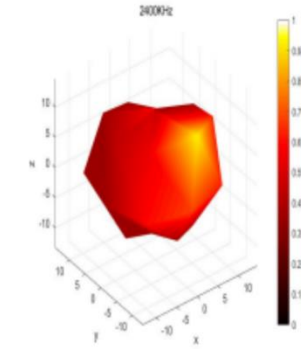
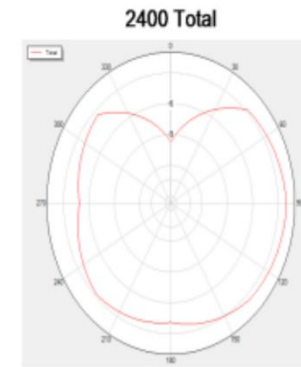
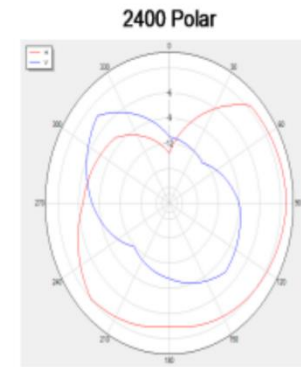
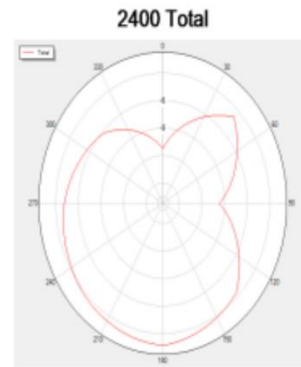
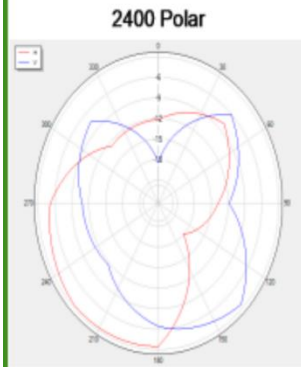
Antenna efficiency gain

天线效率与增益图

L					R			
Frequency	Effic	Percen	Gain (dbi)		Frequency	Effic	Percen	Gain (dbi)
2400	-4.84	32.79%	-1.45		2400	-4.88	32.50%	-1.55
2410	-4.58	34.8%	-1.33		2410	-4.59	34.73%	-1.33
2420	-4.82	32.98%	-1.7		2420	-4.82	32.93%	-1.69
2430	-4.92	32.24%	-2.04		2430	-4.92	32.21%	-2.06
2440	-5.28	29.67%	-1.94		2440	-5.28	29.64%	-1.94
2450	-5.47	28.38%	-2.54		2450	-5.48	28.34%	-2.54
2460	-5.75	26.6%	-3.2		2460	-5.75	26.60%	-3.19
2470	-5.92	25.61%	-2.57		2470	-5.9	25.67%	-2.57
2480	-5.68	27.04%	-2.06		2480	-5.69	26.97%	-2.07
2490	-5.78	26.43%	-1.83		2490	-5.8	26.30%	-1.83
2500	-5.6	27.57%	-1.7		2500	-5.62	27.44%	-1.7

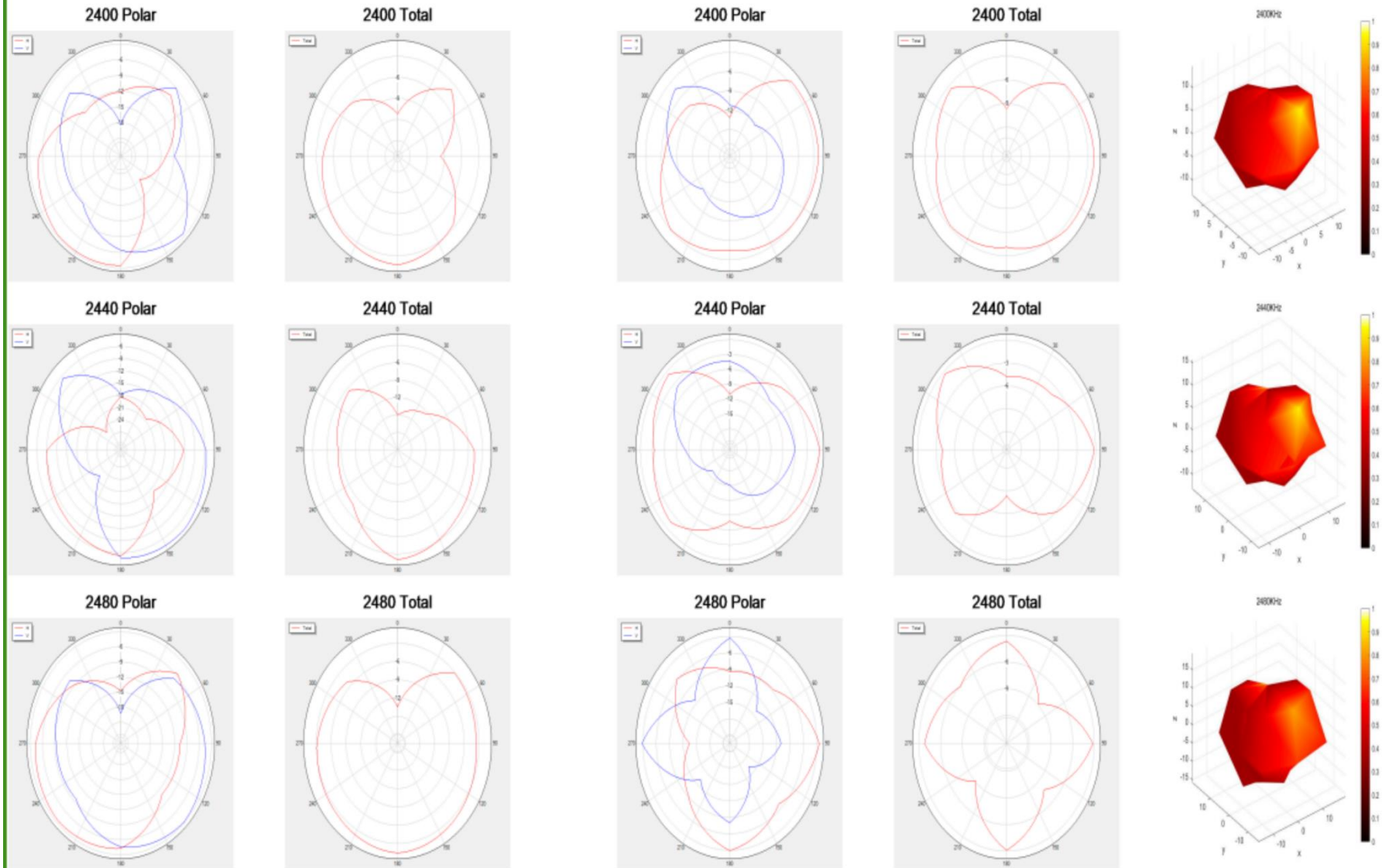
#-R

Antenna radiation pattern 2400.00MHz/2440.00MHz/2480.00MHz



#-L

Antenna radiation pattern 2400.00MHz/2440.00MHz/2480.00MHz



measuring distance

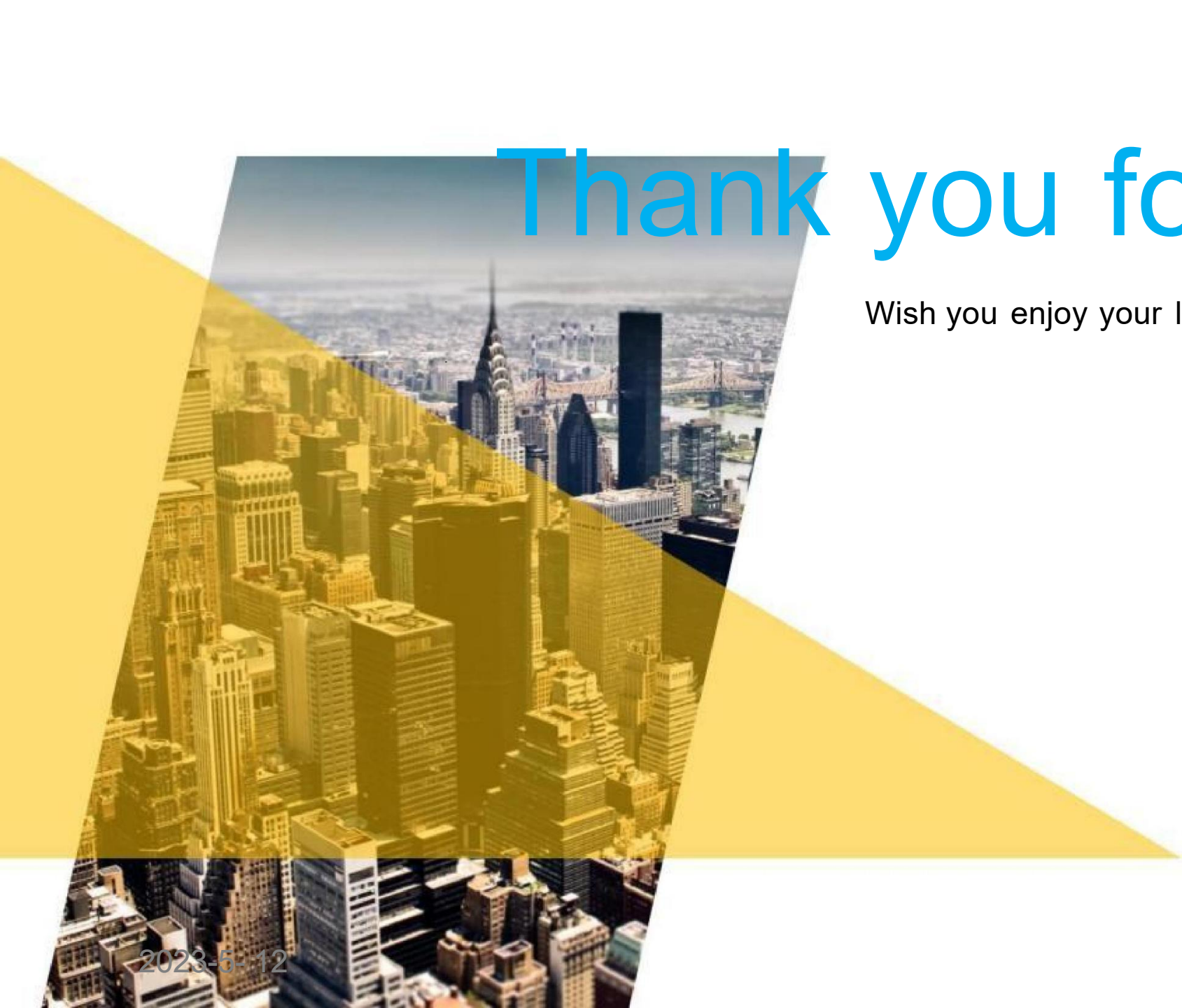
a. Environment

test project	Trying hard not to hear		Pocket test requirement		descr
HK-0003			right front	OK	The iPhone5 was tested over 14+ meters in the park
	OK		front-left	OK	
			right rear	OK	
			left rear	OK	

b. summarize

HK-0003 machine actual test, OTA data test, basically distance matching, our park grass test effect is excellent

assembly method

An aerial photograph of the New York City skyline, featuring numerous skyscrapers and the Chrysler Building. A large yellow triangle is overlaid on the left side of the image, partially obscuring the city view.

Thank you for watching

Wish you enjoy your life

2023-5-12