YONG CHENG INTERNATIONAL(OTA)

AirKing Pro 调测报告

Antenna Test Report

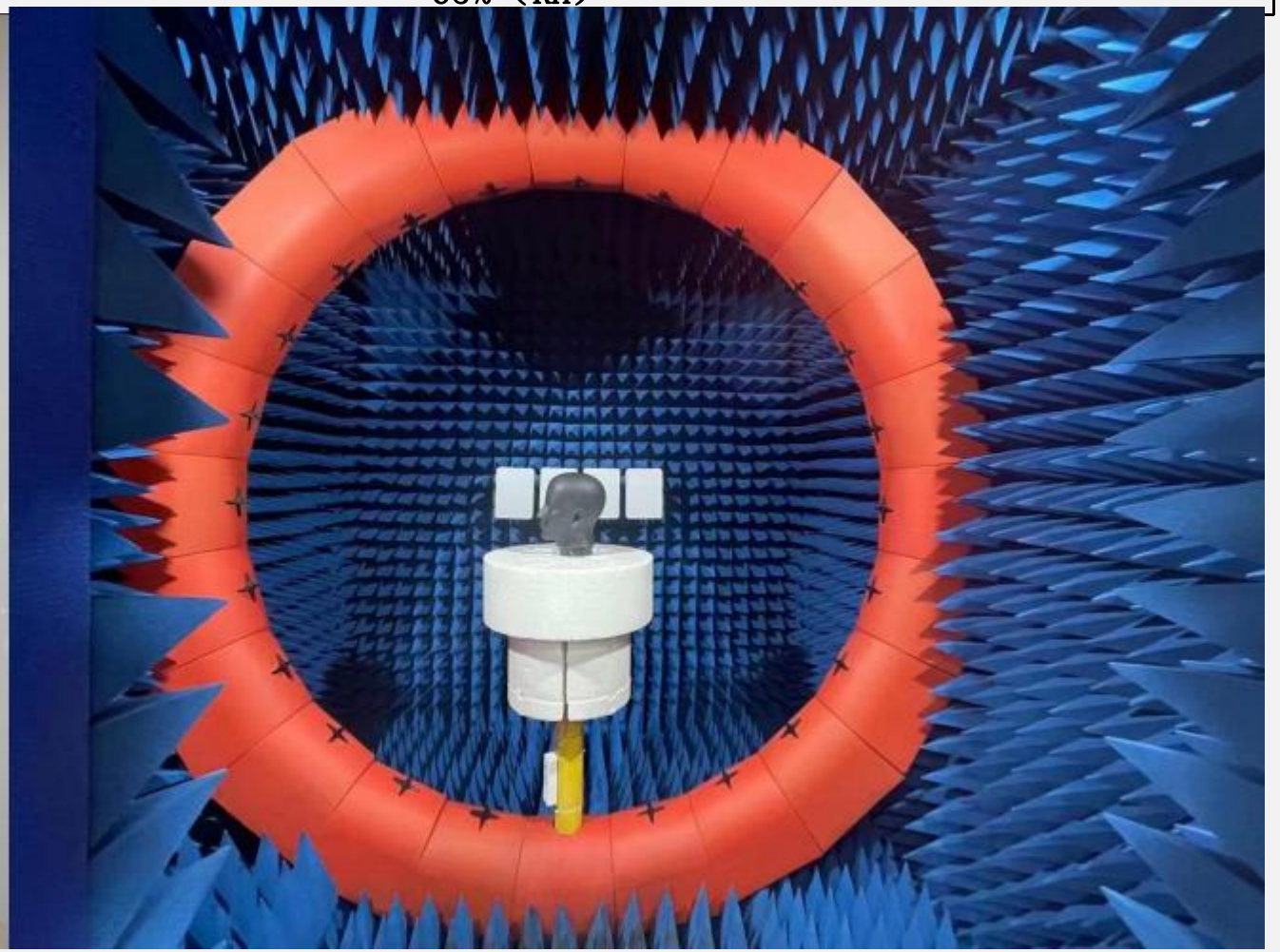
日期 2024年05月24日

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	QC	Project name	F09
frequency band	2400MHZ-2500MHZ	engineer：	CK
Date	2024/05/24	phone：	13530576606

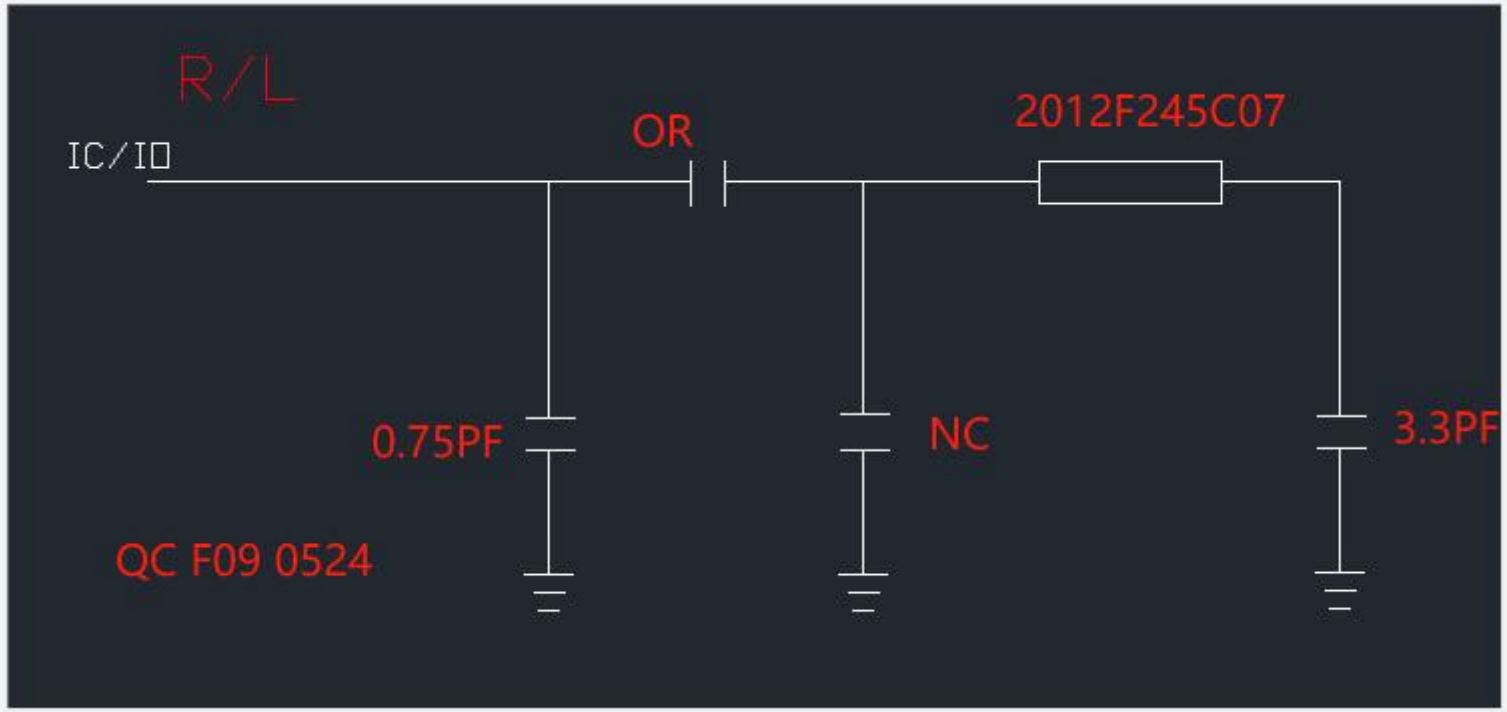
1.测试工具

矢量网络分析仪&综测仪	Agelent Techmologies E5071B & R&S CMW500
暗室	Atenlab M3
测试工程师	CK
温度	25℃
湿度	65%（RH）

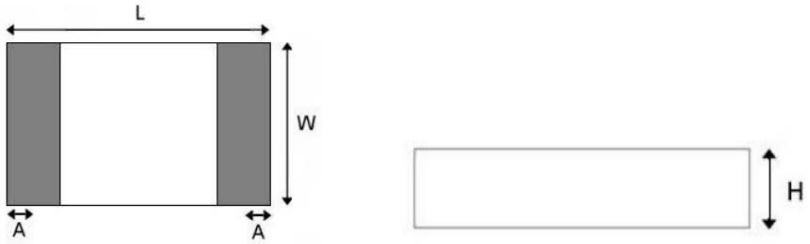


Antenna Placement　　ANT：　antenna2012F245C07(咏成国际)　　L/R

Matching Circuit：左右共参数



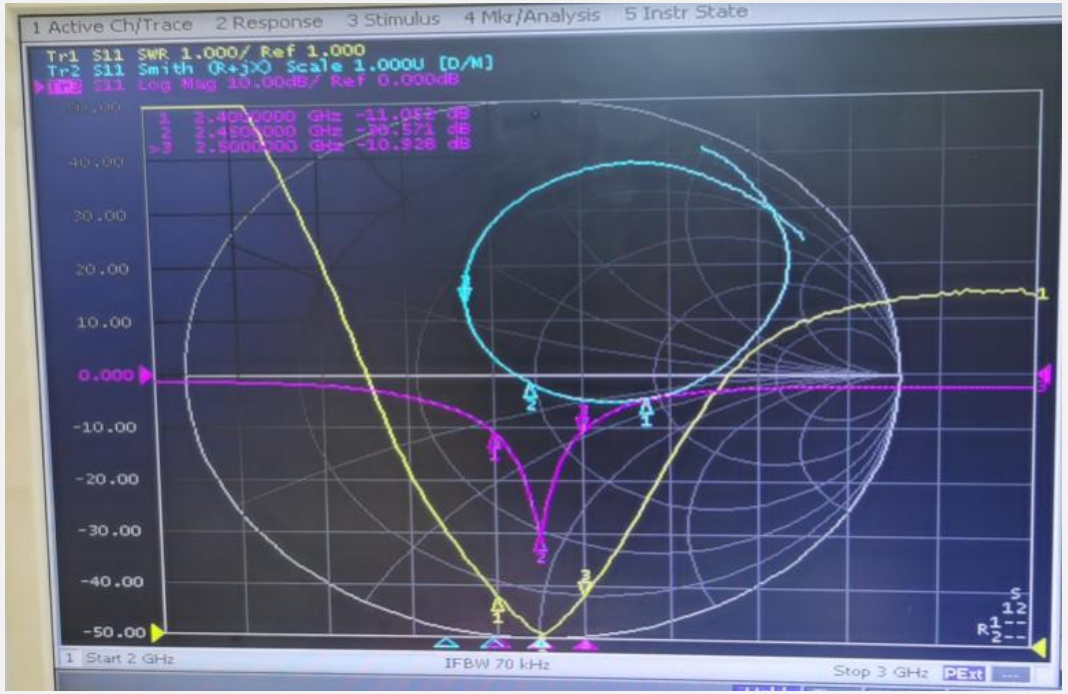
Antenna Shape and Dimensions：(Unit: mm)



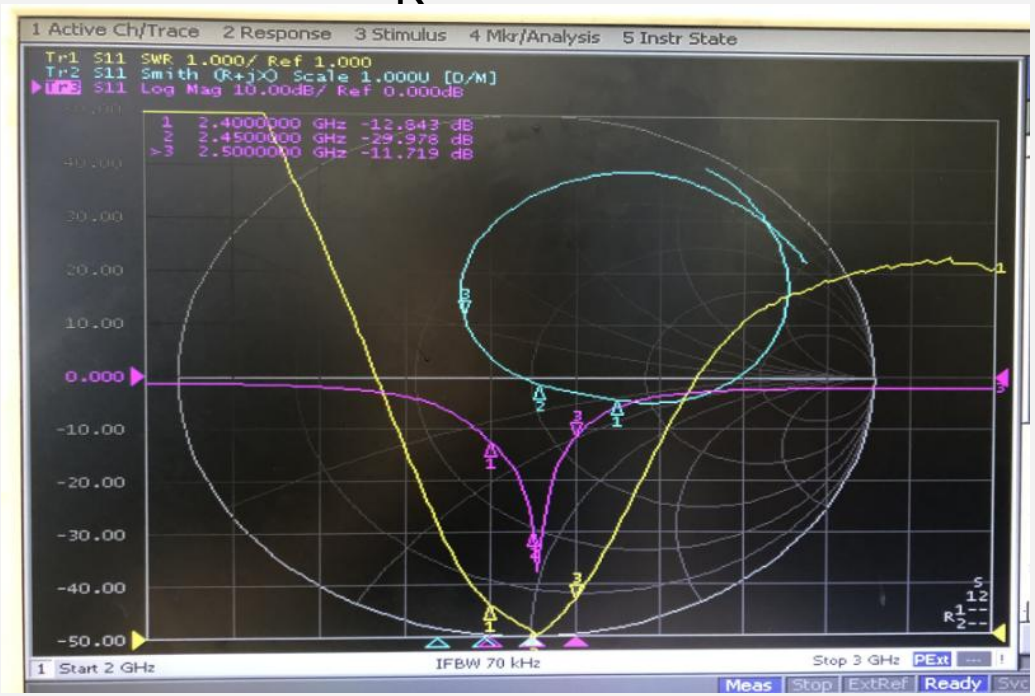
L	W	H	A
3.2±0.2	1.6±0.2	0.52±0.1	0.4±0.1

S11、SWR、smith chart：

L



R



Fre.(MHz)	2400	2450	2500
L-S11(dB)	-11.05	-30.57	-10.92
R-S11(dB)	-12.84	-29.97	-11.71

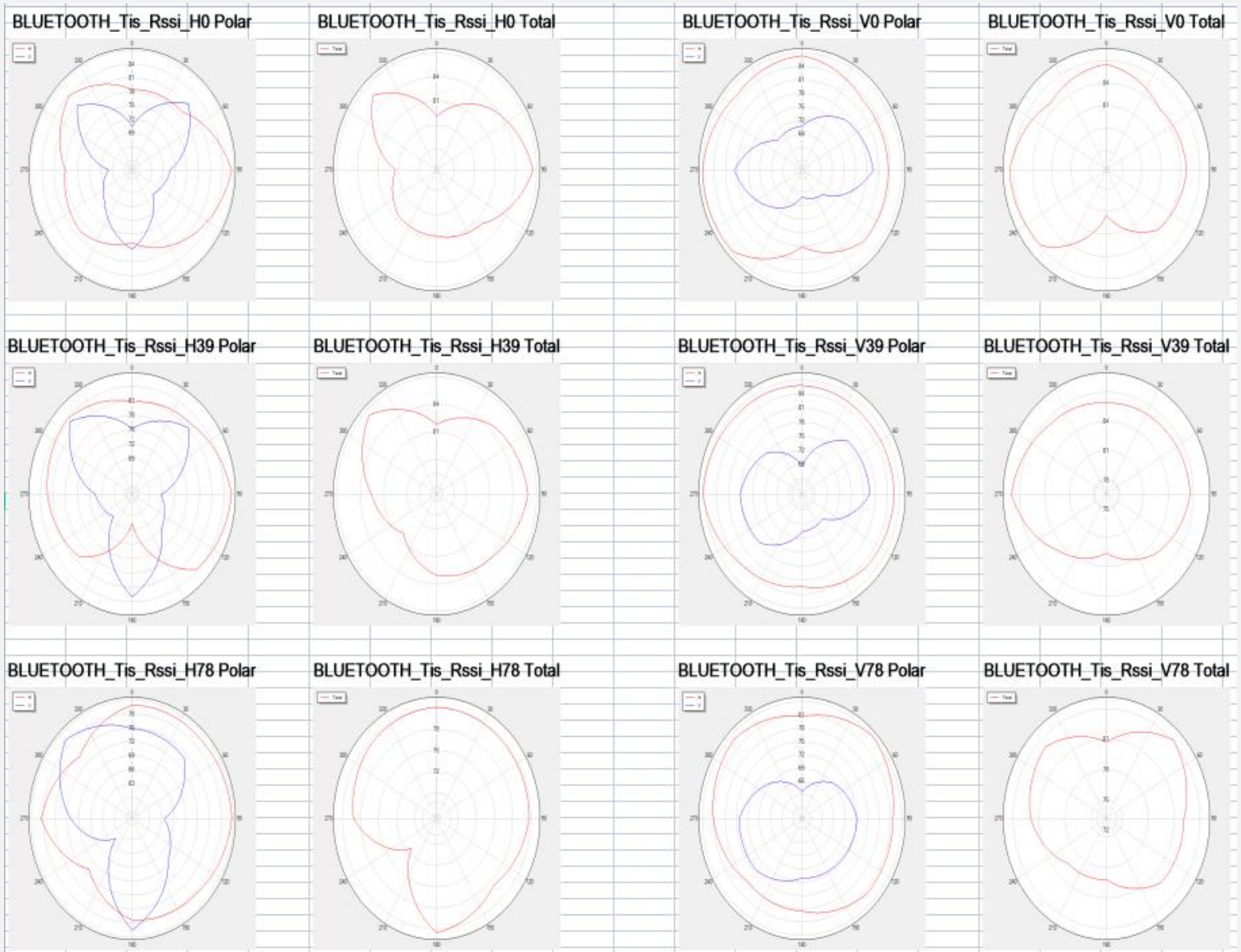
Antenna active test data

ANT EIRP&EIS parameter Summary (free field)						
频段frequency band	BT 2.4G (L)			BT 2.4G (R)		
信道route	0	39	78	0	39	78
0801# TRP (dBm)	3.58	3.25	3.37	4.45	4.69	4.27
0801# TIS (dBm)	-86.06	-86.59	-86.25	-86.23	-86.37	-86.36

ANT EIRP&EIS parameter Summary (phantom head)						
频段frequency band	BT 2.4G (L)			BT 2.4G (R)		
信道route	0	39	78	0	39	78
0801# TRP (dBm)	0.27	0.56	0.28	1.27	1.5	1.06
0801# TIS (dBm)	-83.44	-83.27	-83.13	-83.36	-83.46	-83.69

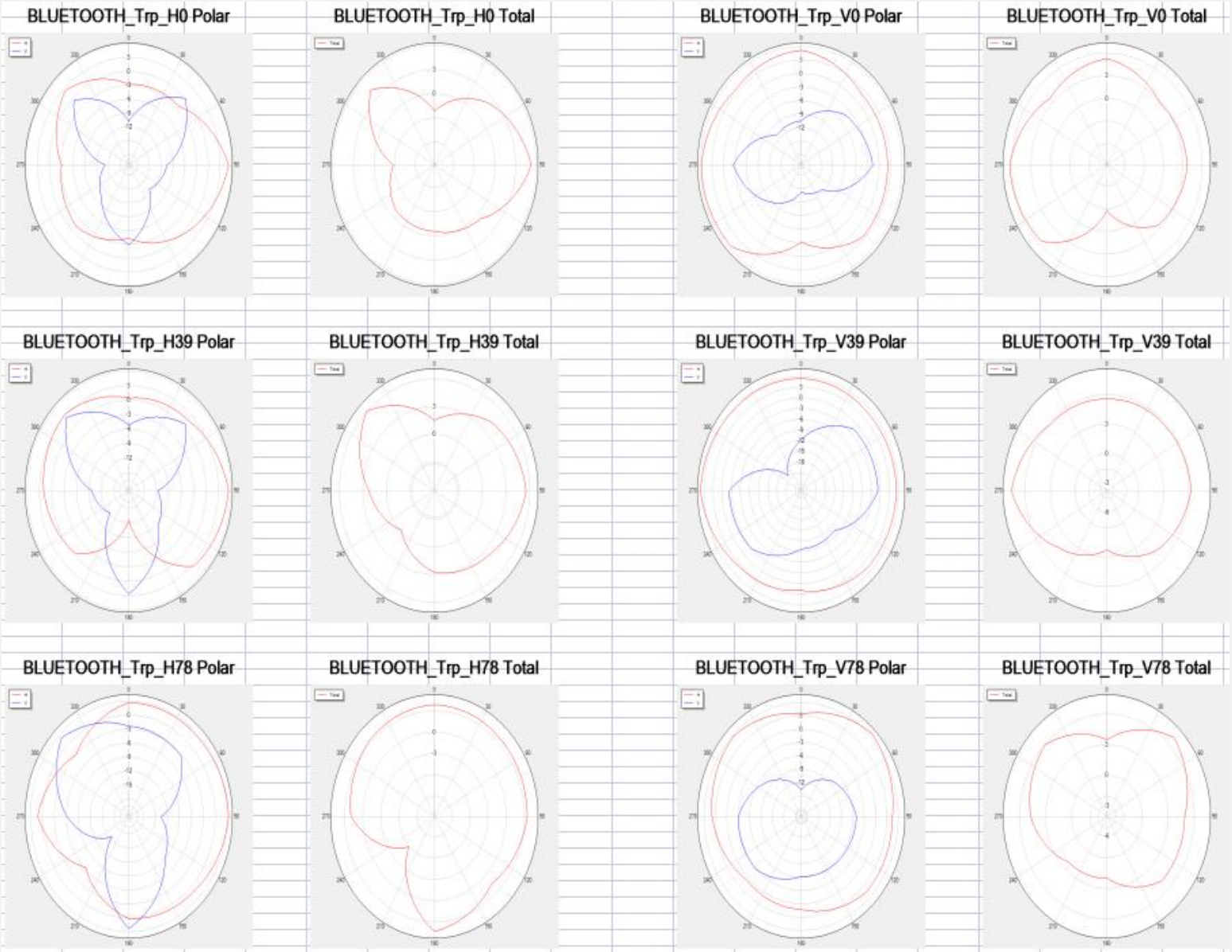
#-L

-L-TIS The antenna pattern of the free field



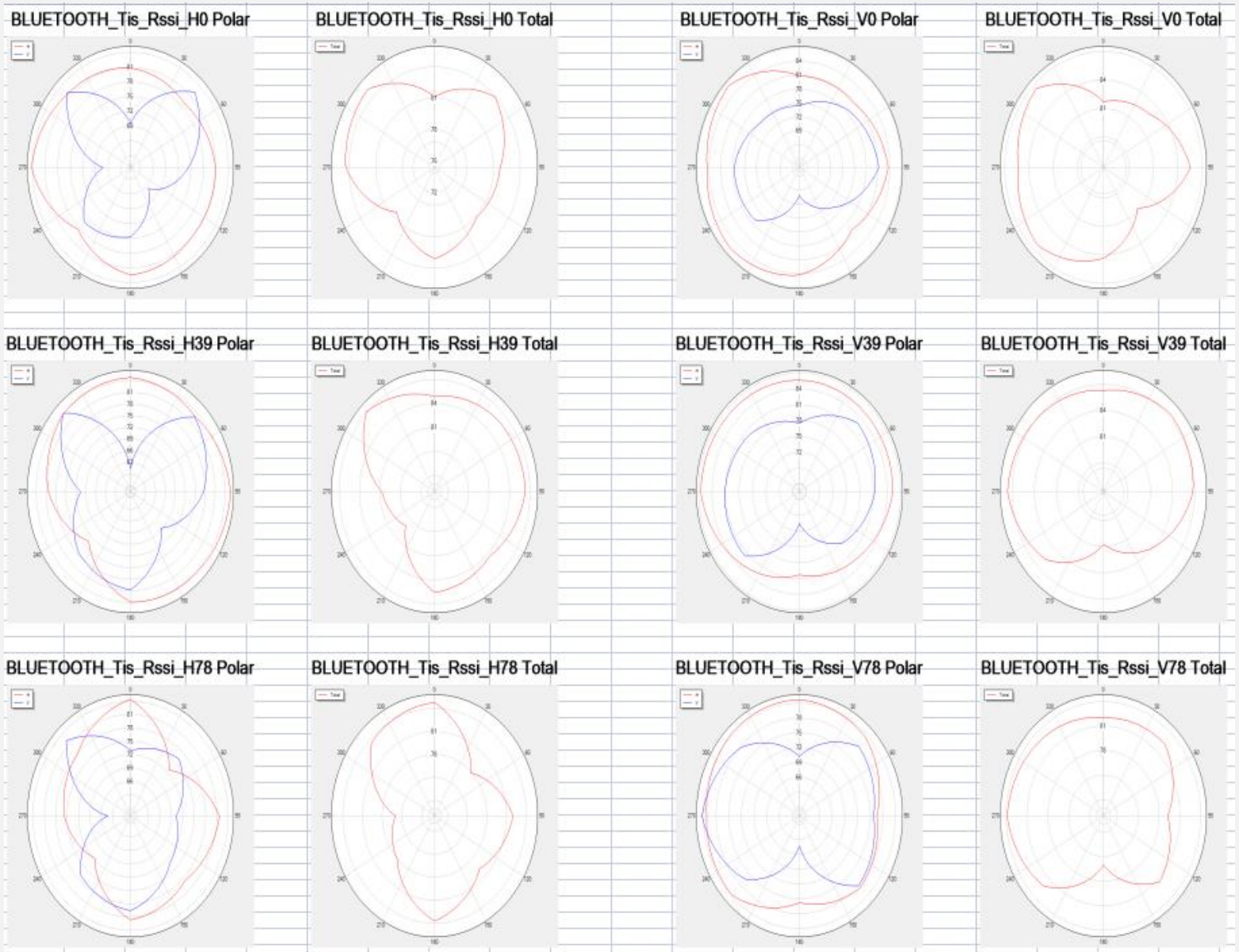
#-L

-L-TRP The antenna pattern of the free field



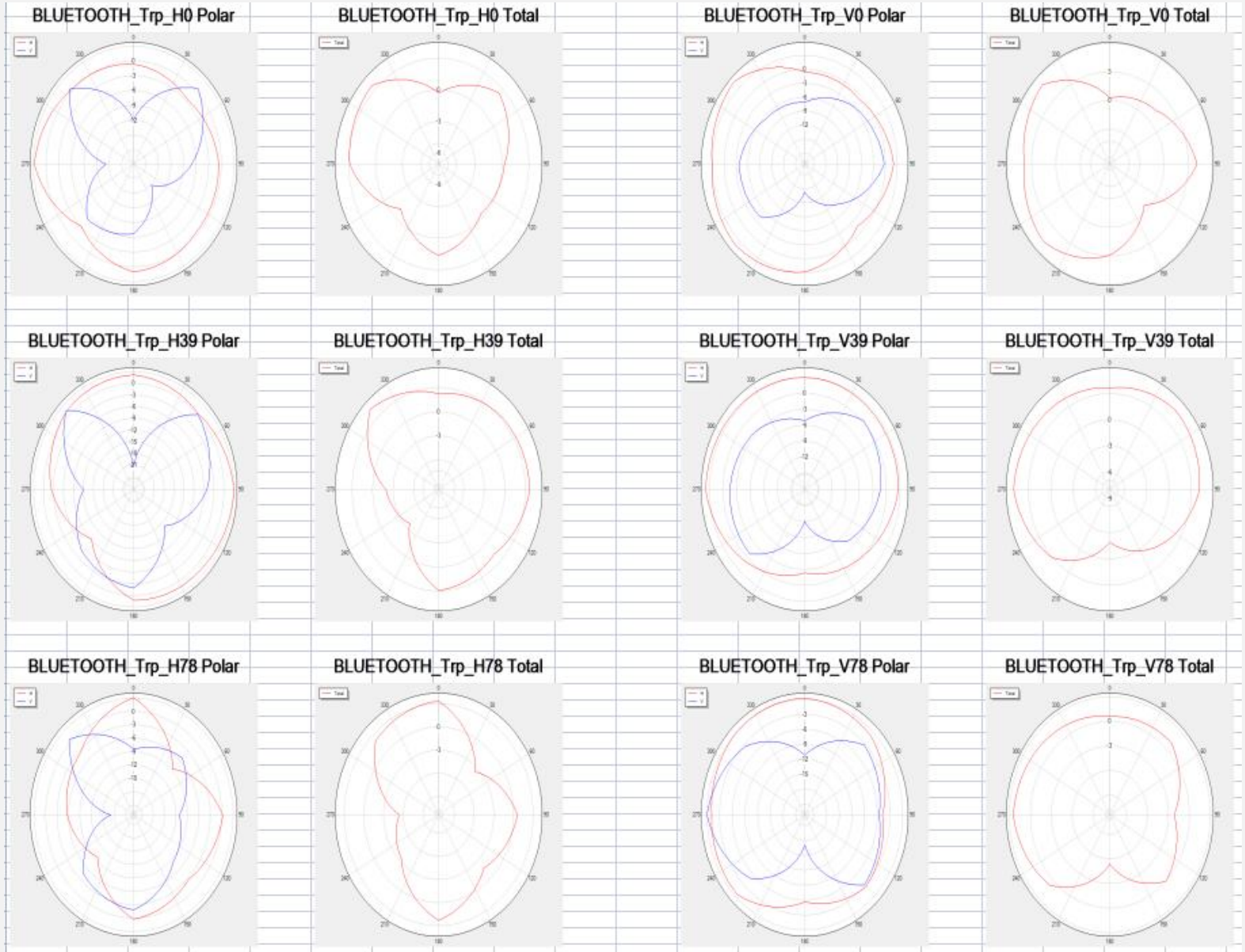
#-R

-R-TIS The antenna pattern of the free field



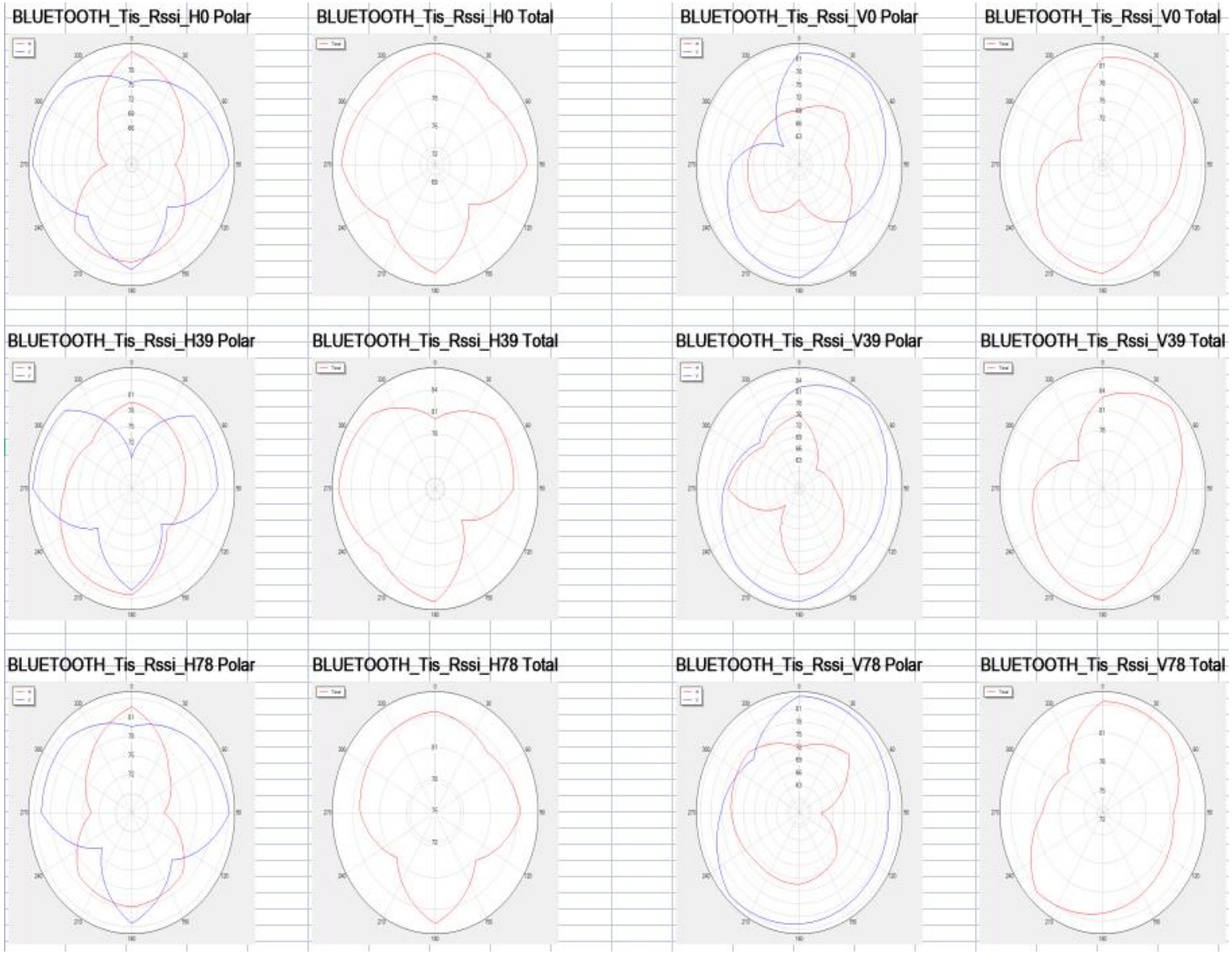
#-R

-R-TRP The antenna pattern of the free field



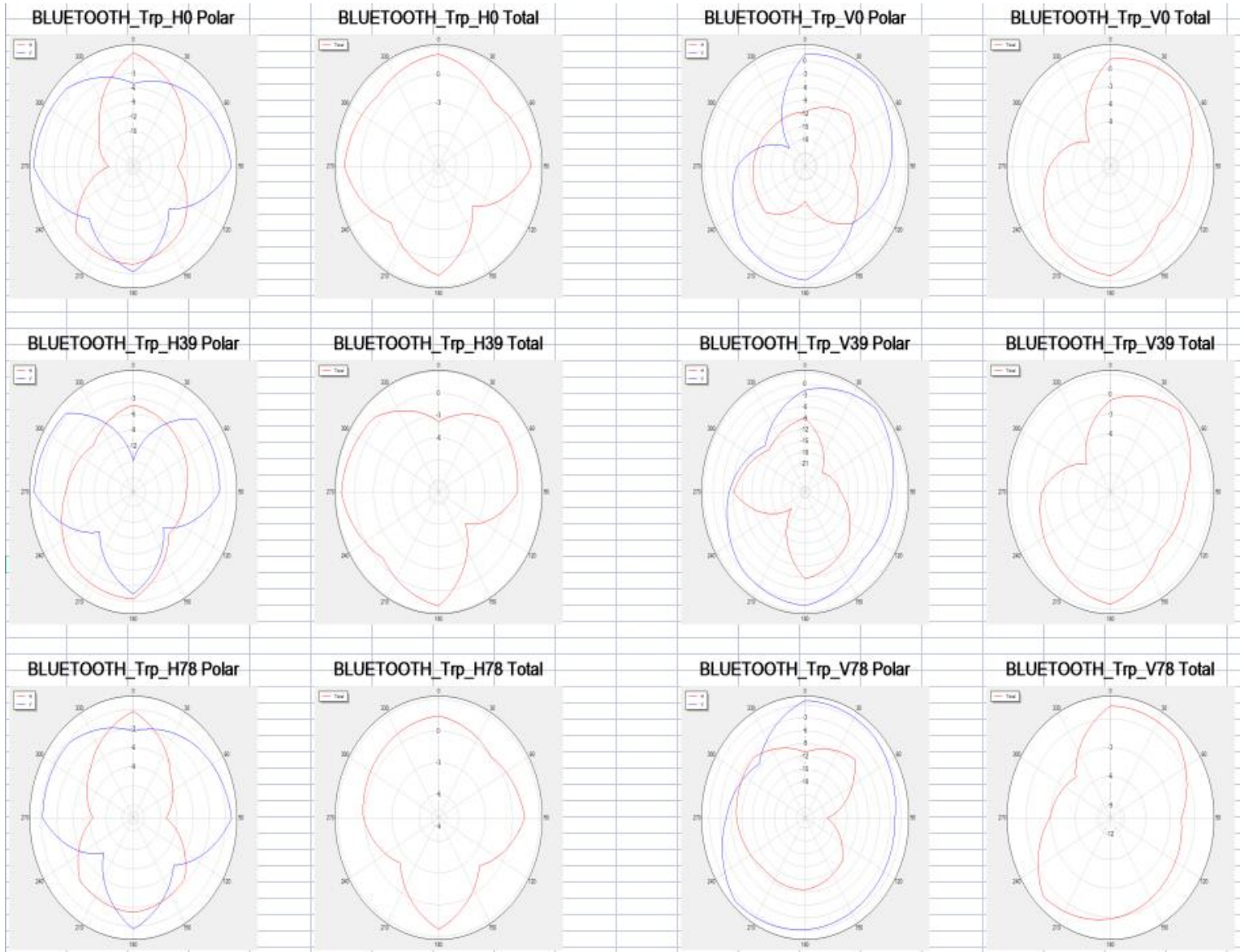
-L-TIS-An antenna pattern simulating a human head

#-L



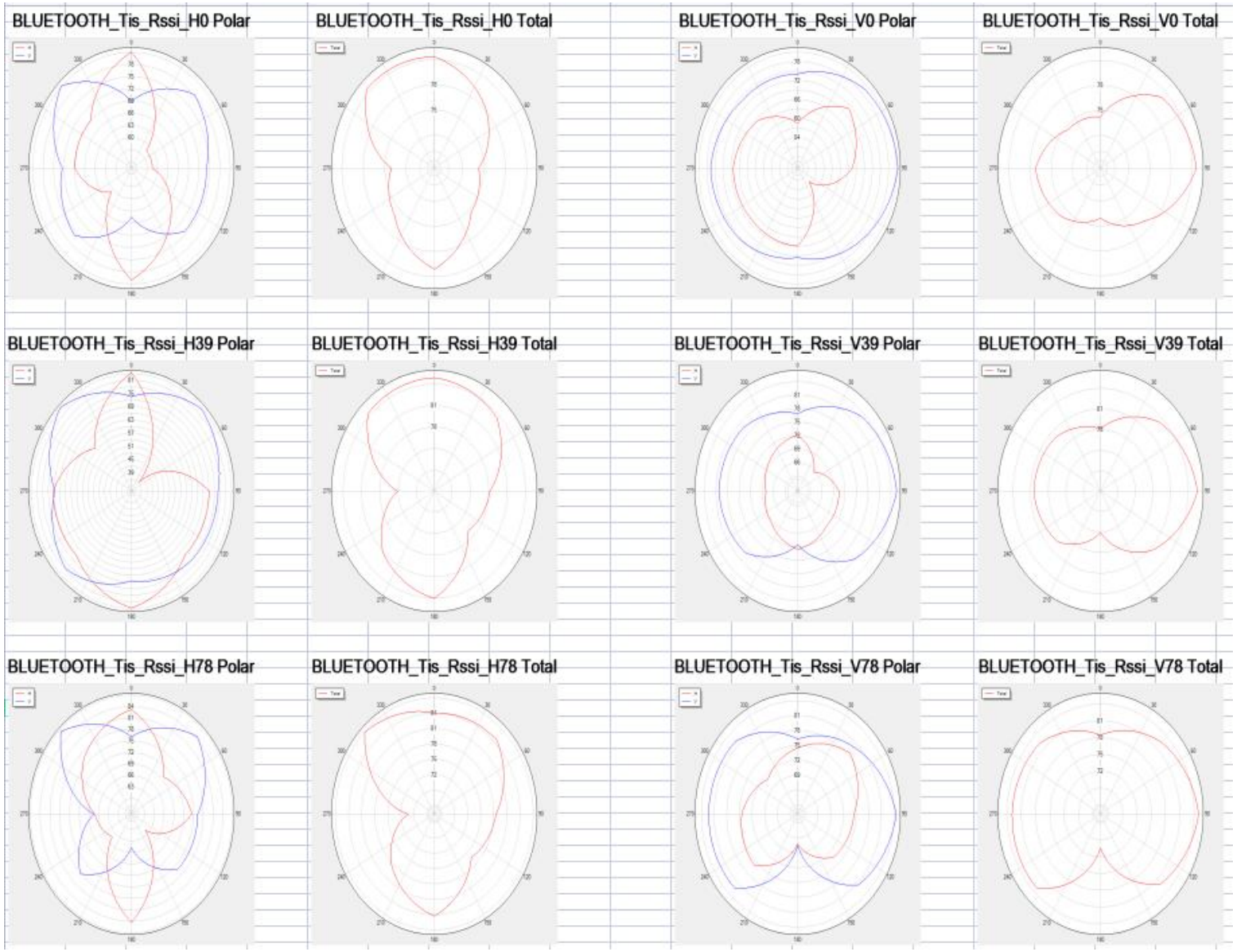
-L-TRP-An antenna pattern simulating a human head

#-L



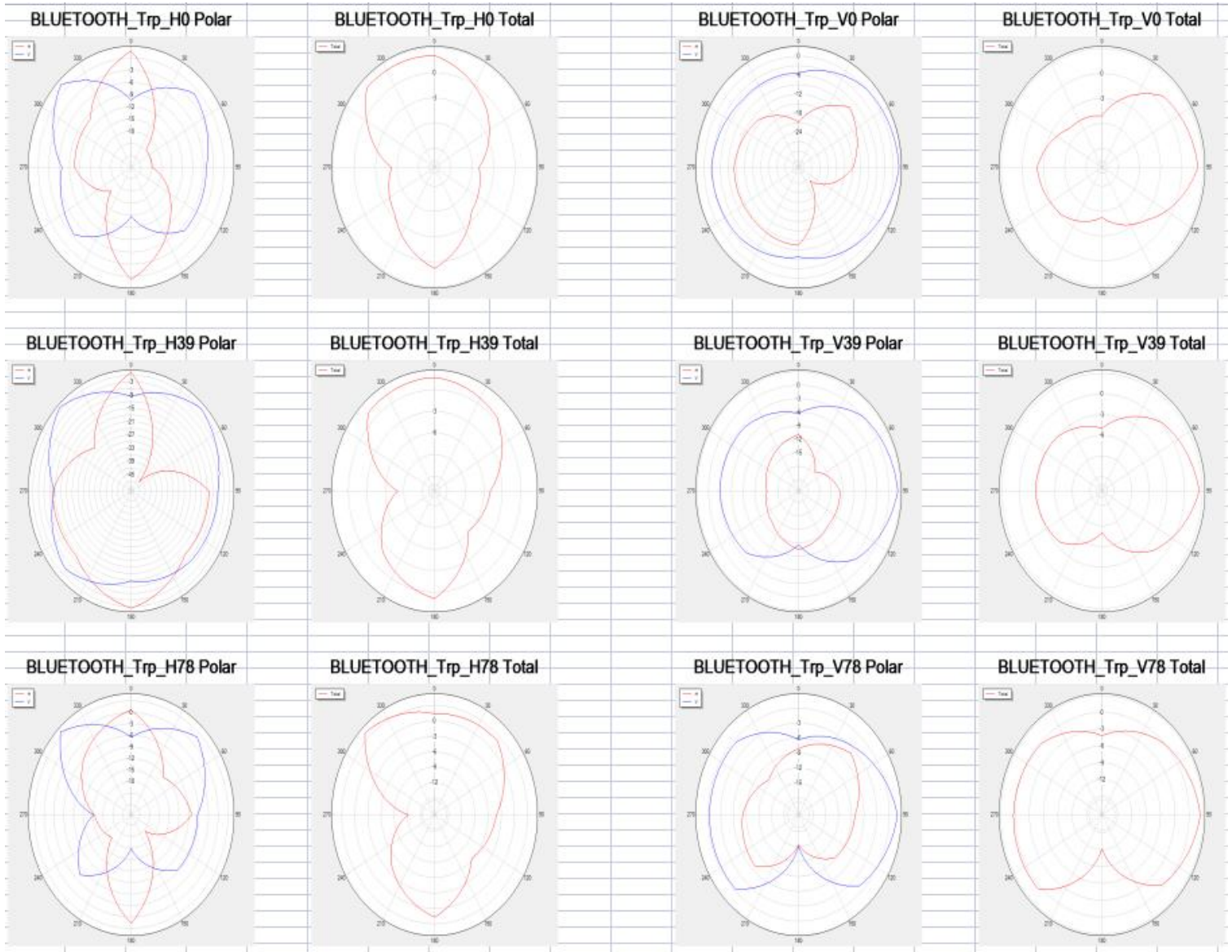
-R-TIS-An antenna pattern simulating a human head

#-R



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

#-R



Antenna efficiency gain

天线效率与增益图

L

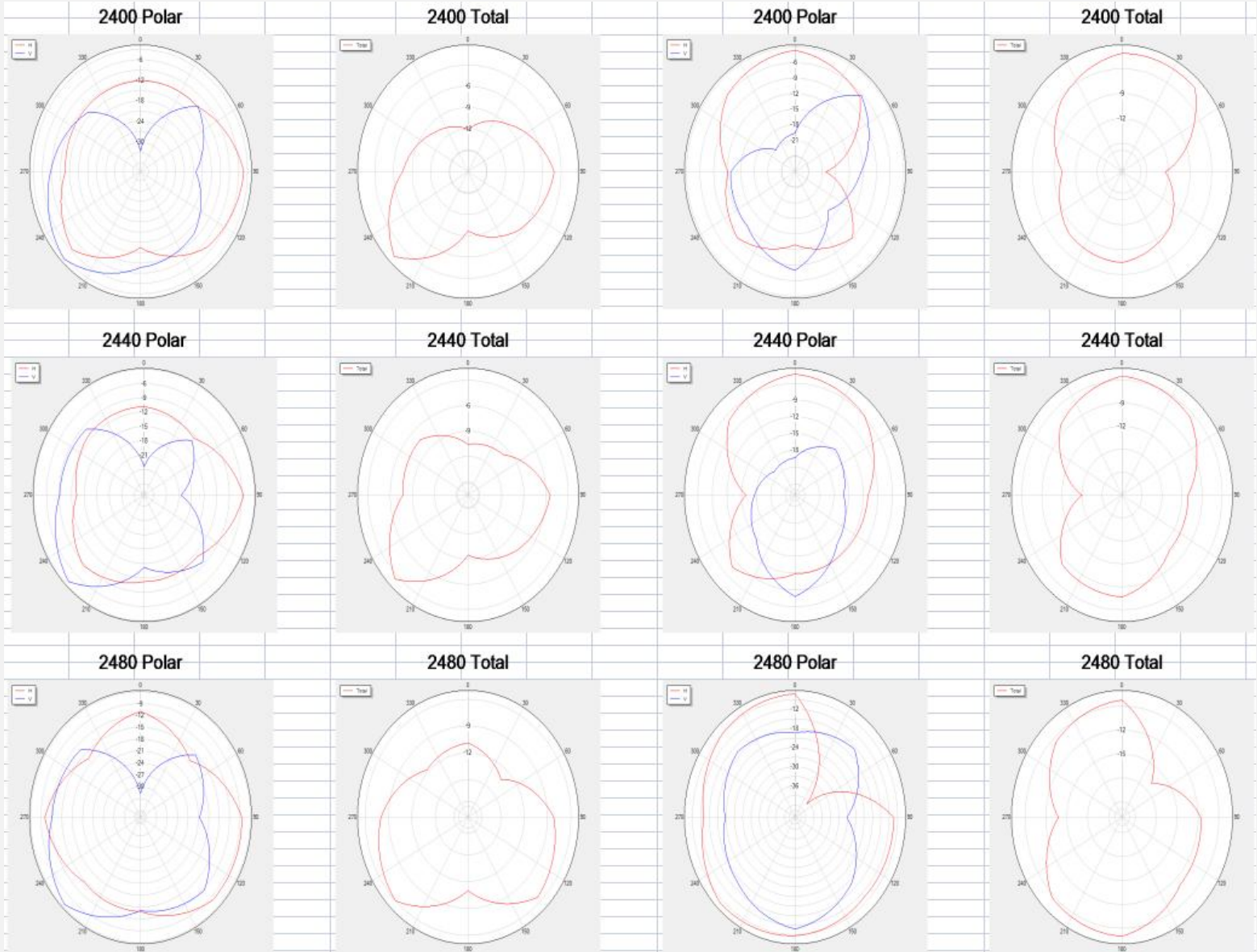
Frequency	Efficiency	percentage	Gain
2400	-4.35	33.18%	-1.49
2410	-4.27	36.62%	-1.25
2420	-4.4	37.91%	-1.14
2430	-4.79	38.96%	-0.79
2440	-3.06	42.71%	-0.28
2450	-4.01	39.8%	-1
2460	-4.54	38.99%	-1.75
2470	-4.04	38.48%	-1.94
2480	-4.13	38.23%	-1.04

R

Frequency	Efficiency	percentage	Gain
2400	-4.97	35.12%	-1.56
2410	-4.87	36.58%	-1.63
2420	-4.79	36.97%	-1.61
2430	-4.15	37.29%	-1.21
2440	-4.01	42.83%	-0.4
2450	-4.19	39.18%	-1.36
2460	-4.71	38.49%	-1.21
2470	-4.29	38.83%	-1.52
2480	-4.4	38.53%	-1.73

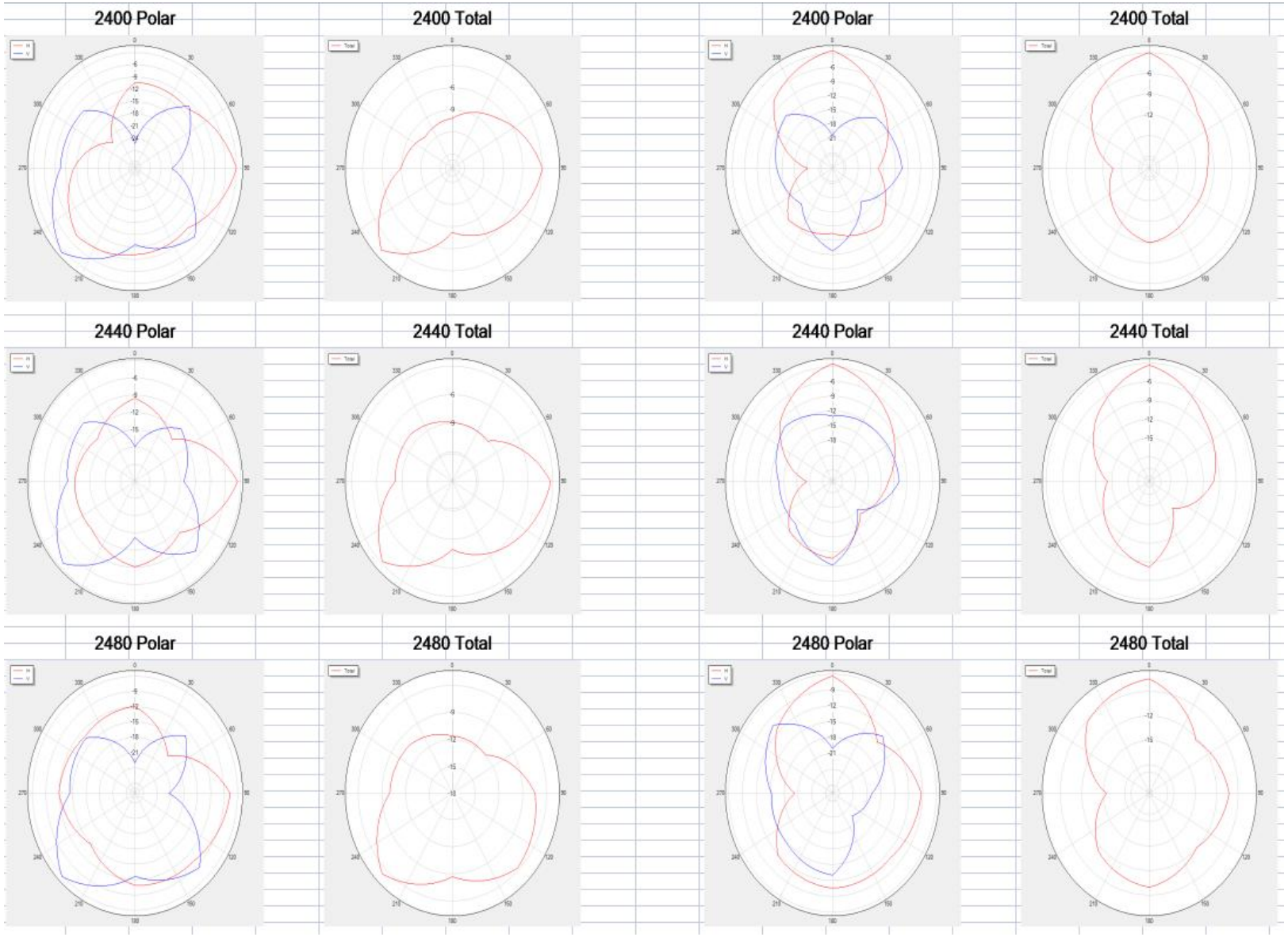
#-R

Antenna radiation pattern 2400.00MHz/2440.00MHz/2480.00MHz



#-L

Antenna radiation pattern 2400.00MHz/2440.00MHz/2480.00MHz



measuring distance

a. Environme

test project	Trying hard not to hear		Pocket test requirement		descr
F09			right front	OK	The iPhone5 was tested over 15+ meters in the park
	OK		front-left	OK	
			right rear	OK	
			left rear	OK	

b. summarize

F09 machine actual test, OTA data test, basically distance matching, our park grass test effect is excellent

assembly method

Thank you for watching !

Wish you enjoy your life

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