



DK079 Antenna Test Report

Date: 2023.07.15

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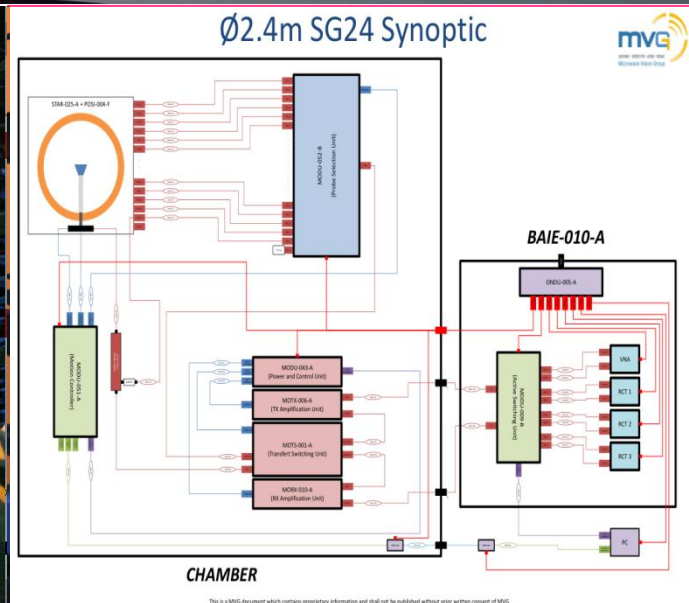
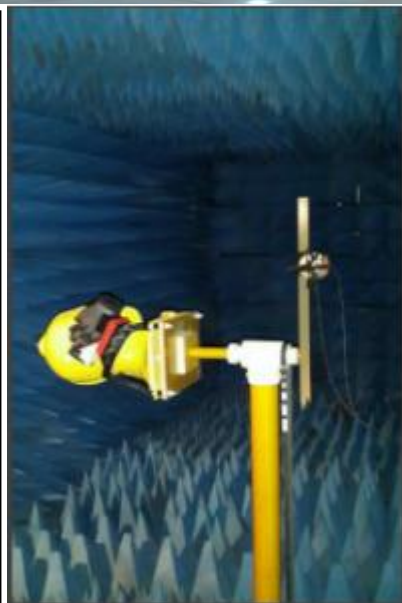
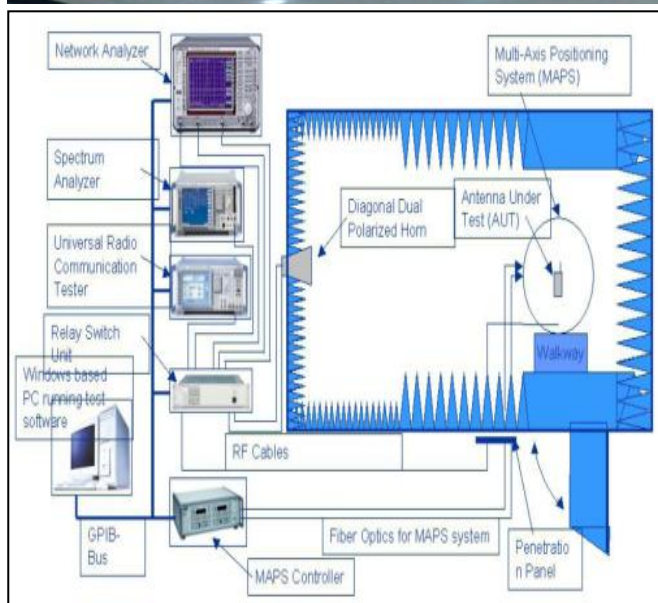


Project Overview



Main antenna design spectrum	5G global network
Type of antenna	PIFA
Deputy antenna design spectrum	WIFI/GPS/BT
Type of antenna	PIFA
Frequency diversity antenna	5G global network
Type of antenna	PIFA

Report version	Date	Content
V5.0	2023.12.29	Antenna test report

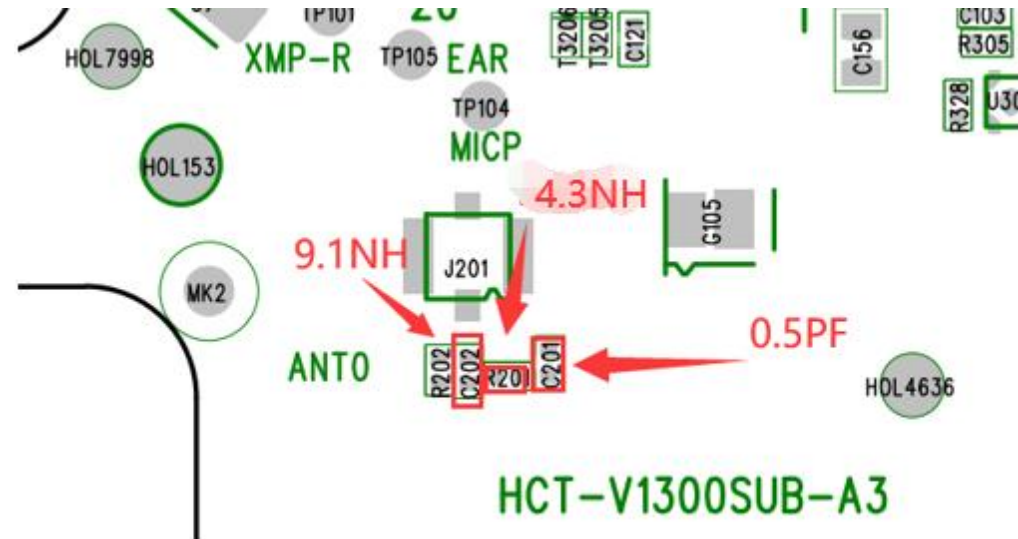
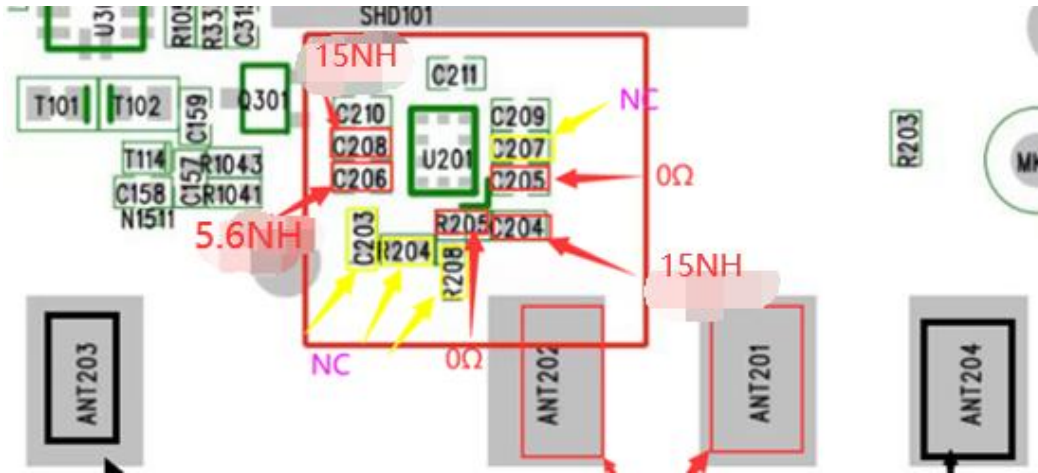
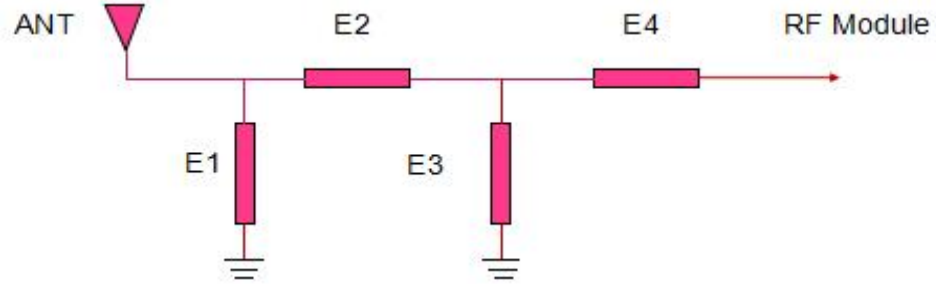


3座远场3D全电波微波暗室实验室系统，1座MVG SG24LT（Satmio）近场3D微波暗室实验室系统（与国家相关实验室同步）

Matching Circuit

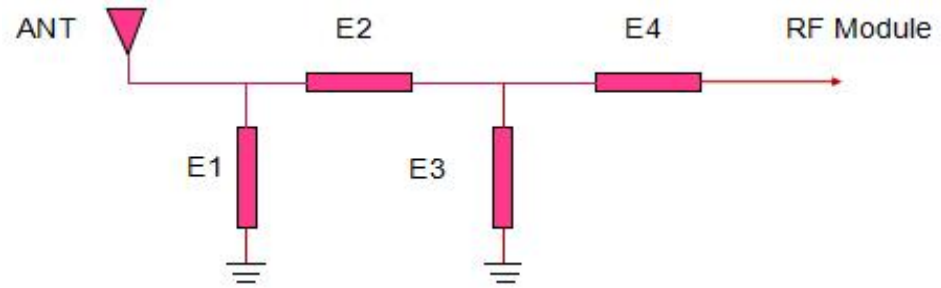
main antenna design

Element	Value
E1(0201):	0.5pF
E2(0201):	4.3nh
E3(0201):	9.1nh
E4(0201):	N/A

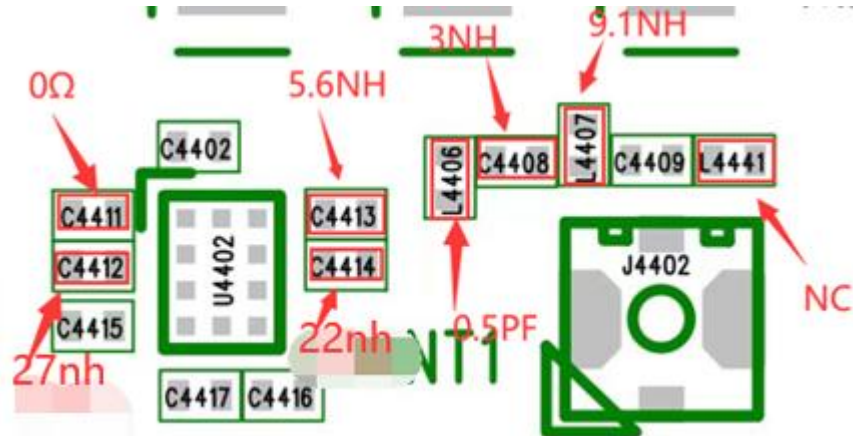


Matching Circuit

main antenna design



Element	Value
E1(0201):	0.5pF
E2(0201):	3nh
E3(0201):	9.1nh
E4(0201):	N/A





BAND	GSM900			DCS1800		
CHANNAL	1	62	124	512	699	885
TRP	25.4	26.2	26.2	23.2	23.4	23.5
TIS			-101.4			-103.3
BAND	GSM850			PCS1900		
CHANNAL	128	192	251	512	661	810
TRP	25.3	25.3	26.1	24.3	24.5	23.4
TIS			-102.2			-103.4



BAND	CDMA-BC0			CDMA-BC1		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	16.2	16.4	16.4	16.3	16.3	16.4
TIS			-102.4			-102.5
BAND	CDMA-BC10					
CHANNAL	Low	Medium	High			
TRP	16.3	16.4	16.4			
TIS			-102.5			



BAND	WCDMA-B1			WCDMA-B2		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	16.5	17.2	17.3	17.22	17.2	17.2
TIS			-105.3			-105.3
BAND	WCDMA-B4			WCDMA-B5		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	15.4	15.8	16.2	16.3	16.5	16.3
TIS			-104.3			-104.3

BAND	WCDMA-B6			WCDMA-B8		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	16.2	16.2	16.4	16.1	16.2	16.3
TIS			-104.3			-103.4
BAND	WCDMA-B19					
CHANNAL	Low	Medium	High			
TRP	15.5	16.2	16.3			
TIS			-102.5			

BAND	LTE-B1			LTE-B2		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	16.2	16.4	17.1	17.2	17.3	16.2
TIS			-93.3			-92.4
BAND	LTE-B3			LTE-B4		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	15.3	15.3	15.4	15.3	15.3	15.1
TIS			-92.2			-93.2

BAND		LTE-B5			LTE-B7		
CHANNAL		Low	Medium	High	Low	Medium	High
TRP		15.4	16.3	16.1	16.3	17.3	17.3
TIS				-91.1			-92.3
BAND		LTE-B8			LTE-B12		
CHANNAL		Low	Medium	High	Low	Medium	High
TRP		15.3	16.3	16.1	15.4	16.1	15.5
TIS				-90.4			-90.4

BAND	LTE-B13			LTE-B17		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	15.3	16.2	15.8	15.4	15.3	15.6
TIS			-90.5			-90.4
BAND	LTE-B18			LTE-B19		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	15.5	16.3	15.5	15.4	16.2	15.5
TIS			-90.5			-90.7

BAND	LTE-B20			LTE-B25		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	15.5	15.6	15.5	16.4	16.2	16.4
TIS			-90.3			-93.5
BAND	LTE-B26			LTE-B66		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	15.5	15.7	15.4	15.1	15.4	16.4
TIS			-91.4			-91.2



BAND	LTE-B34			LTE-B38		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	15.4	15.2	14.8	17.3	17.5	17.5
TIS			-93.1			-90.6
BAND	LTE-B39			LTE-B40		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	17.3	17.5	16.3	17.2	17.5	17.4
TIS			-91.3			-91.3



BAND	LTE-B41			LTE-B28		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	17.2	17.2	17.3	15.3	15.2	15.1
TIS			-91.3			-90.4
BAND	LTE-B30					
CHANNAL	Low	Medium	High			
TRP	16.7	16.5	16.4			
TIS			-91.3			

BAND	NR-N5			NR-N8		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	15.3	16.2	16.1	16.5	16.6	16.1
TIS			-89.4			-89.5
BAND	NR-N20			NR-N28		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	15.4	16.2	16.3	15.5	15.7	15.5
TIS			-89.4			-89.4



BAND	NR-N1			NR-N3		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	16.5	16.3	16.5	16.2	16.4	16.4
TIS			-90.4			-90.3
BAND	NR-N38			NR-N7		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	16.2	16.3	16.4	16.5	16.5	16.2
TIS			-89.3			-89.5



BAND	NR-N40			NR-N41		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	16.4	16.3	16.5	17.2	17.5	17.2
TIS			-88.5			-85.4



BAND	NR-N77			NR-N78		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	20.2	20.2	19.7	20.1	20.3	19.8
TIS			-86.5			-87.7
BAND	NR-N79					
CHANNAL	Low	Medium	High			
TRP	20.1	19.5	18.8			
TIS			-86.7			



BAND	WiFi-B			WiFi-G		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	11.2	12.1	11.5	11.5	11.6	11.5
TIS			-82.1			-71.3
BAND	WiFi-N			WiFi-A		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	11.4	11.3	10.5	12.2	10.7	11.4
TIS			-66.5			-71.4



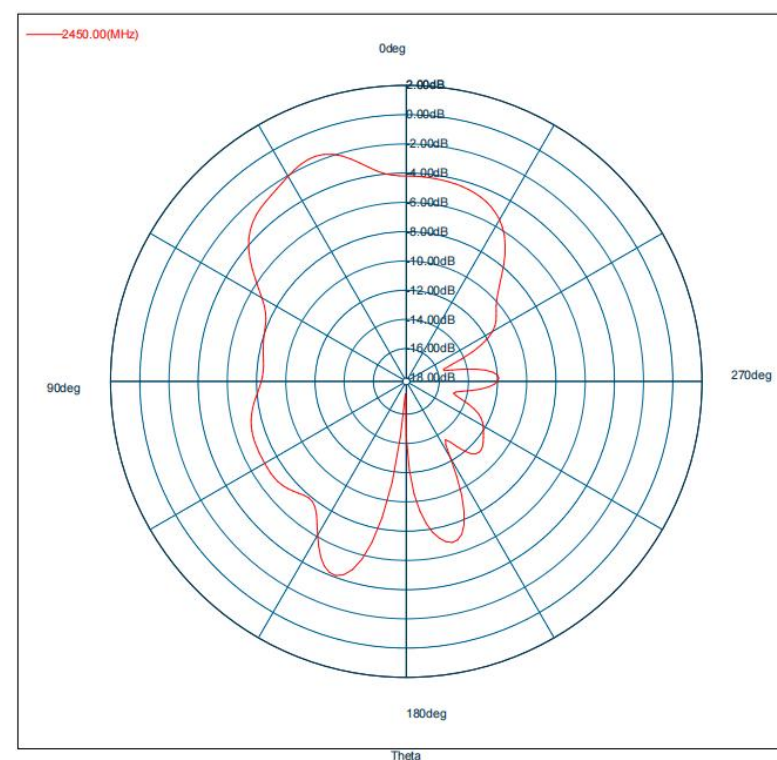
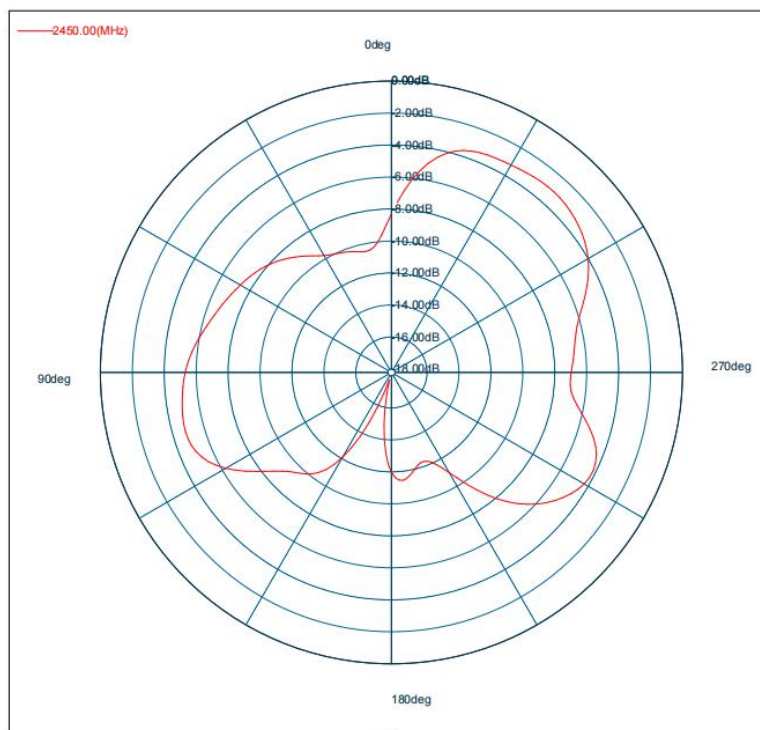
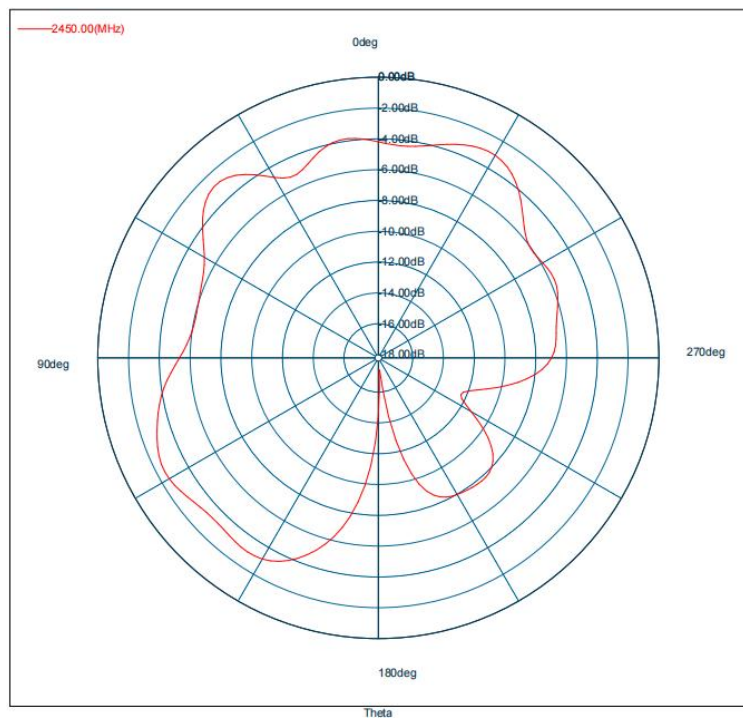
BAND	WiFi-AC			WiFi-AX		
CHANNAL	Low	Medium	High	Low	Medium	High
TRP	11.5	10.5	10.5	11.2	10.5	10.5
TIS			-65.6			-64.6



标准	BAND	WiFi-AC			WiFi-AX		
SA	CHANNAL	Low	Medium	High	Low	Medium	High
	TRP	11.4	10.2	10.4	11.2	10.2	10.3
	TIS			-65.4			-64.7

2.4G Passive pattern

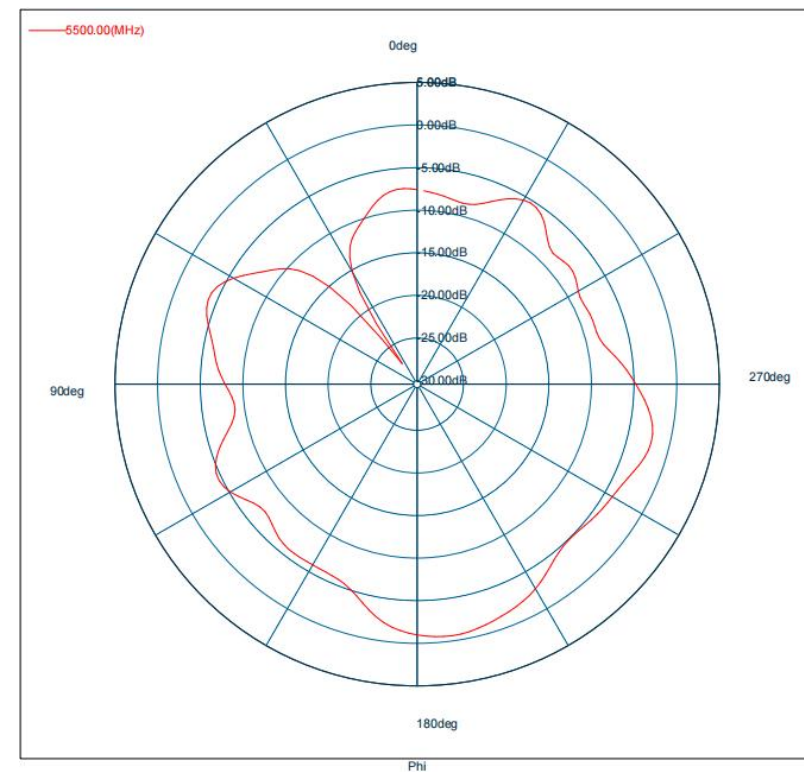
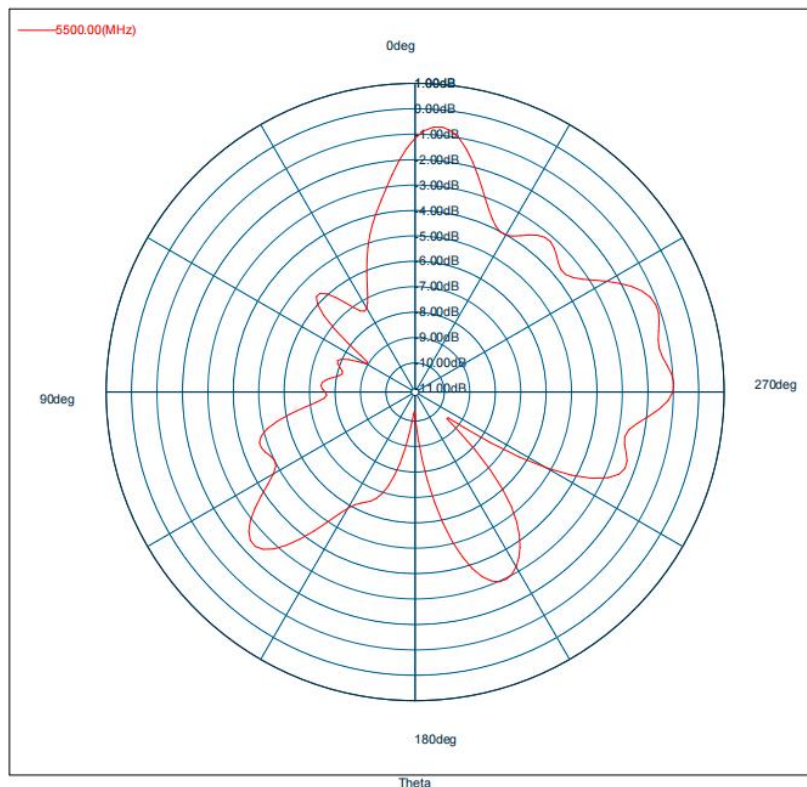
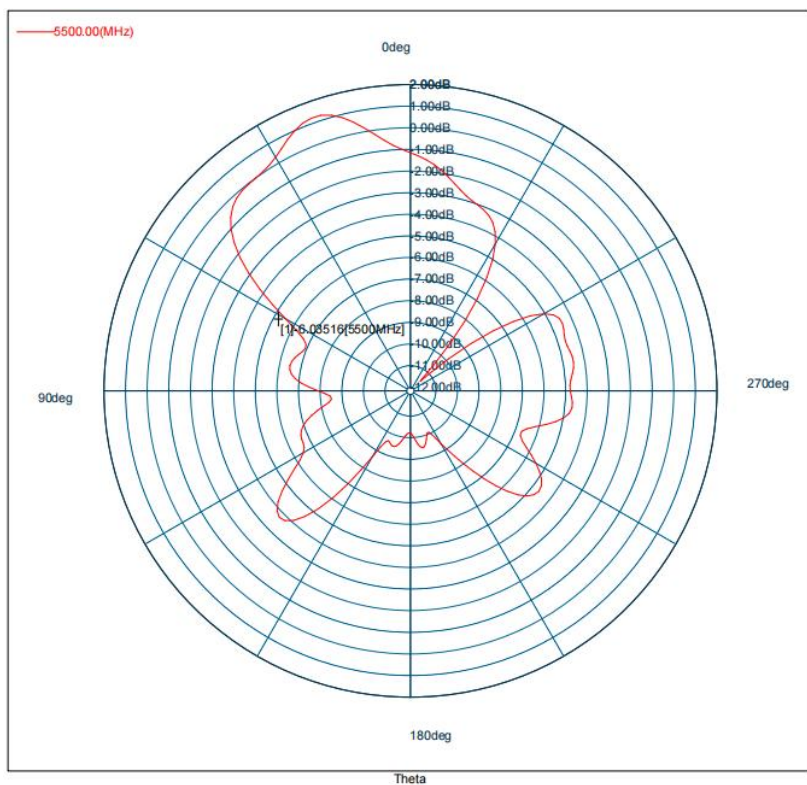
Gain: -1.2 dbi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

5.5G Passive pattern

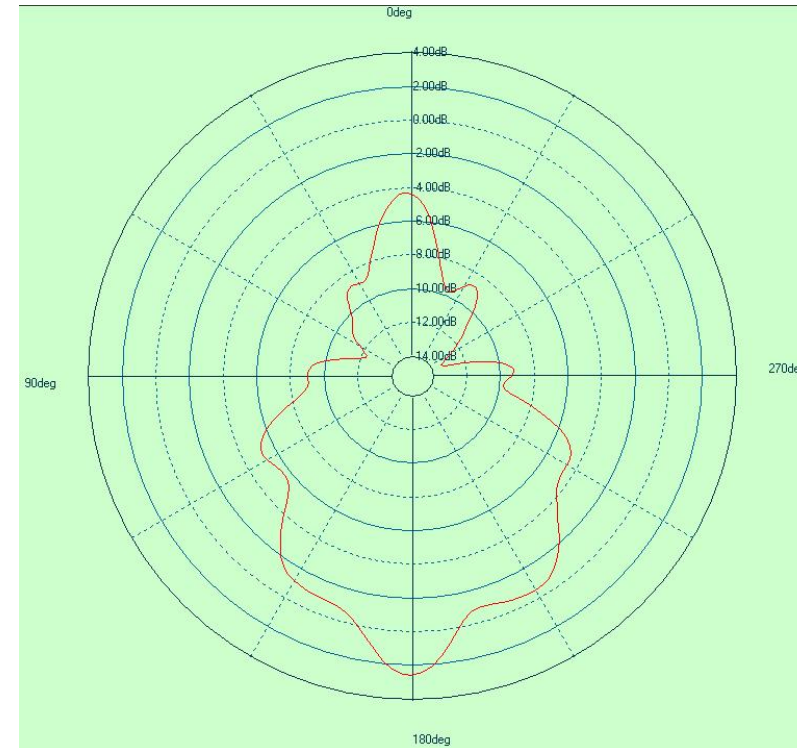
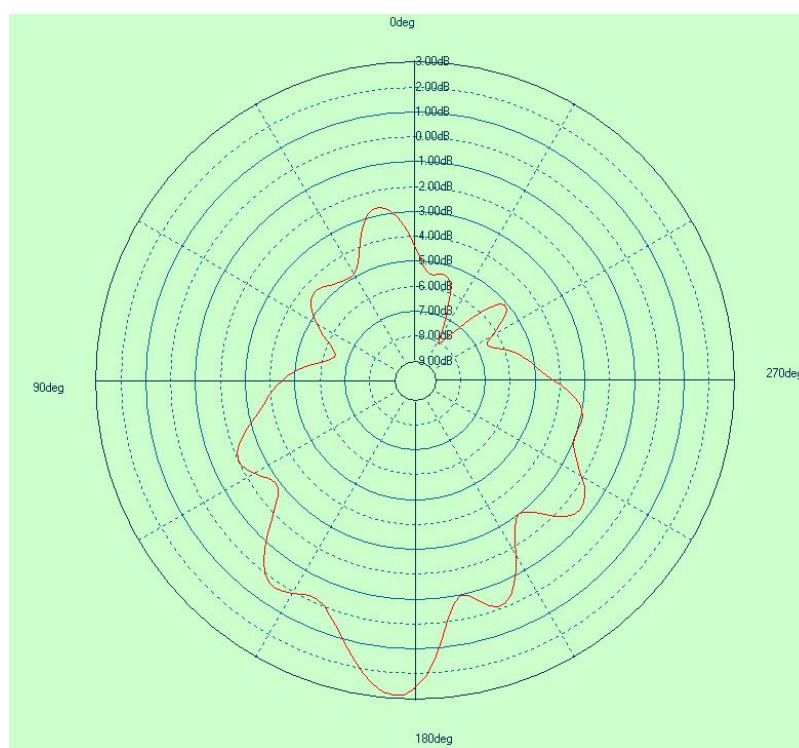
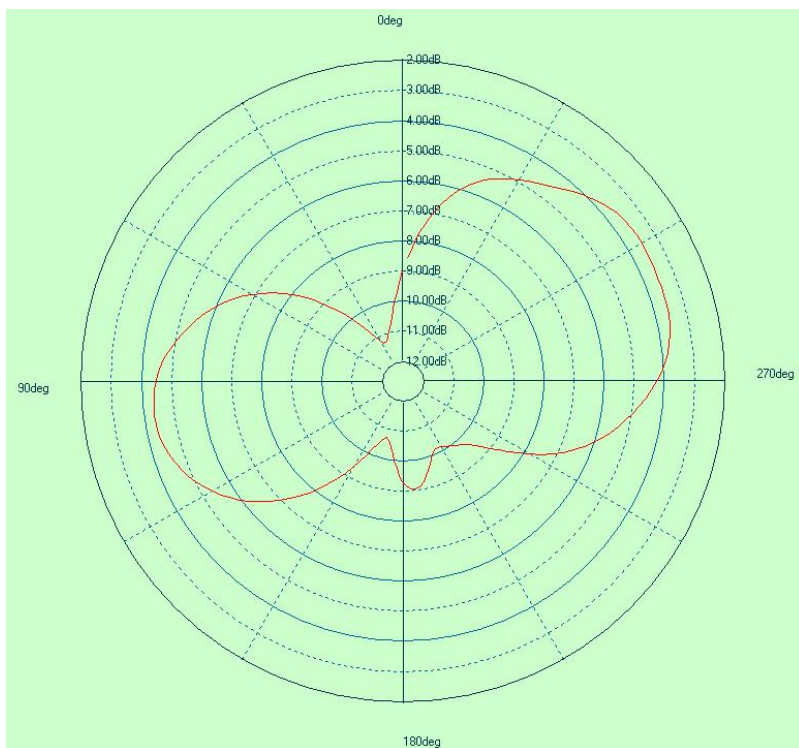
Gain: 0.6 dBi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

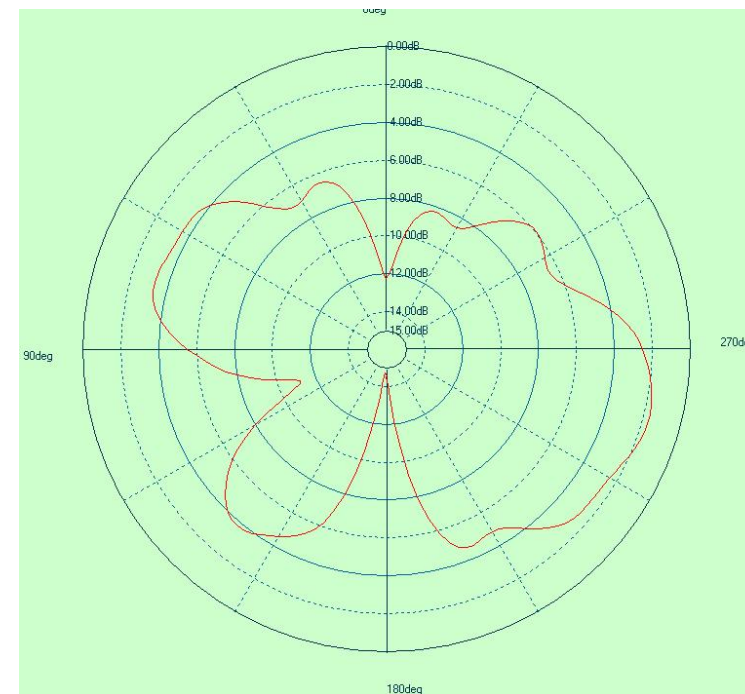
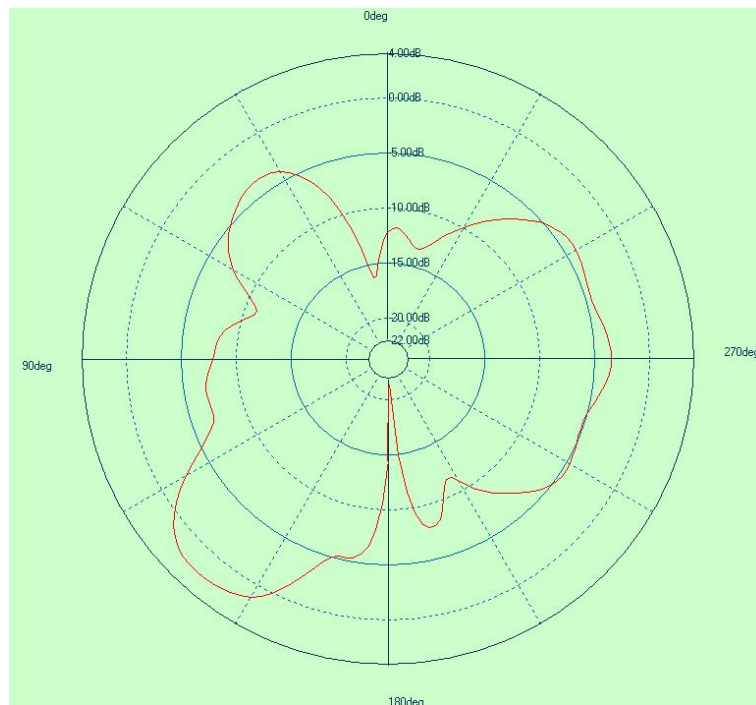
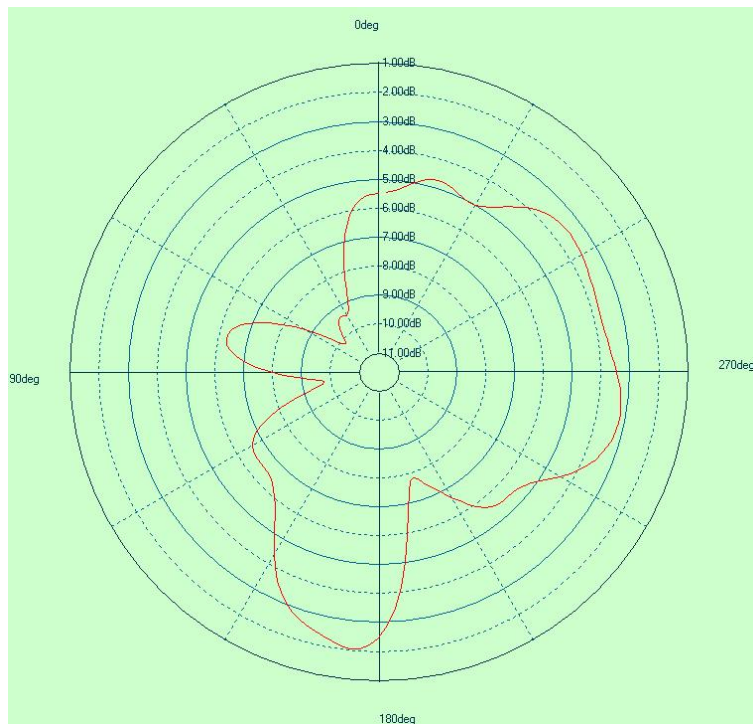
1175Mhz Passive pattern

Gain: -1.3 dbi



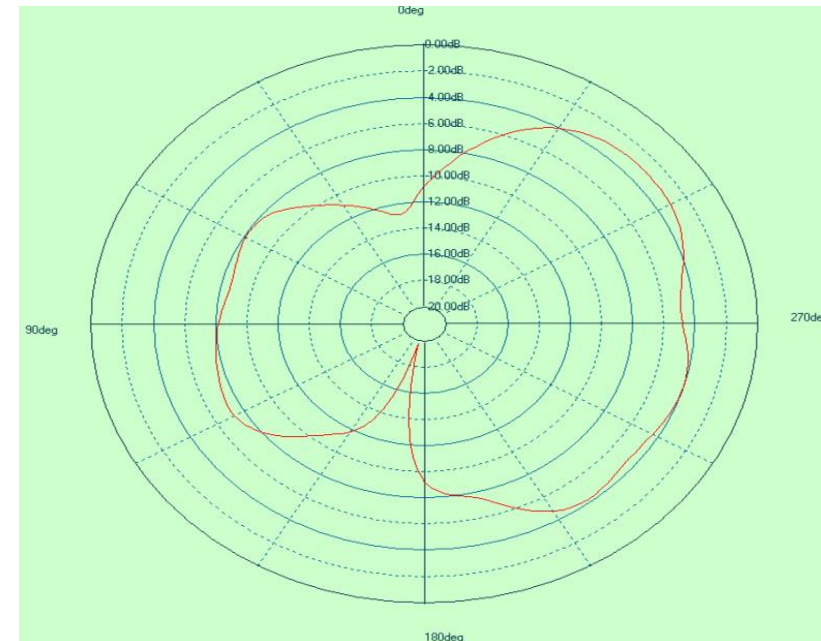
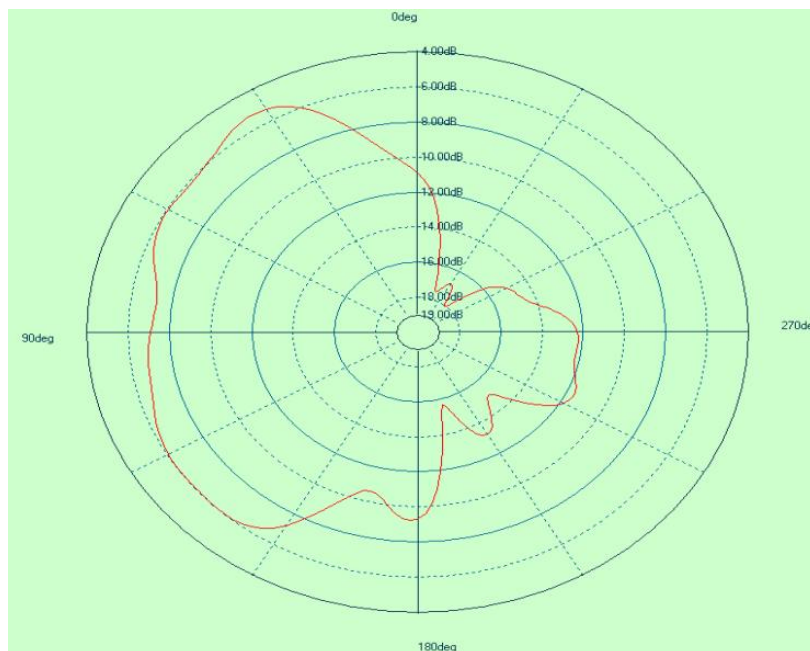
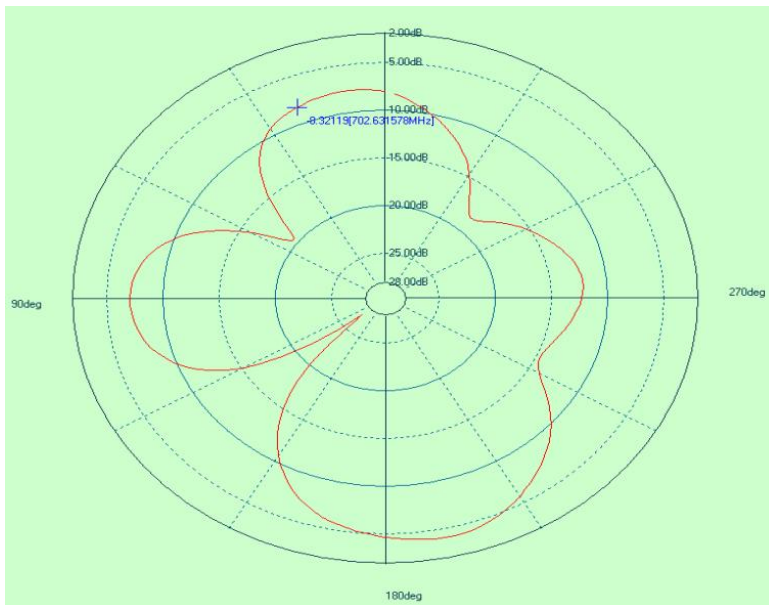
Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

1575Mhz Passive pattern Gain: 1.8 dbi



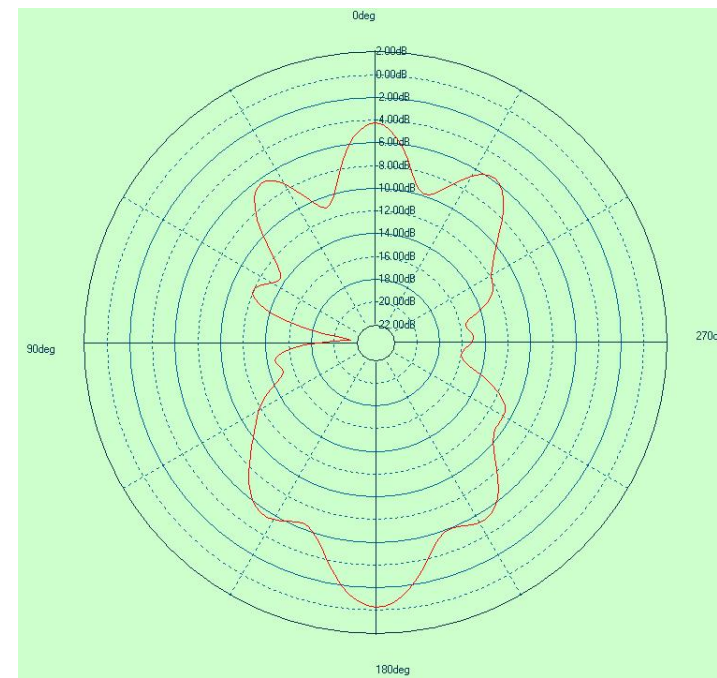
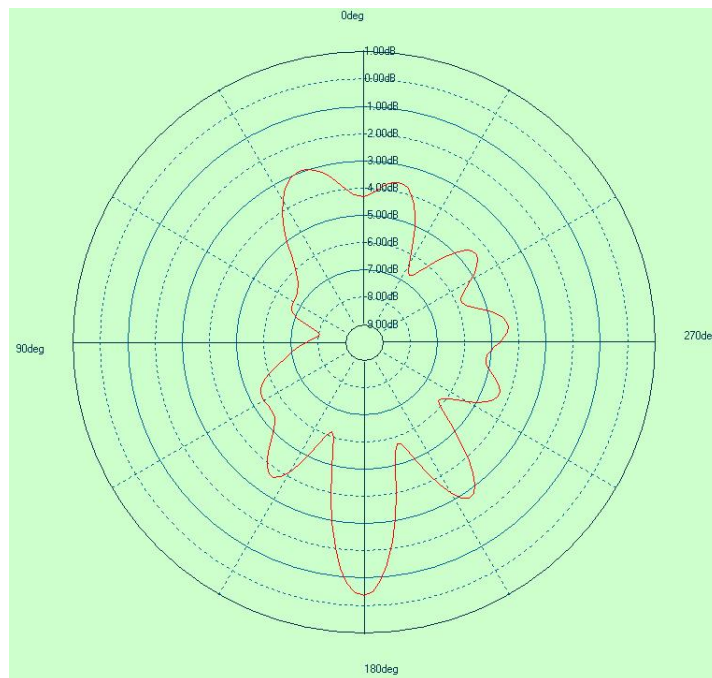
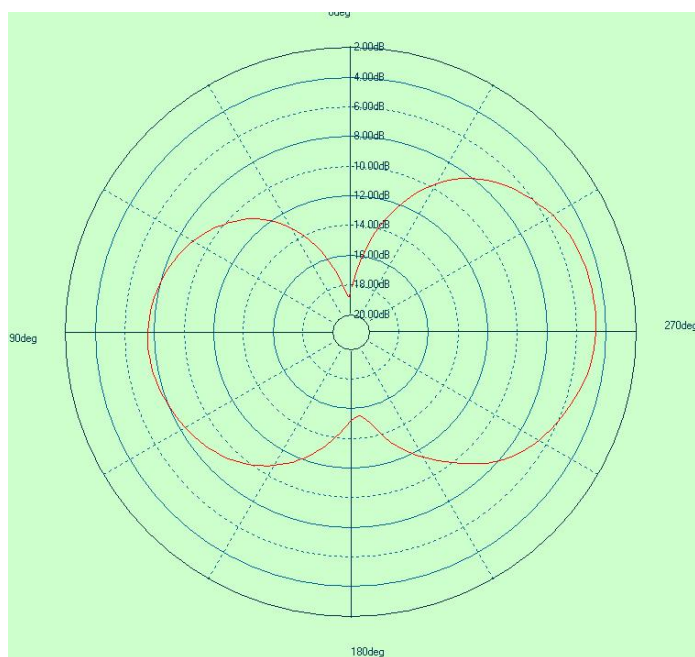
Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

702Mhz Passive pattern Gain: -1.8 dbi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

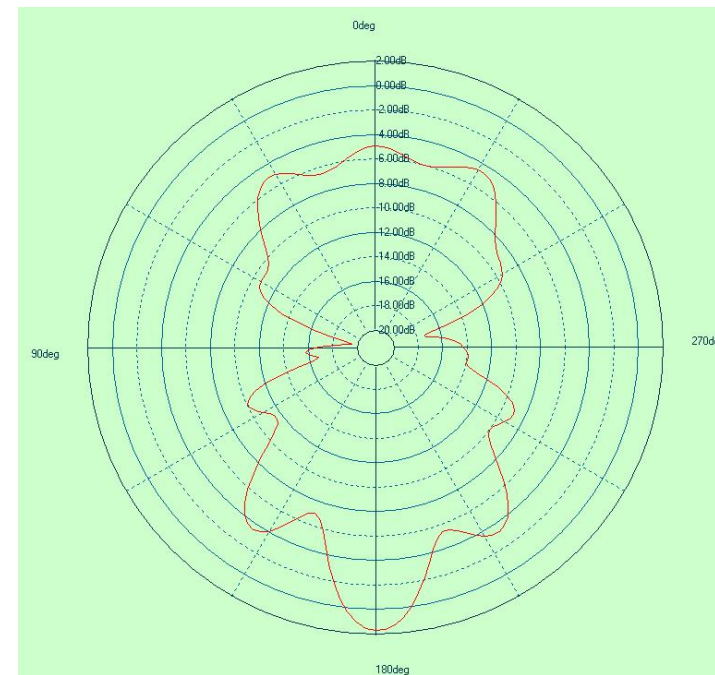
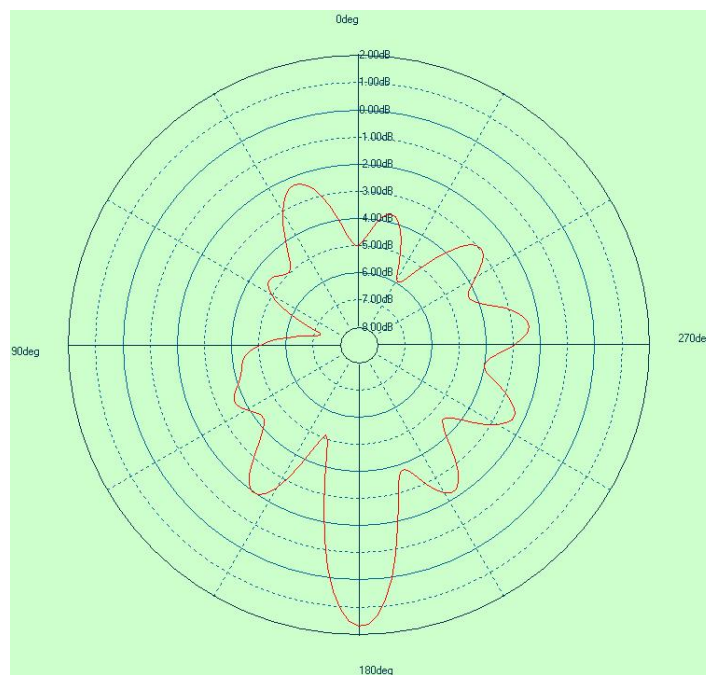
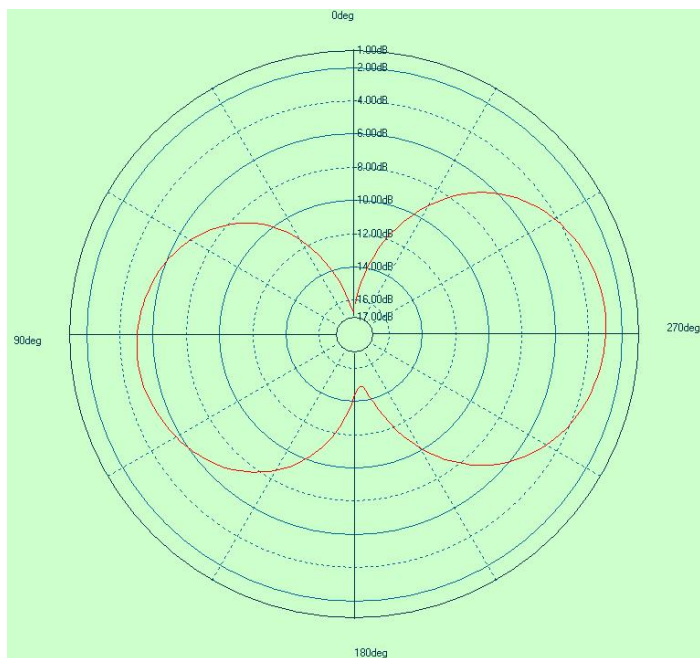
800Mhz Passive pattern Gain: -1.3 dbi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

850Mhz Passive pattern

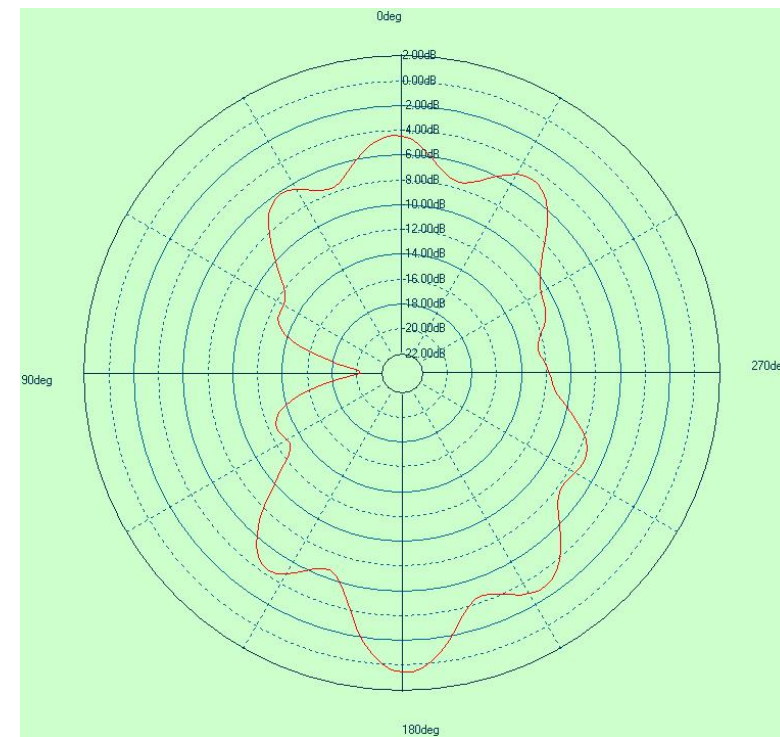
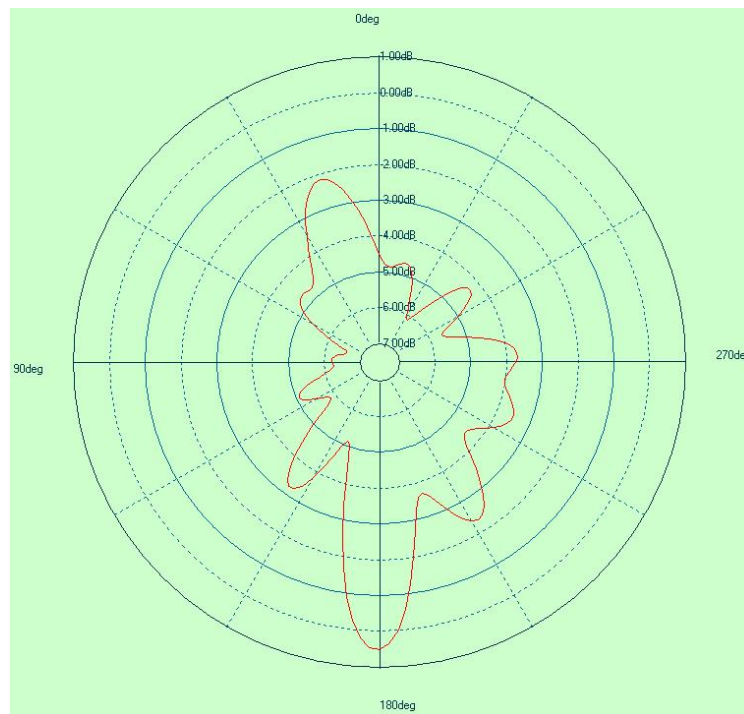
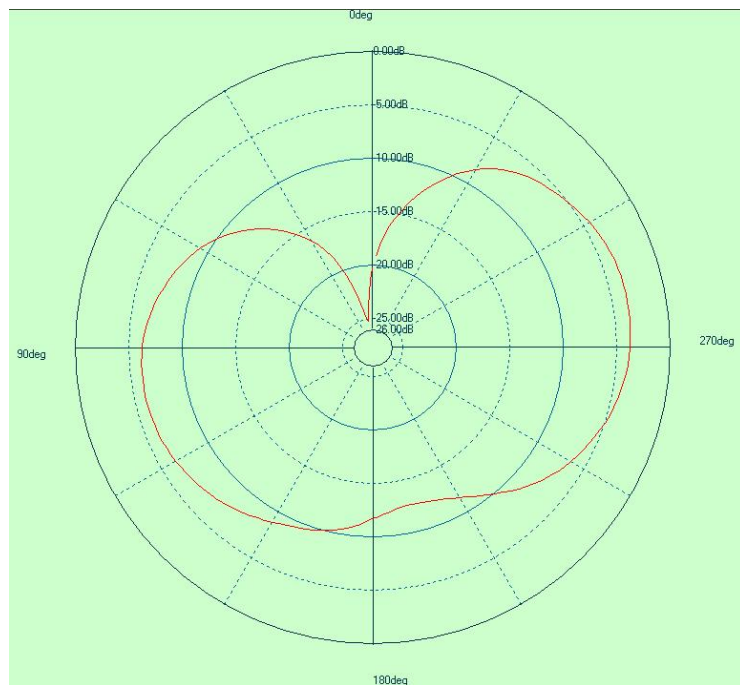
Gain: -0.2 dbi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

880Mhz Passive pattern

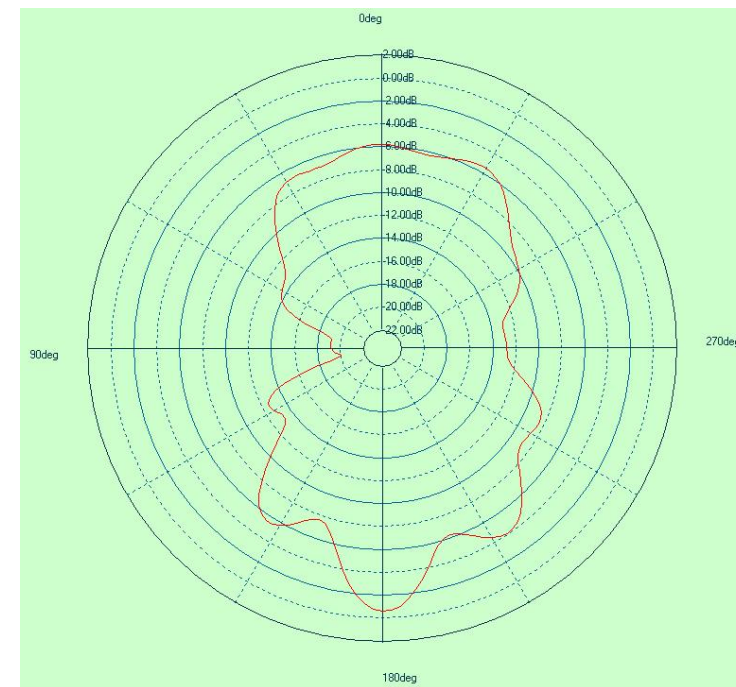
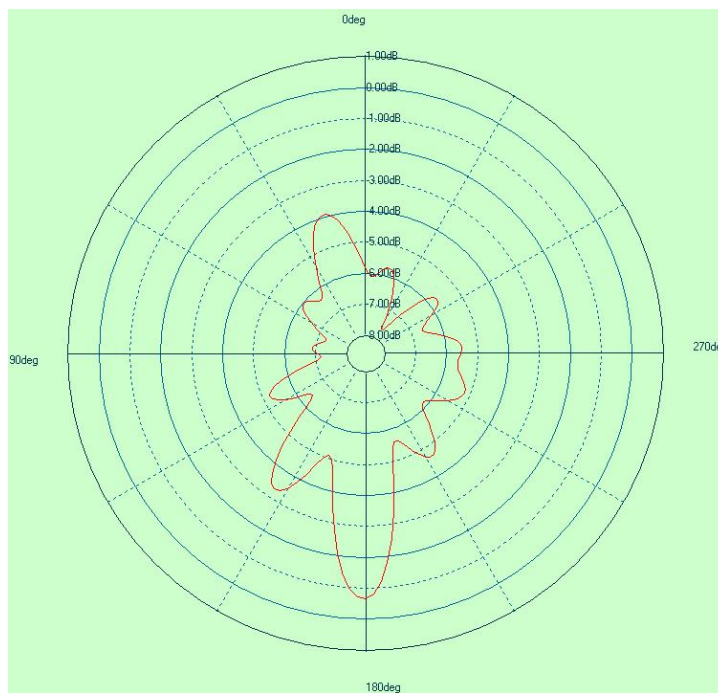
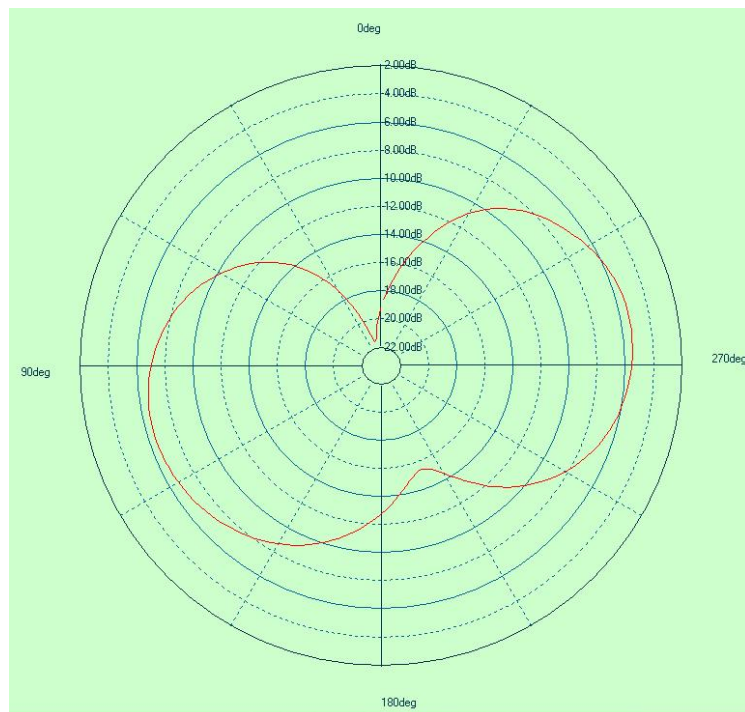
Gain: 0.2 dbi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

960Mhz Passive pattern

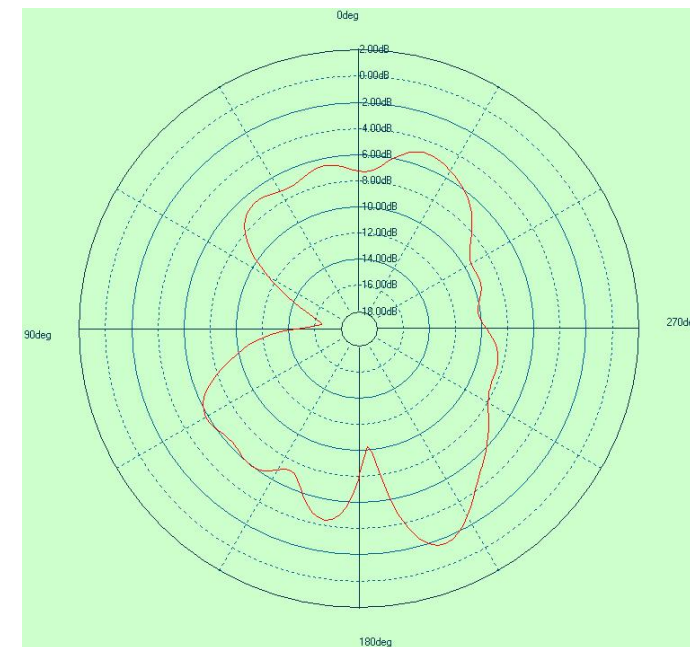
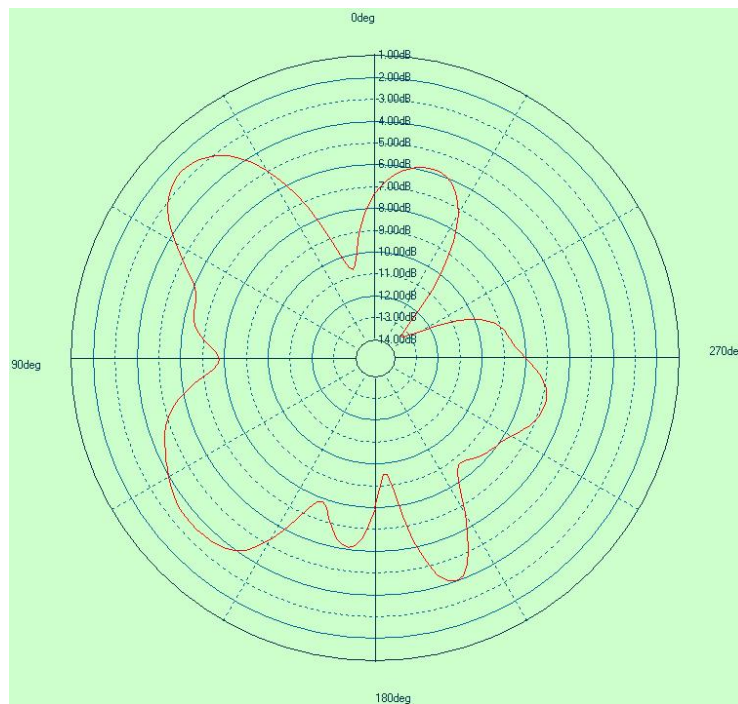
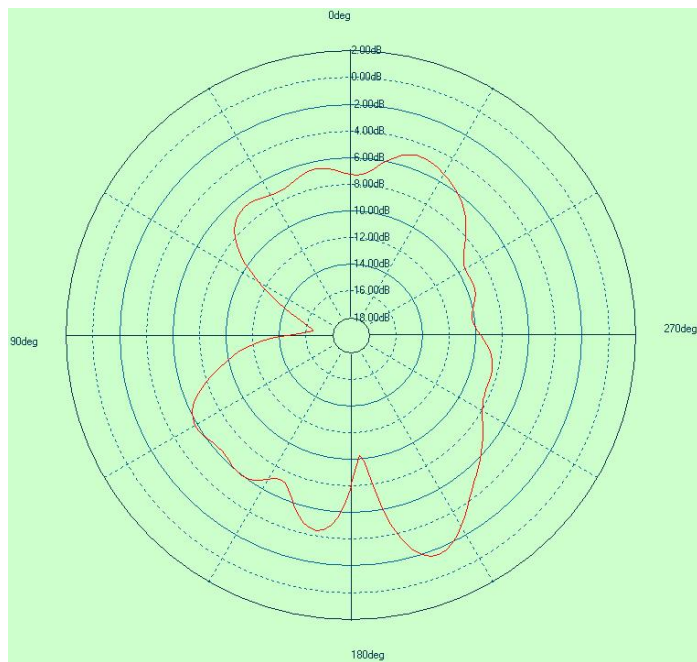
Gain: 0.6 dbi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

1800Mhz Passive pattern

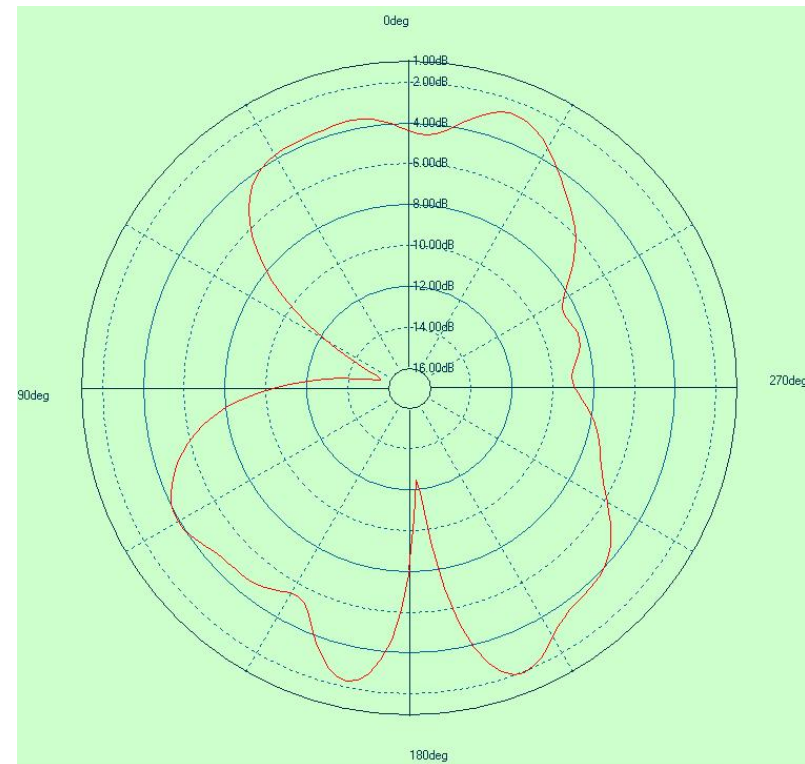
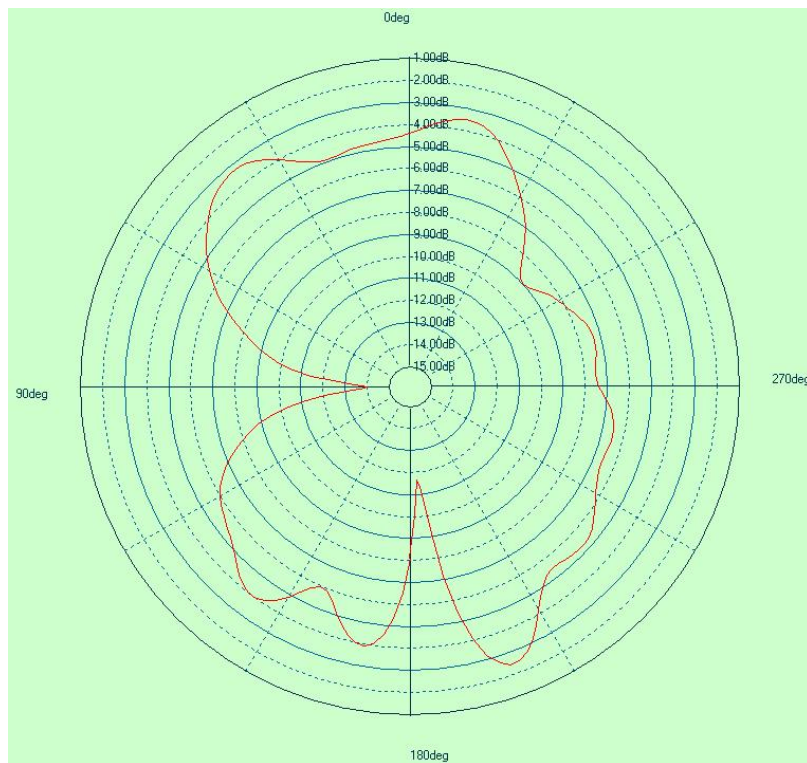
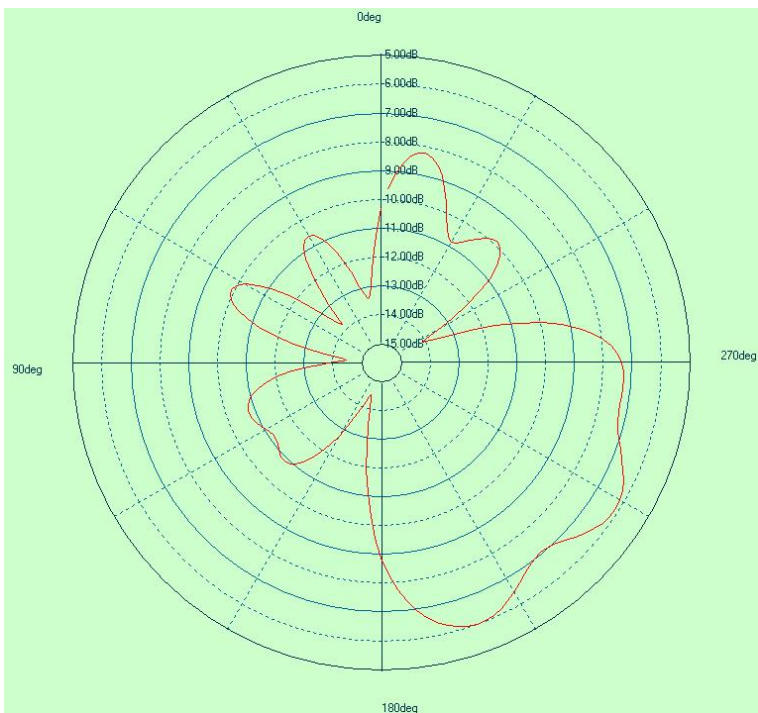
Gain: -0.8 dbi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

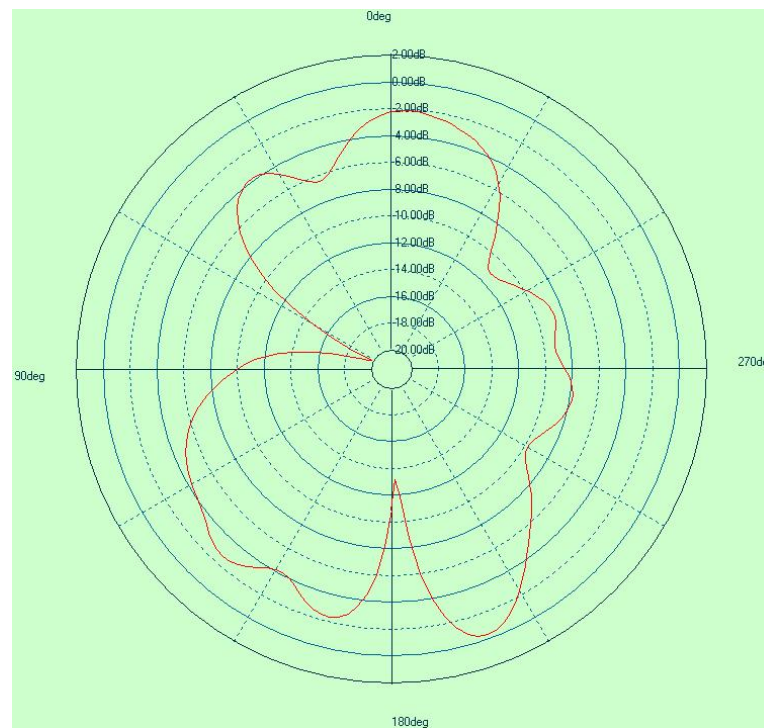
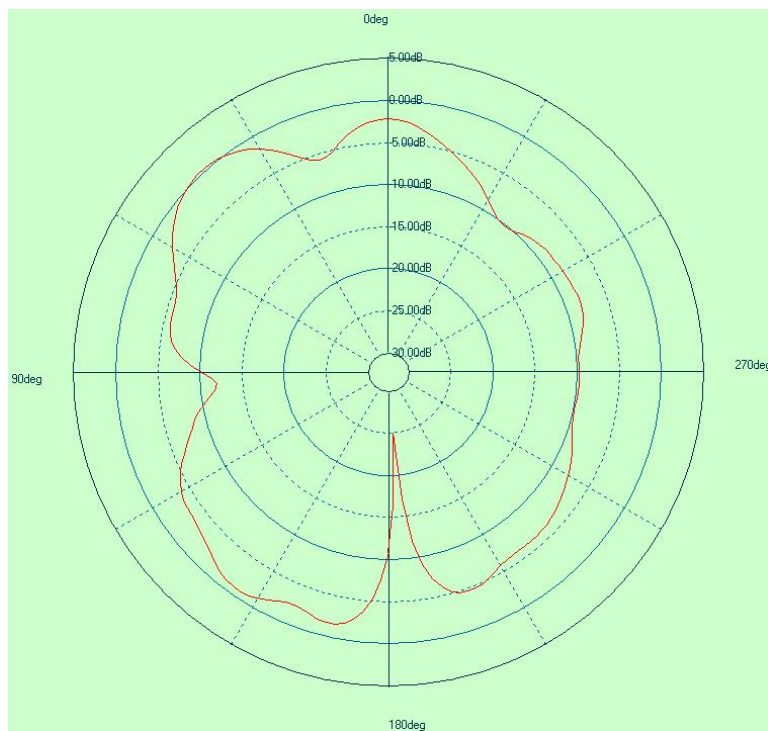
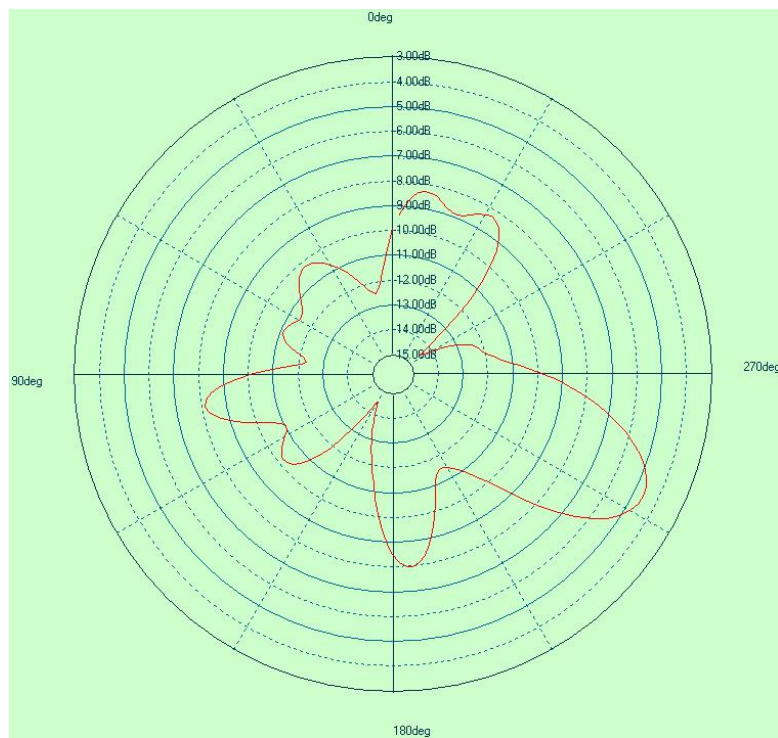
1900Mhz Passive pattern

Gain: -0.7 dbi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

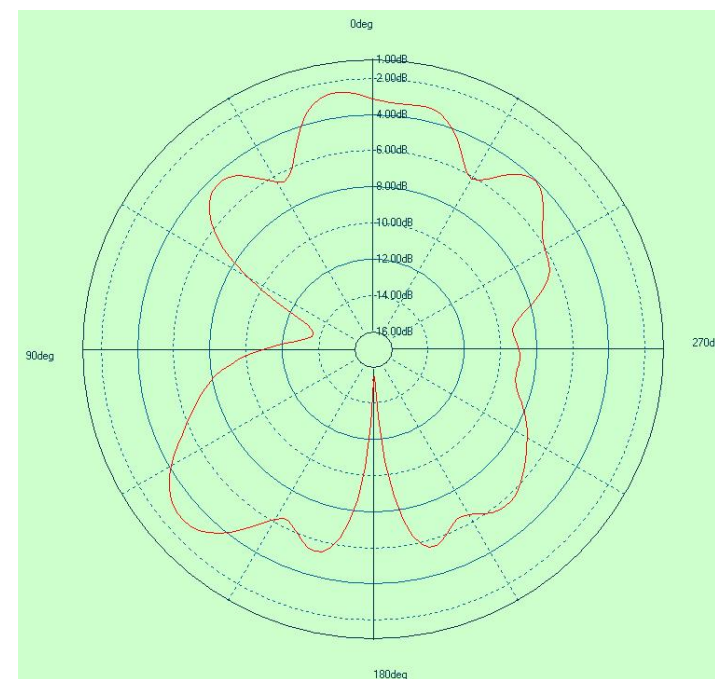
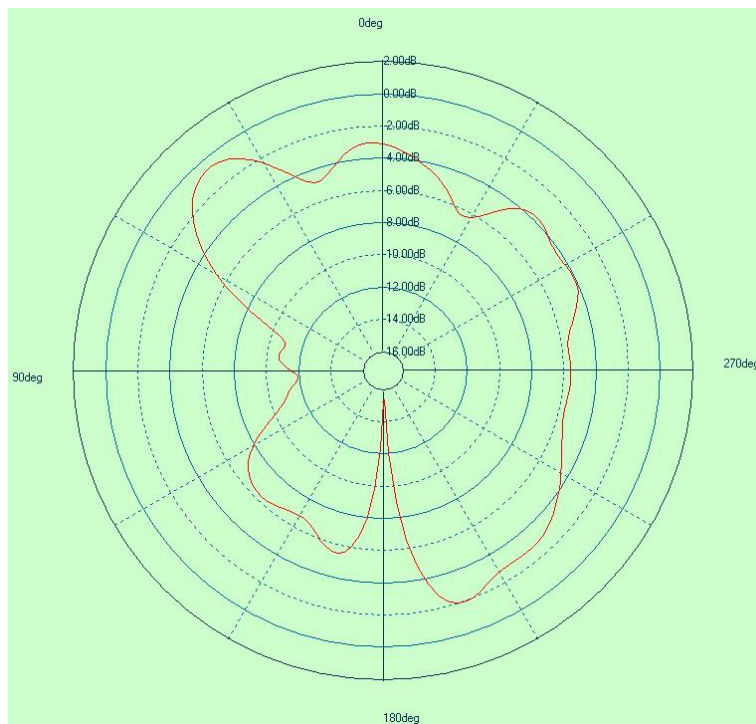
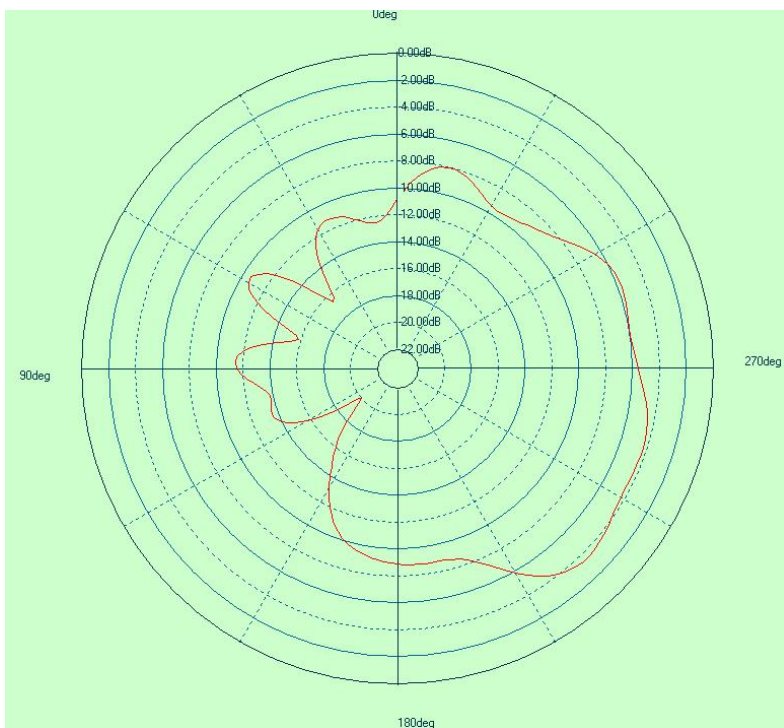
2100Mhz Passive pattern Gain: 0.7 dbi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

2300Mhz Passive pattern

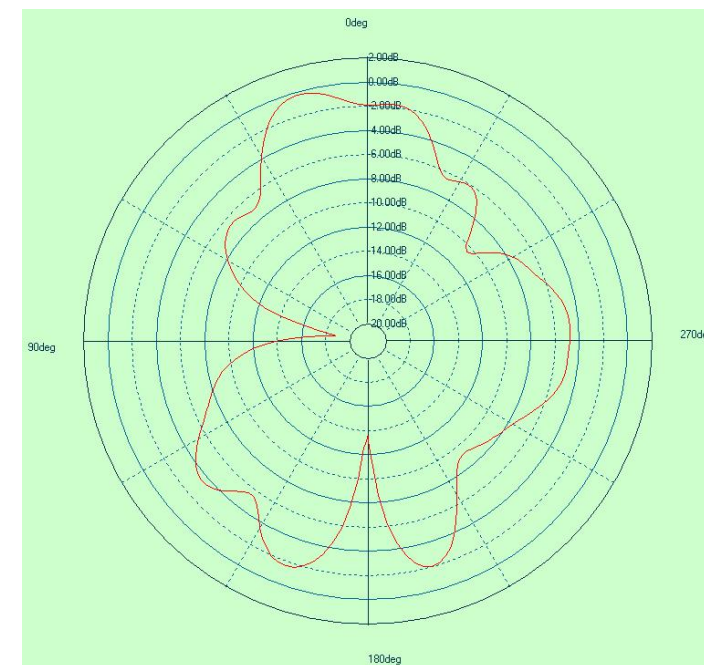
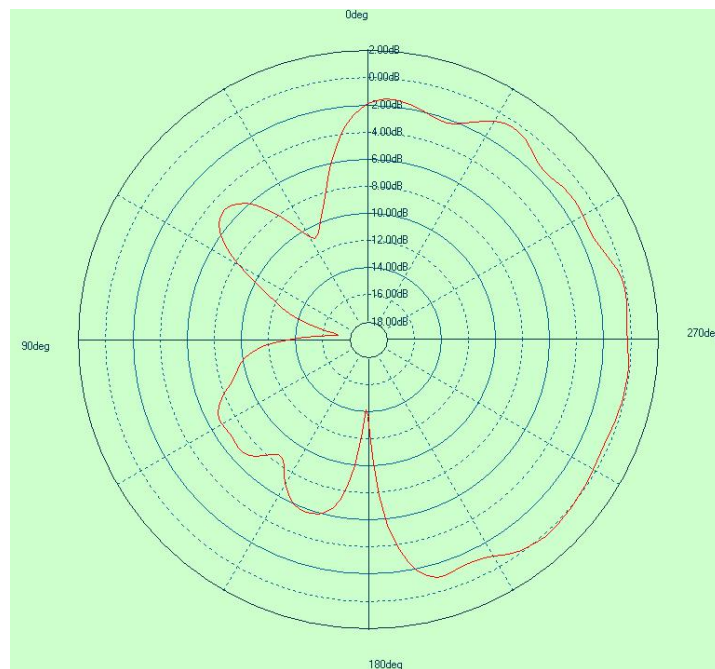
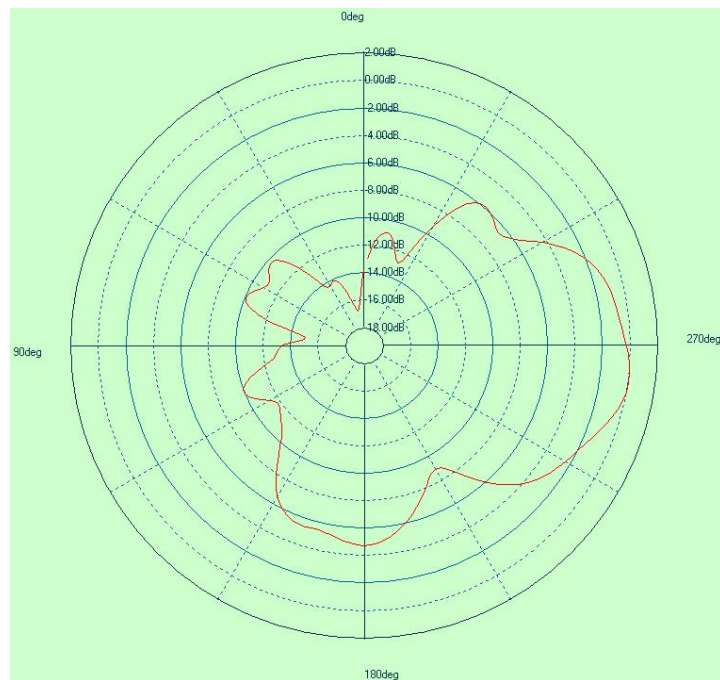
Gain: 0.4 dbi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

2650Mhz Passive pattern

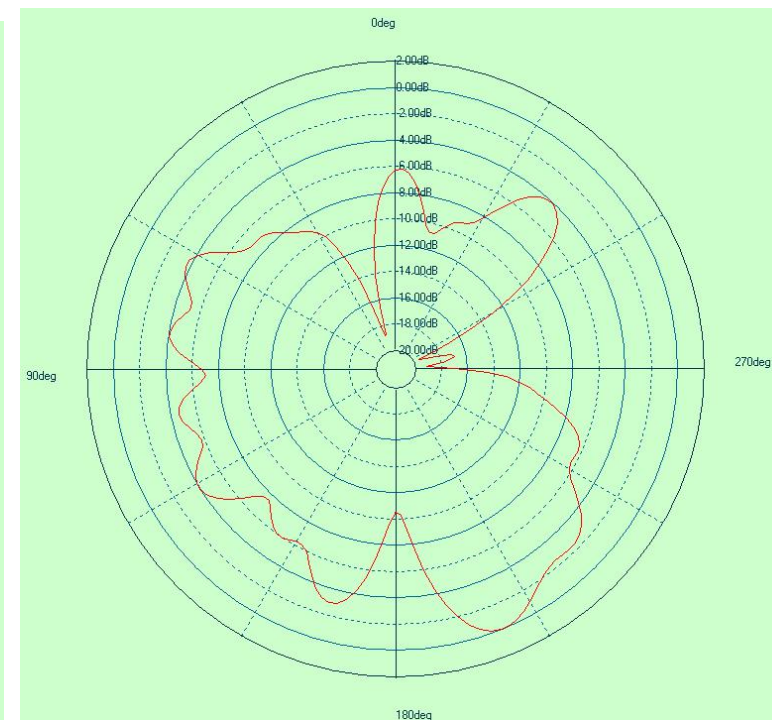
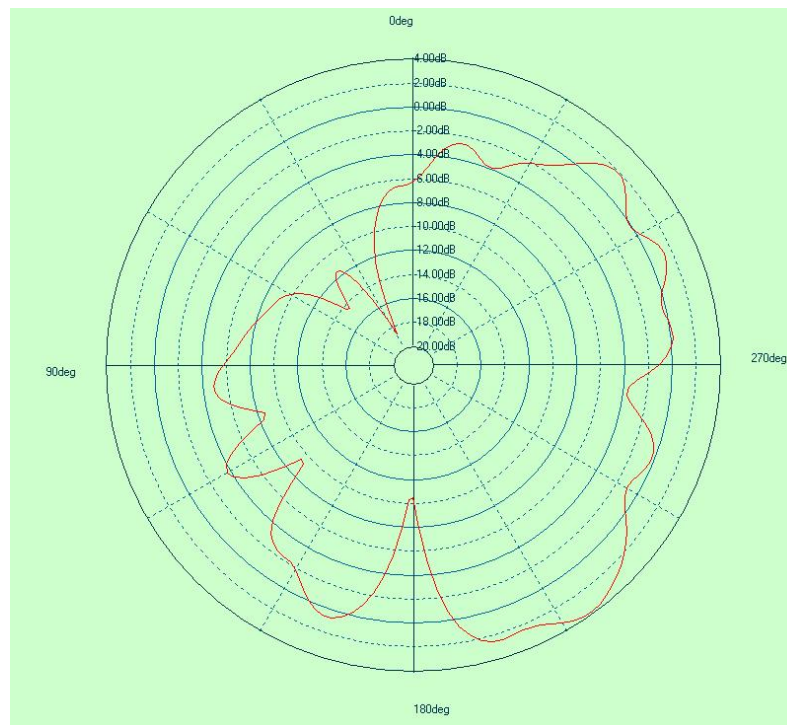
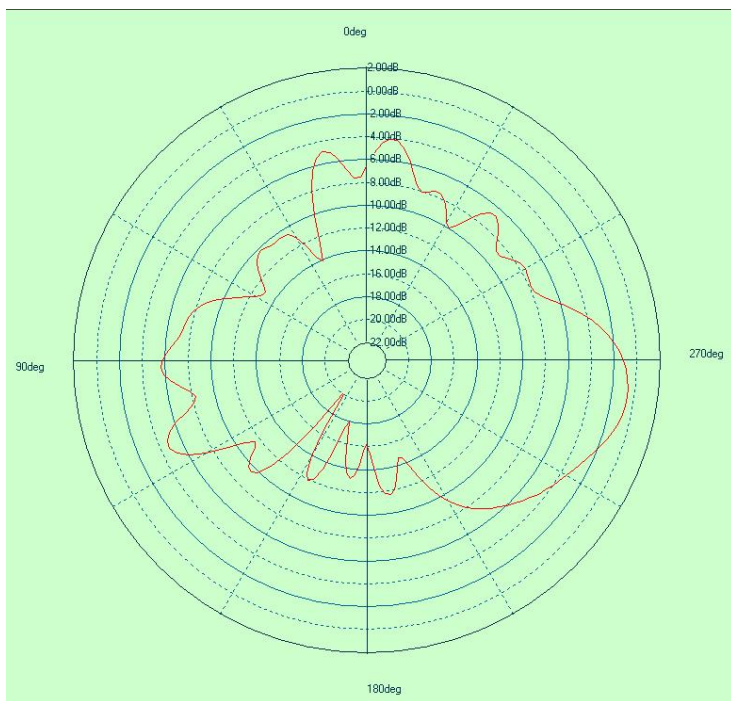
Gain: 1 dbi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

3300Mhz Passive pattern

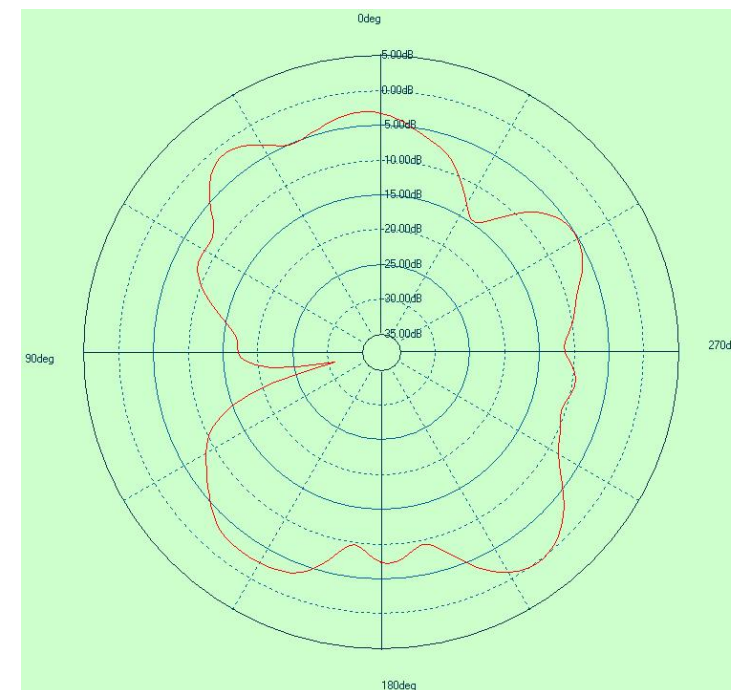
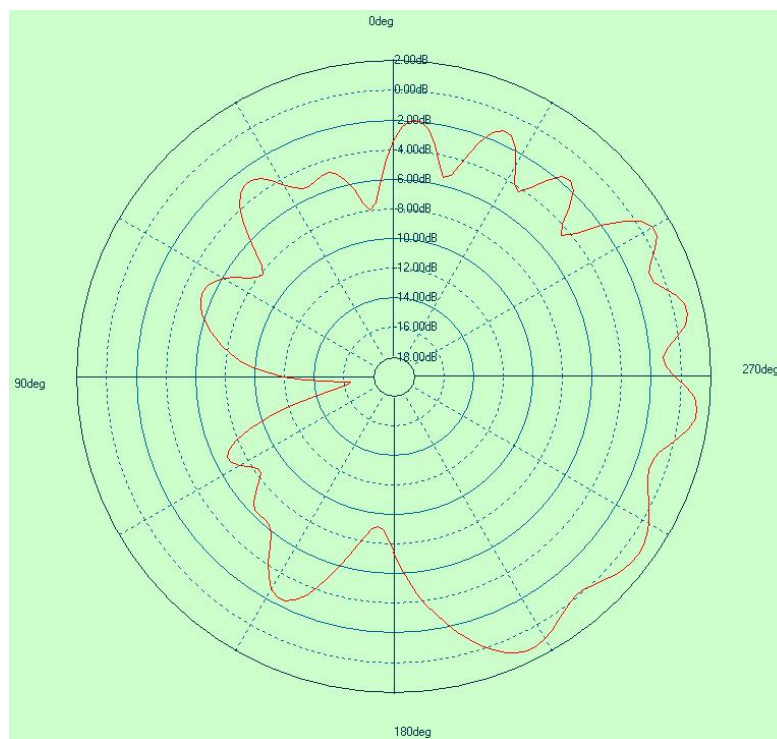
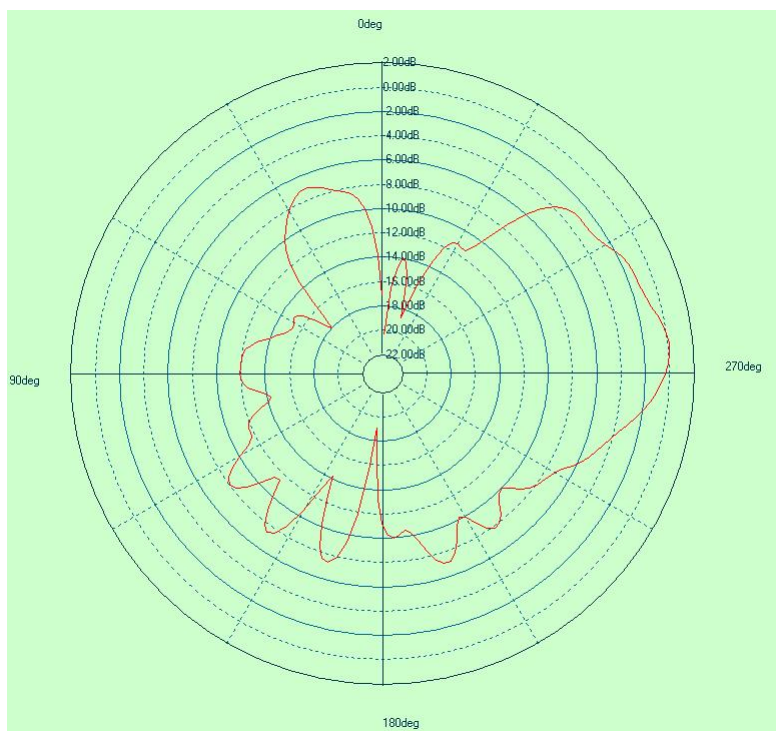
Gain: 0.2 dbi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

4800Mhz Passive pattern

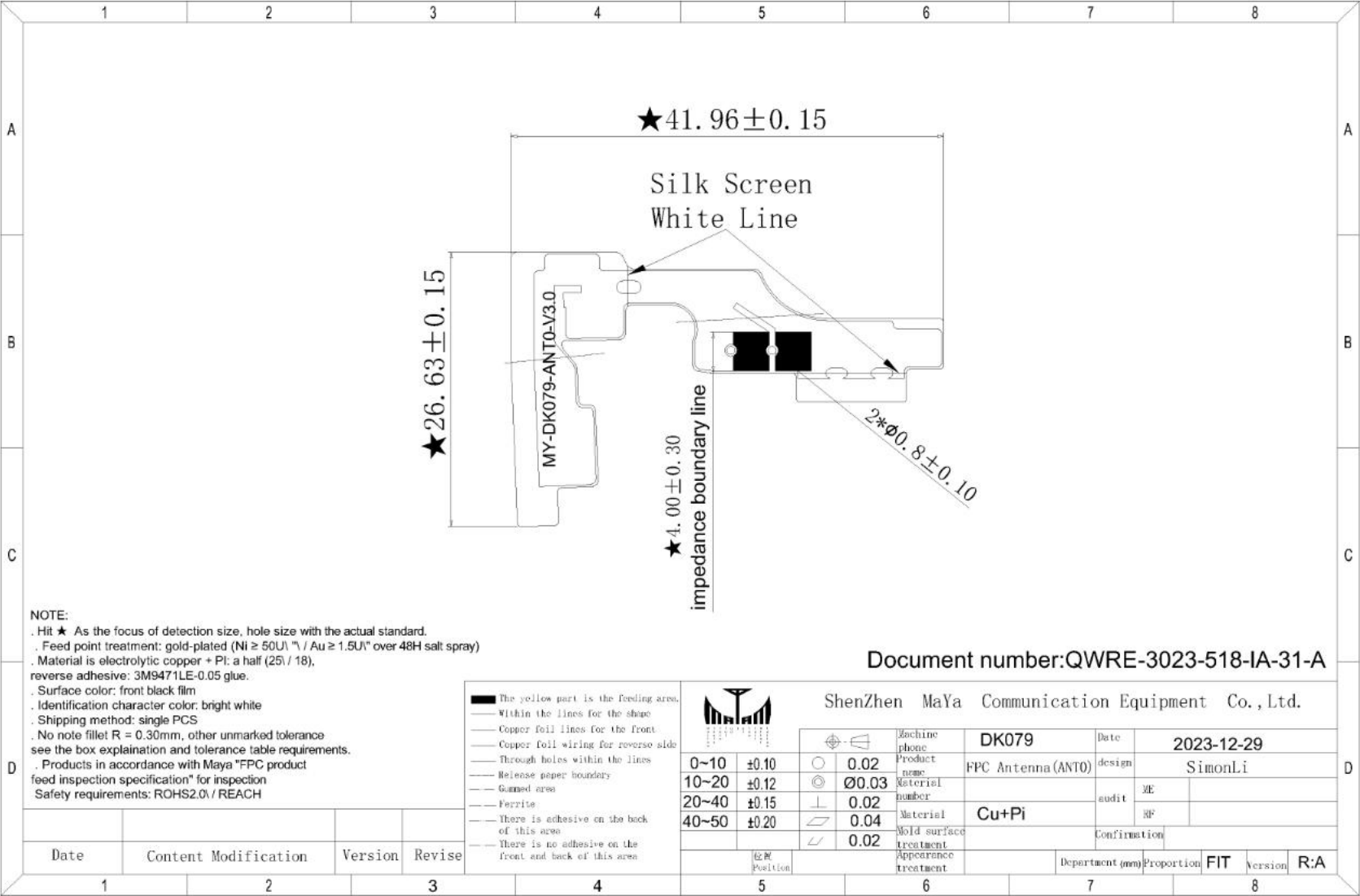
Gain: 0.3 dbi



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

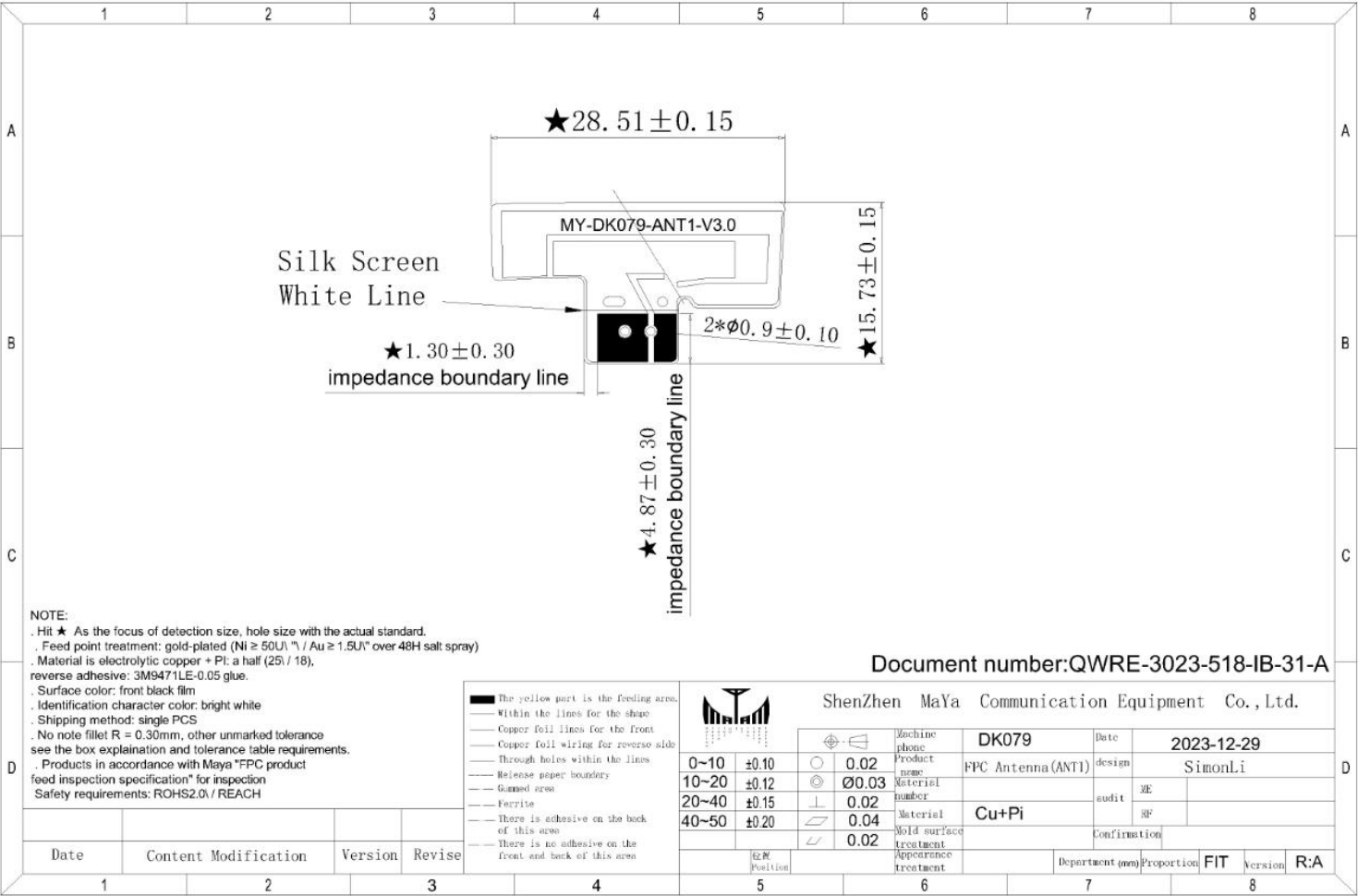


Passive Report



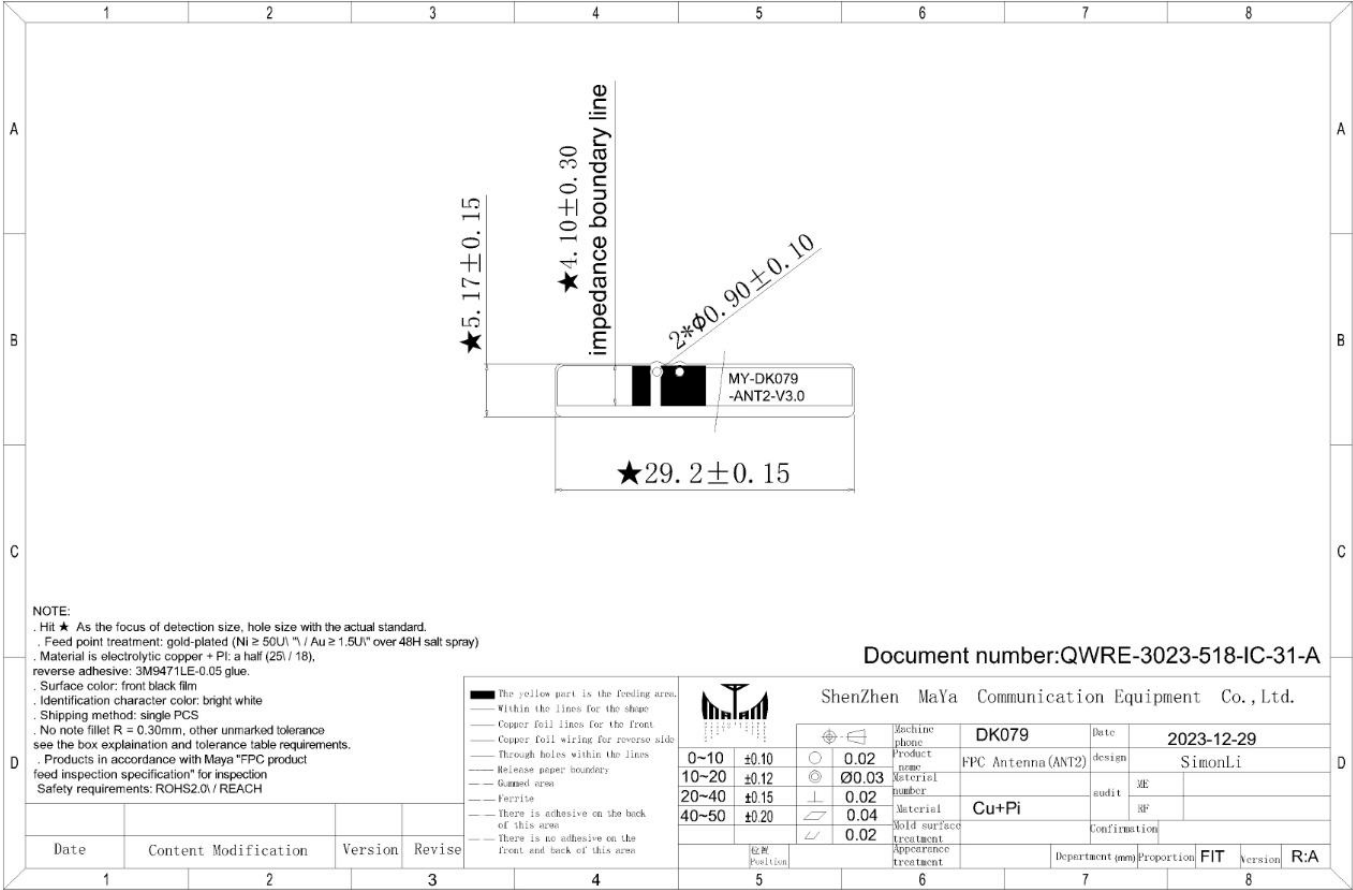


Passive Report



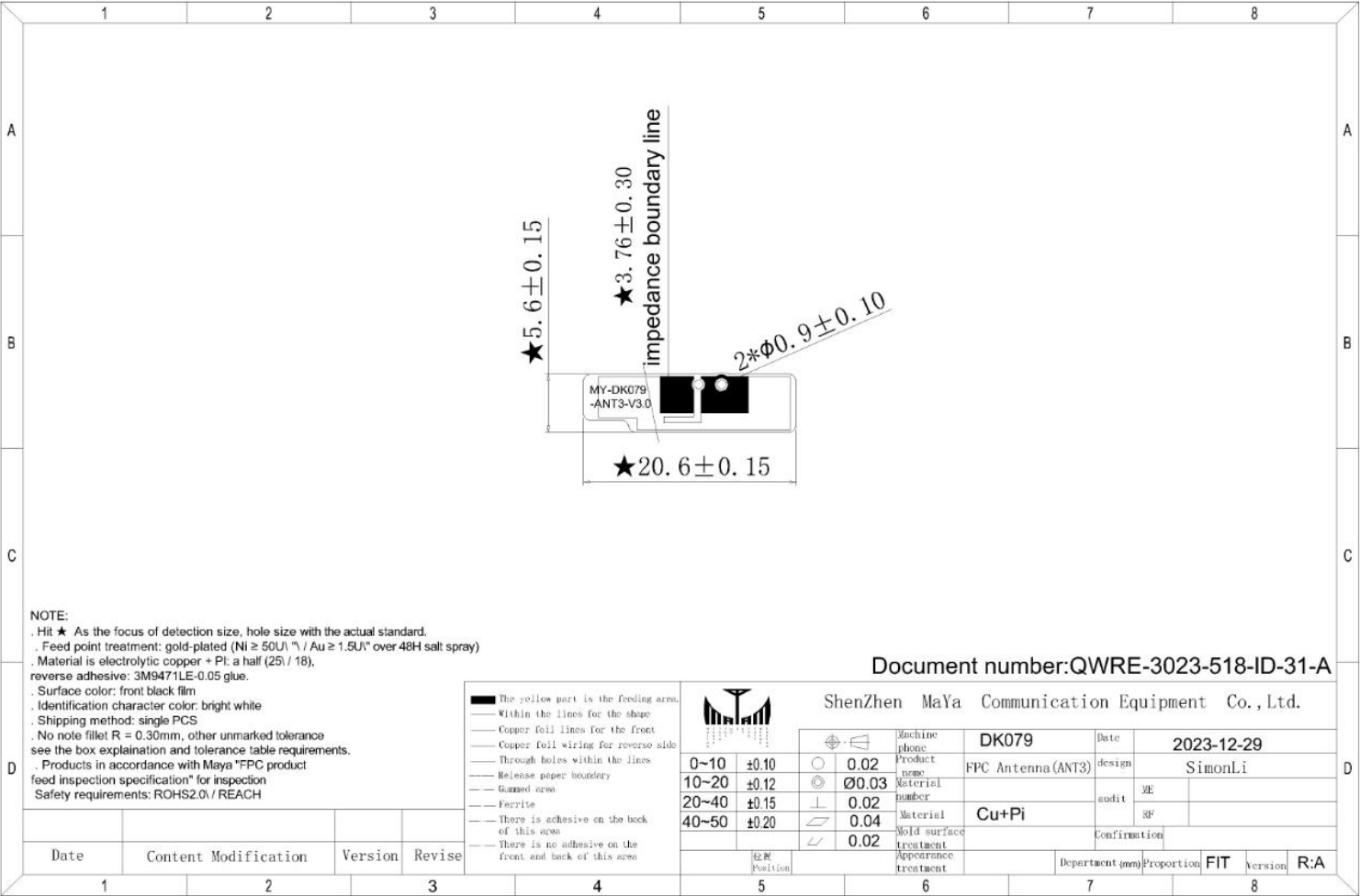


Passive Report

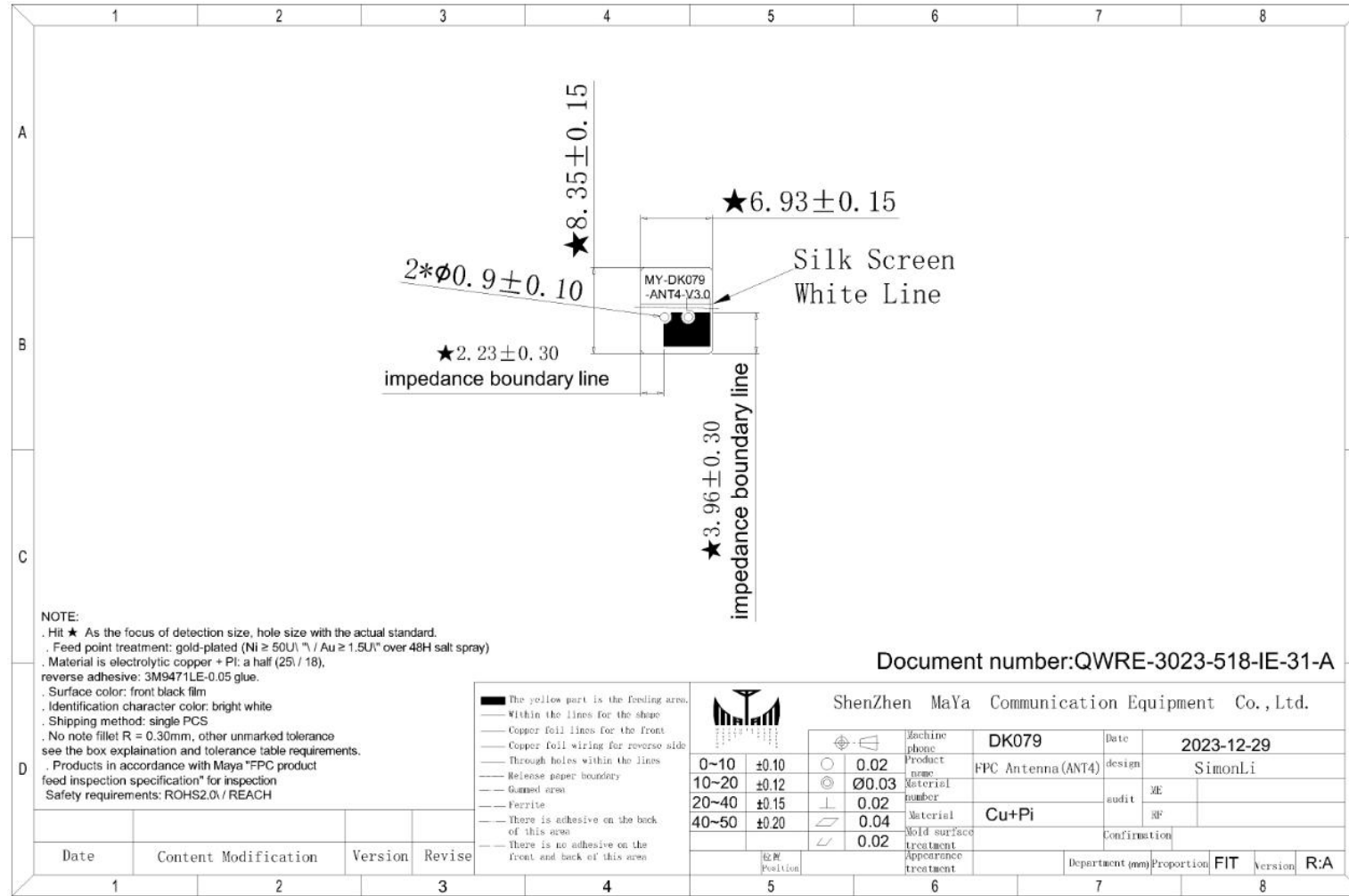




Passive Report

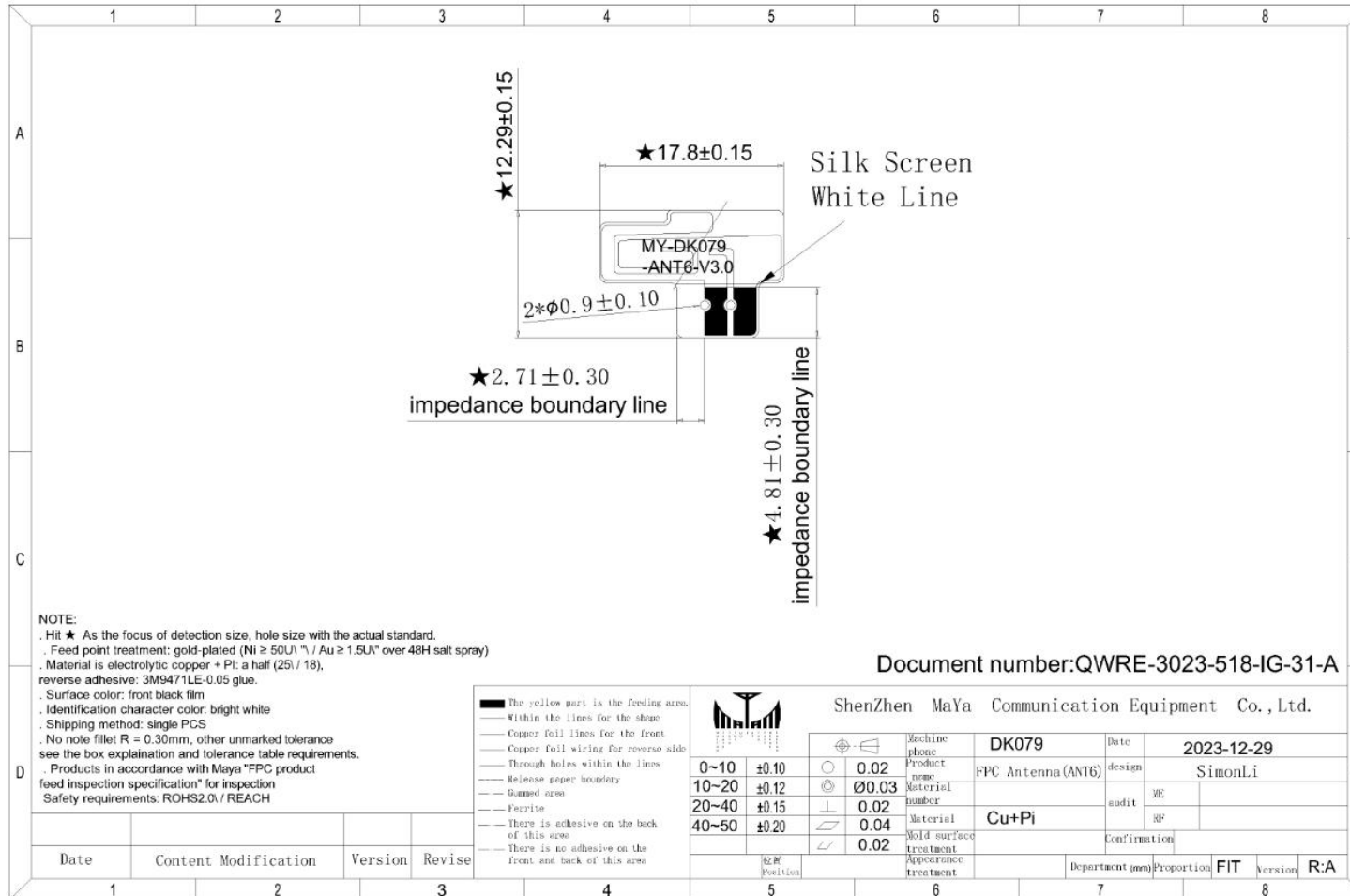


Passive Report



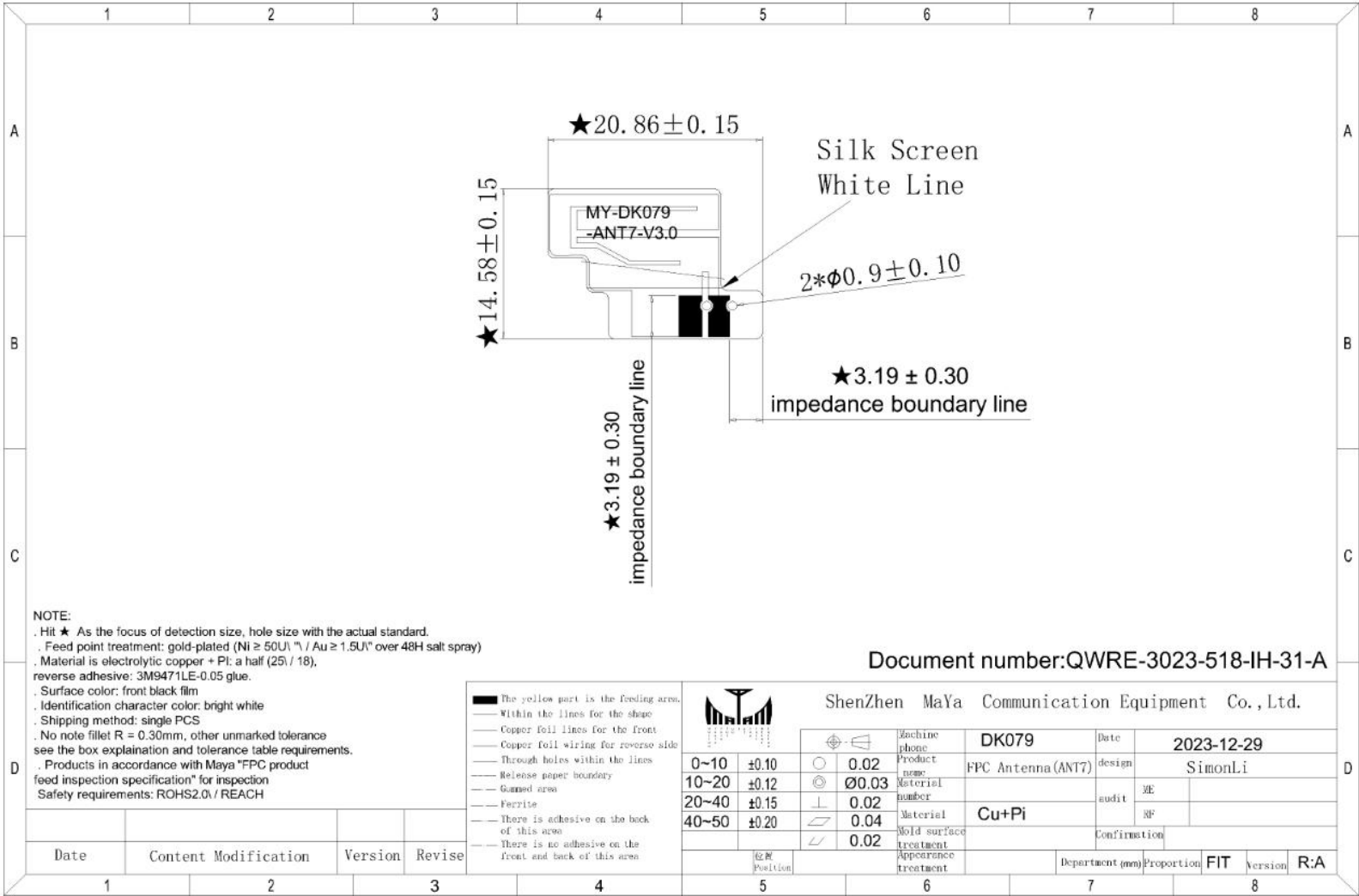


Passive Report



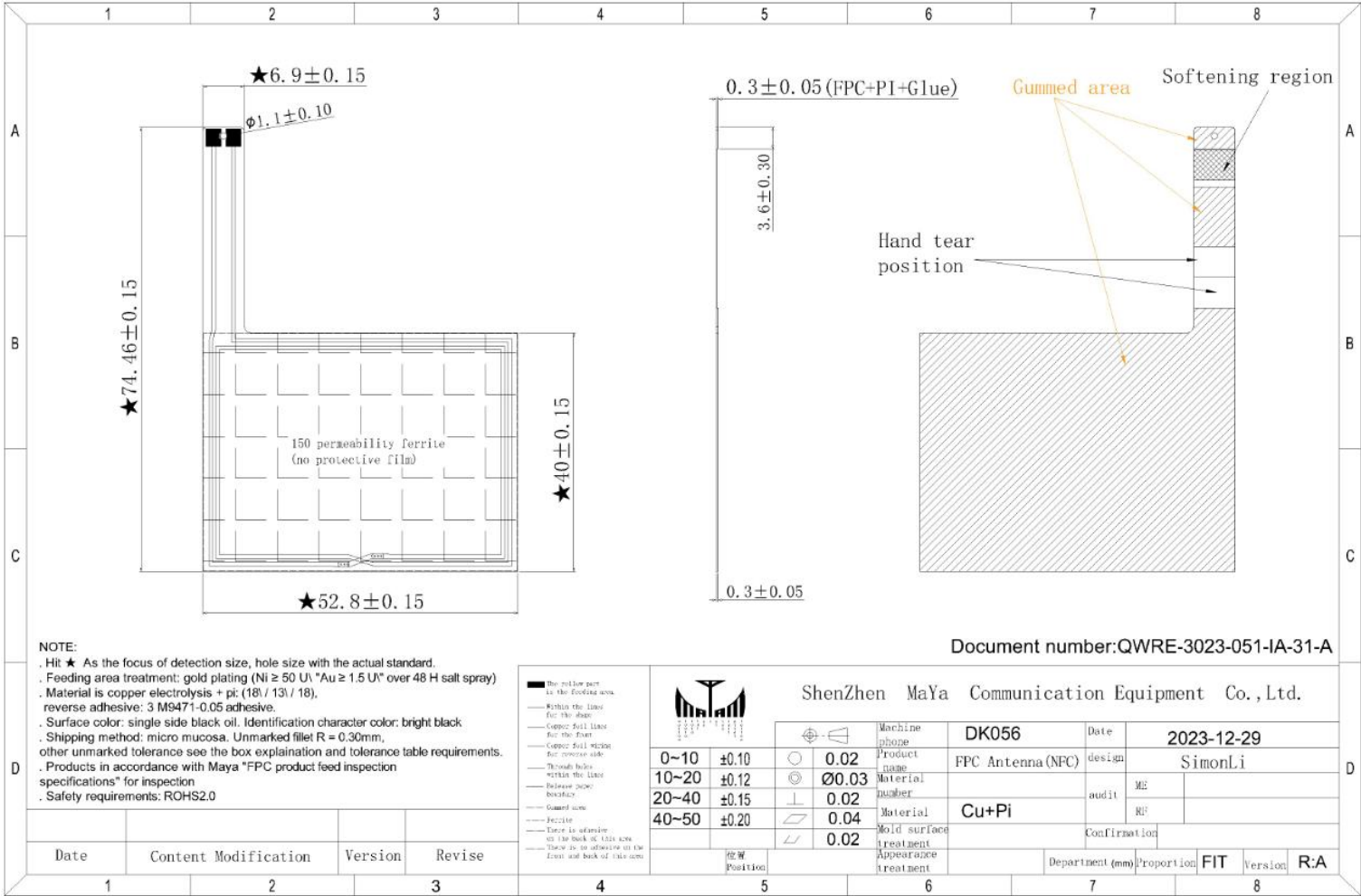


Passive Report





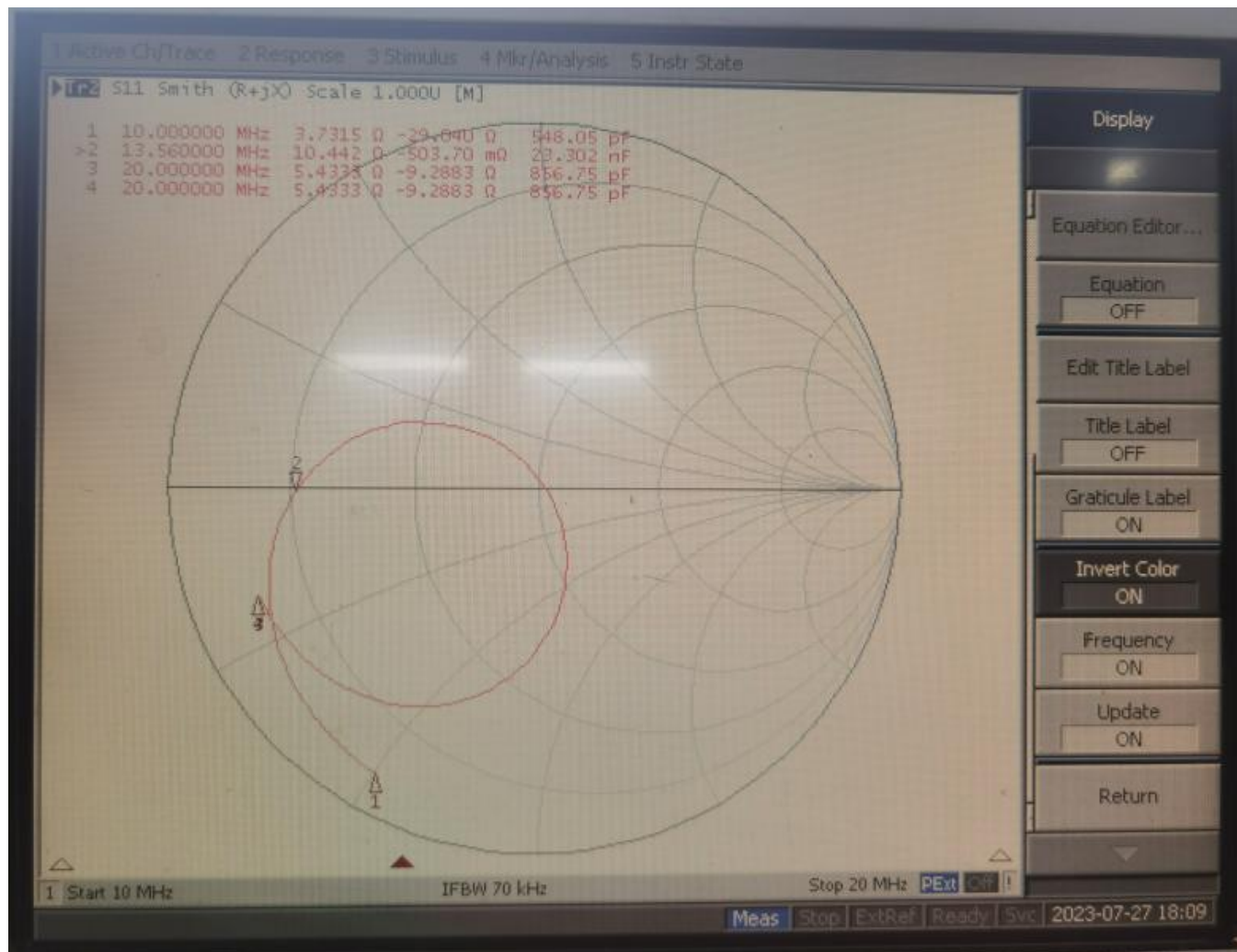
Passive Report



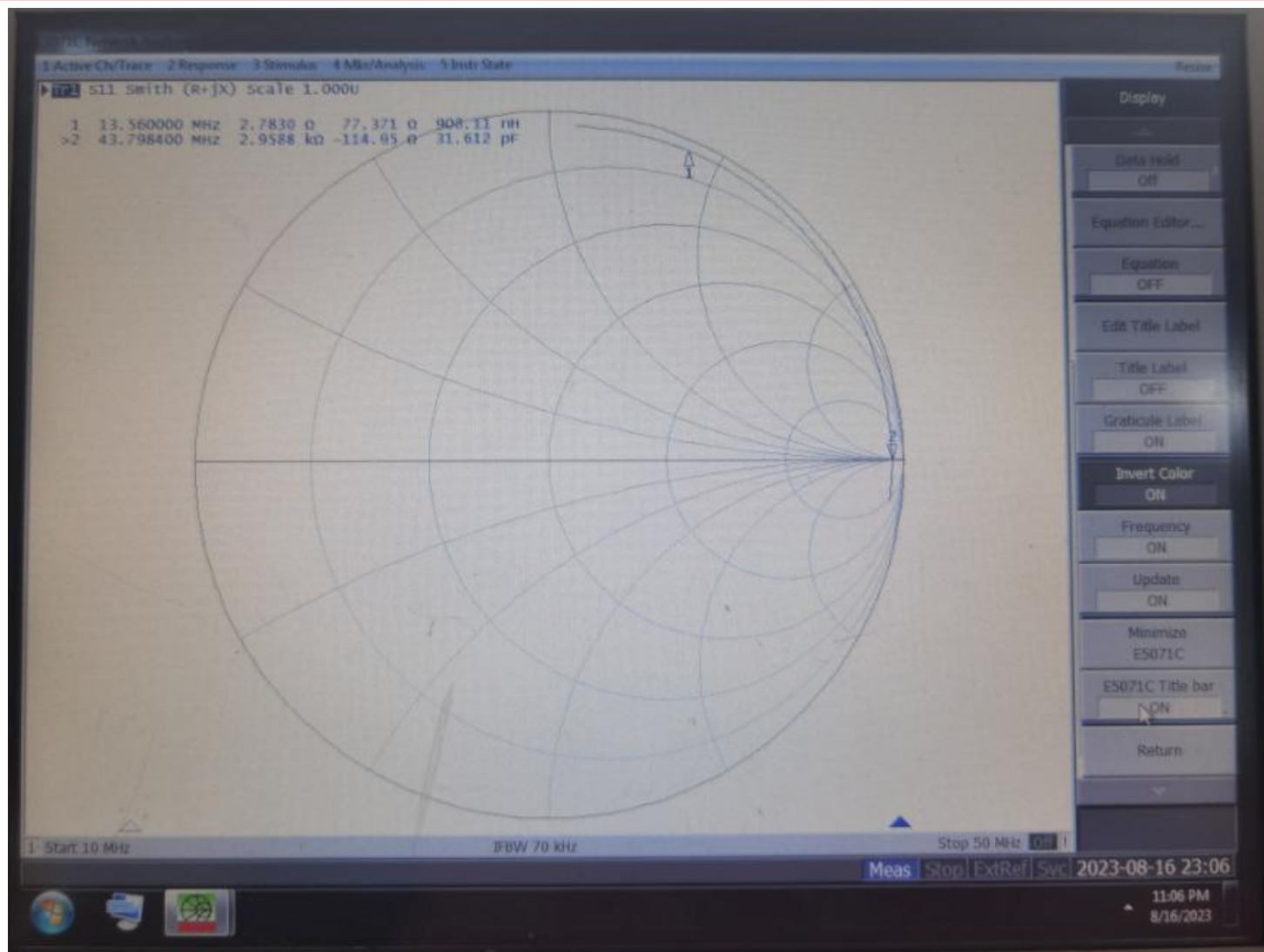
	distance
Type1	40mm
Type2	40mm
Type3	35mm
Type4	20mm



antenna impedance



antenna parameter



Lant@ (μH)	0.908
F0 (MHz)	43.79
X (Ω)	77.37
Rs@ (Ω)	2.78

SATE LLIT ES CNR	SATE LLIT ES LOC	INFO RMA T ION	NMEA LOG	OPS TEST	MPE STAT US
G:GPS R:GLN B:BD E:GAL Q:QZS L:L1S I:IRNSS S:SBAS					
Average CNR					
G:34.8/29.7/+/+ R:34.5/+/+/+ B:29.7/28.1/+/+ E:32.0/27.2/+/+ Q:29.0/27.7/+/+ L:+/+/+ I:+/+/+ S:22.0/+/+/+					
☐ Show in single page					
SVID	Fq	CNR	Elevation	Azimuth	
5 L1	40.7	24.00	97.00		
12 L1	35.5	9.00	146.00		
13 L1	36.1	10.00	45.00		
15 L1	30.2	42.00	28.00		
18 L1	39.0	68.00	290.00		
18 L5	24.4	68.00	290.00		
23 L1	42.9	39.00	333.00		
23 L5	28.4	39.00	333.00		
24 L1	39.0	73.00	89.00		
24 L5	36.4	73.00	89.00		
29 L1	14.9	14.00	205.00		
65 L1	27.8	16.00	51.00		
66 L1	31.8	37.00	356.00		
67 L1	38.6	22.00	298.00		
75 L1	30.8	13.00	42.00		
76 L1	33.1	35.00	99.00		
77 L1	23.6	23.00	153.00		

SVID	Fq	CNR	Elevation	Azimuth	
5 L1	35.9	24.00	97.00		
12 L1	40.4	9.00	146.00		
13 L1	33.7	0.00	0.00		
15 L1	30.0	42.00	28.00		
18 L1	32.5	68.00	290.00		
18 L5	35.6	68.00	290.00		
23 L1	42.2	39.00	333.00		
23 L5	36.8	39.00	333.00		
24 L1	40.3	73.00	89.00		
24 L5	37.9	73.00	89.00		
65 L1	37.3	16.00	50.00		
66 L1	32.2	37.00	356.00		
67 L1	29.0	22.00	297.00		
75 L1	35.2	13.00	43.00		
76 L1	30.8	0.00	0.00		
77 L1	23.2	22.00	153.00		
81 L1	31.8	54.00	268.00		

SVID	Fq	CNR	Elevation	Azimuth	
24 L1	36.3	73.00	89.00		
24 L5	41.0	73.00	89.00		
29 L1	0.0	14.00	205.00		
65 L1	42.0	16.00	50.00		
66 L1	35.7	37.00	356.00		
67 L1	36.7	22.00	297.00		
75 L1	29.8	13.00	43.00		
76 L1	35.6	35.00	100.00		
77 L1	21.4	22.00	153.00		
81 L1	36.0	54.00	268.00		
82 L1	41.5	23.00	322.00		
88 L1	38.2	32.00	192.00		
1 L1	28.7	0.00	0.00		
3 L1	29.1	65.00	190.00		
6 L1	29.3	66.00	213.00		
8 L1	27.3	0.00	0.00		
9 L1	31.2	0.00	0.00		

SATE LLIT ES CNR	SATE LLIT ES LOC	INFO RMA T ION	NMEA LOG	GPS TEST	MPE STAT US
Provider: gps enabled					
Status: SPS Fix					
TTFF: 41987 ms					
Date: GMT+08:00 2023/10/20					
Time: 10:58:27					
First Latitude: 22.657375000000002					
First Longitude: 114.04003333333334					
Latitude: 22.657441666666667					
Longitude: 114.04032166666666					
Altitude: 115.5					
Accuracy: 1.4					
Bearing: 133.38					
Speed: 0.0					
Distance: 0.0					
Chip version: 0x6877					
MNL version: default					
DSP version: UNKNOWN					
Clock type: Co-clock					
Clock buffer: 2					
☒ Enable EPO [Need Restart]					
☒ Enable QEPO [Need Restart]					
☒ Enable GPS.LOG					
Delete GPS logs					
☐ EPO.DAT					
☐ QEPO.DAT					
☐ QEPO_BD.DAT					
☐ QEPO_GA.DAT					
HOT					
WARM					

L1	L5
42.9	37.9
42.2	36.8
41.5	36.4
41	35.6
40.4	32.6
40.3	30.1

THANK YOU



If you have any questions, please contact us
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 website : www.mayaant.com

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