

# SPECIFICATION

## SHEET FOR APPROVAL

(Revision: R: A1)

CUSTOMER(客户名称)	TCL
CS NO.(客户物料编码)	
PART NAME(品名)	WIFI 天线
FREQUENCY(频率)	2.4G~5G
GSD NO.(物料编号)	WC0D-90(不含红磷低损)
DATE(日期)	2018-06-30

CUSTOMER			
QA CHECKED	ME CHECKED	RF CHECKED	MANAGER CHECKED

Remark(备注):

Sign(客户确认签字盖章): \_\_\_\_\_

DESIGN	CHECK	APPROVAL
秦楠	陈宇科	熊运自
20180630	20180630	20180630

惠州高盛达科技有限公司

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# ANTENNA SPECIFICATION



ApplicationDate:Jun,30,2018

Rev: R:A1

GSD P/N : WC0D-90(不含红磷低损)

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## Revision history

版本	日期	状态
A1	2018-06-30	(初版) 承认书制定

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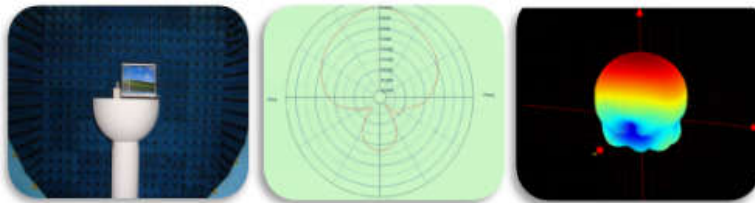
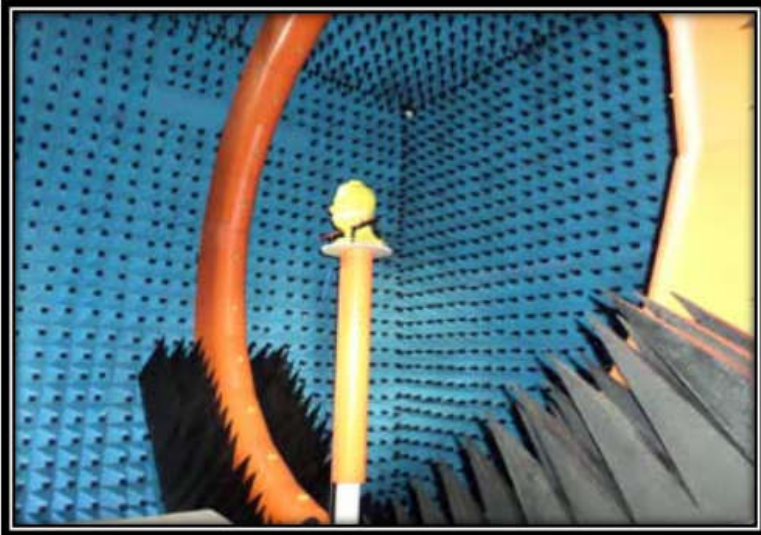
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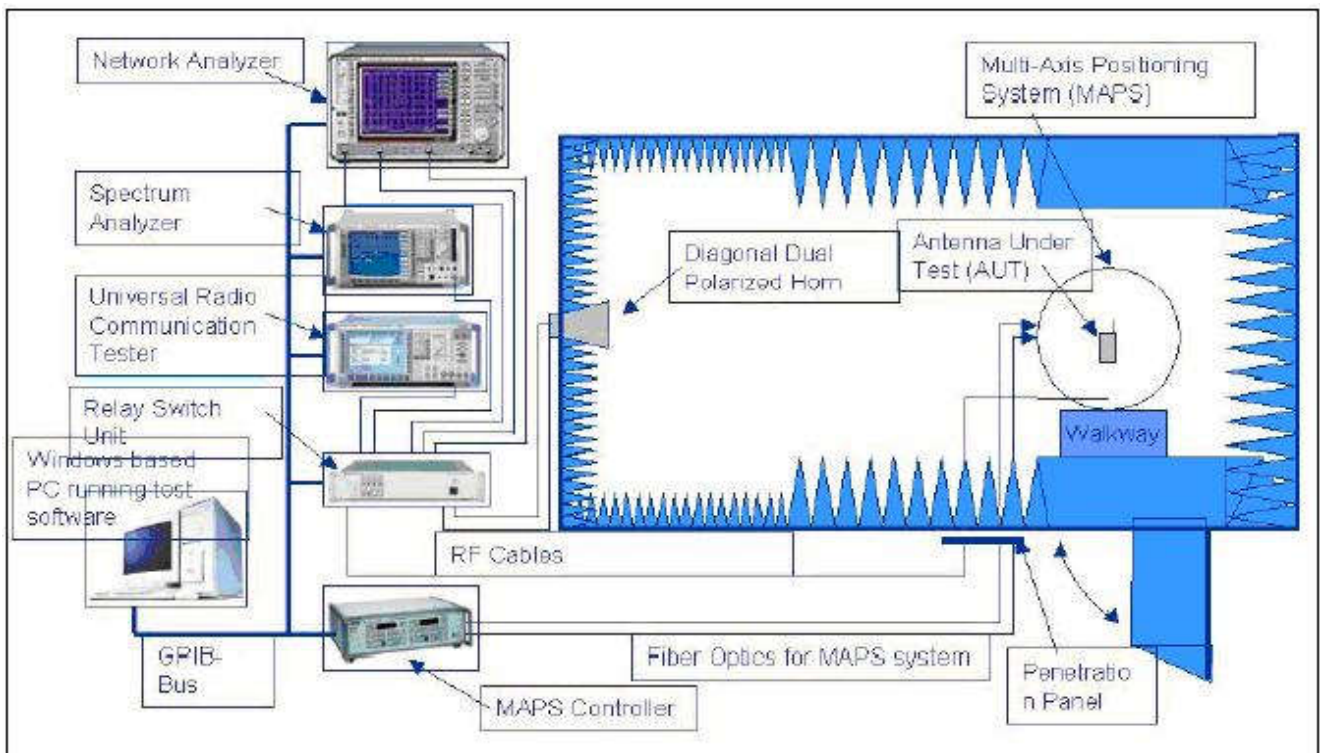
## 1. Test equipment



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 CITA 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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## 2. Electrical Specifications

### 2-1 Frequency Band

Frequency Band	Frequency
<b>WIFI 2.4G</b>	<b>2400-2500MHZ</b>
<b>WIFI 5.8G</b>	<b>5150-5850MHZ</b>

### 2-2 VSWR And GAIN

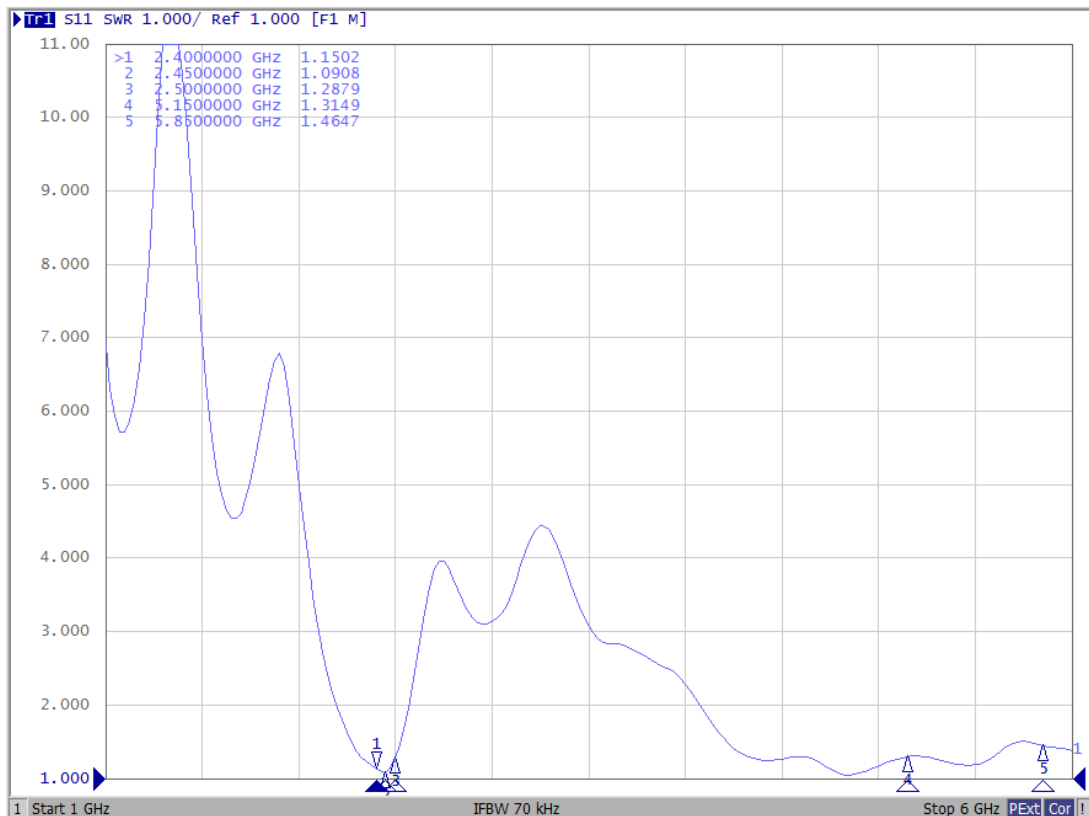
VSWR		GAIN	
Freq. Band	OPEN SPEC	Band Freq.	OPEN SPEC
2400MHz	$\cong 2.0$	2400MHz	$\cong -1.0\text{dBi}$
2500MHz	$\cong 2.0$	2500MHz	$\cong -1.0\text{dBi}$
5150MHz	$\cong 2.0$	5150MHz	$\cong -1.0\text{dBi}$
5850MHz	$\cong 2.0$	5850MHz	$\cong -1.0\text{dBi}$

※Measuring a 50  $\Omega$  test jig is connected to a network analyzer to measure the VSWR.

※※All test value is done in customer approval fixture.

## 3. Antenna test data

### 3-1 VSWR



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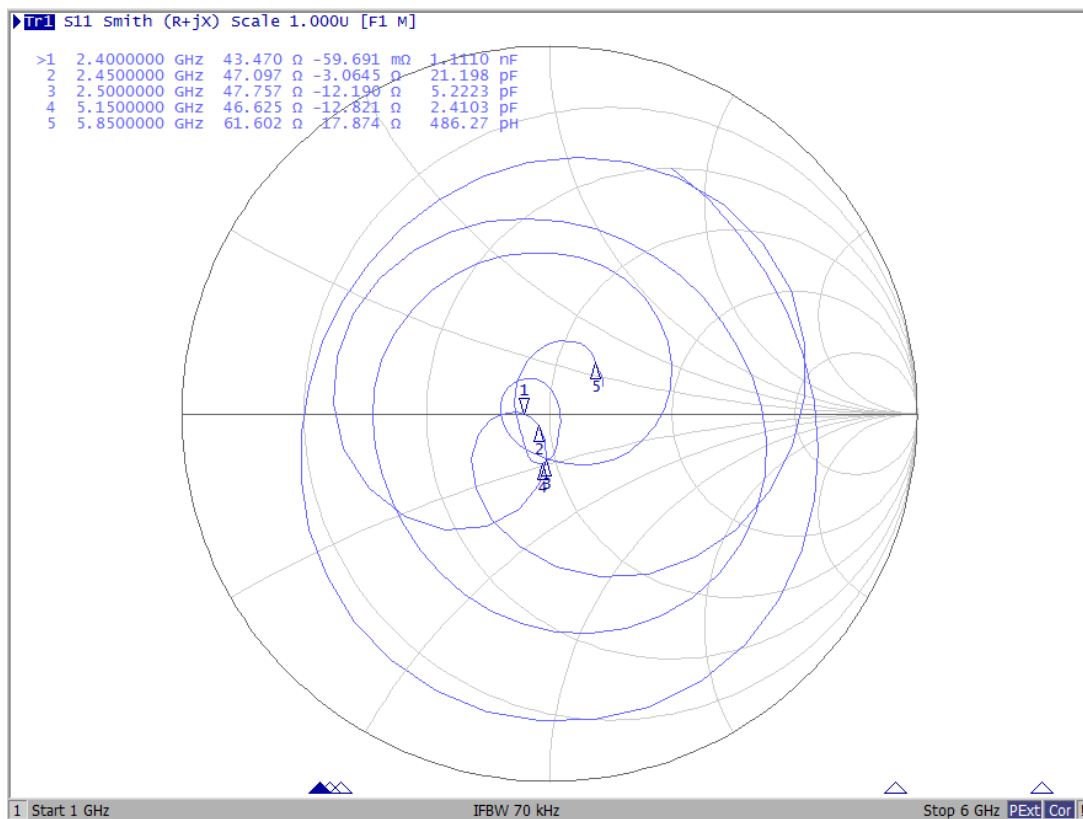
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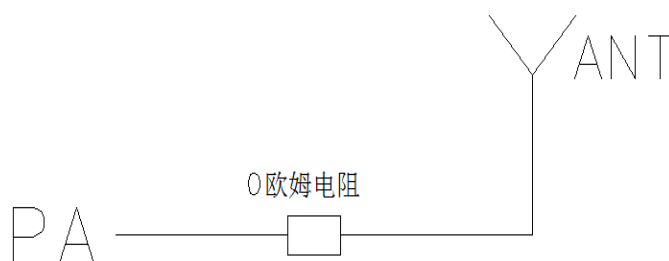
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## 3-2 Smith Chart



## 3-3 Matching circuit



## 3-4 No-source test data

Frequency (MHz)	2400	2450	2500	5150	5850
Average Gain	1.42	1.72	1.65	2.34	2.57
Efficiency (dB)	(44%)	(48%)	(45%)	(61%)	(66%)

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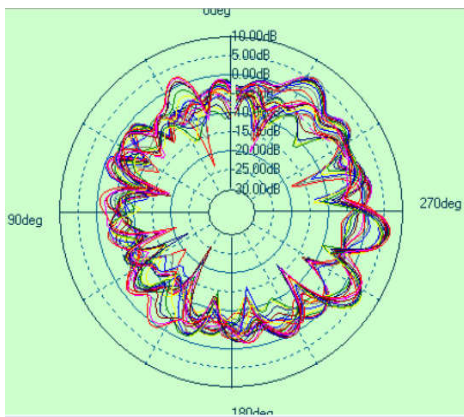
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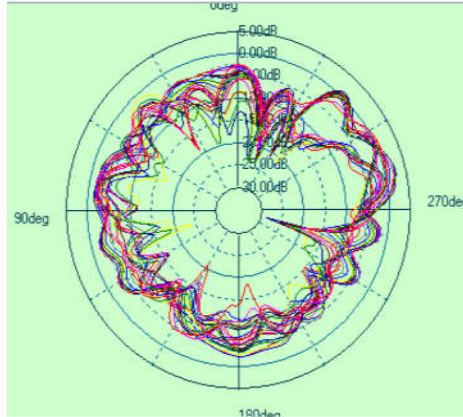
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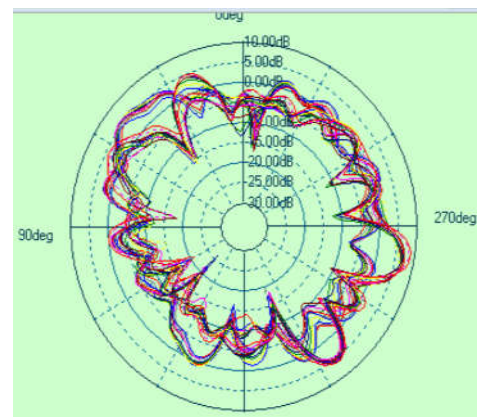
## 3-5 Directional drawing of horizontal plane of



Theta 90deg



Phi 0deg



Phi 90deg

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## 4. Mechanical Specification

### 4-1 Mechanical Configuration( WIFI2.4G/5.8G)

版本	说明	审核	日期	批准	日期

展开图

立体图

**环保要求:**

MATTER	RoHs ( PPM )
Cd	≤100
Pb	≤1000
Hg	≤1000
Cr6+	≤1000
PBB	≤1000
PBDE	≤1000

**未注明公差**

5 UND	±0.08
5-10	±0.10
10-35	±0.12
35-50	±0.15
50-100	±0.18
100 OVE	±0.20

**备注:**

1. 角度尺寸模具设计时依图纸尺寸作参照,样品及量产配即可;
2. 打"\*"为严格控制尺寸 (IQC必测等级A);
3. 字符说明(采用宋体,要求字迹清晰,弹片无变形);
4. 产品不能有油污、毛刺、利边、缺料、变形、压印过深等不良;
5. 需通过48小时盐雾测试;
6. 包装时需用吸塑盒摆放整齐,运输过程中产品不能挤压碰撞等;
7. 未经过ZTX公司确认,材料不能随意更改;

深圳市中天迅通信技术股份有限公司			
制图	第一麟	日期	2018-04-04
审核	李方森	日期	2018-04-04
批准	第一麟	日期	2018-04-04
物料号	WC0D	物料号	1.01.00030
图例	1:1	图例	1/1
单位	mm	单位	mm
基本	A1	基本	SS304 P=0.30mm (螺距)
产品名称	WC0D (WIFI)	图例编号	ZTX-QR-RD-029



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## 4-2 Mechanical Configuration(同轴线)

标记	版本	说明	审核	日期	批准	日期

剥线尺寸图

铆压端子后尺寸图

备注:

- 1>RF 端子需通过48H盐雾测试;
- 2>端子与线材铆压后拉力需25N>Φ1.13>9.8N;
- 3>包装时需用PP袋装好摆放整齐,运输过程中产品不能挤压,线条需保持直顺,不能有明显扭曲变形现象;
- 4>未经过ZTX公司确认,材料不能随意更改;

环保要求:		RoHS ( PPM )
MATTER	Cd	≤100
Pb	Hg	≤1000
Cr6+	PBDE	≤1000
PBDE	PBDE	≤1000

制图	第一版	日期: 2018.06.29	单位: mm	版本: A1	物料编号: 2.00002560
射频	李方森	日期: 2018.06.29	材料	比例	页码: 1/1
审核	/	日期: /	工艺	产品名称	WC0D-90(不含红磷低损)同轴线
批准	龙秋霖	日期: 2018.06.29	规格	图框编号	ZTX-QR-RD-013

深圳市中天迅通信技术股份有限公司

序号	部件名称	材质工艺	料号
①	同轴线	银锡(低损耗)/黑色	SY113L/50-001
②	RF 端子1代	磷青铜(镀金)	CM-958-C113-CM-B-BU-A0

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## 4-3 Mechanical Configuration(天线组件)

版本	说明	审核	日期	批准	日期

材质说明:

序号	结构说明	材质	工艺	备注
①	RF同轴线	银锡(低损耗)/黑色		料号:ST113L/50-001
②	WiFi弹片	SUS304 T=0.30mm	镀镍	
③	支撑泡棉	防火EVA 3M 9495		
④	固定泡棉胶	泡棉胶 3M RP45		通过UL-94 通过UL-746C
⑤	护套	黑色无卤无红磷环保热缩套管		
⑥	RF 端子1代	磷青铜	镀金 厚度 ≥ 1μ	料号: CW-9558-C113-CW-B-B1-A0

注:带\*号尺寸为CPK检测尺寸

深圳市中天迅通信技术股份有限公司

日期:	2018.06.29	版本:	A1	比例:	1:1
图号:	2018.06.29	物料编号:	2.00000616	材料:	SUS304 T=0.30mm (镀镍)
日期:	2018.06.29	审核:	/	图例:	1/1
日期:	2018.06.29	批准:	/	产品名称:	WC0D-90(不含红磷低损)WiFi组件
日期:	2018.06.29	图例:	A1	图例:	Z7X-QR-RD-018

环保要求:

MATTER	RoHs ( PPM )	未注明公差	制图
Cd	≤100	5 LND ±0.08	2018.06.29
Pb	≤1000	5-10 ±0.10	2018.06.29
Hg	≤1000	10-35 ±0.12	2018.06.29
Cr6+	≤1000	35-50 ±0.15	2018.06.29
PBB	≤1000	50-100 ±0.18	2018.06.29
PBDE	≤1000	100 0VE ±0.20	2018.06.29

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## 5. Measurement Data

### 6. Salt-Spray test

35°C, 85%RH, 48Hours(According to MIL-STD-810E)The salt-spray is generated from a 5% salt solution., The VSWR, Gain, Radiation Pattern must be met specifications after the salt-spray test.

### 7. Environment Characteristic

NO.	ITEM	TEST CONDITION	SPECIFICATION
7-1	High Temperature/Humidity Storage Test(non operating)	1. Temperature: +80 ±2°C 2. Humidity: 90~95%RH 3. Time: 48hrs	No material deformation is allowed.
7-2	Low Temperature/Humidity Storage Test(non operating)	1. Temperature: -30±2°C 2. Humidity: 0%RH 3. Time:48hrs	The VSWR, Gain, Radiation Pattern must be met specifications after these test.

### 8. Material list

序号	材料（原料） 名称	第三方公证化学报告 测试编号	第三方公证化学 报告测试单位	第三方公证化学 报告测试日期	状态	文档
1	SUS304	SZXEC1800784502	SGS	2018/05/24	有效	PDF
2	支撑泡棉	C180412011001	CPST	2018/4/14	有效	PDF
3	固定泡棉					
4	3M 背胶	CANEC1802476102	SGS	2018/01/06	有效	PDF
5	RF 端子 1 代	XMNEC1701306006	SGS	2017/10/27	有效	PDF
		ECL01L002089002C	CTI	2018/1/9	有效	PDF
		ECL01K002089001C	CTI	2018/1/9	有效	PDF
		ECL01J084881001	CTI	2018/1/3	有效	PDF
6	热缩套管	A2170058867101010C	CTI	2017/11/24	有效	PDF
7	同轴线（低损）	SHAEC1802904705	SGS	2018/02/14	有效	PDF

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## 9.The packing way

N/A