

SPECIFICATION

SHEET FOR APPROVAL

(Revision: R: A1)

	CUSTOMER(客户名称)	GAOSHENGDA	
	CS P/N(客户机种)	WT3E-11	
	PART NAME(品名)	WIFI Antenna	
	FREQUENCY(频率)	2.4~5 G	
	ZTX NO.(物料编号)	1.01.00451	carrier band packaging
	DATE(日期)	2017-06-02	

CUSTOMER			
QA CHECKED	ME CHECKED	RF CHECKED	MANAGER CHECKED

Remark(备注):

Sign(客户确认签字盖章): _____

ZHONG TIAN XUN TECHNOLOGY CO., LTD				
MANAGER CHECKED	MANAGER CHECKED	ME CHECKED	RF CHECKED	LISTER
		huangxiaoyu	lifangsen	



深圳市中天迅通信科技股份有限公司

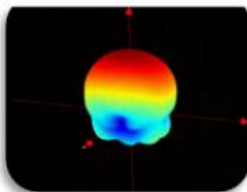
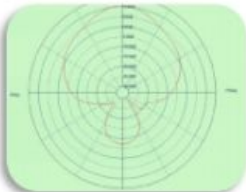
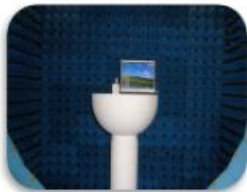
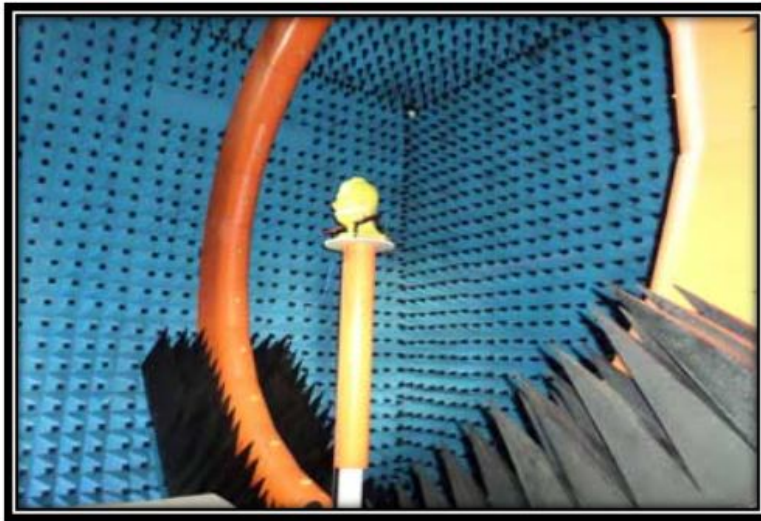
SHENZHEN ZHONGTIAN XUN Communication Technology Co.,Ltd.

Add:NO.34 Shilong Road, Baoan District, Shenzhen Guangdong Province, China
TEL:0755-27588360 /27572127 FAX:0755-27588320 <http://www.chinaztx.com>

Catalog:

1.Test equipment	3
2.Project information	4
2.1Descraption of project	4
2.2 No-source test data	4
2.3 Directional drawing of horizontal plane of 2.4G	4~5
3.Environment treatment	5
4.Matching circuit	5
5.No-source chart	5
5.1 VSWR	5
6. Drawing	6
7.Measurement Data	7
8.Salt-Spray test	8
9. Environment Characteristic	9
10. material list	9
11.Packaging	10

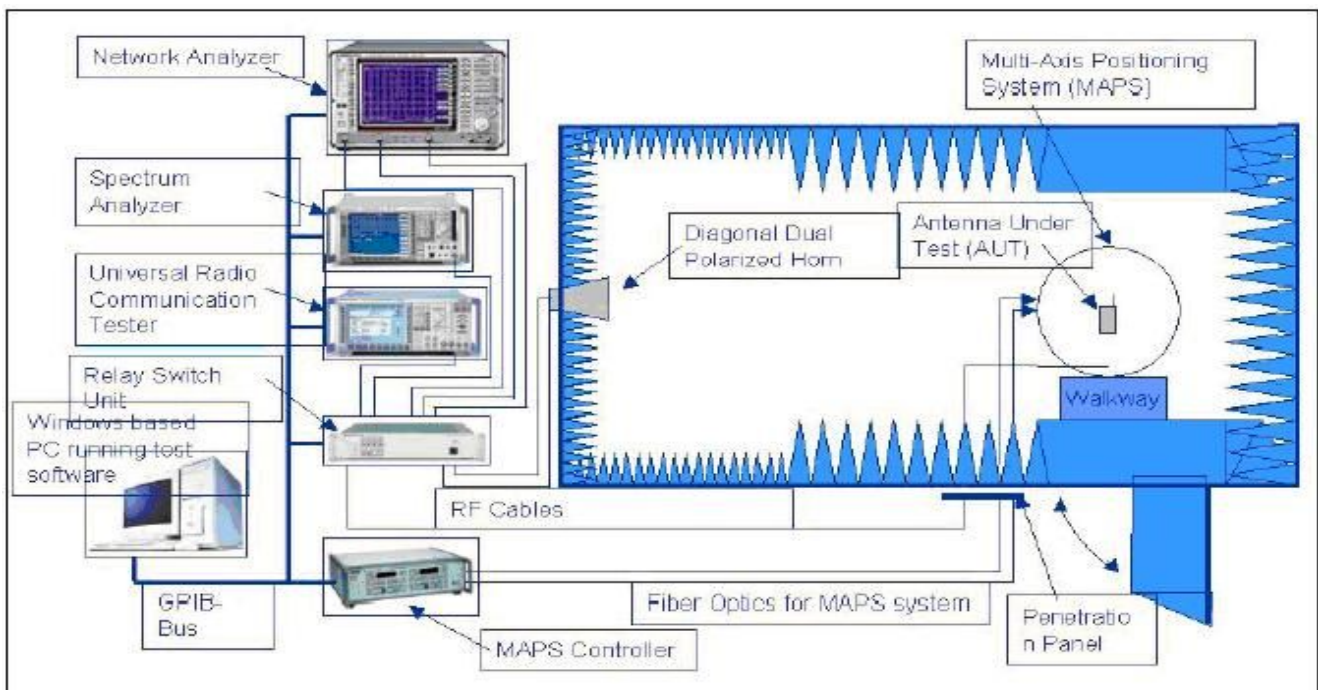
1. Test equipment



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.



2. Project infomation

2.1 Description of Project

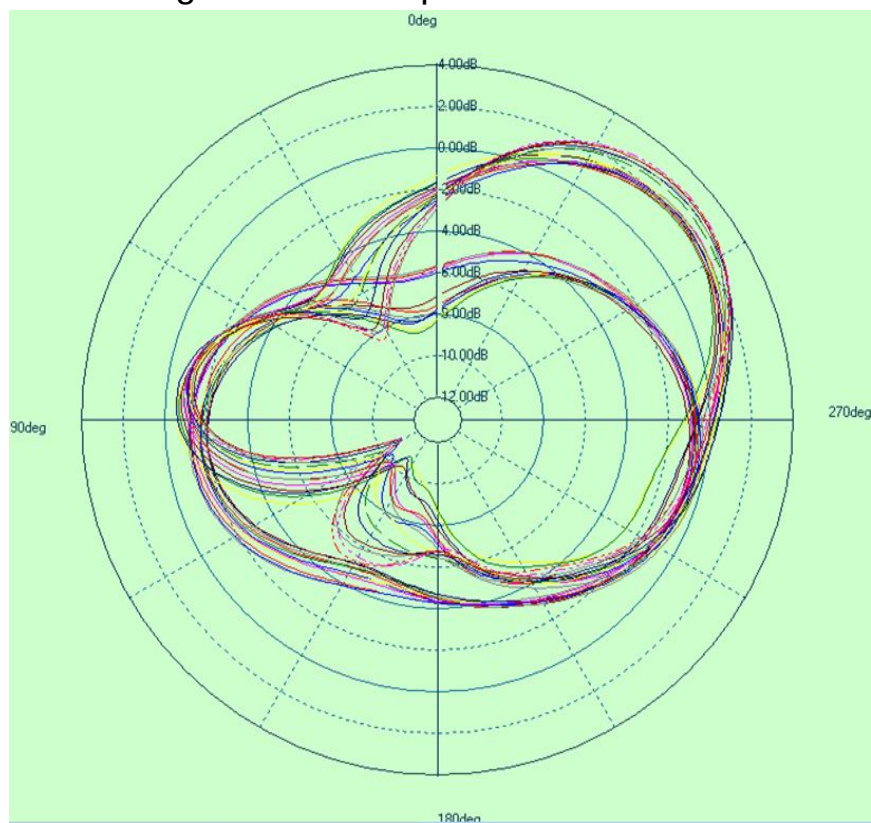
As shown below, there are two antennas on the PCB which is WT3E-11 and WT3E-12 to be tested respectively. The tested sample is molding sample.

2.2 No-source test data

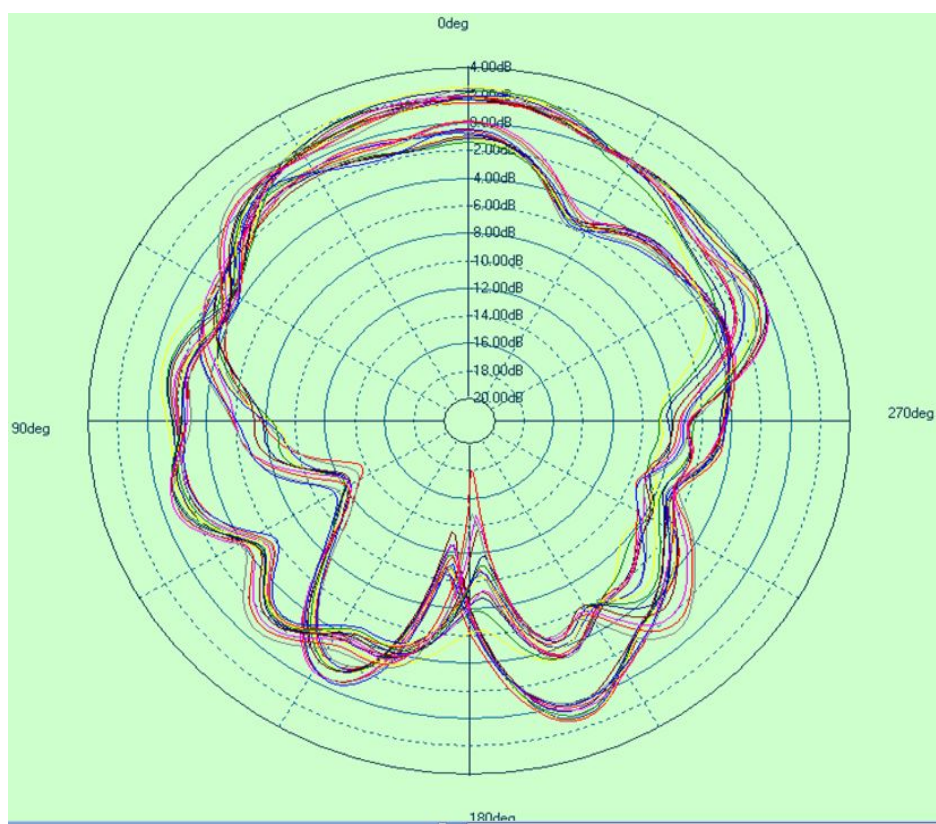
Test data of 2.4G~5.8G efficiency and gain

Frequency	Efficiency	Gain . dB
2.4E+09	55%	1.965087
2.41E+09	55%	1.747932
2.42E+09	56%	2.011216
2.43E+09	61%	2.083311
2.44E+09	60%	2.028712
2.45E+09	60%	2.01519
2.46E+09	60%	1.892422
2.47E+09	65%	2.014073
2.48E+09	65%	2.080288
2.49E+09	66%	1.77556
2.5E+09	64%	1.520574
5.15E+09	73%	3.015395
5.2E+09	72%	2.802659
5.25E+09	73%	3.042086
5.3E+09	72%	2.666647
5.35E+09	73%	2.654816
5.4E+09	74%	2.554222
5.45E+09	72%	2.719635
5.5E+09	70%	2.844753
5.55E+09	69%	2.554846
5.6E+09	70%	2.675371
5.65E+09	69%	2.429675
5.7E+09	68%	2.872939
5.75E+09	71%	2.916023
5.8E+09	69%	3.062214
5.85E+09	71%	3.096462

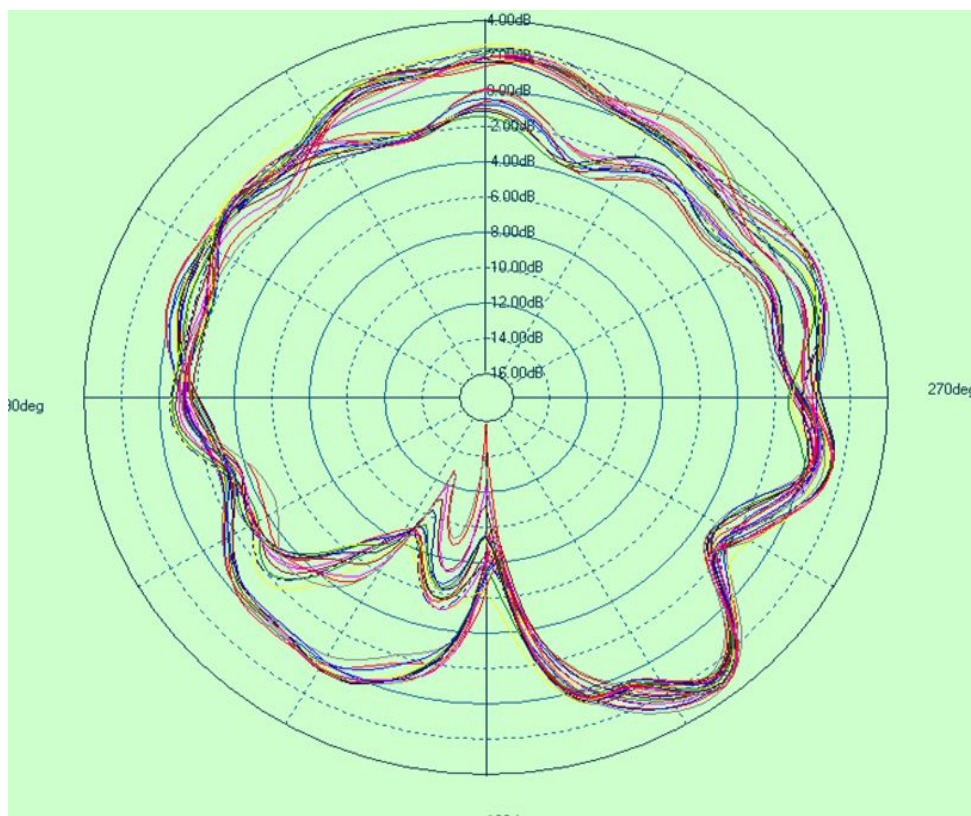
2.3 Directional drawing of horizontal plane of 2.4G~5.8G



Theta=90deg



Phi=0deg



Phi=90deg

3. Environment treatment

N/A

4. Matching circuit

N/A

5. No-source chart

5.1 VSWR



frequency	VSWR
2.4G	2.44
2.45G	1.86
2.5G	1.45
5.1G	1.53
5.8G	1.52

7.Measurement Data

customer name	GAOSHENDA	product name	WT3E-11	quantity	5 pcs								
material	SUS304	material color	/	date	2016/07/15								
Type of product: ☒ ample of new molding ☐ sample of revised molding ☐ mass productio ☐ others													
NO	The size of ME required	measured size										Judgment	remarks
		1	2	3	4	5	6	7	8	9	10		
1	5.00±0.20	5.01	5.00	5.02	5.00	4.98						OK	
2	5.90±0.20	5.85	5.95	5.85	5.95	5.91						OK	
3	6.80±0.20	6.87	6.84	6.82	6.87	6.84						OK	
4	15.75±0.20	15.82	15.77	15.81	15.83	15.82						OK	
5	0.30±0.10	0.31	0.30	0.30	0.30	0.31						OK	
6	14.55±0.20	14.63	14.66	14.67	14.66	14.65						OK	
7	1.20±0.15	1.20	1.19	1.20	1.20	1.20						OK	
8													
9													
10													
11													
appearance: NO smudginess on the surface。													
performance: OK													
Judgment: ☒ OK ☐ NG Approved:huchunmei Check: yiailing tester: weijinshu													
remarks:													

表单编号:ZTX-QR-QA-016 版本: A1



8.Salt-Spray test

customer name	GAOSHENDA		product name	WT3E-11	date	2016. 7. 15
material	SUS304		test time	48H	quantity	PCS
the period of time	test condition		test standard		results	remarks
0-6hour	Salt Spray Test machine: salt solution: NaCl (waterless); concentration5%+-1% ; PH value: 6.5-7.2; Test temp: 32-38℃ ; Pressure of compressed air: 1.0+-0.01 (kg/M2) ; amount of salt spray: 1.0-2.0ml/80cm2/H; relative humidity:85%+-2%; setting angle: 30° +-10° ; time of salt spray: 48h		No rust spots, oxidation, corrosion, obscission of clad layer		ok	2016. 7. 13 8:30AM
6-12hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	
12-18hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	
18-24hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	
24-30hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	
30-36hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	
36-48hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	
42-48hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	2016. 7. 15 8:30AM
≥48 hours			No rust spots, oxidation, corrosion, obscission of clad layer≤ 1% product area			
Result	Salt Spray OK					
tester	weijinshu	Check	yiailing	Approved	huchunmei	

9. Environment Characteristic

NO.	ITEM	TEST CONDITION	SPECIFICATION
4-1	High Temperature/Humidity Storage Test(non operating)	1.Temperature: $+80 \pm 2^{\circ}\text{C}$ 2.Humidity: 90~95%RH 3.Time: 48hrs	No material deformation is allowed. The VSWR, Gain, Radiation Pattern must be met specifications after these test.
4-2	Low Temperature/Humidity Storage Test(non operating)	1.Temperature: $-30 \pm 2^{\circ}\text{C}$ 2.Humidity: 0%RH 3.Time:48hrs	

10. material list

No.	material	manufa cturer	Chemistry report No. by third party notarization	The company of third party notarization	Date	state	Form
1	SUS304	ZTX	CANEC1610311502	SGS	2016/6/6	valid	PDF



11.Packaging

 深圳市中天迅通信技术有限公司 ZHONGTIAN XUN Communication Technology Co., Ltd. SOP					
product name	Type	File No.	Version	Step	
WiFi antenna	WE3E-11	ZTX-QD-WI -070	A1	packaging	
The step of operation					
1. 400pcs/1 plate, stick interior label (which included material name: type, item, qty);					
2. Put the box in the carton (5plates in the carton), expect Mantissa;					
3. Stick outside label on the top right corner of carton (which included Manufacturer, type, name, PN, QTY, Order No., date, QA test, ROHS label)					
4. Sealing					
Material		PN			
Contents			Date	Made by	
Version					
Made by	longqioulin	Check	vialling	QA confirmed	Approved
				huchurmei	liuyuwwei

SPECIFICATION

SHEET FOR APPROVAL

(Revision: R: A1)

	CUSTOMER(客户名称)	GAOSHENGDA	
	CS P/N(客户机种)	WT3E-12 WiFi	
	PART NAME(品名)	WiFi Antenna	
	FREQUENCY(频率)	2.4~5 G	
	ZTX NO.(物料编号)	1.01.00452	carrier band packaging
	DATE(日期)	2017-06-02	

CUSTOMER			
QA CHECKED	ME CHECKED	RF CHECKED	MANAGER CHECKED

Remark(备注):

Sign(客户确认签字盖章): _____

ZHONG TIAN XUN TECHNOLOGY CO., LTD				
MANAGER CHECKED	MANAGER CHECKED	ME CHECKED	RF CHECKED	LISTER
		huangxiaoyu	lifangsen	



深圳市中天迅通信科技股份有限公司

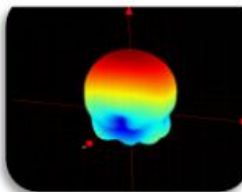
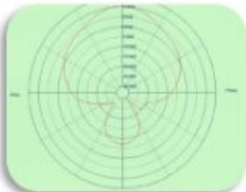
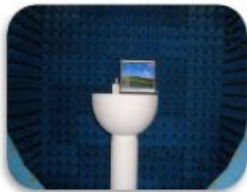
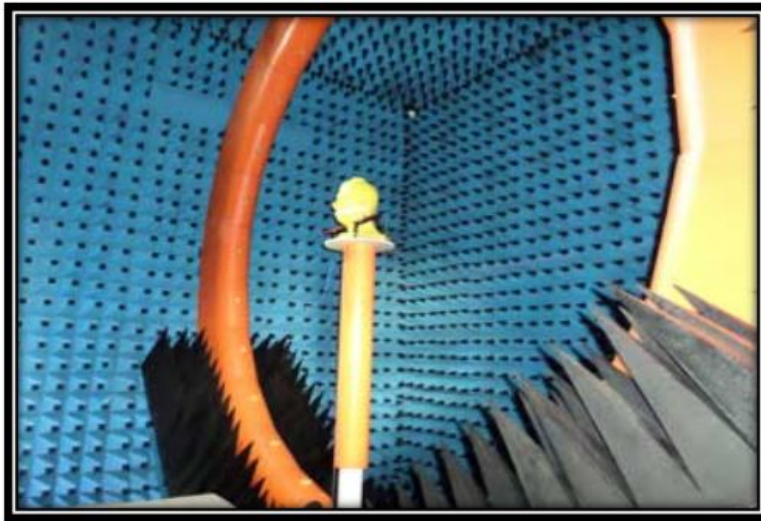
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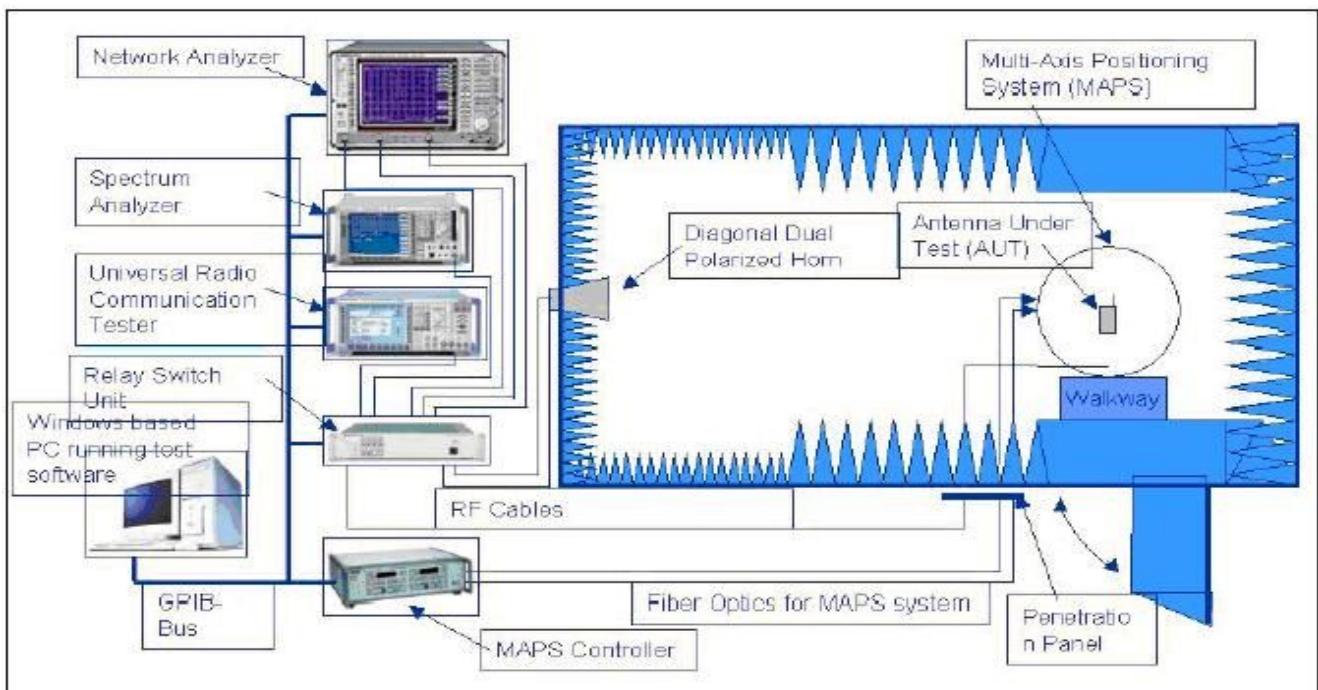
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Testing range:

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



2. Project information

2.1 Description of Project

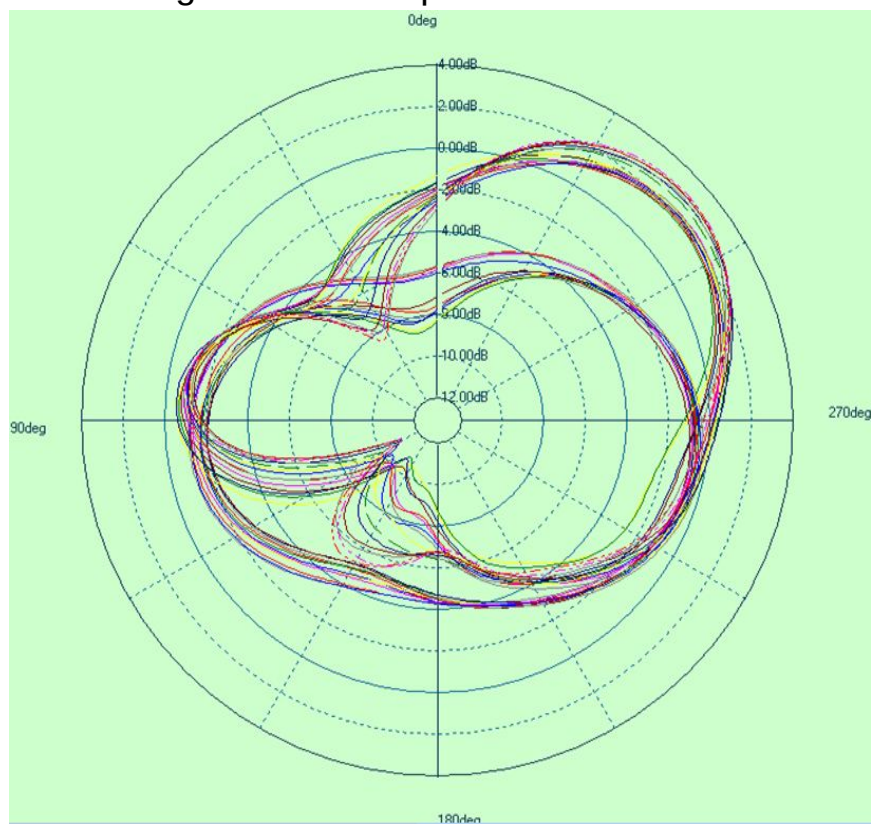
As shown below, there are two antennas on the PCB which is WT3E-12 and WT3E-12 to be tested respectively. The tested sample is molding sample.

2.2 No-source test data

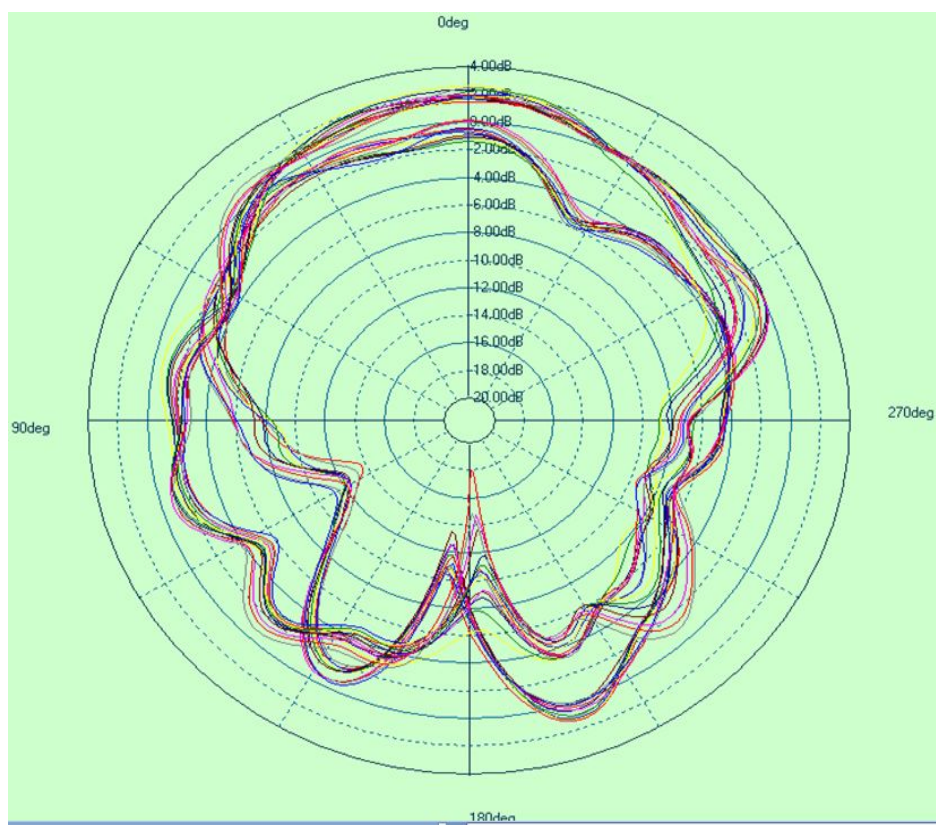
Test data of 2.4G~5.8G efficiency and gain

Frequency	Efficiency	Gain . dB
2.4E+09	57%	1.865087
2.41E+09	57%	1.757932
2.42E+09	57%	2.000122
2.43E+09	61%	1.933115
2.44E+09	62%	1.628712
2.45E+09	63%	1.61519
2.46E+09	64%	1.892422
2.47E+09	65%	1.914073
2.48E+09	65%	1.980288
2.49E+09	66%	1.77556
2.5E+09	64%	1.520574
5.15E+09	63%	3.061539
5.2E+09	65%	2.902659
5.25E+09	66%	3.042086
5.3E+09	67%	2.866647
5.35E+09	68%	2.754816
5.4E+09	70%	2.954222
5.45E+09	72%	2.719635
5.5E+09	70%	2.844753
5.55E+09	69%	2.554846
5.6E+09	73%	2.475371
5.65E+09	69%	2.729675
5.7E+09	72%	2.672939
5.75E+09	71%	2.816023
5.8E+09	69%	3.066221
5.85E+09	73%	3.079646

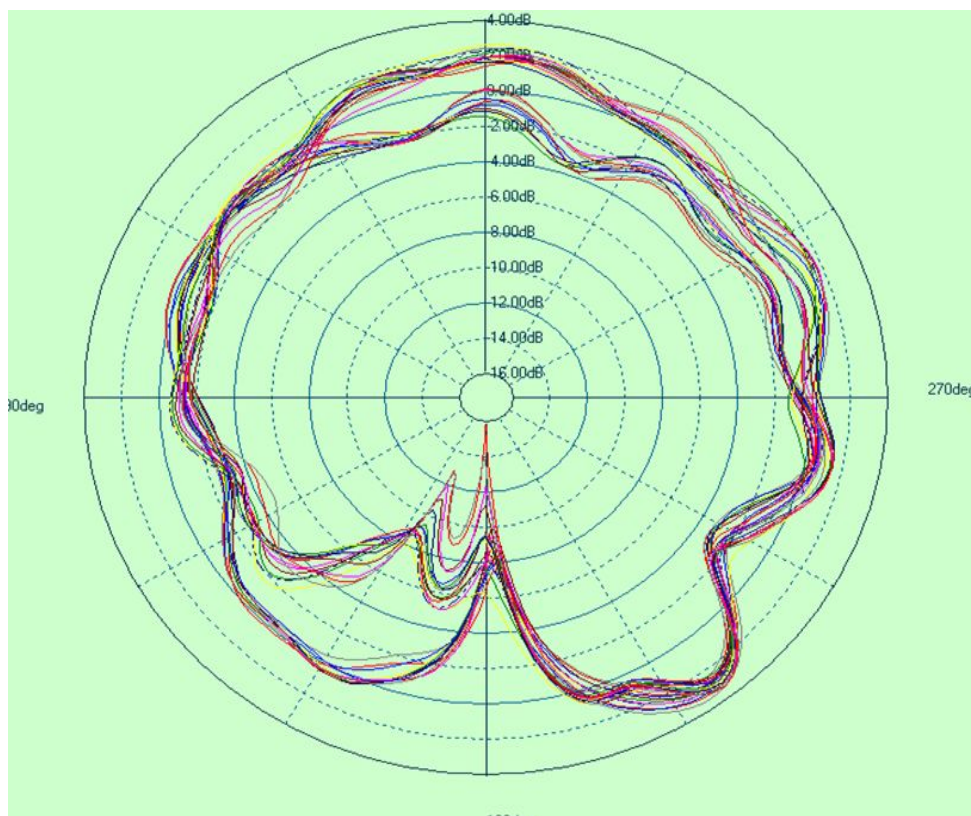
2.3 Directional drawing of horizontal plane of 2.4G~5.8G



Theta=90deg



Phi=0deg



Phi=90deg

3. Environment treatment

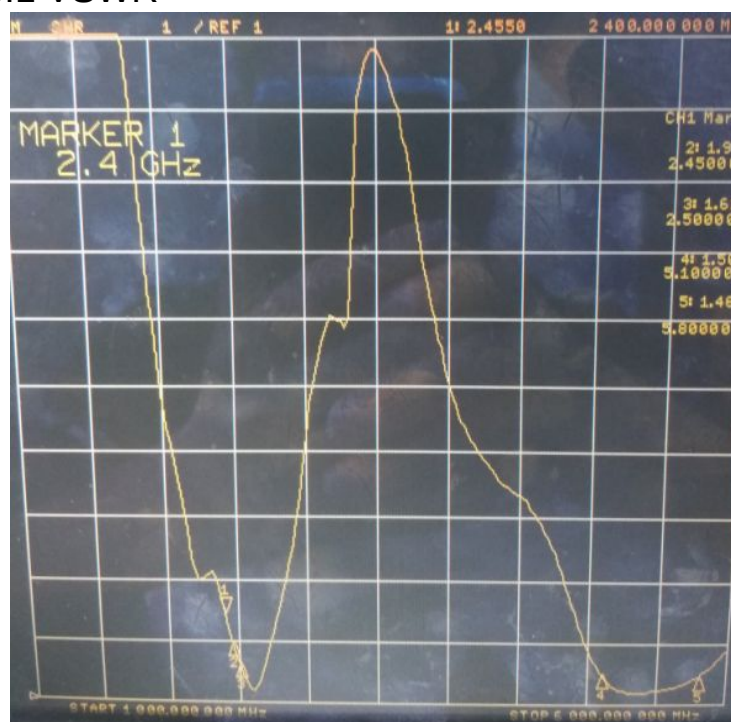
N/A

4. Matching circuit

N/A

5. No-source chart

5.1 VSWR



frequency	VSWR
2.4G	2.46
2.45G	1.97
2.5G	1.62
5.1G	1.51
5.8G	1.46

7.Measurement Data

customer name	GAOSHENDA	product name	WT3E-12	quantity	5 pcs
material	SUS304	material color	/	date	2016/07/15

Type of product: ☒ ample of new molding ☐ sample of revised molding ☐ mass productio ☐ others

NO	The size of ME required	measured size										Judgment	remarks
		1	2	3	4	5	6	7	8	9	10		
1	5.00±0.20	4.99	5.01	5.00	5.00	5.01						OK	
2	5.90±0.20	5.85	5.95	5.85	5.95	5.91						OK	
3	6.80±0.20	6.82	6.84	6.82	6.87	6.82						OK	
4	0.30±0.10	0.32	0.30	0.31	0.30	0.32						OK	
5	14.55±0.20	14.63	14.66	14.67	14.66	14.65						OK	
6	15.75±0.20	15.79	15.77	15.76	15.83	15.80						OK	
7	1.20±0.15	1.19	1.20	1.19	1.20	1.19						OK	
8													
9													
10													
11													

appearance: NO smudginess on the surface.

performance: OK

Judgment:

☒ OK ☐ NG

Approved:huchunmei

Check: yiailing

tester: weijinshu

remarks:

表单编号:ZTX-QR-QA-016 版本: A1



8.Salt-Spray test

customer name	GAOSHENDA		product name	WT3E-12	date	2016. 7. 15
material	SUS304		test time	48H	quantity	PCS
the period of time	test condition		test standard		results	remarks
0-6hour	Salt Spray Test machine: salt solution: NaCl (waterless); concentration5%+-1% ; PH value: 6.5-7.2; Test temp: 32-38℃ ; Pressure of compressed air: 1.0+-0.01 (kg/M2) ; amount of salt spray: 1.0-2.0ml/80cm2/H; relative humidity:85%+-2%; setting angle: 30° +-10° ; time of salt spray: 48h		No rust spots, oxidation, corrosion, obscission of clad layer		ok	2016. 7. 13 8:30AM
6-12hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	
12-18hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	
18-24hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	
24-30hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	
30-36hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	
36-48hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	
42-48hour			No rust spots, oxidation, corrosion, obscission of clad layer		ok	2016. 7. 15 8:30AM
≥48 hours			No rust spots, oxidation, corrosion, obscission of clad layer≤ 1% product area			
Result	Salt Spray OK					
tester	weijinshu	Check	yiailing	Approved	huchunmei	

9. Environment Characteristic

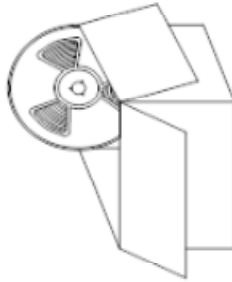
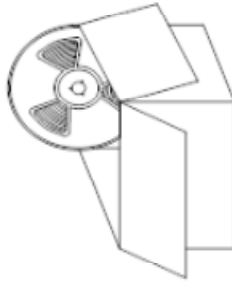
NO.	ITEM	TEST CONDITION	SPECIFICATION
4-1	High Temperature/Humidity Storage Test(non operating)	1.Temperature: $+80 \pm 2^{\circ}\text{C}$ 2.Humidity: 90~95%RH 3.Time: 48hrs	No material deformation is allowed. The VSWR, Gain, Radiation Pattern must be met specifications after these test.
4-2	Low Temperature/Humidity Storage Test(non operating)	1.Temperature: $-30 \pm 2^{\circ}\text{C}$ 2.Humidity: 0%RH 3.Time:48hrs	

10. material list

No.	material	manufa cturer	Chemistry report No. by third party notarization	The company of third party notarization	Date	state	Form
1	SUS304	ZTX	CANEC1610311502	SGS	2016/6/6	valid	PDF



11.Packaging

		深圳市中天迅通信技术有限公司 ZHONGTIAN XUN Communication Technology Co., Ltd.		SOP	
product name		Type	File No.	Version	Step
WiFi antenna		WE3E-12	ZTX-QD-WI-071	A1	packaging
The step of operation					
		1. 400pcs/1 plate, stick interior label (which included material name: type, item, qty);			
		2. 2. Put the box in the carton (5plates in the carton), expect Mantissa;			
		3. Stick outside label on the top right corner of carton (which included Manufacturer, type, name, PN, QTY, Order No., date, QA test, ROHS label)			
		4. Sealing			
PIC1: carrier band packaging		PIC2: 400pcs/1plate			
		PIC3: packing			
		PIC4: stick a label, sealing			
Version		Contents			Date
Made by		longqioulin	Check	viailing	QA confirmed
				huchumei	Approved
					liuyuwe