

SPECIFICATION

SHEET FOR APPROVAL

(Revision: R: A1)

CUSTOMER	Hesung Innovation Limited	
CS P/N	DR-HAF003S	Internal model: TD3S
PART NAME	WIFI Antenna	
FREQUENCY	2400~2500MHz	
ZTX NO.	2.00005785	
DATE	2023-09-05	

CUSTOMER			
QA CHECKED	ME CHECKED	RF CHECKED	MANAGER CHECKED

Remark:

Sign: _____

ZHONG TIAN XUN TECHNOLOGY CO., LTD				
MANAGER CHECKED	MANAGER CHECKED	ME CHECKED	RF CHECKED	LISTER
		Lai Ningping	Wang Pei	

ZTX 中天迅

Shenzhen ZTX Communication Technology Co., Ltd

Address: No.34, Shilong Avenue, Shiyao Town, Baoan District, Shenzhen, (Tengda Industrial Park) 518000

Tel.: 0755-27588320 Fax: 0755-27588045 <http://www.chinaztx.com>

ANTENNA SPECIFICATION

CUS P/N :DR-HAF003S WIFI Antenna
ZTX P/N :DR-HAF003S WIFI Antenna

ApplicationDate:Sep,05,2023
Editor:

Rev: R:A1
Page 1 of 9

Revision history

Edition	Edition	Edition
A1	2023-09-05	The first edition

ANTENNA SPECIFICATION

CUS P/N :DR-HAF003S WIFI Antenna
ZTX P/N :DR-HAF003S WIFI Antenna

ApplicationDate:Sep,05,2023
Editor:

Rev: R:A1
Page 2 of 9

Index

		Revision history	1
		Index	2
1		Mechanical Specification	3
	1-1	Mechanical Specification(WIFI Antenna)	3
2		Test equipment	6
3		Test Results Surmmary	7
	3-1	Active Test	7
	3-2	VSWR	7
	3-3	Passive Test	8
	3-4	Environment treatment	8
	3-5	2D/3D Radiation Pattern Results	9
4		Environment Characteristic	10
5		The packing way	11

ANTENNA SPECIFICATION

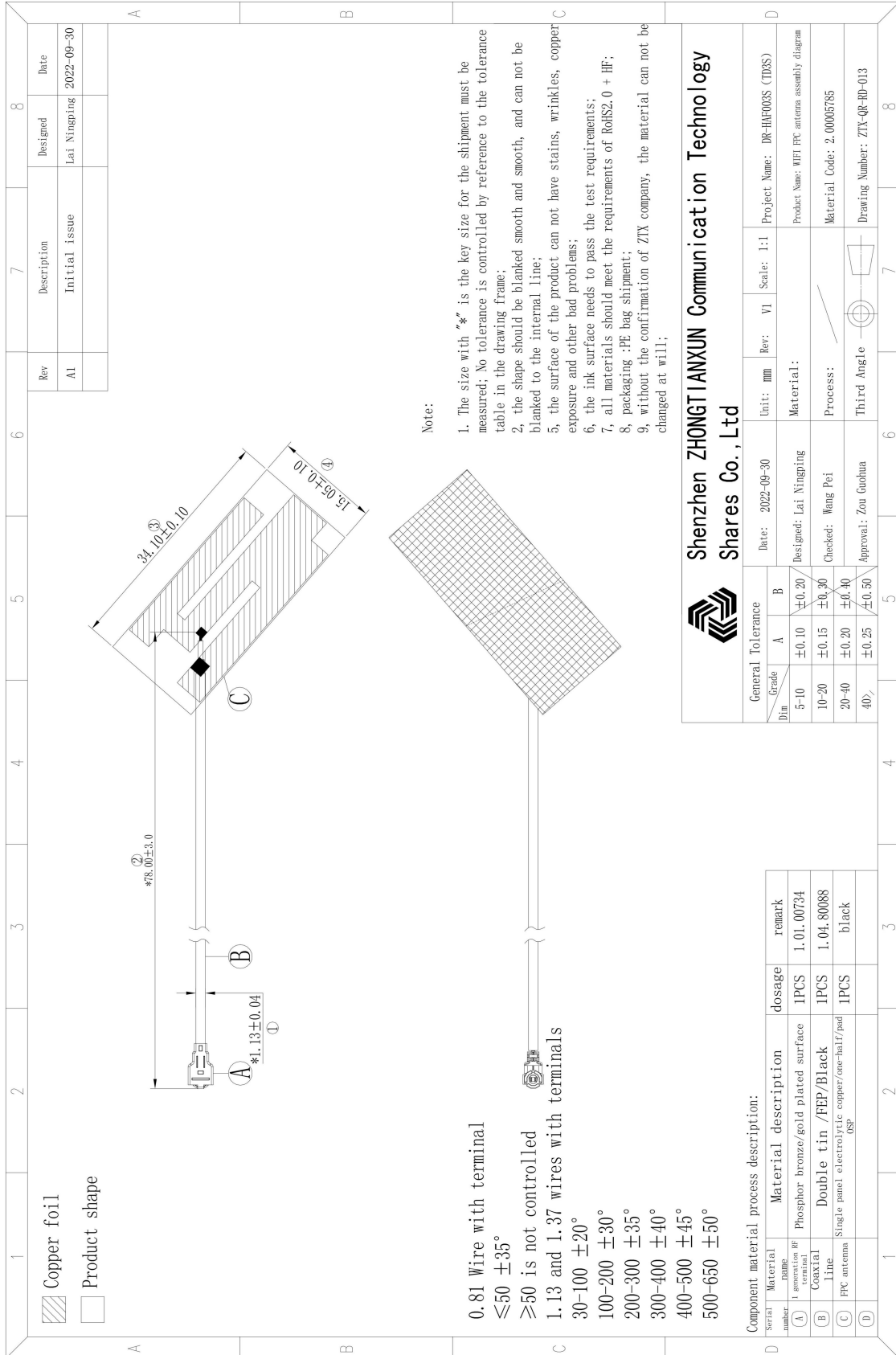
CUS P/N :DR-HAF003S WIFI Antenna
ZTX P/N :DR-HAF003S WIFI Antenna

ApplicationDate:Sep,05,2023
Editor:

Rev: R:A1
Page 3 of 9

1. Mechanical Specification

1-1 Mechanical Configuration (WIFI Antenna)



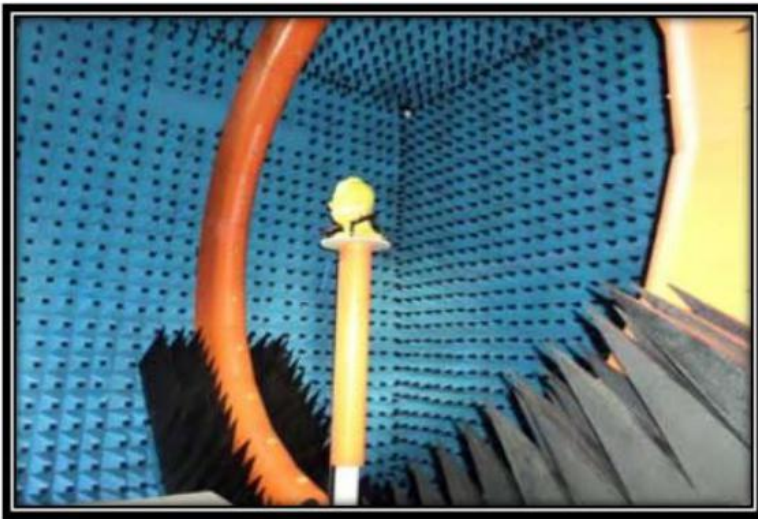
ANTENNA SPECIFICATION

CUS P/N :DR-HAF003S WIFI Antenna
ZTX P/N :DR-HAF003S WIFI Antenna

ApplicationDate:Sep,05,2023
Editor:

Rev: R:A1
Page 4 of 9

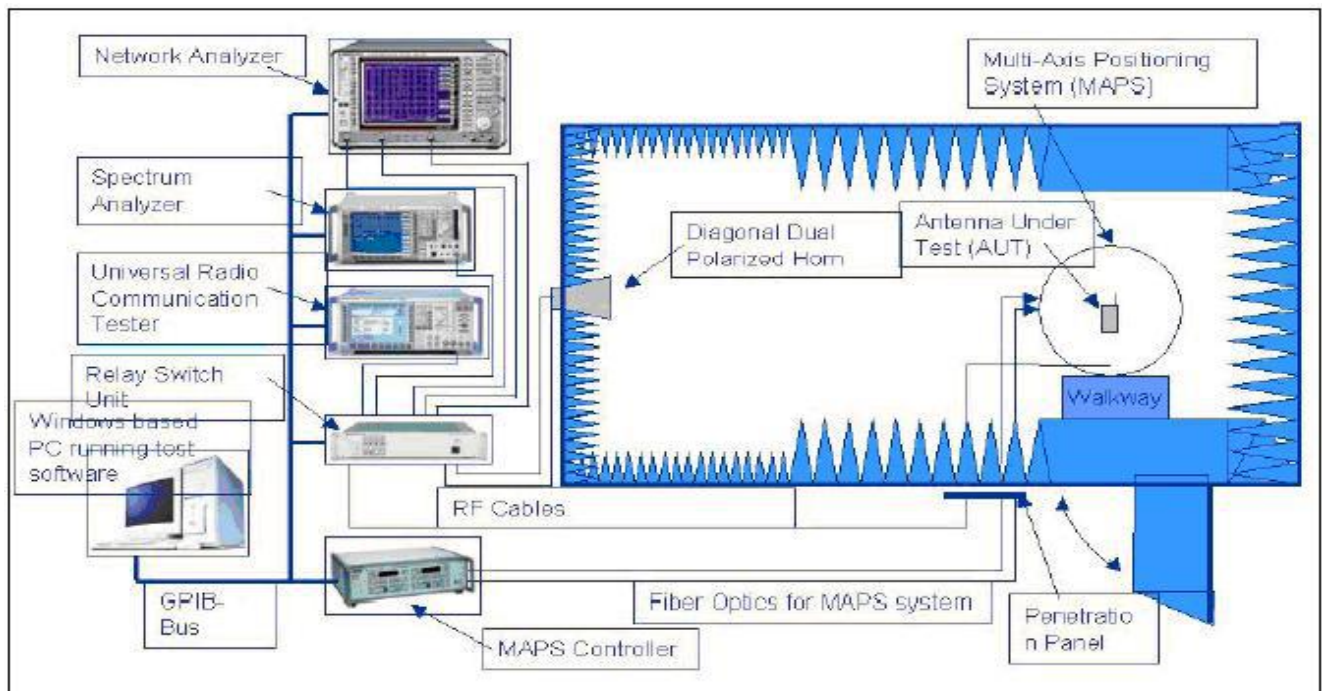
2. Test equipment



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-HAF003S WIFI Antenna
 ZTX P/N :DR-HAF003S WIFI Antenna

ApplicationDate:Sep,05,2023
 Editor:

Rev: R:A1
 Page 5 of 9

3.Test Results Summary

3-1 Active Test

Fan static			
WiFi2.4G b model			
channel	1	7	13
TRP(11M)	16.98	17.69	17.36
TIS(11M)	-82.51	-82.84	-82.71
WiFi2.4G g model			
channel	1	7	13
TRP(6M)	13.52	14.13	13.68
TIS(54M)	-72.61	-72.62	-72.56
WiFi2.4G n model			
channel	1	7	13
TRP(MCS0)	13.5	13.86	13.13
TIS(MCS7)	-67.45	-67.78	-67.11

Fan dynamic			
WiFi2.4G b model			
channel	1	7	13
TRP(11M)	16.21	17.03	16.32
TIS(11M)	-81.74	-81.88	-81.95
WiFi2.4G g model			
channel	1	7	13
TRP(6M)	12.91	13.53	13.42
TIS(54M)	-71.48	-71.04	-71.14
WiFi2.4G n model			
channel	1	7	13
TRP(MCS0)	14.02	13.02	11.91
TIS(MCS7)	-66.56	-66.92	-66.39

Now the fan use

WiFi2.4G b model			
channel	1	7	13
TX	19.18	19.33	18.9
WiFi2.4G g model			
channel	1	7	13
TX	15.09	15.39	14.52
WiFi2.4G n model			
channel	1	7	13
TX	15.11	15.39	14.53

ANTENNA SPECIFICATION

CUS P/N :DR-HAF003S WIFI Antenna
ZTX P/N :DR-HAF003S WIFI Antenna

ApplicationDate:Sep,05,2023
Editor:

Rev: R:A1
Page 6 of 9

3-2 VSWR



3-3 Passive Test

Frequency	Efficiency	Efficiency . dB	Gain . dB
2400MHz	64%	-1.94	3.24
2410MHz	65%	-1.87	3.06
2420MHz	67%	-1.74	3.36
2430MHz	72%	-1.43	3.59
2440MHz	71%	-1.49	3.55
2450MHz	68%	-1.67	3.66
2460MHz	66%	-1.80	3.40
2470MHz	66%	-1.80	3.01
2480MHz	64%	-1.94	3.10
2490MHz	63%	-2.03	2.98
2500MHz	62%	-2.08	2.77

ANTENNA SPECIFICATION

CUS P/N :DR-HAF003S WIFI Antenna
ZTX P/N :DR-HAF003S WIFI Antenna

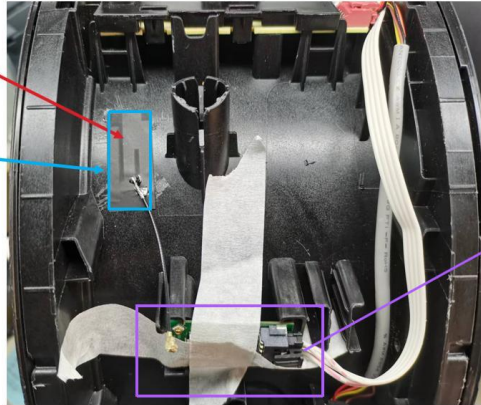
ApplicationDate:Sep,05,2023
Editor:

Rev: R:A1
Page 7 of 9

3-4 Environment treatment

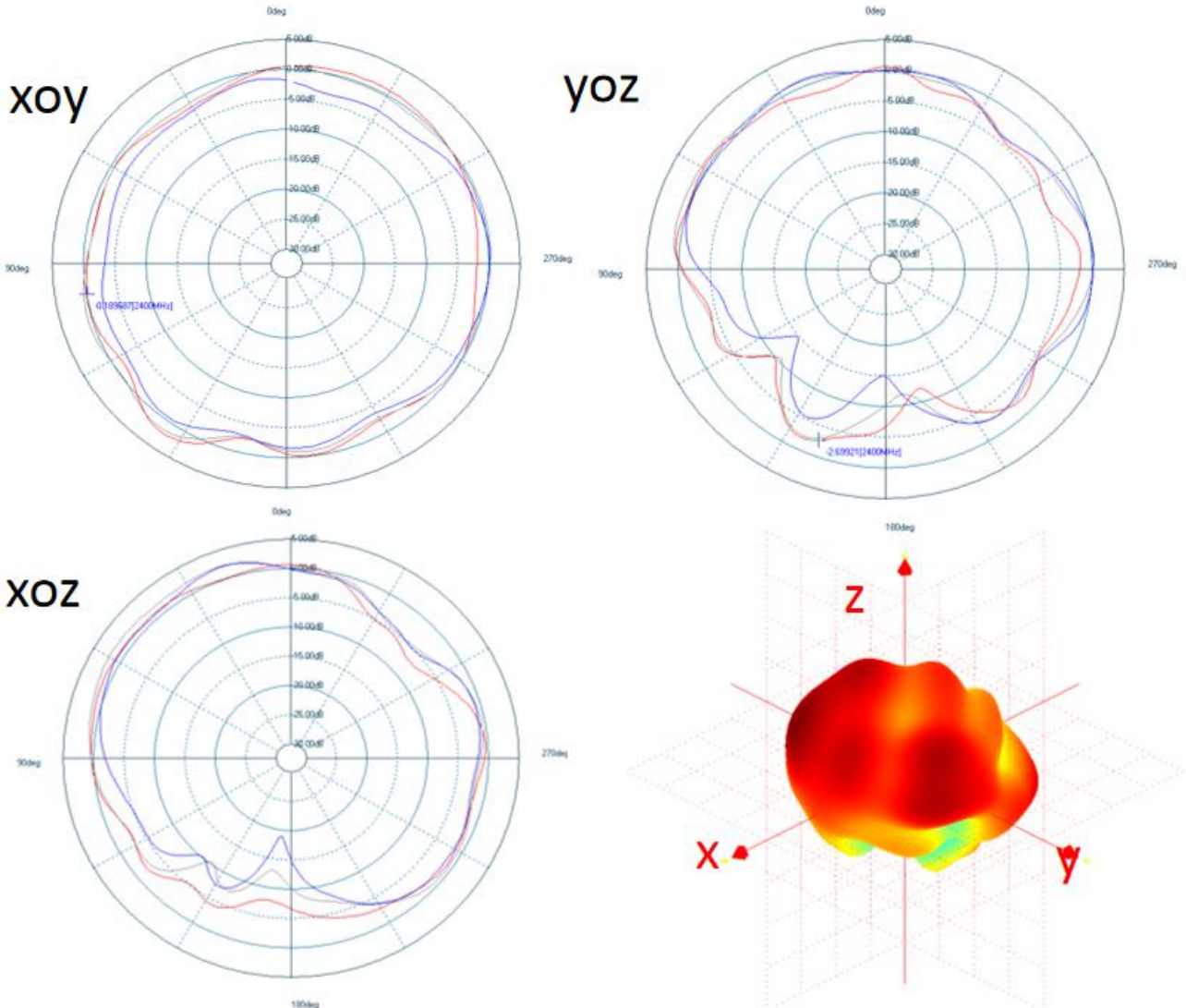
2400—2500MHz
Antenna position

It is suggested to add a positioning column to the antenna paste position, and paste the antenna in the same position to ensure the consistency of the antenna performance



The modules should be arranged according to the drawing

3-5 2D/3D Radiation Pattern Results



ANTENNA SPECIFICATION

CUS P/N :DR-HAF003S WIFI Antenna
ZTX P/N :DR-HAF003S WIFI Antenna

ApplicationDate:Sep,05,2023
Editor:

Rev: R:A1
Page 8 of 9

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.

ANTENNA SPECIFICATION

CUS P/N :DR-HAF003S WIFI Antenna

ApplicationDate:Sep,05,2023




Rev: R:A1

ZTX P/N :DR-HAF003S WIFI Antenna

Editor:

Page 9 of 9

5.The packing way

Packing specification & wi SOP					
customer name	Hesung Innovation Limited	product model	DR-HAF003S (TD3S)		product WIFI Antenna
Carton specifications	K=K45*32.5*21CM		Material number	1.12.000002	dosage 1PCS
PE seal pocket	360*280*0.10mm		Material number	1.12.000026	dosage 10PCS
PE open the pocket	240*160*0.05mm		Material number	1.12.000030	dosage 100PCS
Paper board	2PCS / box		unclassified stores	Tags / tape	
Number of boxes per box	5000PCS	PE open pocket number	50~100PCS	Number of PE sealing pockebs	500~1000PCS
Matters need attention	1.Whether the customer material code and quantity are correct, the label must be printed by machine. 2.Internal label, external label, shipment report and delivery form should be consistent 3.If the trial production materials or change, the corresponding identification shall be affixed, the mantissa box shall be affixed, and the inspection report shall be attached.				
1. Take (50~100pcs products, bag and label materials;	2. Put the packaged products into large bags (500~1000pcs) and label the materials;		3. Box the packaging (5000pes) and label the materials;		4. Seal the box.
					
NO	Change content		Change person and date		
Tag diagram:			Short diagram of outer box:		
					
(Tabulation): HONGJIA WEI			(Approved by): FEIFEIDANG		