

# SPECIFICATION

## SHEET FOR APPROVAL

(Revision: R: A1)

CUSTOMER(客户名称)	Hesung
CS P/N(客户机种)	DR-HHM002S (5L Humidifier)
PART NAME(品名)	WIFI Antenna
FREQUENCY(频率)	2400~2500MHz
ZTX NO.(物料编号)	2.00006323
DATE(日期)	2023-07-17

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	MANAGER CHECKED	ME CHECKED	RF CHECKED	LISTER
		Chang lin liu	Pei Wang	



Shenzhen ZTX Communication Technology Co., Ltd

Address: No.34, Shilong Avenue, Shiyan Town, Baoan District, Shenzhen City (Tengda Industrial Park)

Postcode: 518000

Tel: 0755-27588320

Fax: 0755-27588045

<http://www.chinaztx.com>

# ANTENNA SPECIFICATION

CUS P/N :DR-HHM002S(5L Humidifier) WIFI Antenna ApplicationDate:Jul,17,2023  
ZTX P/N :DR-HHM002S(5LHumidifier) WIFI Antenna Editor:

Rev: R:A1  
Page 1 of 8

---

## Revision history

Edition	Date	State
A1	2023-07-17	The first edition

# ANTENNA SPECIFICATION

CUS P/N :DR-HHM002S(5L Humidifier) WIFI Antenna ApplicationDate:Jul,17,2023  
ZTX P/N :DR-HHM002S(5LHumidifier) WIFI Antenna Editor:

Rev: R:A1  
Page 2 of 8

## Index

		<b>Revision history</b>	<b>1</b>
		<b>Index</b>	<b>2</b>
<b>1</b>		<b>Mechanical Specification</b>	<b>3</b>
	<b>1-1</b>	<b>Mechanical Specification(WIFI Antenna)</b>	<b>3</b>
<b>2</b>		<b>Test equipment</b>	<b>4</b>
<b>3</b>		<b>Test Results Surmmary</b>	<b>5</b>
	<b>3-1</b>	<b>OTA Test</b>	<b>5</b>
	<b>3-2</b>	<b>VSWR</b>	<b>5</b>
	<b>3-3</b>	<b>No-source test data</b>	<b>5</b>
	<b>3-4</b>	<b>Environment treatment</b>	<b>6</b>
	<b>3-5</b>	<b>2D/3D Radiation Pattern Results</b>	<b>6</b>
<b>4</b>		<b>Environment Characteristic</b>	<b>7</b>
<b>5</b>		<b>The packing way</b>	<b>8</b>

# ANTENNA SPECIFICATION

CUS P/N :DR-HHM002S(5L Humidifier) WIFI Antenna ApplicationDate:Jul,17,2023

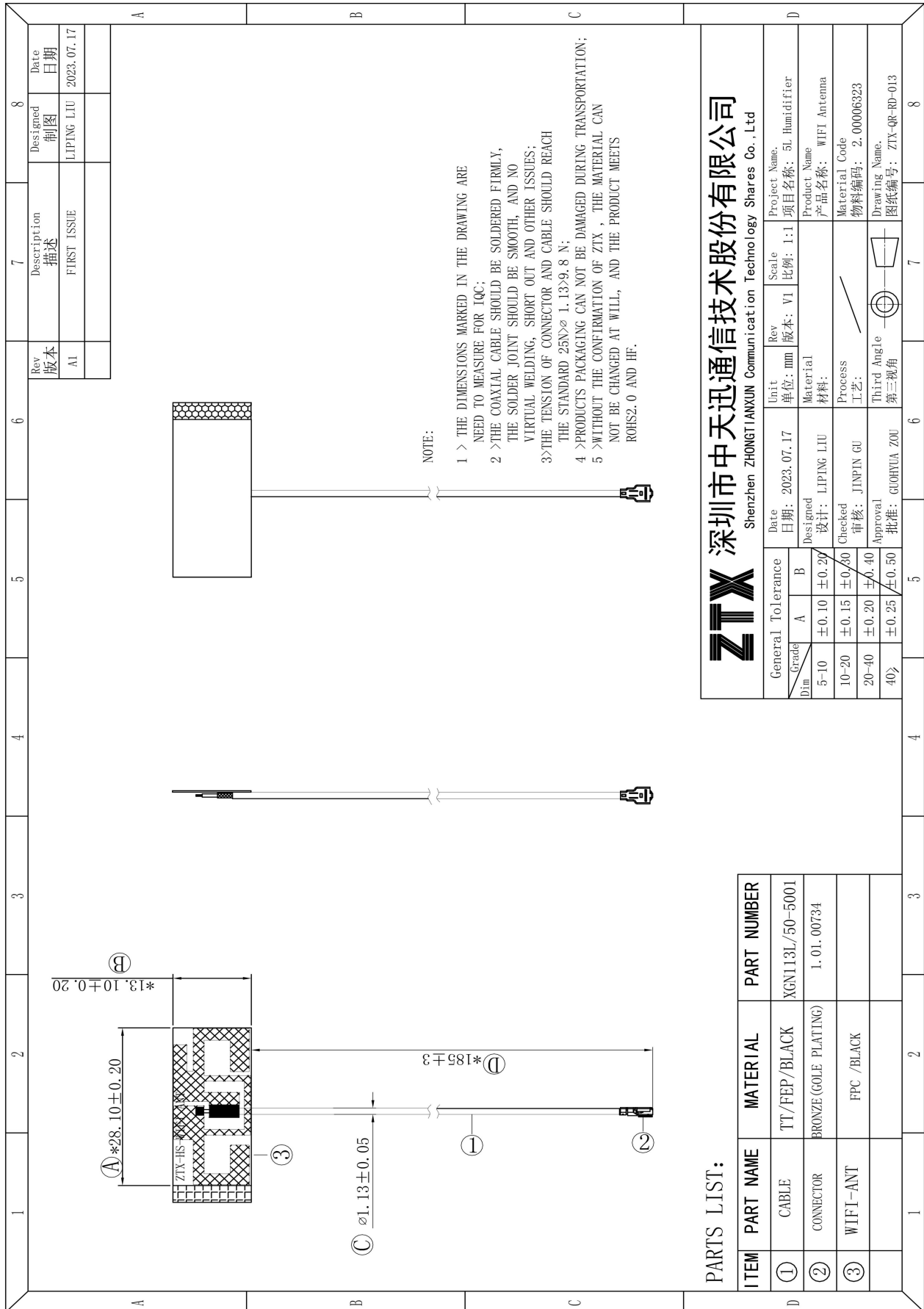
Rev: R:A1

ZTX P/N :DR-HHM002S(5LHumidifier) WIFI Antenna Editor:

Page 3 of 8

## 1. Mechanical Specification

### 1-1 Mechanical Configuration (WIFI Antenna)



**ZTX** 深圳市中天迅通信技术股份有限公司

Shenzhen ZHONGTIANXUN Communication Technology Shares Co., Ltd

Dim	General Tolerance	Unit	Rev	Scale	Project Name
5-10	±0.10	mm	版本: V1	比例: 1:1	项目名称: 5L Humidifier
10-20	±0.15	Material			产品名称: WIFI Antenna
20-40	±0.20	Process			物料编码: 2.00006323
40>	±0.25	Third Angle			图纸编号: ZTX-QR-RD-013

# ANTENNA SPECIFICATION

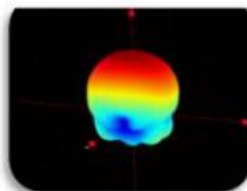
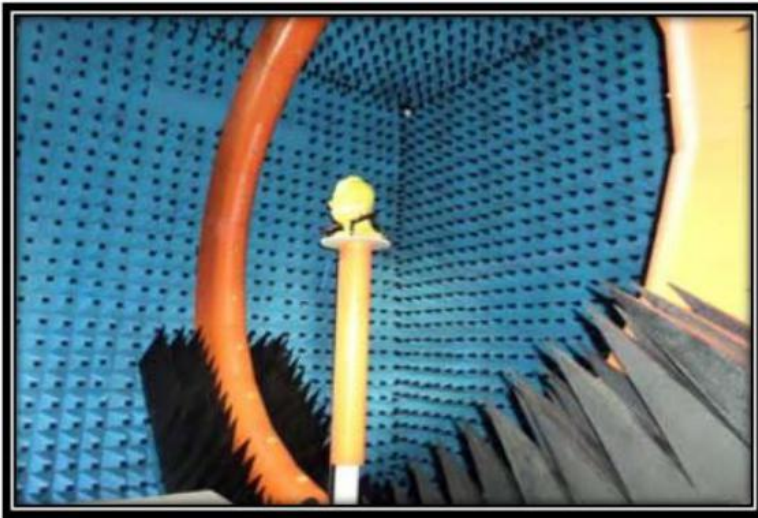
CUS P/N :DR-HHM002S(5L Humidifier) WIFI Antenna ApplicationDate:Jul,17,2023

Rev: R:A1

ZTX P/N :DR-HHM002S(5LHumidifier) WIFI Antenna Editor:

Page 4 of 8

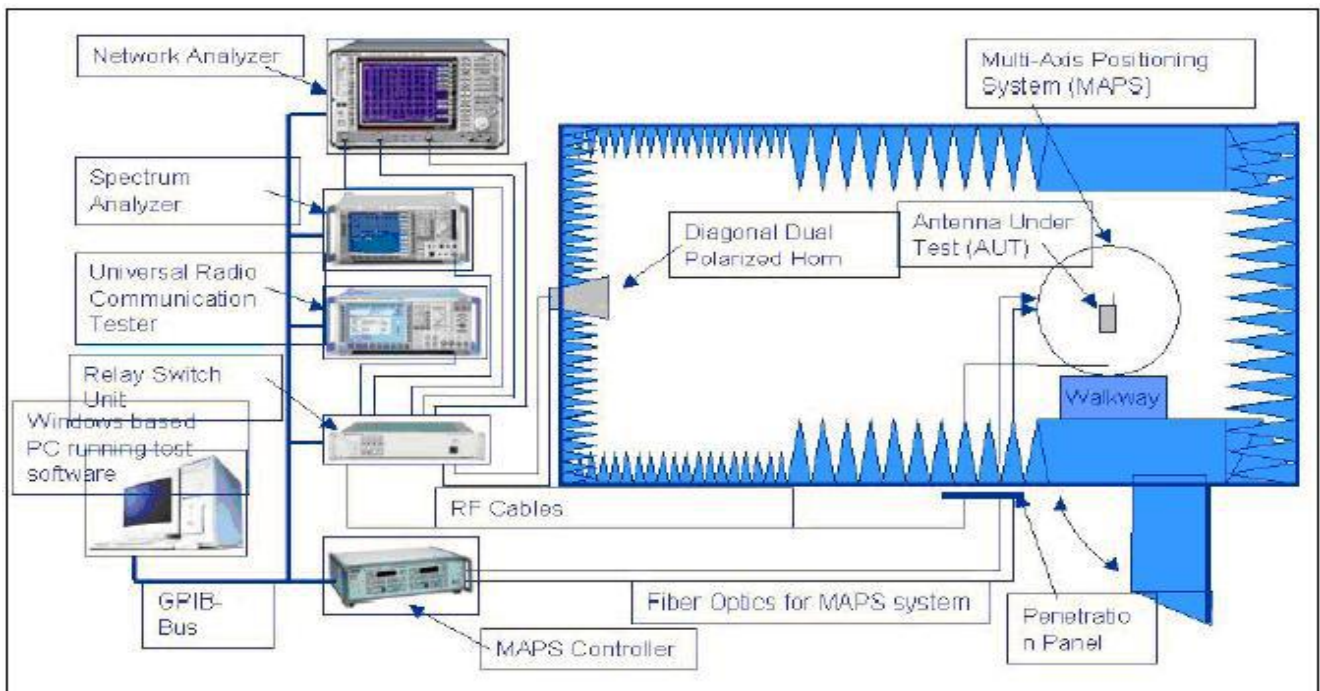
## 2. Test equipment



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.



# ANTENNA SPECIFICATION

CUS P/N :DR-HHM002S(5L Humidifier) WIFI Antenna ApplicationDate:Jul,17,2023

Rev: R:A1

ZTX P/N :DR-HHM002S(5LHumidifier) WIFI Antenna Editor:

Page 5 of 8

## 3.Test Results Summary

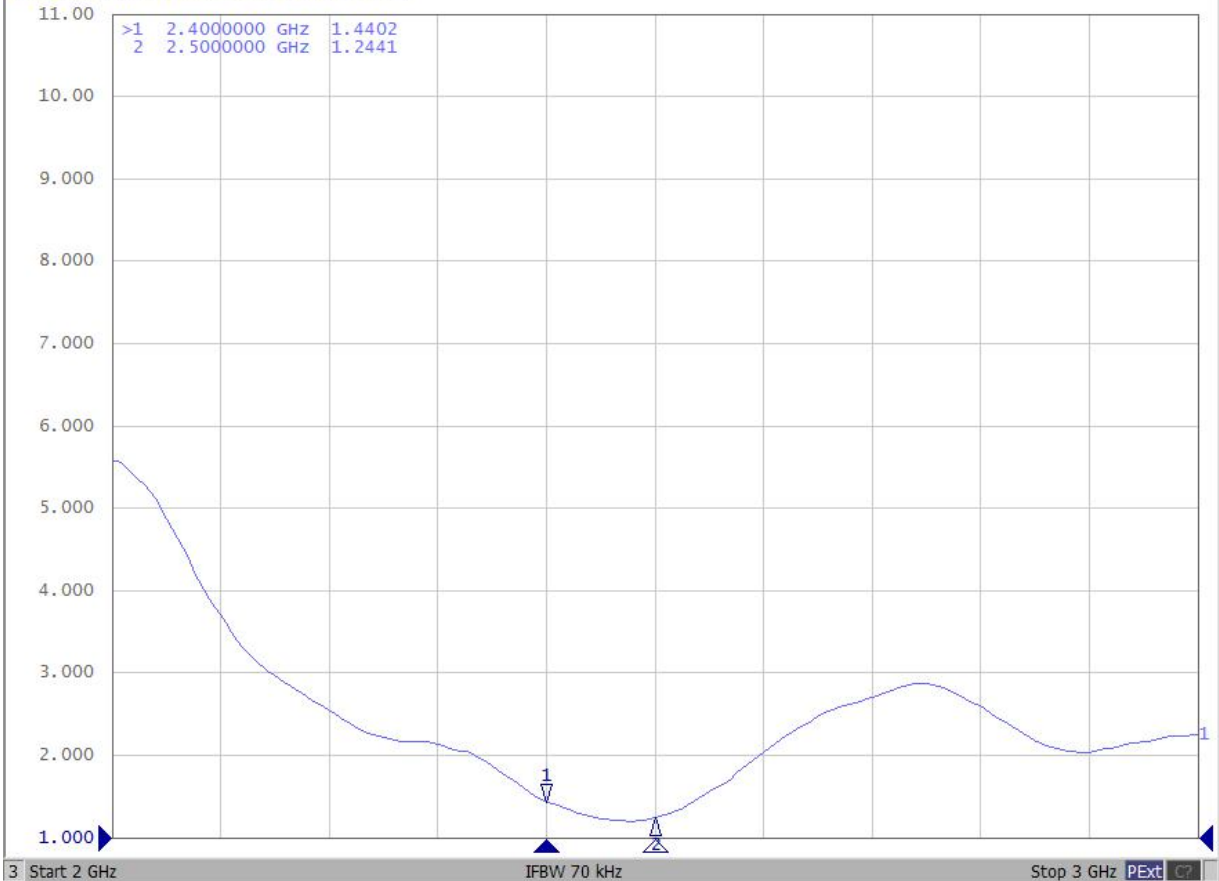
### 3-1 OTA Test

11b	Channels	TRP (1M)	TIS (11M)
	1	15.72	-84.53
	6	15.89	-83.96
11g	Channels	TRP (6M)	TIS (54M)
	1	13.17	-69.92
	6	13.45	-70.27
11n	Channels	TRP (MCS0)	TIS (MCS7)
	1	13.05	-64.52
	6	13.42	-64.33
11n	Channels	TRP (MCS0)	TIS (MCS7)
	1	13.05	-64.52
	6	13.42	-64.33
11n	Channels	TRP (MCS0)	TIS (MCS7)
	1	13.05	-64.52
	6	13.42	-64.33

### 3-2 VSWR

1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

S22 SWR 1.000/ Ref 1.000 [F1 M]



# ANTENNA SPECIFICATION

CUS P/N :DR-HHM002S(5L Humidifier) WIFI Antenna ApplicationDate:Jul,17,2023

Rev: R:A1

ZTX P/N :DR-HHM002S(5LHumidifier) WIFI Antenna Editor:

Page 6 of 8

## 3-3 No-source test data

Frequency	Efficiency	Efficiency (dB)	Gain (dBi)
2400MHz	56%	-2.51	3.93
2410MHz	54%	-2.64	3.85
2420MHz	58%	-2.39	3.85
2430MHz	57%	-2.41	3.83
2440MHz	60%	-2.23	3.96
2450MHz	60%	-2.21	4.01
2460MHz	61%	-2.15	4.00
2470MHz	57%	-2.41	3.89
2480MHz	56%	-2.49	3.51
2490MHz	55%	-2.56	3.29
2500MHz	55%	-2.59	3.29

## 3-4 Environment treatment



# ANTENNA SPECIFICATION

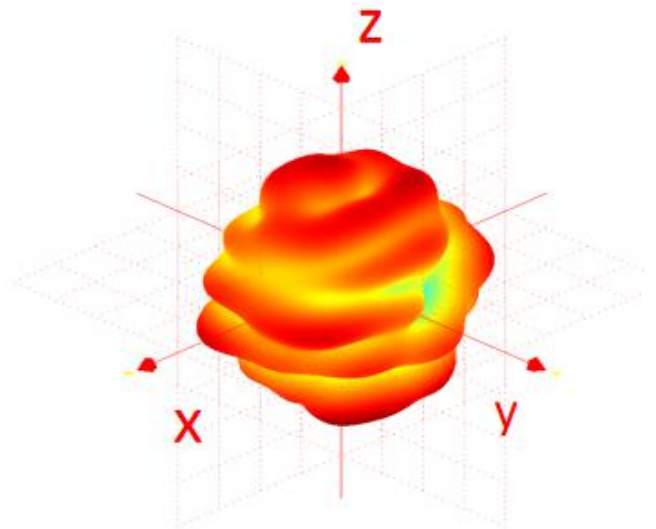
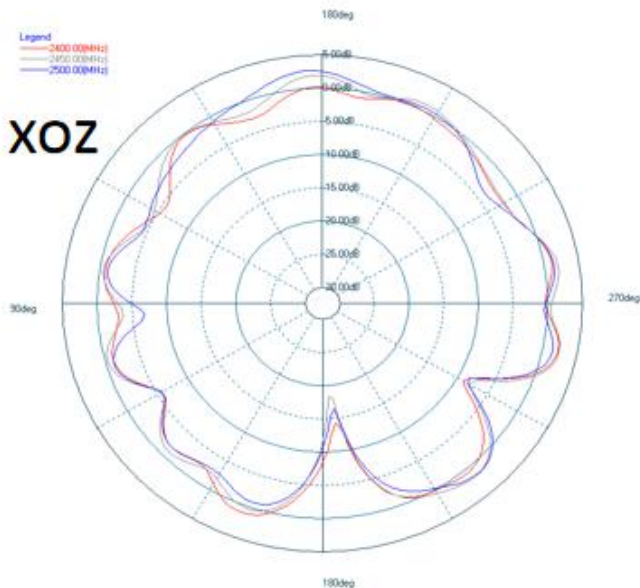
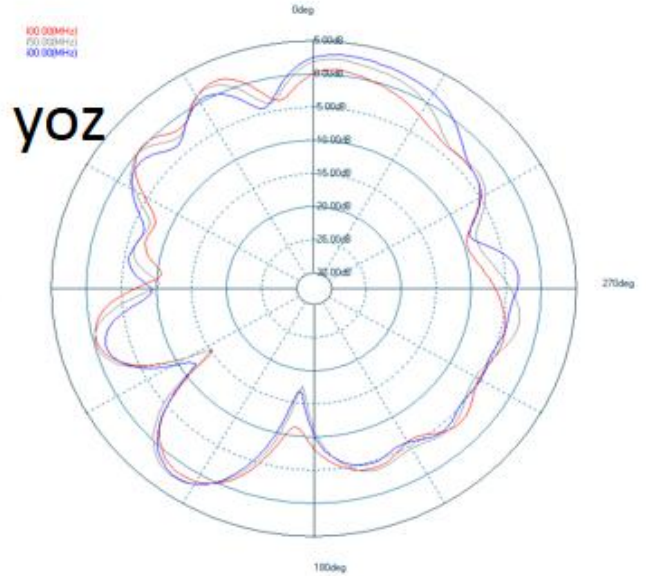
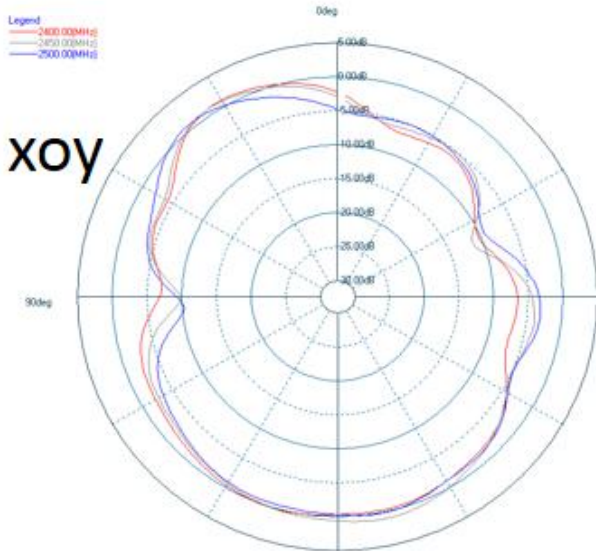
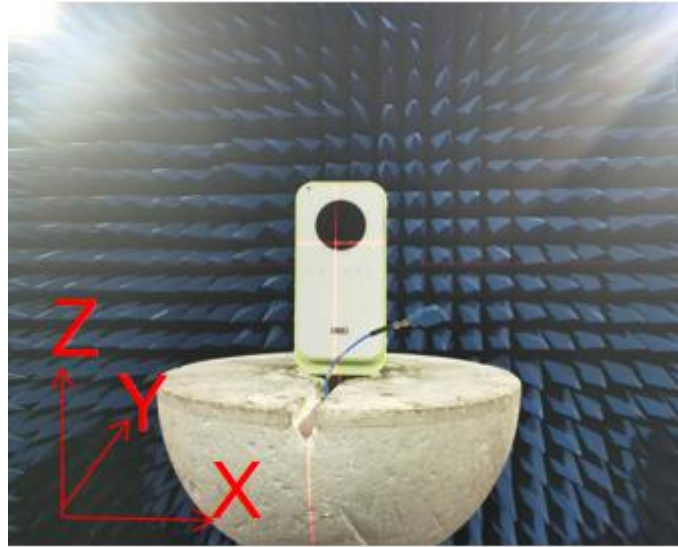
CUS P/N :DR-HHM002S(5L Humidifier) WIFI Antenna ApplicationDate:Jul,17,2023

Rev: R:A1

ZTX P/N :DR-HHM002S(5LHumidifier) WIFI Antenna Editor:

Page 7 of 8

## 3-5 2D/3D Radiation Pattern Results





# ANTENNA SPECIFICATION

CUS P/N :DR-HHM002S(5L Humidifier) WIFI Antenna ApplicationDate:Jul,17,2023

Rev: R:A1

ZTX P/N :DR-HHM002S(5LHumidifier) WIFI Antenna Editor:

Page 8 of 8

## 4.Environment Characteristic

NO.	ITEM	TEST CONDITION	SPECIFICATION
4-1	High Temperature/Humidity Storage Test(non operating)	1. Temperature: $+70 \pm 2^{\circ}\text{C}$ 2. Humidity: 90~95%RH 3. Time: 48hrs	No material deformation is allowed.
4-2	Low Temperature/Humidity Storage Test(non operating)	1. Temperature: $-30 \pm 2^{\circ}\text{C}$ 2. Humidity: 0%RH 3. Time:48hrs	The VSWR, Gain, Radiation Pattern must be met specifications after these test.