

# SPECIFICATION

## SHEET FOR APPROVAL

(Revision: R: A1)

CUSTOMER(客户名称)	Hesung Innovation Limited	
CS P/N(客户机种)	7inch Circulating Fan	内部型号: TD17
PART NAME(品名)	WIFI Antenna	
FREQUENCY(频率)	2400~2500MHz	
ZTX NO.(物料编号)	K.00000029	
DATE(日期)	2023-01-09	

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
		Lai Ningping	Wang Pei	

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## Revision history

Edition	Date	State
A1	2023-01-09	The first edition

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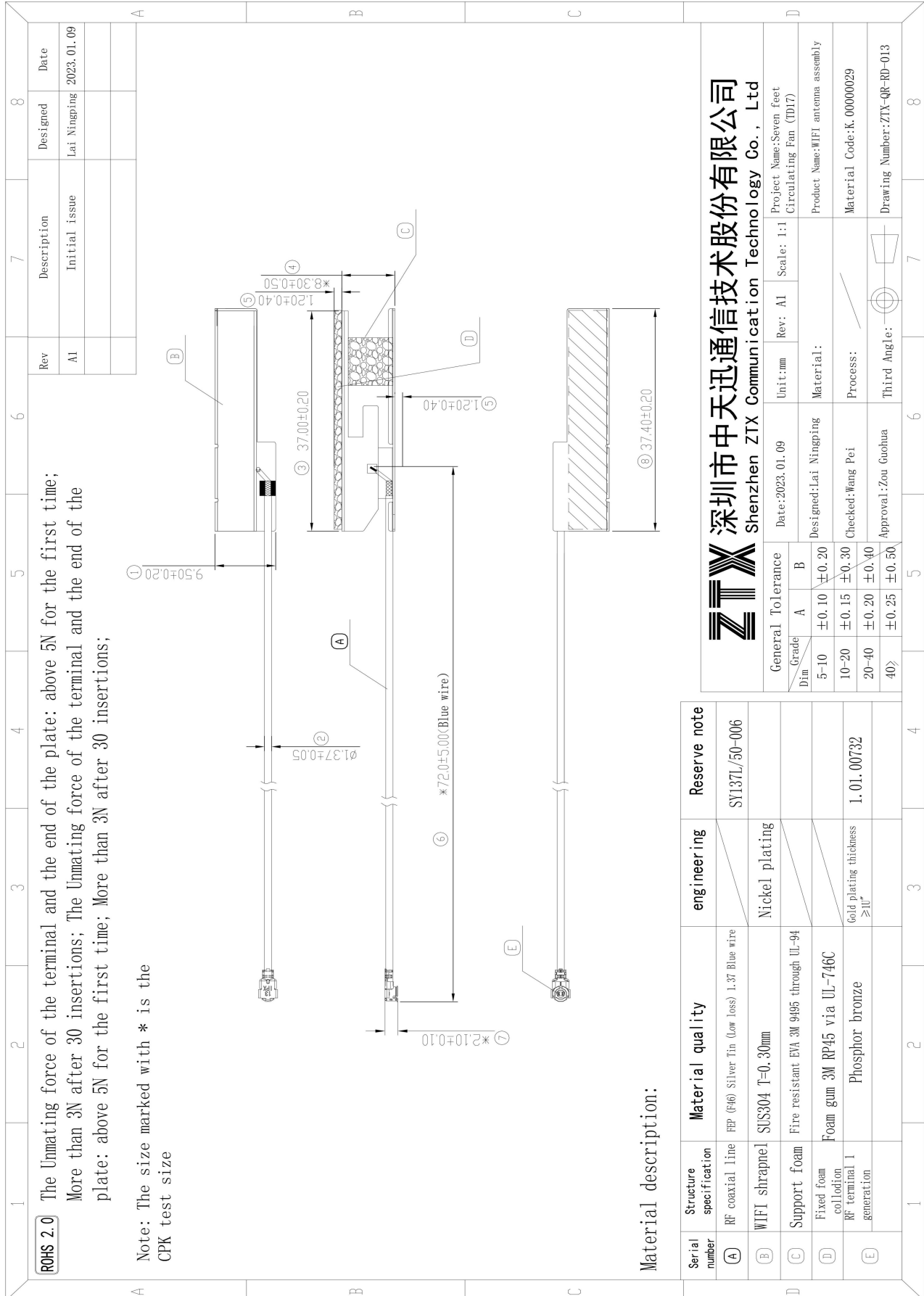
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## 1. Mechanical Specification

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



**ROHS 2.0**

The Unmating force of the terminal and the end of the plate: above 5N for the first time; More than 3N after 30 insertions; The Unmating force of the terminal and the end of the plate: above 5N for the first time; More than 3N after 30 insertions;

Note: The size marked with \* is the CPK test size

Material description:

Serial number	Structure specification	Material quality	engineering	Reserve note
(A)	RF coaxial line	FFP (F46) Silver Tin (Low loss) 1.37 Blue wire		SY137L/50-006
(B)	WiFi shrapnel	SUS304 T=0.30mm	Nickel plating	
(C)	Support foam	Fire resistant EVA 3M 9495 through UL-94		
(D)	Fixed foam collision RF terminal I generation	Foam gum 3M RP45 via UL-746C Phosphor bronze	Gold plating thickness $\geq 1\mu$	1.01.00732

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General Tolerance	Unit:mm	Rev: A1	Scale: 1:1
Grade			
Dim			
5-10	$\pm 0.10$		
10-20	$\pm 0.15$		
20-40	$\pm 0.20$		
40>	$\pm 0.25$		

Project Name: Seven feet Circulating Fan (TD17)
Product Name: WiFi antenna assembly
Material Code: K.00000029
Drawing Number: ZTX-QR-RD-013

# ANTENNA SPECIFICATION

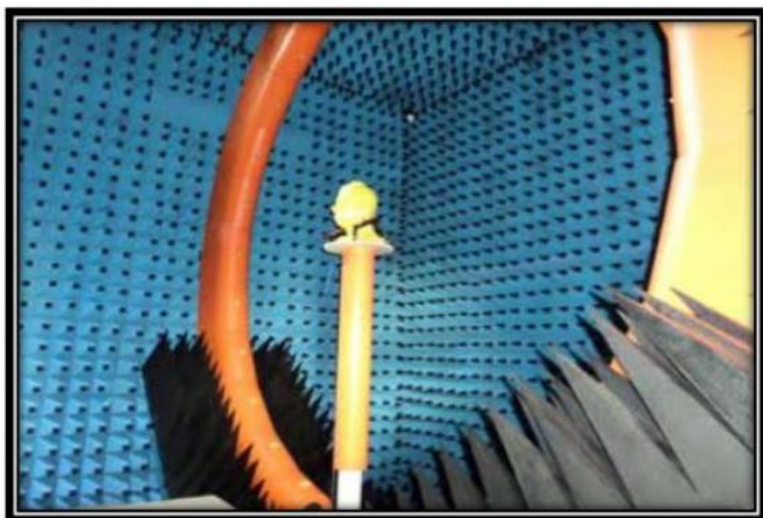
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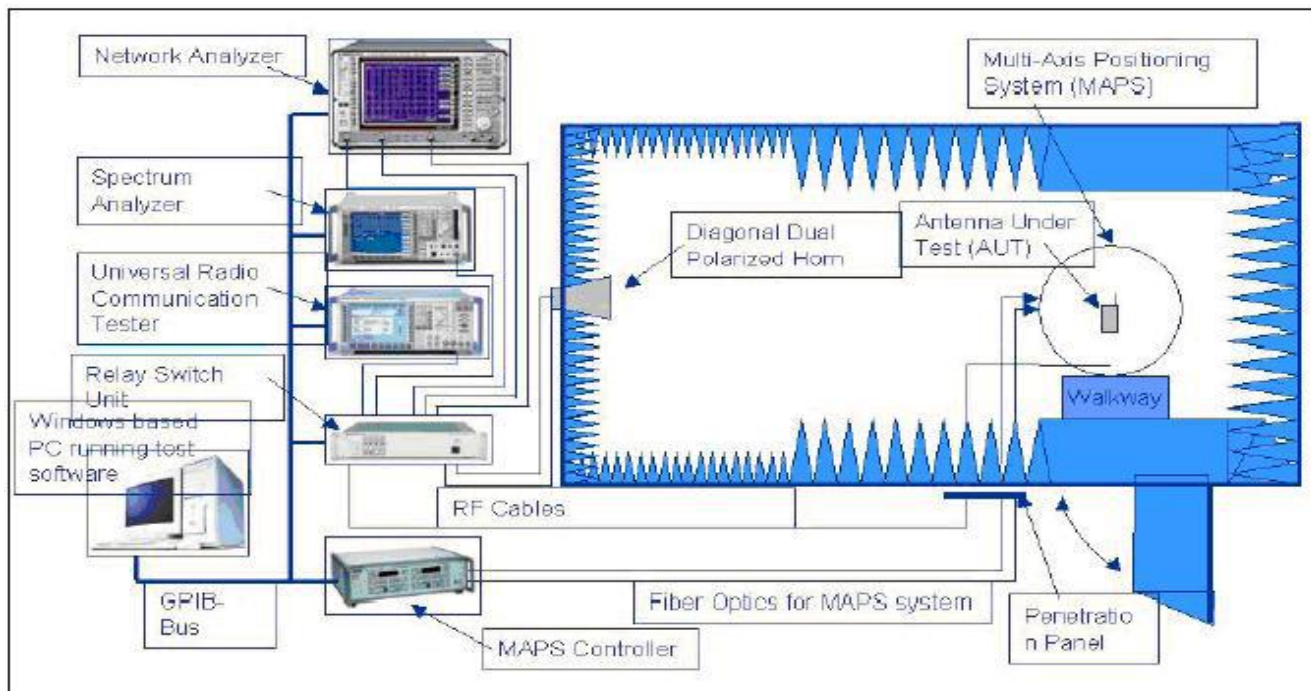
## 2. Test equipment



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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## 3.Test Results Summary

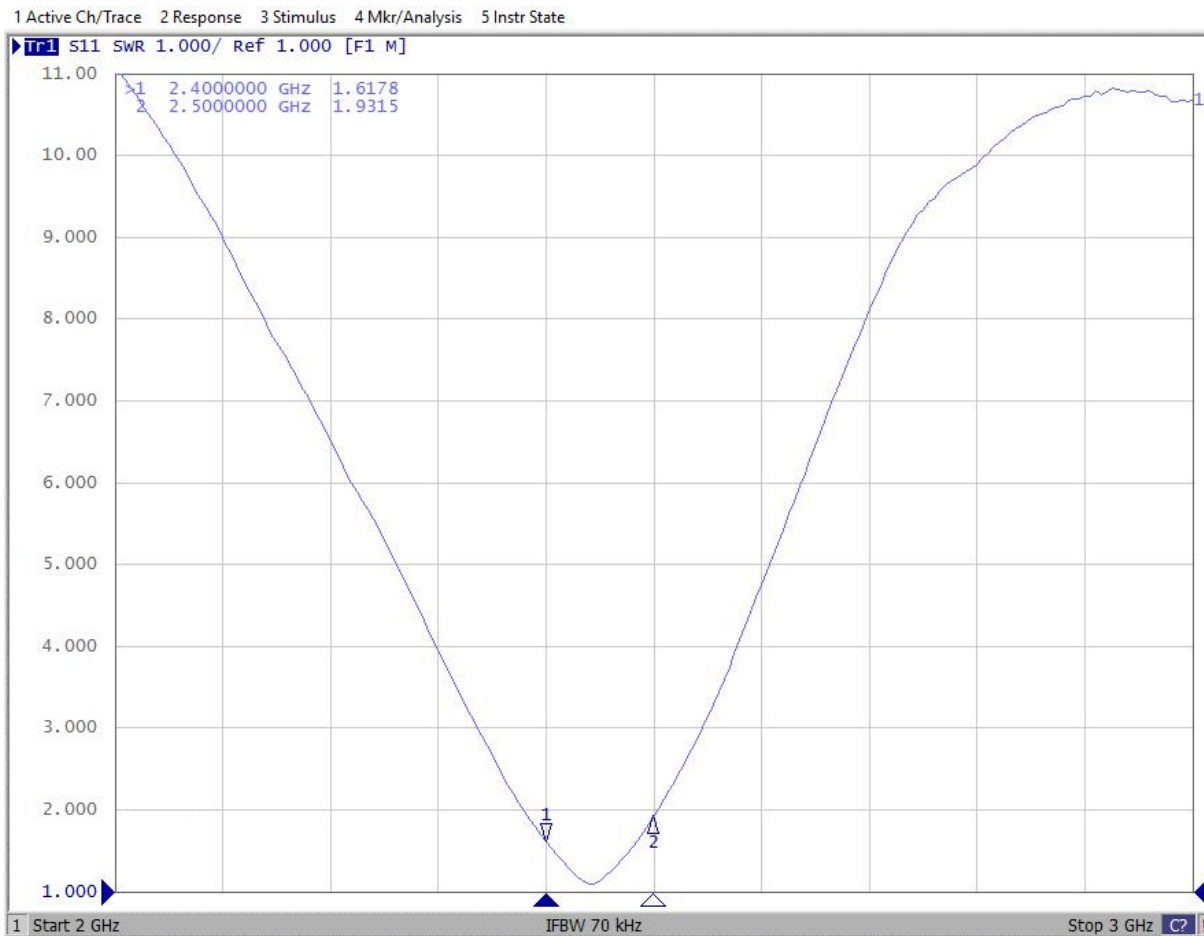
### 3-1 OTA Test

B			G			N		
Channels	TRP/1M	TIS/11M	Channels	TRP/6M	TIS/54M	Channels	TRP/M CS0	TIS/M CS7
1	15.09	-84.65	1	11.85	-70.46	1	11.61	-64.26
6	15.89	-84.63	6	12.74	-70.36	6	12.82	-64.58
11	15.81	-84.33	11	12.17	-70.66	11	12.77	-64.34

### 3-2 Transmit Test

B			G			N		
Channels	TRP/1M	TIS/11M	Channels	TRP/6M	TIS/54M	Channels	TRP/M CS0	TIS/M CS7
1	17.05	-87	1	14.23	-73	1	14.12	-66
6	17.3	-87	6	14.04	-73	6	14.28	-66
11	17.48	-87	11	14.29	-73	11	14.6	-66

### 3-3 VSWR



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## 3-4 No-source test data

Frequency	Efficiency	Efficiency . dB	Gain . dB
2400M Hz	66%	-1.80	4.56
2410M Hz	68%	-1.67	4.32
2420M Hz	69%	-1.61	4.20
2430M Hz	68%	-1.67	4.41
2440M Hz	69%	-1.61	4.40
2450M Hz	68%	-1.67	4.51
2460M Hz	70%	-1.55	4.55
2470M Hz	71%	-1.49	4.53
2480M Hz	69%	-1.61	4.61
2490M Hz	68%	-1.67	4.66
2500M Hz	68%	-1.66	4.21

## 3-5 Environment treatment

2400-2500MHz  
Antenna position



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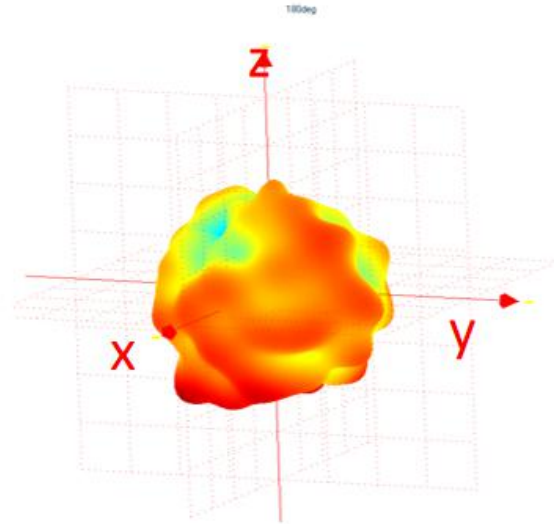
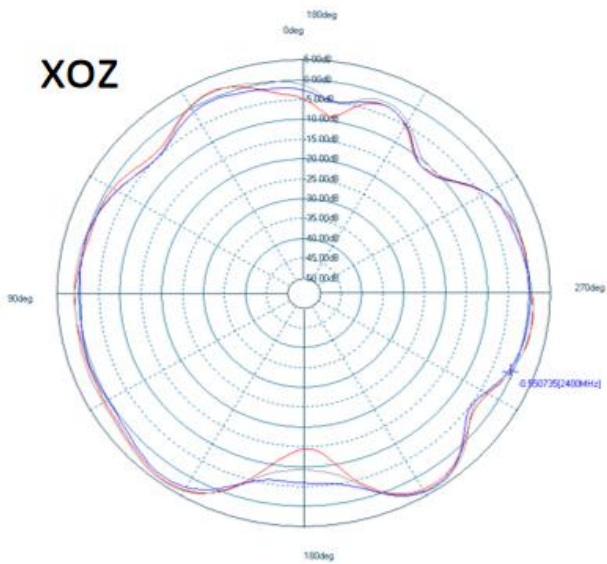
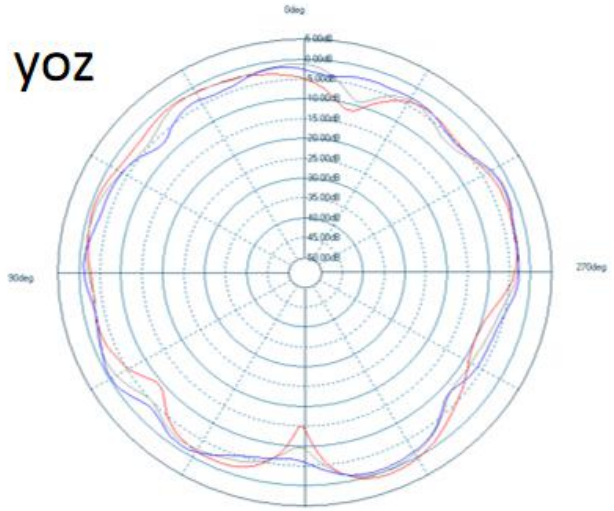
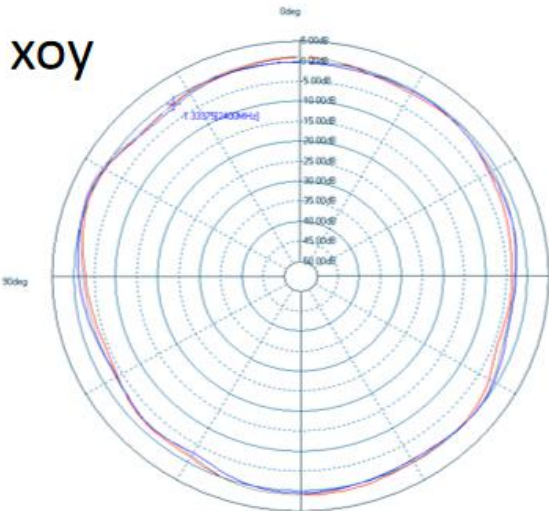
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## 3-6 2D/3D Radiation Pattern Results





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## 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.