

SPECIFICATION

SHEET FOR APPROVAL

(Revision: R: A2)

	CUSTOMER(客户名称)	利利普	
	CS P/N(客户机种)	VT-7A-EM	
	PART NAME(品名)	MAIN	
	FREQUENCY(频率)	800-960MHz; 1710-2690MHz。	
	ZTX NO.(物料编号)	F.00000597	
	DATE(日期)	2025-3-25	

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
		胡小良	林权	



福州中天迅通信技术有限公司

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ANTENNA SPECIFICATION

CUS P/N : VT-7A-EM MAIN

ApplicationDate:Mar, 25 ,2025

Rev: R:A1

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Revision history

版本	日期	状态
A1	2023-2-27	规格书制定。
A2	2025-3-25	更新无源，有源数据。



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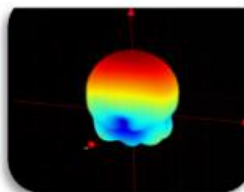
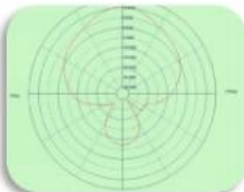
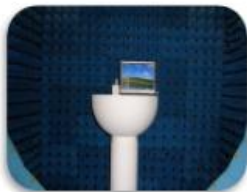
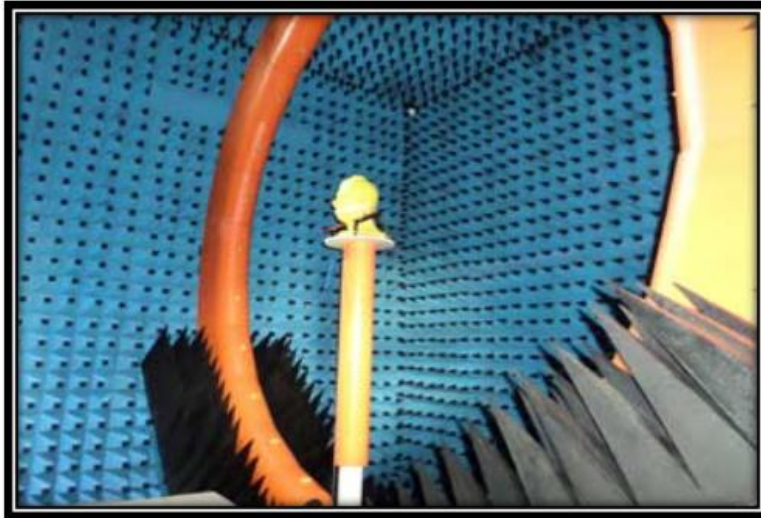
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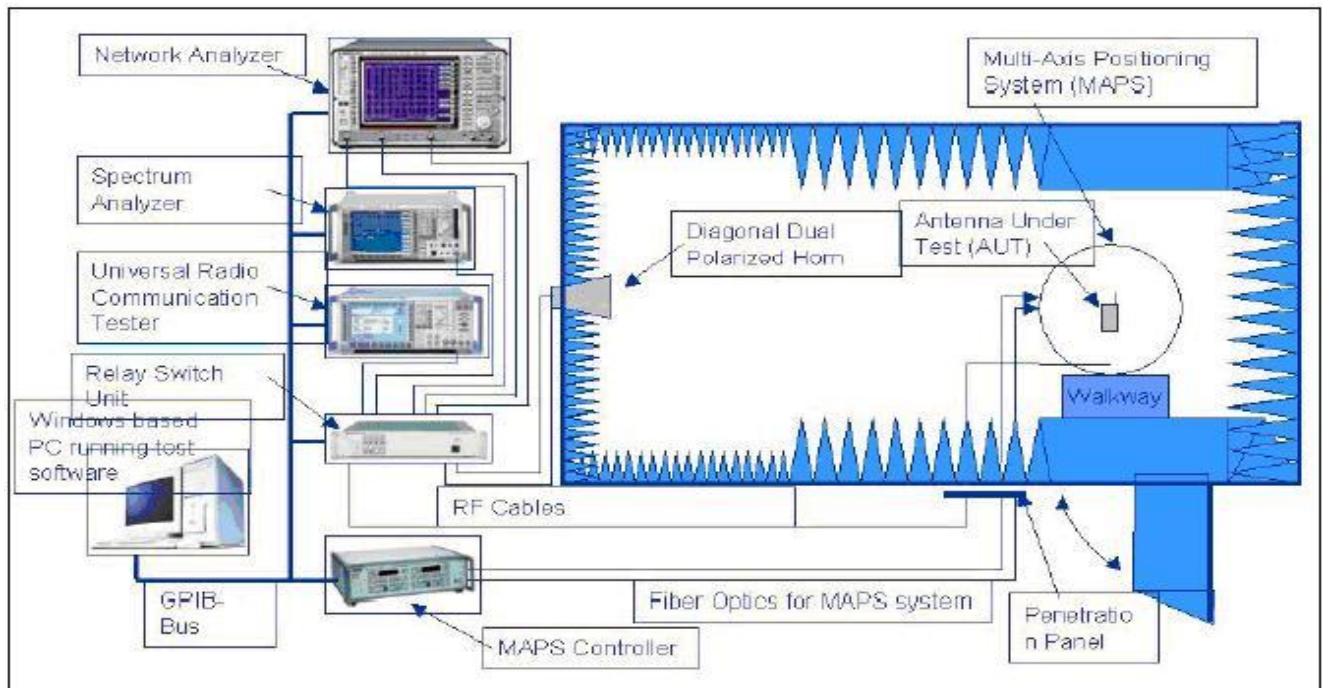
1. Test equipment



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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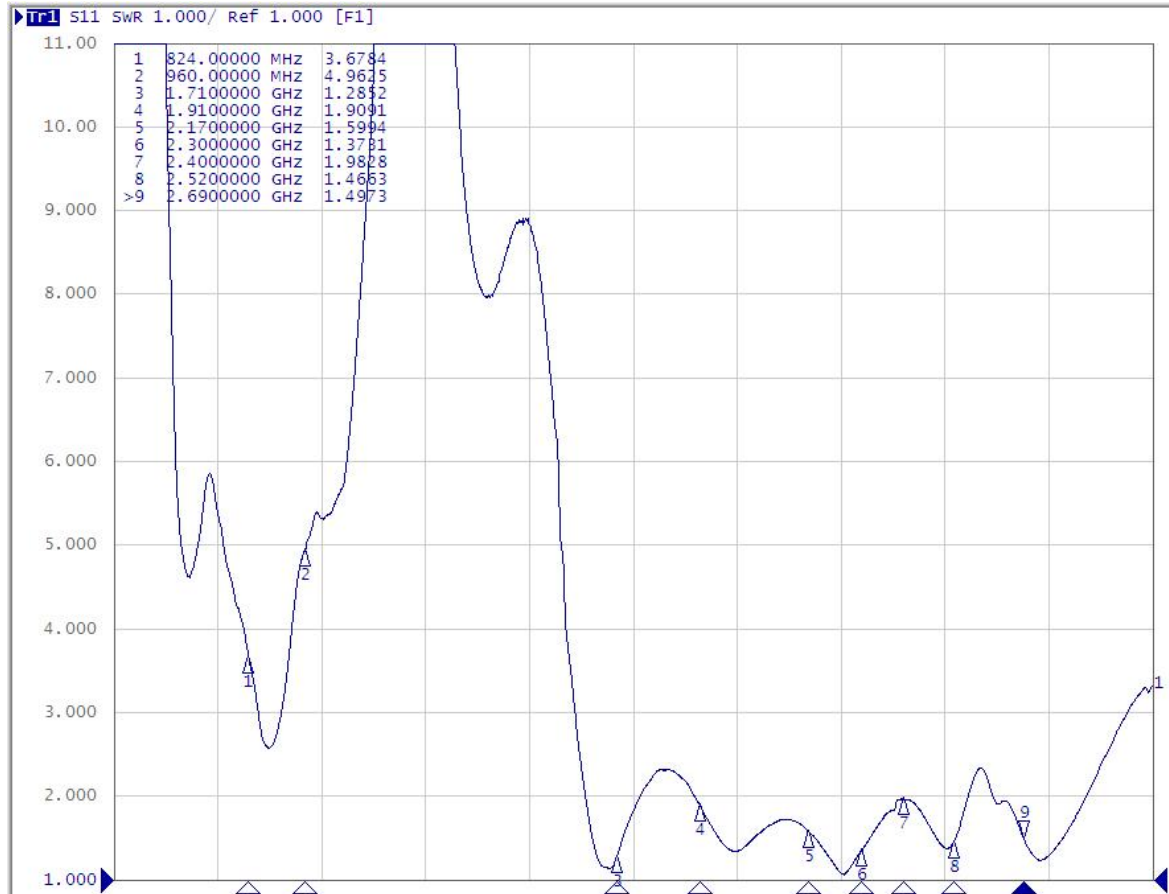
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2.Antenna test data

2-1 VSWR



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2-2 Antenna passive test

chNo	Freq (MHz)	Gain (dB)	Efficiency_Pcent (%)
1	800	-2.00972	30.42039
2	810	-2.29083	30.39533
3	820	-1.36273	33.07996
4	830	-0.89821	36.48834
5	840	-0.82221	37.85317
6	850	-0.6148	38.2192
7	860	-0.29627	37.94277
8	870	-0.93658	35.84588
9	880	-1.09478	38.71019
10	890	-0.36677	44.9906
11	900	-0.29353	46.42015
12	910	-0.74095	42.59511
13	920	-0.64813	39.1884
14	930	0.748698	42.41672
15	940	1.632674	46.4076



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16	950	0. 670853	44. 37358
17	960	-0. 26918	39. 16658
18	1710	0. 523785	46. 05126
19	1730	0. 007195	46. 67124
20	1750	-0. 07764	44. 3171
21	1770	0. 015616	41. 77123
22	1785	0. 380213	40. 33093
23	1790	-0. 24535	41. 53061
24	1800	0. 177303	42. 1598
25	1810	-0. 52942	43. 13737
26	1830	0. 149294	46. 48562
27	1840	0. 241686	43. 06534
28	1850	-0. 08287	45. 43045
29	1870	0. 121829	47. 99431
30	1880	0. 338093	51. 42106
31	1890	0. 458129	50. 08663
32	1900	0. 374072	49. 38504
33	1910	0. 146135	47. 89845



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34	1930	0.52487	50.10799
35	1950	0.690465	51.42466
36	1960	0.859399	50.77892
37	1970	0.830157	53.50596
38	1990	0.885338	55.81799
39	2010	0.576138	54.42848
40	2030	0.959512	55.27167
41	2050	0.898988	53.68709
42	2070	0.851802	53.54777
43	2090	1.075926	53.94529
44	2110	1.146601	53.62538
45	2130	1.234771	52.87334
46	2150	1.080306	49.47985
47	2170	1.238976	47.25169
48	2300	1.668714	44.1327
49	2320	1.995592	47.79334
50	2340	1.413292	46.19072
51	2360	1.127533	47.74562



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52	2380	0.441965	46.38471
53	2400	0.748874	53.00567
54	2500	2.632312	60.80304
55	2520	2.290392	57.96157
56	2540	1.079459	48.79628
57	2560	0.994795	42.7727
58	2580	0.580468	35.20365
59	2600	-0.05636	34.07439
60	2620	-0.97557	33.26136
61	2640	-1.20271	34.43429
62	2660	0.079953	39.87751
63	2680	1.306278	47.00384
64	2690	1.785831	51.71269



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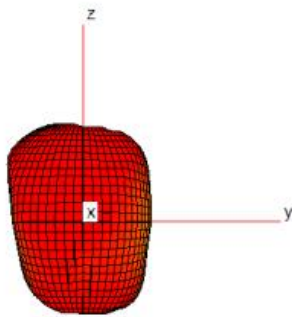
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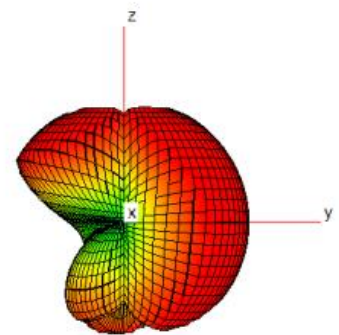
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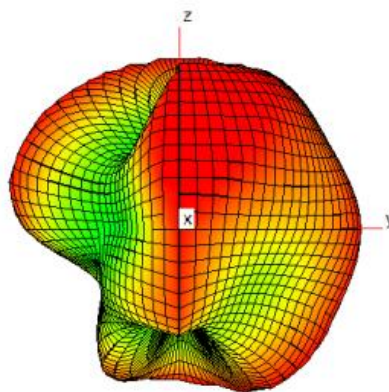
2-3 3D radiation drawing



900MHz



1850MHz



2500MHz



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2-4 Active test data 4G

FDD band8	channel	21500	21625	21750
	TRP	20. 01	20. 29	19. 34
	TIS		-96. 55	
FDD band20	channel	24200	24300	24400
	TRP	19. 44	19. 97	19. 91
	TIS		-94. 41	
TDD band38	channel	37850	38000	38150
	TRP	20. 15	20. 74	20. 47
	TIS		-91. 42	
TDD band40	channel	38750	39150	39550
	TRP	18. 18	18. 40	19. 61
	TIS		-91. 58	
TDD band41	channel	40540	40740	40940
	TRP	20. 38	20. 73	20. 19
	TIS		-91. 5	



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FDD band8	channel	21500	21625	21750
	TRP	20. 01	20. 29	19. 34
	TIS		-96. 55	
FDD band20	channel	24200	24300	24400
	TRP	19. 44	19. 97	19. 91
	TIS		-94. 41	
TDD band38	channel	37850	38000	38150
	TRP	20. 15	20. 74	20. 47
	TIS		-91. 42	
TDD band40	channel	38750	39150	39550
	TRP	18. 18	18. 40	19. 61
	TIS		-91. 58	
TDD band41	channel	40540	40740	40940
	TRP	20. 38	20. 73	20. 19
	TIS		-91. 5	



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3G

WCDMA band1	channel	9612	9750	9888
	TRP	20.52	21.10	20.95
	TIS		-107.44	
WCDMA band2	channel	9262	9400	9538
	TRP	20.54	20.28	20.35
	TIS		-108.88	
WCDMA band4	channel	1312	1450	1513
	TRP	20.64	21.12	20.84
	TIS		-107.02	
WCDMA band5	channel	4132	4183	4233
	TRP	19.38	19.56	19.69
	TIS		-105.96	
WCDMA band8	channel	2712	2788	2863
	TRP	19.44	19.28	18.17
	TIS		-104.69	



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2G

GSM850	channel	128	190	251
	TRP	27.48	27.46	28.03
	TIS		-93.43	
GSM900	channel	1	62	124
	TRP	29.47	29.62	28.52
	TIS		-102.86	
DCS1800	channel	512	699	885
	TRP	27.14	27.65	27.64
	TIS		-99.59	
DCS1900	channel	512	661	810
	TRP	28.31	27.85	28.14
	TIS		-100.65	



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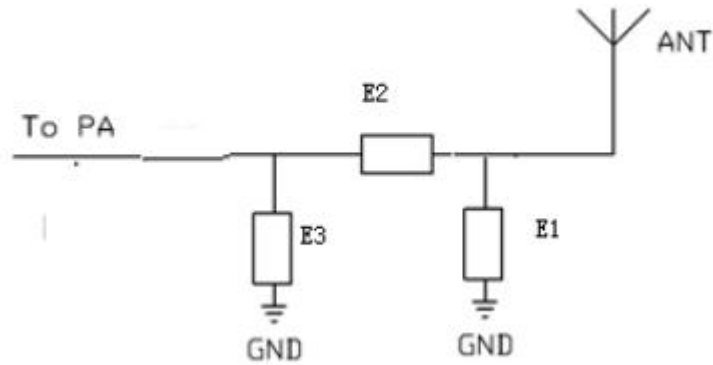
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2-5 Matching circuit



匹配说明	
E1	NC
E2	0Ω
E3	NC



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2-6 Environment treatment



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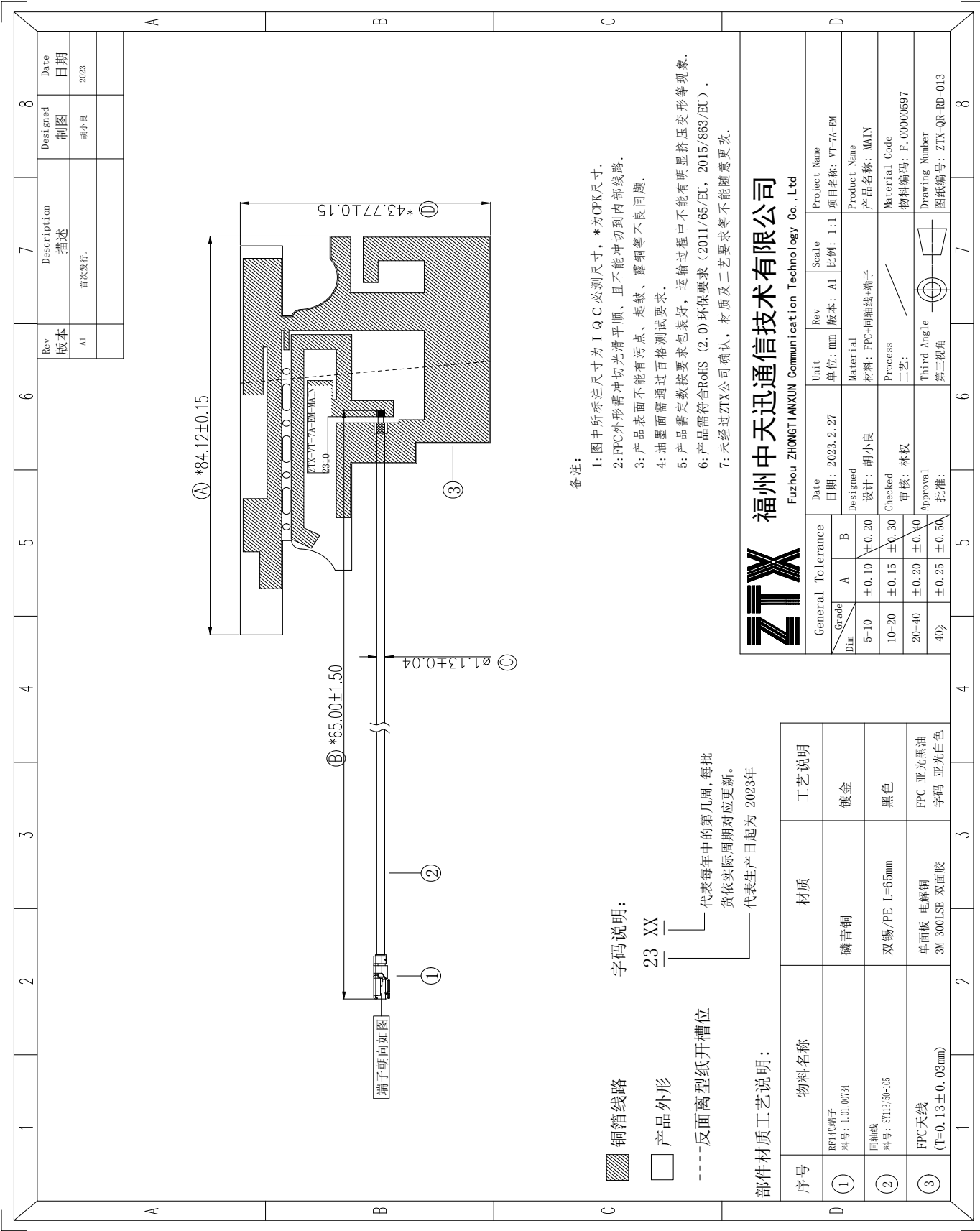
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3. Mechanical Specification



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ZHONGTIAN XUN Communication Technology Co., Ltd.

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4.Size report

5.Salt-Spray test

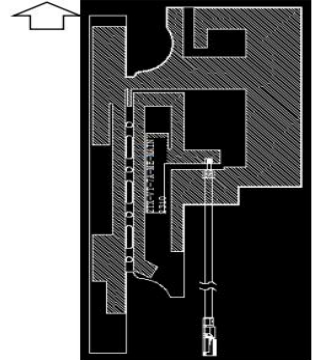
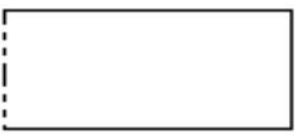
6.Environment Characteristic

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

7.The packing way

福州中天迅通信技术有限公司 Fuzhou ZHONGTIANXUN Communication Technology Co., Ltd				包装规范			
产品名称	MAIN	产品型号	VT-7A-EM	工序序号/名称	版本	文件编号	仪器校准及要求:
				包装	A1	ZTX-QD-WI-023	1.测试设备必须接地; 2.重新连接接口后测试天线悬空,并远离人体或金属器件30cm以上; 3.测试产品时保证天线悬空,并远离人体或金属器件30cm以上;
 图1: 确认数量  图2: 封口PE袋包装/贴标签  图3: 封口PE袋包装/贴标签  图4: 装箱  图5: 贴外箱标签/附出货检验报告  图6: 封箱				作业方法:作业参数(自检验工序作业合格后,方能流入下一道工序)			
				1.确认数量50pcs产品橡皮筋包扎;			
				2.将50pcs产品装入(240*160mm)PE开口袋中,贴小标签,填写产品名称、物料号、数量、周期等信息;			
				2.每5袋装入(330*230mm)PE封口袋装好(250PCS)的PE装袋,贴小标签,填写产品名称、物料号、数量、周期等信息;			
				3.装箱,纸箱规格(45*32.5*21cm),每箱装(5000pcs)尾数除外,并附手写检验报告一份;			
贴外箱标签 附报告				4.标签贴于外箱的右上角,外标签内容(含:企业名称,供应商代码,客户规格号,生产周期,生产批次包装数量,供应商代码,内附检验报告,ROHS等);			
封箱				5.将贴好标签的箱子用胶纸以“工”字型封箱;			
				6S要求:			
				1.保持检测现场台面整洁,无生、水、油污;			
				2.物料摆放整齐,标识清楚;			
				3.操作测试台时,严格按照操作规范使用,避免伤手;			
				操作防护要求:			
				1.作业人员需带手套进行作业,(特殊产品带棉手套);			
				2.检测过程中检测产品做到轻拿轻放;			
				注意事项: 1.客户物料编码和数量是否正确,标签必须用机打印的 2.内标签、外标签、出货报告、送货单内容需一致。			
				3.如是试产物料或有变更均需贴相应标识,尾数箱需贴尾数标识,内附检验报告等			
物料名称	物料代码	规格	用量	备注			
PE开口袋	1.12.000030	240*160*0.05mm	100/袋				
PE封口袋	1.12.000023	330*230*mm	10/袋				
纸板	1.13.000003	42*30cm	2张/箱				
纸箱	1.12.000086	45*32.5*21cm	1/箱				
标签							
橡皮筋							
版本	修订内容			修订日期	修订人		
制订	胡小良	审核	易爱玲	批准	张武民		