

# SPECIFICATION

## SHEET FOR APPROVAL

(Revision: R: A0)

CUSTOMER	Hesung Innovation Limited
CS P/N	DR-HPF001S seven inches DC vertical cyclic fan-IOT
PART NAME	FPC Antenna
FREQUENCY	2400~2500MHz
ZTX NO.	2.00006418
DATE	2023-11-30

CUSTOMER			
QA CHECKED	ME CHECKED	RF CHECKED	MANAGER CHECKED

Remark(备注):

Sign(客户确认签字盖章):

Shenzhen ZTX Communication Technology Co., Ltd				
MANAGER CHECKED 2023-11-30	MANAGER CHECKED	ME CHECKED	RF CHECKED	LISTER
		Lie Qin	Pei Wang	



Shenzhen ZTX Communication Technology Co., Ltd

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# ANTENNA SPECIFICATION

CUS P/N :DR-HPF001S 2.4G Antenna

Application Date:Nov,30, 2023

Rev: R:A0

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## Revision history

版本	日期	状态
A0	2023-11-30	初版

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# ANTENNA SPECIFICATION

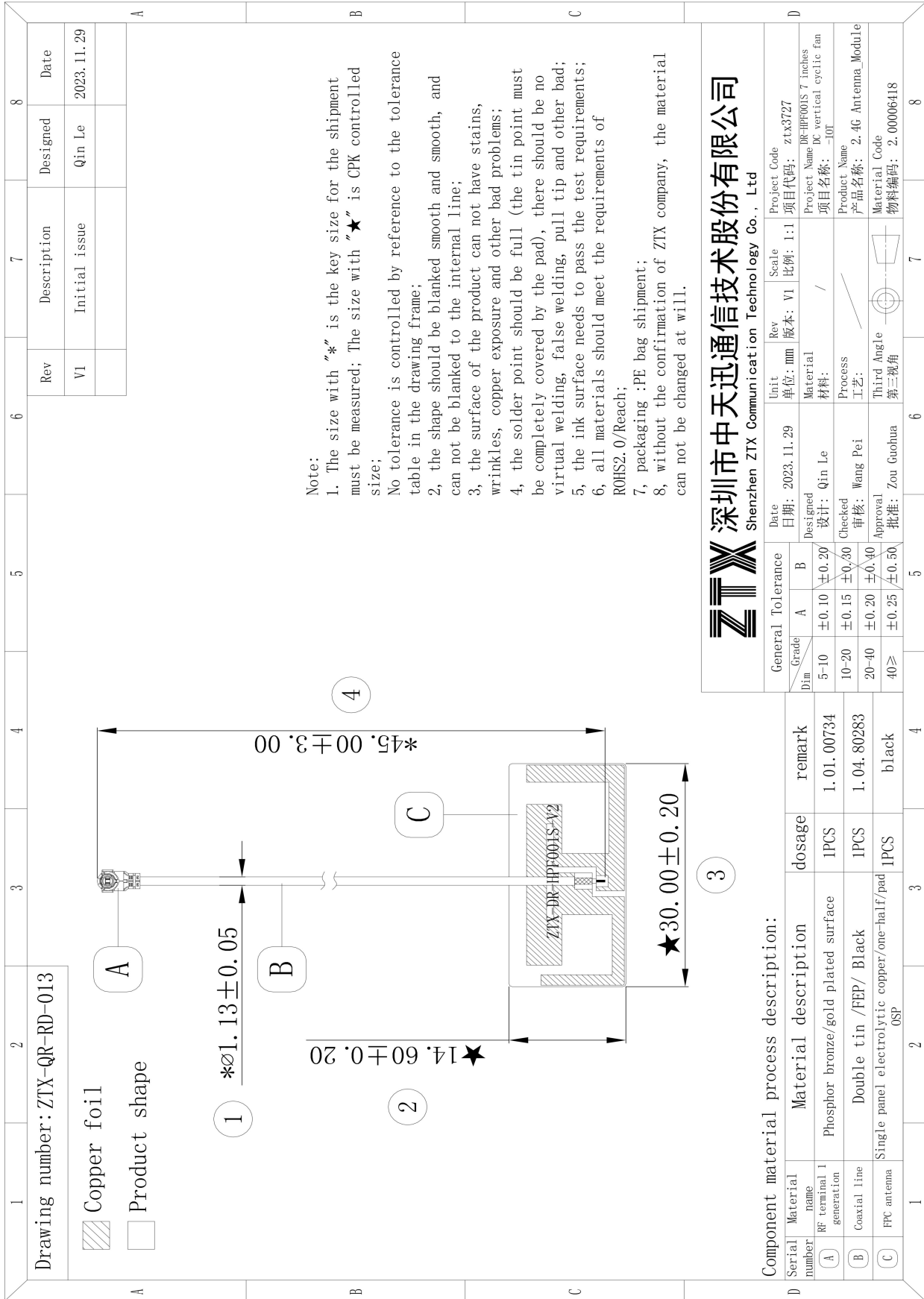
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## 1. Mechanical Specification

### 1-1 Mechanical Configuration (2.4G Antenna)



Note:  
1. The size with "\*" is the key size for the shipment must be measured; The size with "★" is CPK controlled size;  
2. No tolerance is controlled by reference to the tolerance table in the drawing frame;  
3, the shape should be blanked smooth and smooth, and can not be blanked to the internal line;  
4, the surface of the product can not have stains, wrinkles, copper exposure and other bad problems;  
5, the solder point should be full (the tin point must be completely covered by the pad), there should be no virtual welding, false welding, pull tip and other bad;  
6, the ink surface needs to pass the test requirements;  
7, all materials should meet the requirements of ROHS2.0/Reach;  
7, packaging :PE bag shipment;  
8, without the confirmation of ZTX company, the material can not be changed at will.

**ZTX** 深圳市中天迅通信科技股份有限公司  
Shenzhen ZTX Communication Technology Co., Ltd

Serial number	Material name	Material description	dosage	remark
A	RF terminal I generation	Phosphor bronze/gold plated surface	1PCS	1. 01. 00734
B	Coaxial line	Double tin /FEP/ Black	1PCS	1. 04. 80283
C	FPC antenna	Single panel electrolytic copper/one-half/pad OSP	1PCS	black

General	Tolerance	Date	Rev	Scale	Project Code
Grade	A B	日期: 2023.11.29	版本: V1	比例: 1:1	项目代码: ZTX3727
Dim	5-10 ±0.10 ±0.20 10-20 ±0.15 ±0.30 20-40 ±0.20 ±0.40 40≥ ±0.25 ±0.50	Designed 设计: Qin Le Checked 审核: Wang Pei Approval 批准: Zou Guohua	Unit 单位: mm	Material 材料: /	Project Name 项目名称: DR-HPF001S 7 inches Product Name 产品名称: -10T Process 工艺: / Third Angle 第三视角

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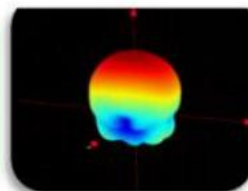
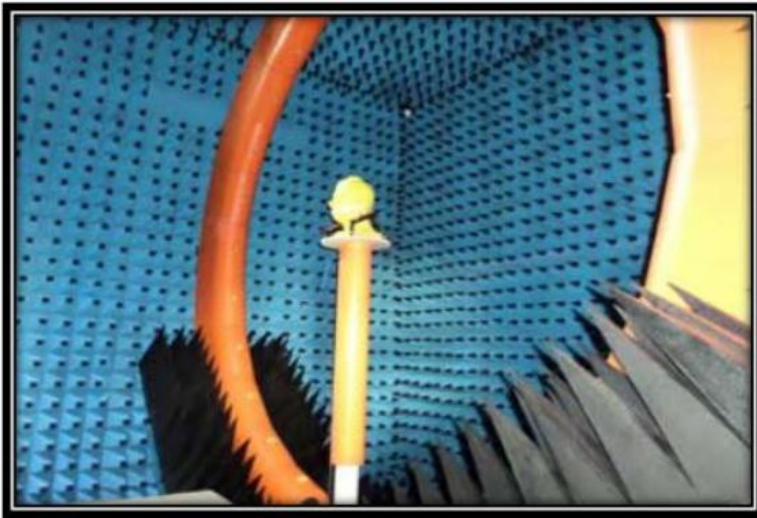
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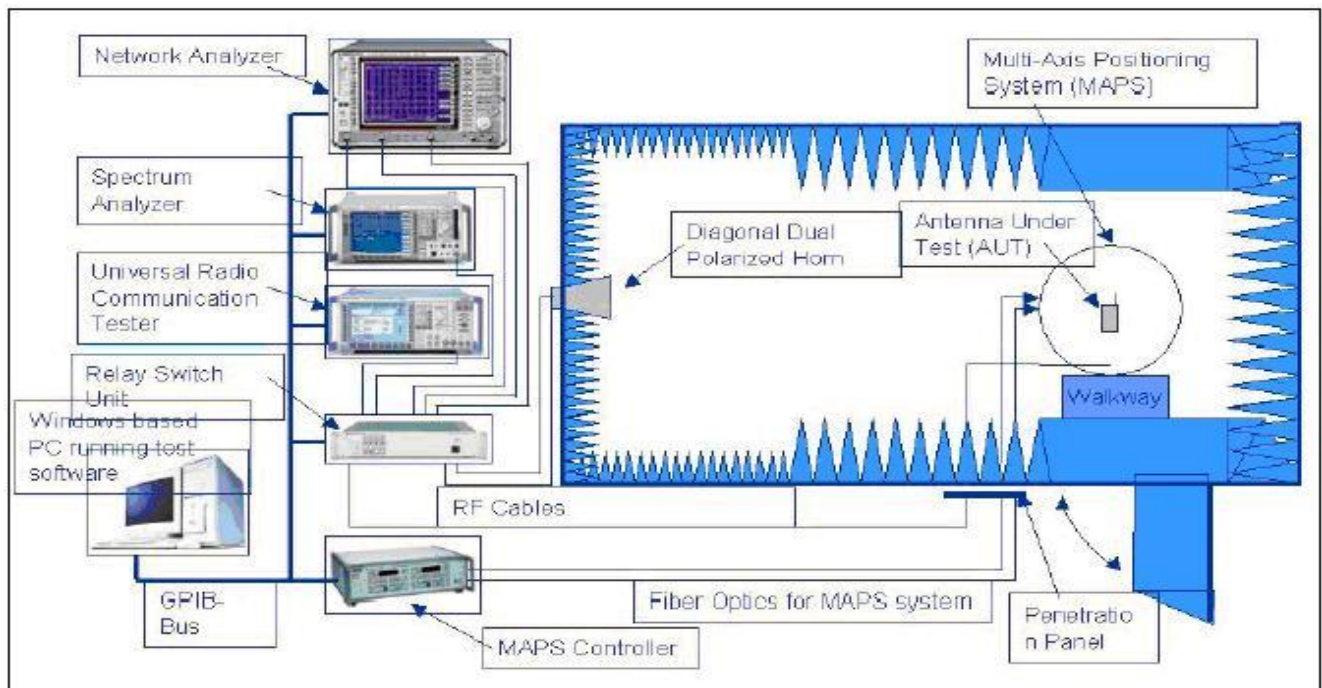
## 2. Test equipment



Owned 6 microwave dark room, equipped 2 sets world leading France Satimo SG24 OTA certification test systems (one in SHENZHEN, another one in Shanghai), ETS OTA Standard test system, Blue test reverberation test system which is High repeatability, high accuracy and high resolution. It can quickly provide accurate test reports, fully meet the CTIA standards.

Testing range:

Support active, passive testing of GSM/CDMA/WCDMA/TD-SCDMA/LTE/WIFI/WLAN/WiMax/BT/GPS/MIMO/UWB within 0.4-6G.



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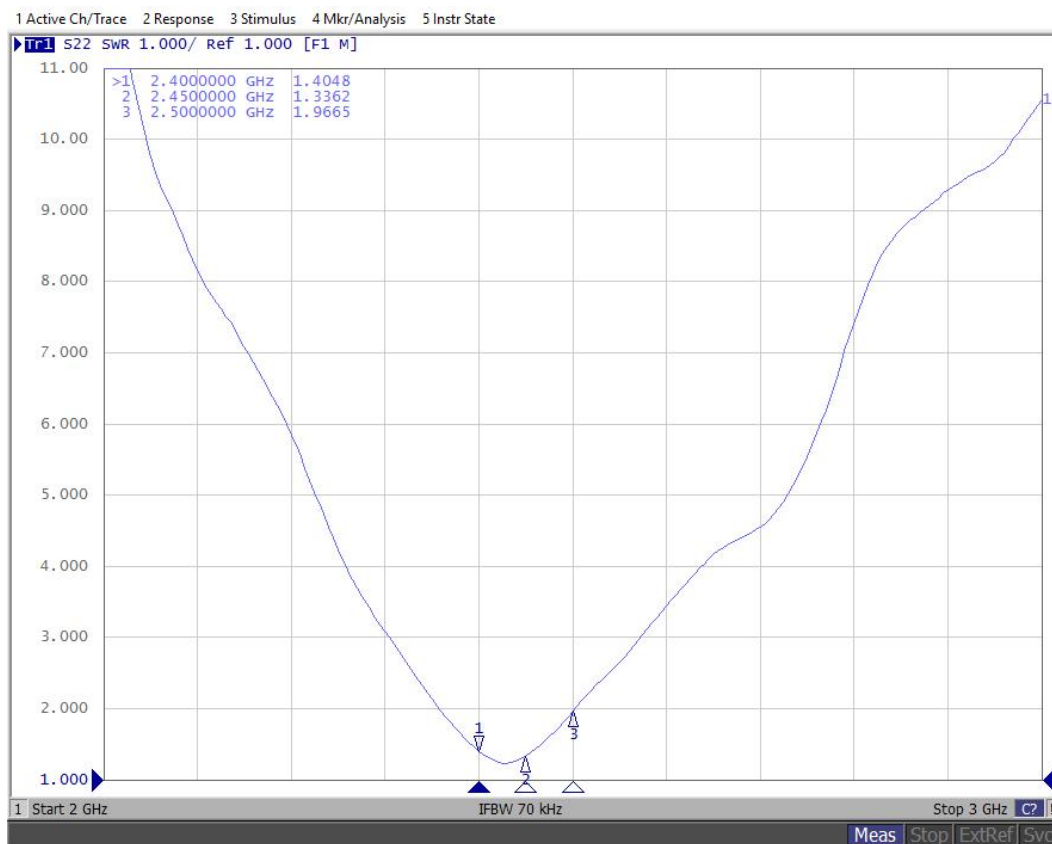
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## 3.Test Results Summary

### 3-1 VSWR



### 3-2 No-source test data

Frequency	Efficiency	Efficiency . dB	Gain . dB
2400MHz	65%	-1.90	3.22
2410MHz	62%	-2.07	2.84
2420MHz	66%	-1.81	2.82
2430MHz	67%	-1.75	2.87
2440MHz	66%	-1.80	2.93
2450MHz	68%	-1.70	3.12
2460MHz	66%	-1.78	3.45
2470MHz	68%	-1.66	3.36
2480MHz	69%	-1.63	3.53
2490MHz	68%	-1.67	3.76
2500MHz	69%	-1.60	4.10

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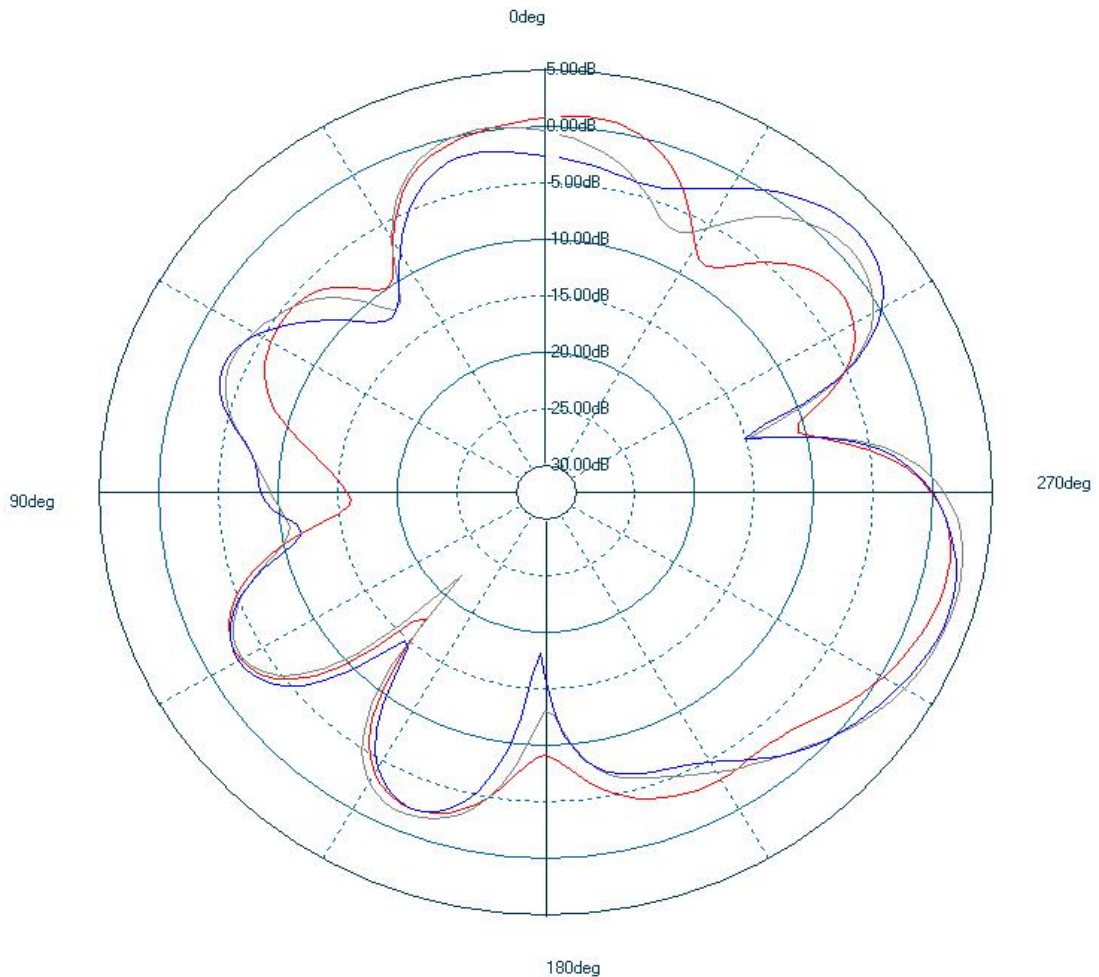
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## 3-3 Active Test

Moble	B		G		N	
Channels	TRP	TIS	TRP	TIS	TRP	TIS
1	15.31	-84.02	12.91	-69.41	12.65	-63.53
6	14.73	-84.12	13.17	-69.51	12.94	-63.48
11	14.83	-84.24	13.24	-69.27	12.87	-63.26

## 3-4 2D/3D Radiation Pattern Results

### XOY



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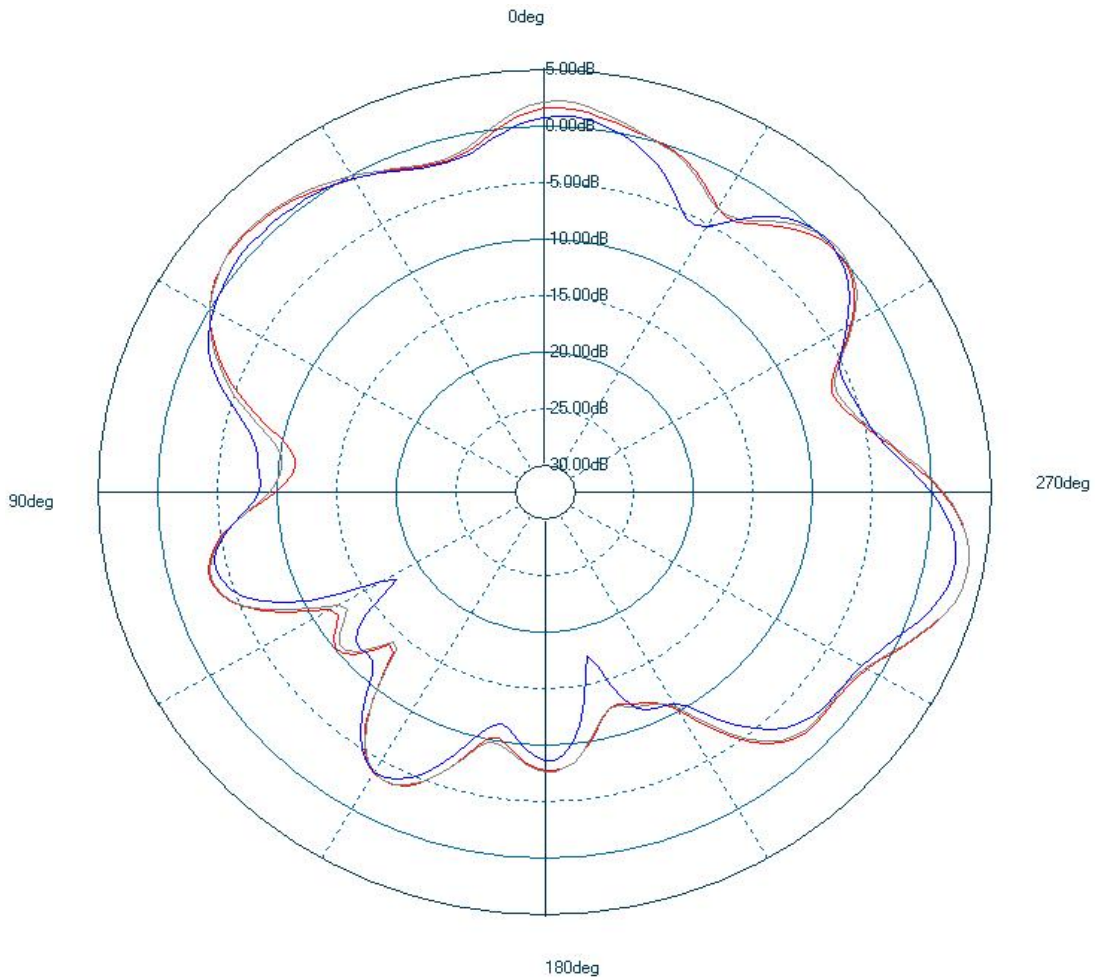
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## YOZ





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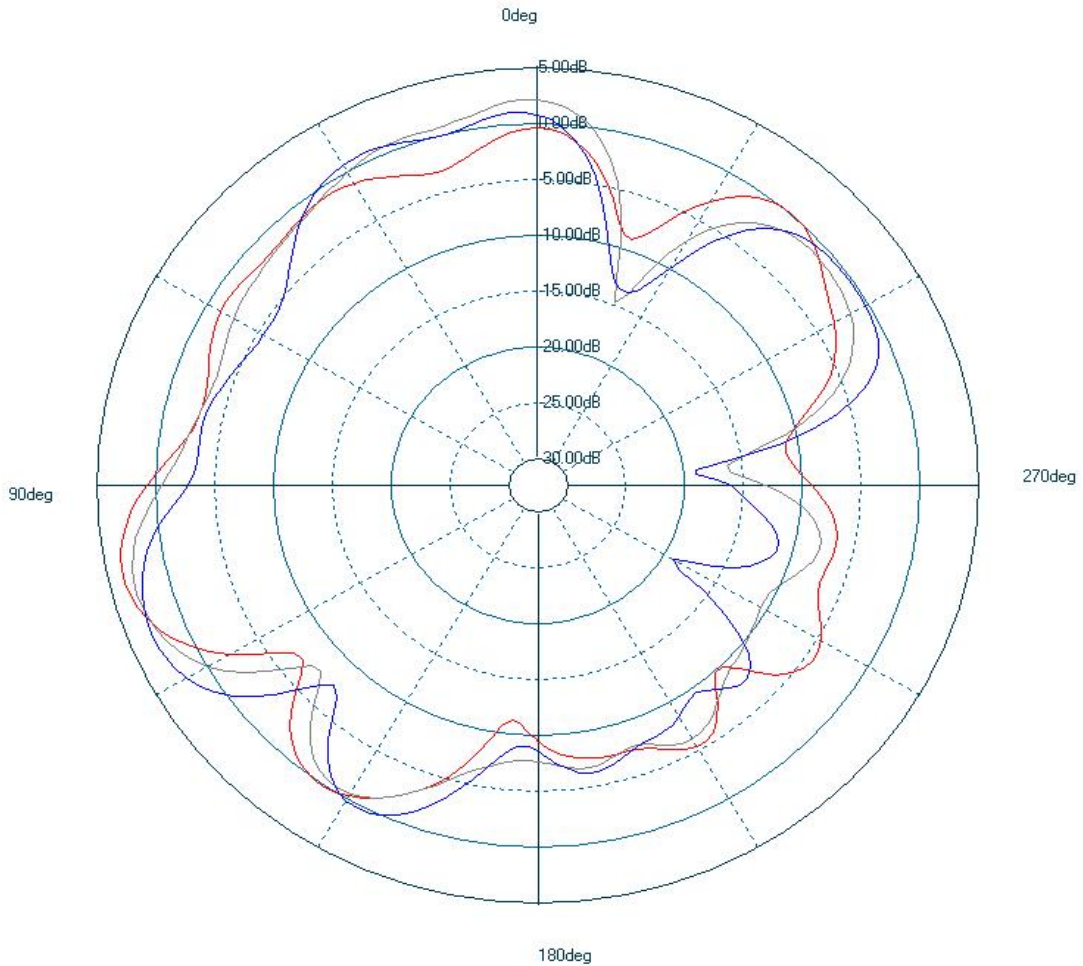
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