

天线性能规格书

Antenna Performance Specification

客户/Customer	奕瑞//IRAY
项目名/Project	LuxHD
产品类型/Product	holder+LDS +cable
工作频段/Frequency	2400~2500MHz&5150~5858MHz
发行日期/Issuing Data	2024.11.28
发行版/本 Version	V1.0
作者/Editor	吕鸿乐/Hongle lv
审阅/Approver	夏彪/Arvin

1. 概述/Overview

此文档是奕瑞 LuxHD 天线射频性能报告，天线为 LDS 天线分别焊接 120\300\460mm 同轴线。
This document is the RF performance report for the LuxHD project antenna of IRAY, which is a 120\300\460mm coaxial line welded LDS antenna.

1.1 天线状态/ Antenna status



图 1 天线图片/ Figure 1: Antenna image

2. 工程图纸/2D drawing



LAB☒

QE☐

OQC☒

IPQC☒

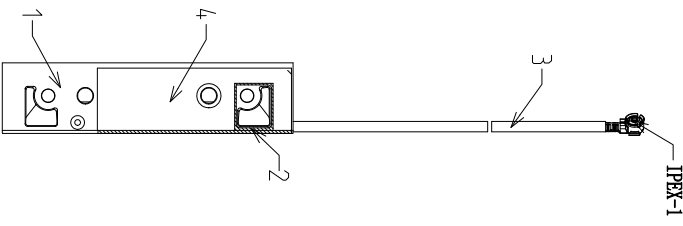
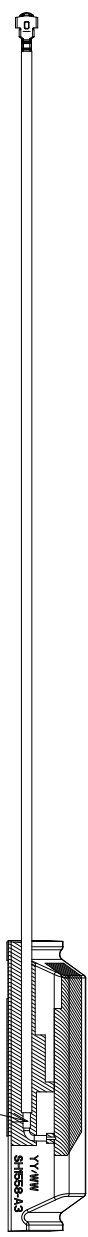
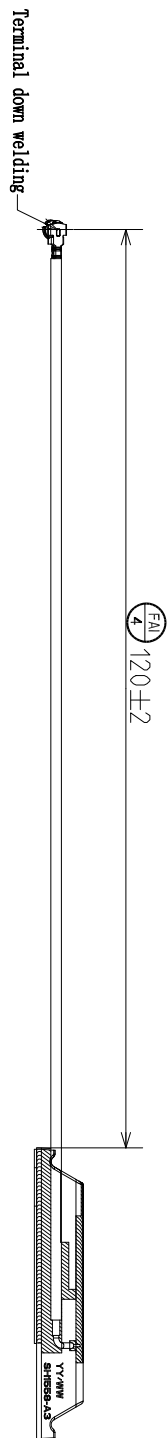
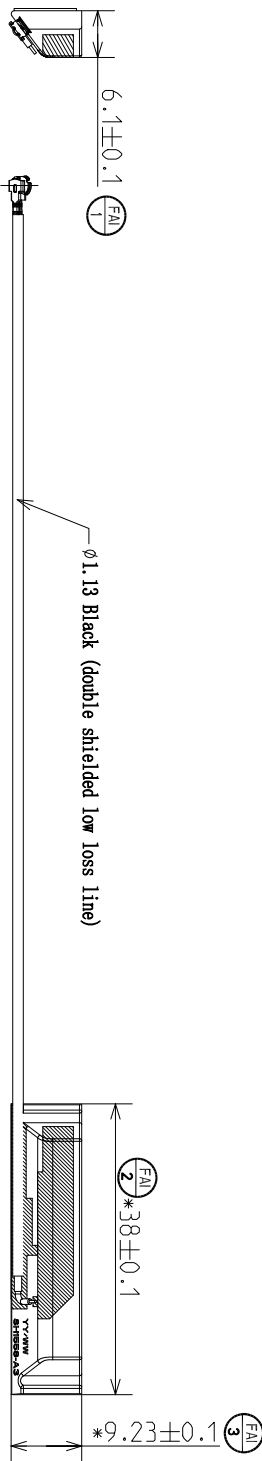
IOC☐

注塑☐

冲压☐

组表☐

NO.	DESCRIPTION	DESIGN	DATE
A1	Prototype preparation	GZQ	20240314
A2	Pattern amend	GZQ	20241128



Note:

- Components must meet all 3D data;
- Components: refer to the exploded drawing;
- No obvious aesthetic defects after assembly;
- Pass the quality department's tests required by HALTONG;
- Part marking: according to the specified location;
- Dimension requirements:
- 6.1. ST dimension: measure the minimum quantity of 35 products selected at random for CPK analysis;
- 6.2. * Dimensions are critical dimensions;
- Initial samples: randomly select 5pcs for full size measurement, report and samples must be forwarded to the quality department of HALTONG;
- Any changes to materials must be approved in writing by the HT engineering department;
- Products must comply with (RoHS/HF/REACH) requirements;

NO TOLERANCE NOTED			
ONE PLACE	XX	±0.15	
TWO PLACE	XX.XX	±0.10	
ANGULAR DIM	X°	±1.0°	
HOLE DIA	XX	±0.10	

NHAI

ZHEJIANG HALTONG COMMUNICATION ELECTRONICS CO.,LTD.

PROJECT NAME: SH1558_W IF11_LDS_ASM

PRODUCT NAME: LUXHD_W IF11_LDS_ASM

APPR:

HT NUMBER

B.1.05.L.0185

CHKD:

HT Seri-finished NUMBER

XXX

DNV:

CLIENTELE NUMBER

02090114

SCALE: 1:1

PAGE: 1/1

REV: A2

TITLE: mm

SIZE: A4

DRAWING NO.: 118-2576

ITEM	PART NAME	Q'TY	REMARK
4	SH1558-LDS-FOAM	1	
3	SH1558_W IF11_CAB	1	
2	SH1558_W IF1_LDS	1	
1	SH1309_LDS_FRM	1	



LAB☒

QE☐

OQC☒

IPQC☒

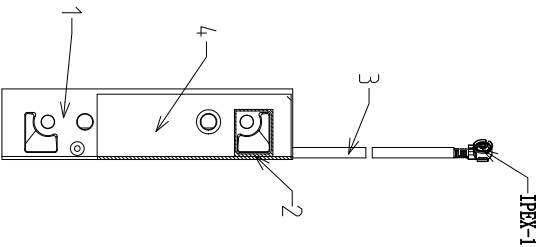
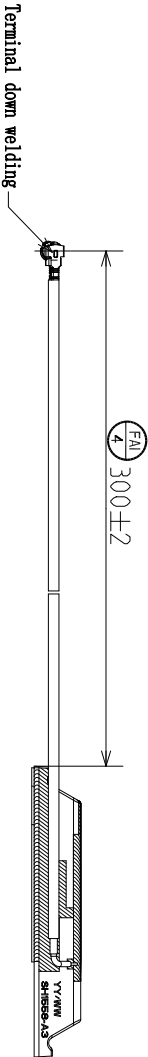
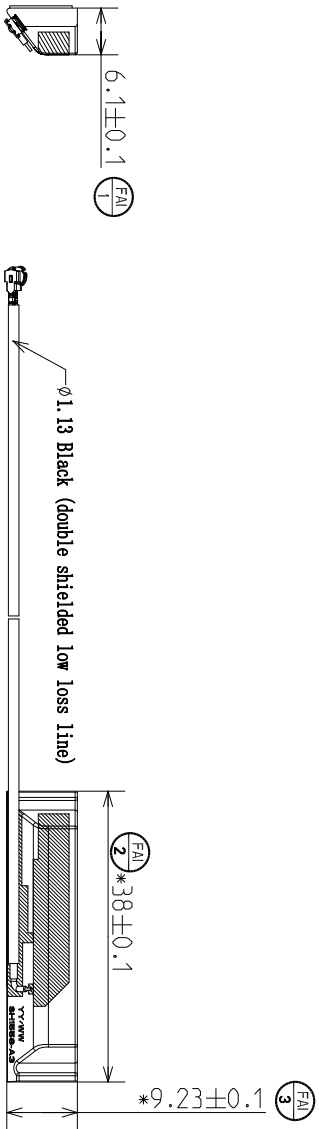
IOC☐

注塑☐

冲压☐

组表☐

NO.	DESCRIPTION	DESIGN	DATE
A1	Prototype preparation	GZQ	20240314
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The shielding layer is fixed with UV glue after welding

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TWO PLACE	X.XX	± 0.10	
ANGULAR DIM	X°	$\pm 10'$	
HOLE DIA	X.X	± 0.10	

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PROJECT NAME:

SH1558_W IF13_LDS_ASM

PRODUCT NAME:

LUXHD_W IF13_LDS_ASM

APPR:

B.1.05.L.0225

CHKD:

XXX

DATE:

02090119

SCALE:

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PAGE:

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REV:

A2

FIG:

TITLE:

mm

SIZE:

A4

DRAWING NO.:

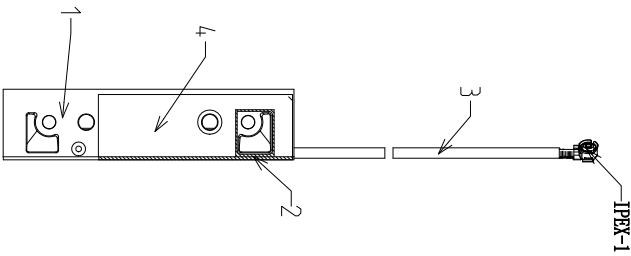
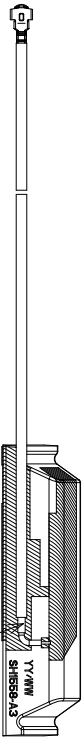
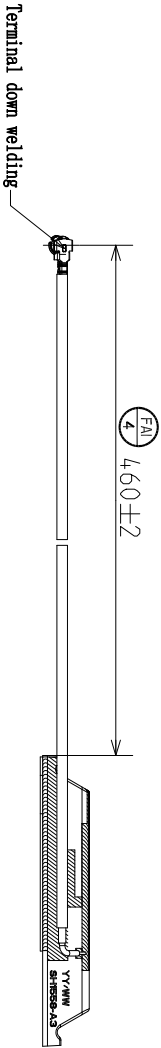
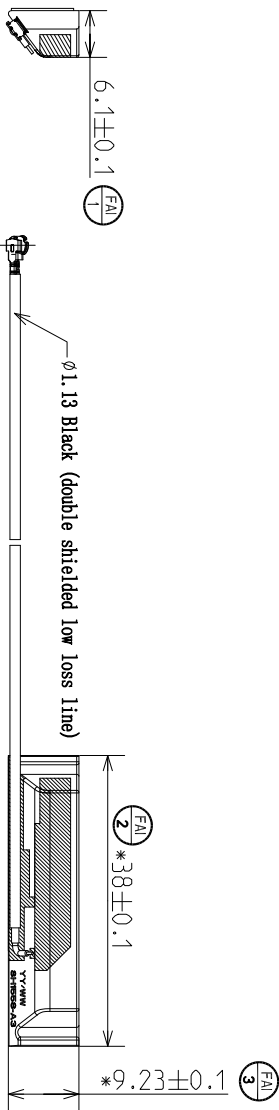
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ITEM	PART NAME	Q'TY	REMARK
4	SH1558-LDS-FOAM	1	
3	SH1558_W IF13_CAB	1	
2	SH1558_W IF1_LDS	1	
1	SH1309_LDS_FRM	1	



LAB	QE	OQC	IPQC	IOC	注塑	冲压	组表
☒	☐	☒	☒	☐	☐	☐	☐

NO.	DESCRIPTION	DESIGN	DATE
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A2	Pattern amend	GZQ	20241128



The shielding layer is fixed with UV glue after welding

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TWO PLACE	X.XX	±0.10	
ANGULAR DIM	X°	±1.0°	
HOLE DIA	X.X	±0.10	

AFPD:	HT NUMBER	B.1.05.L.0186
CHKD:	HT Semi-finished NUMBER	XXX
DWG:	CLIENTELE NUMBER	02090113
SCALE: 1:1	PAGE: 1/1	REV: A2
TUNIT: mm	SIZE: A4	DRAWING NO.: 118-2576

NHAI
ZHEJIANG HALTONG COMMUNICATION ELECTRONICS CO.,LTD.

PROJECT NAME: SH1558_W IF12_LDS_ASM

PRODUCT NAME: LUXHD_W IF12_LDS_ASM

3. 天线测试环境/ Antenna testing environment

天线输入特性测试使用 Agilent E5071C 矢量网络分析仪。

The antenna input characteristics were tested using an Agilent E5071C vector network analyzer.

天线辐射特性测试使用 Satimo SG24 3D 近场微波暗室，测试坐标系如图 2 所示。

The antenna radiation characteristics were tested using the Satimo SG24 3D near-field microwave anechoic chamber, with the testing coordinate system shown in Figure 2.

电磁波吸收率测试使用 DASY5 测试系统。

SAR testing uses the DASY5 testing system.

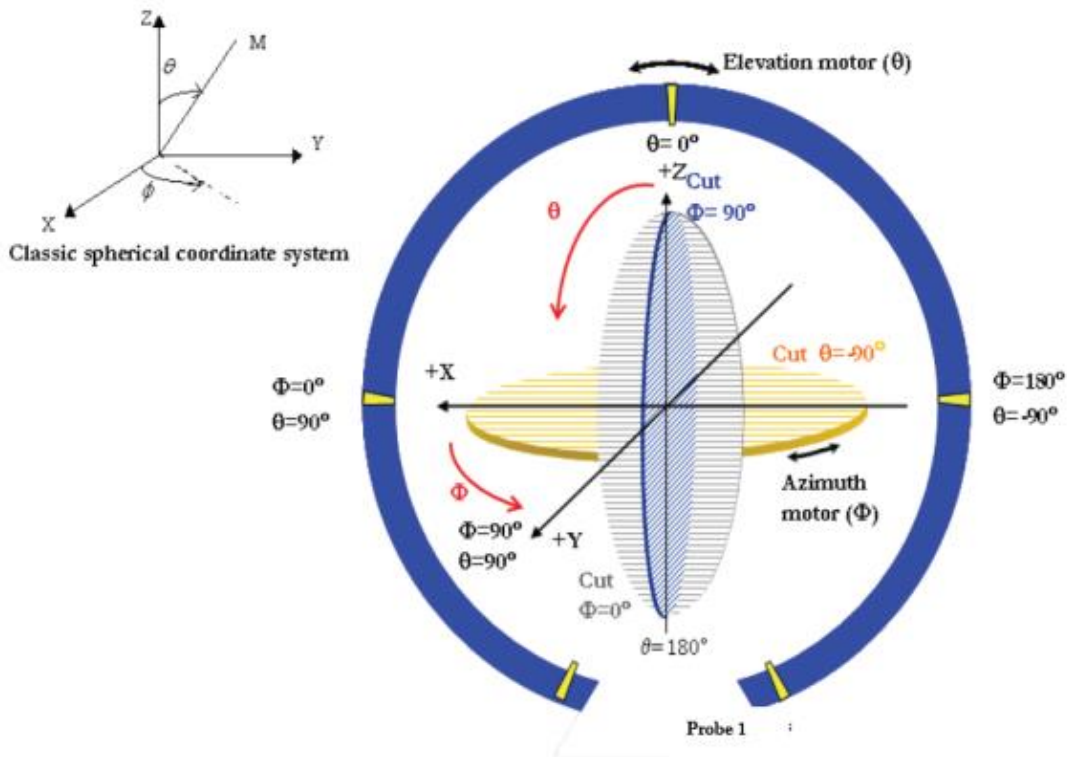


图 2 3D 微波暗室测试坐标系（后视图）

Figure 2: Coordinate System for 3D Microwave Chamber Testing (back view)

4. 天线测试结果/ Antenna test results

4.1 天线反射损耗/Antenna return loss

Frequency(MHz)	2400	2500	5150	5850
S11(dB)	-19	-5.3	-29	-7.2

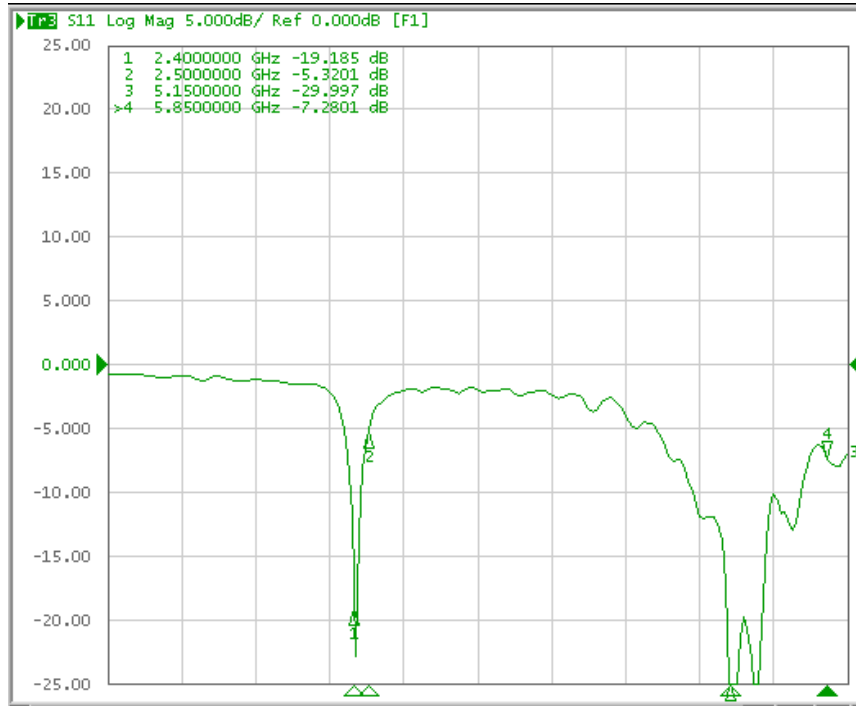


图 3 天线反射损耗

Figure 3: Antenna Reflection Loss

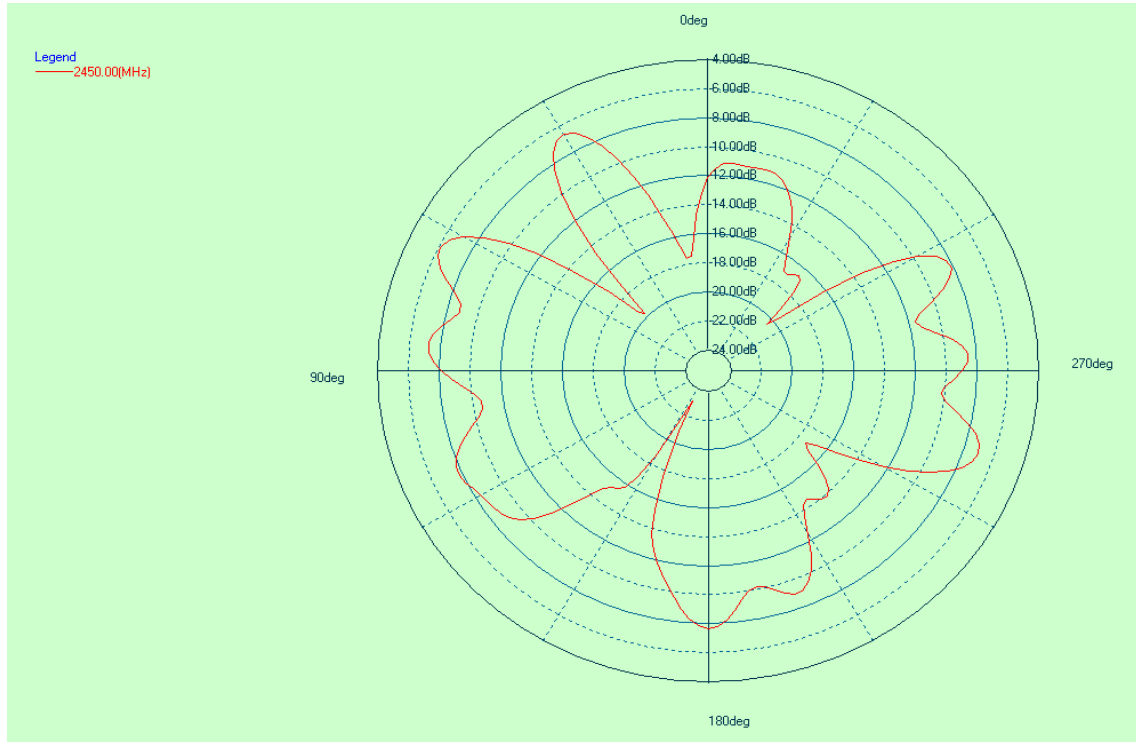
4.2 天线效率/Antenna Efficiency

Fre/MHz	Efficiency	Gain/dBi
2400	29%	1.9
2410	29%	1.6
2420	29%	1.7
2430	29%	1.5
2440	29%	1.4
2450	28%	1.4
2460	27%	1.1
2470	25%	0.8
2480	25%	0.8
2490	22%	0.6
2500	20%	0.3

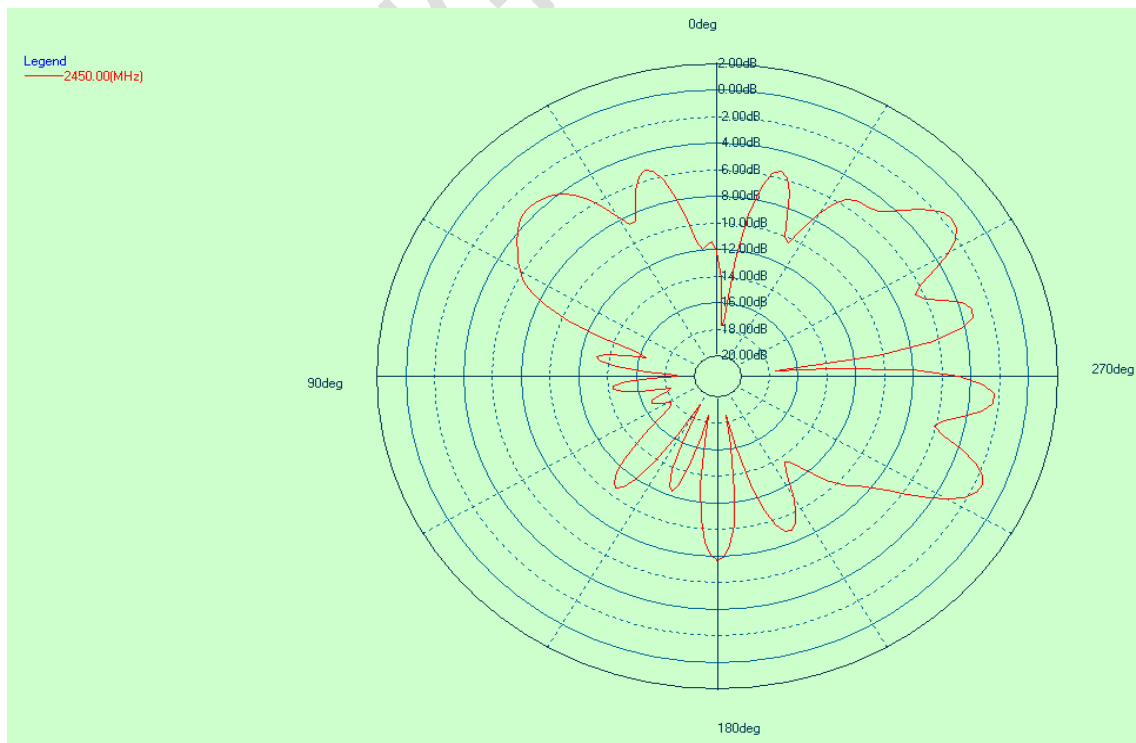
Fre/MHz	Efficiency	Gain/dBi
5150	40%	5
5200	40%	5
5250	39%	4.9
5300	37%	4.4
5350	34%	4.3
5400	34%	4.1
5450	34%	3.8
5500	33%	3.6
5550	31%	3.5
5600	31%	3.3
5650	32%	3.5
5700	30%	3.3
5750	27%	3
5800	26%	3.1
5850	27%	3.4

4.3 天线辐射方向图 / Antenna radiation pattern

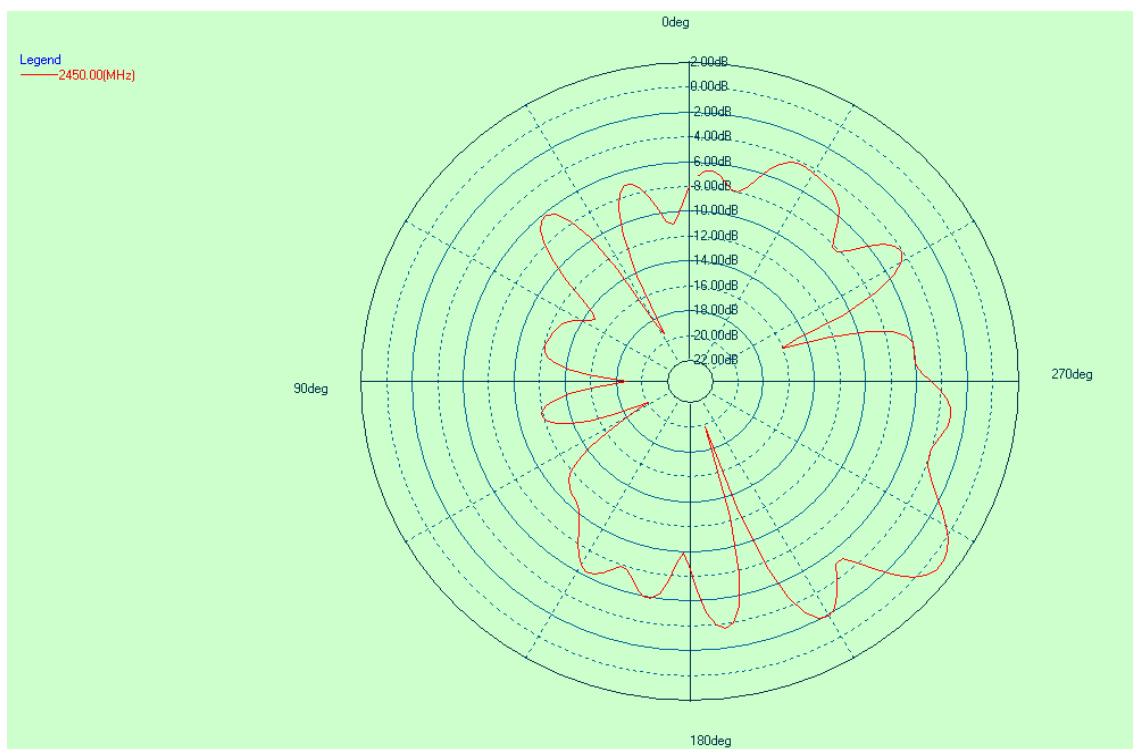
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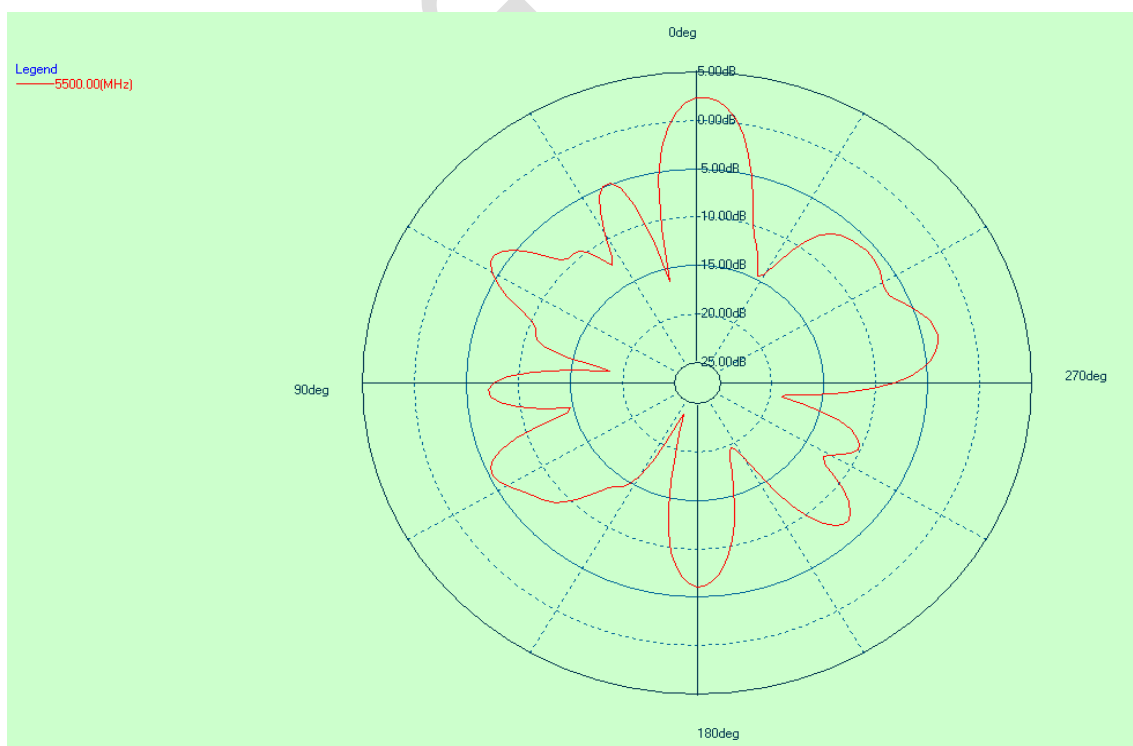


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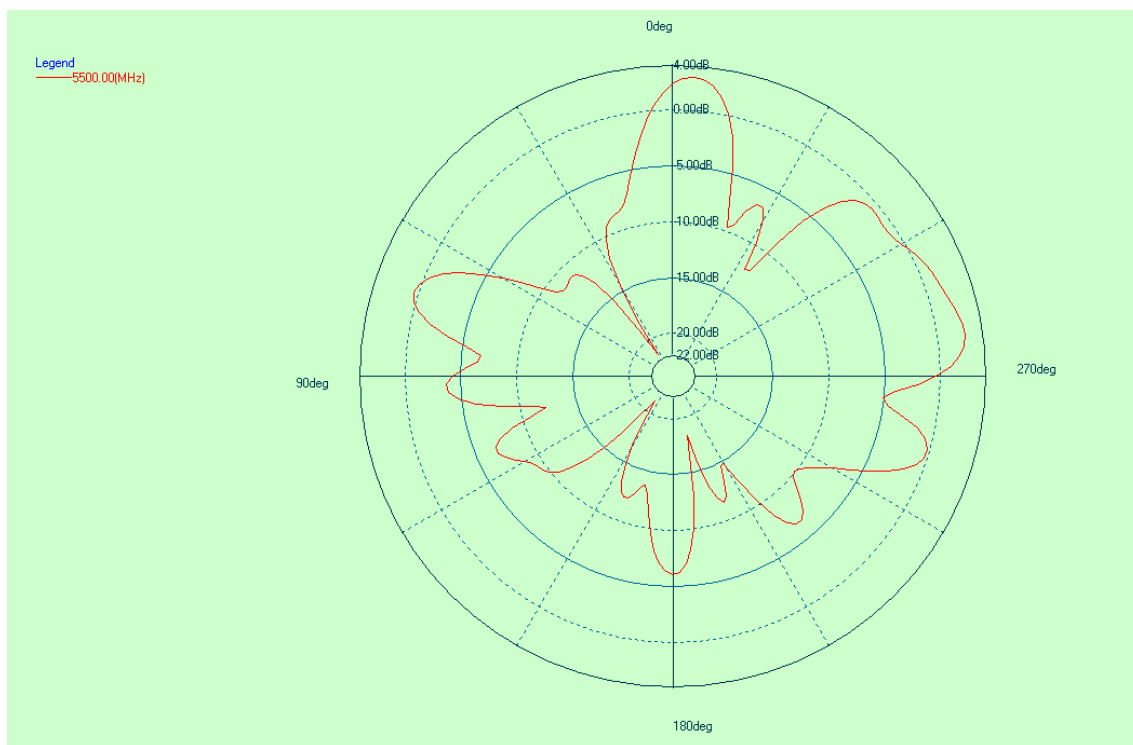


Theta=90

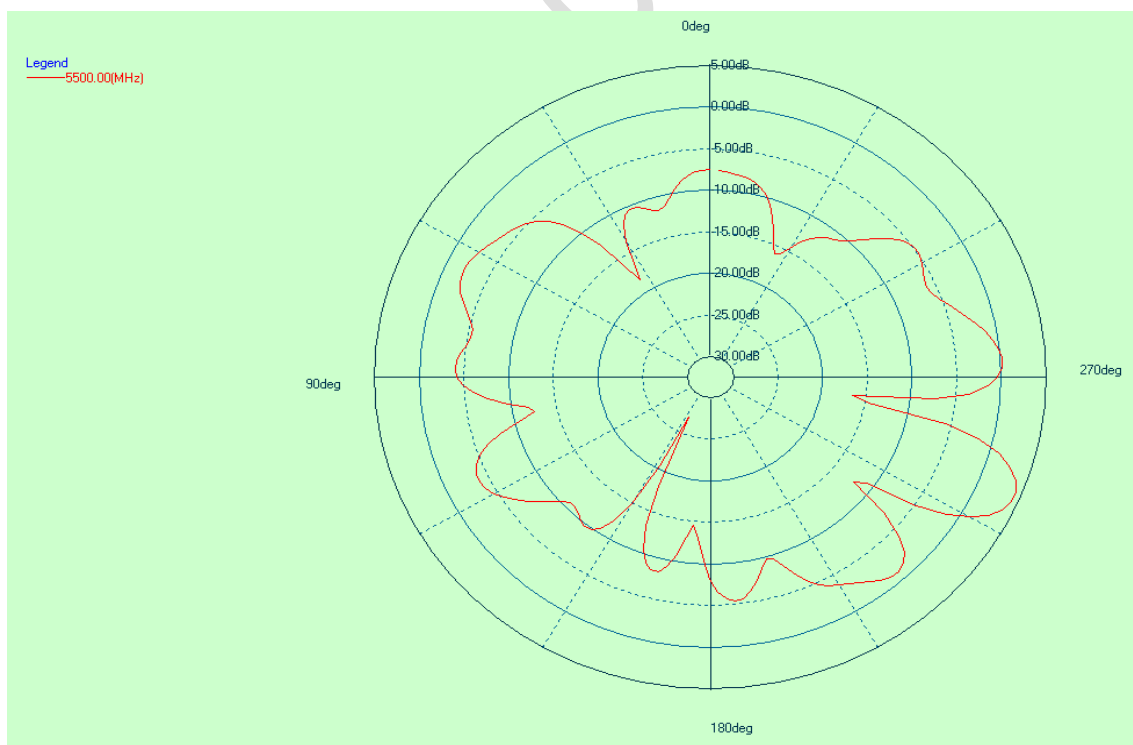
5500MHz



Phi=0



Phi=90



Theta=90