SPEED TECHNOLOGY

SPEED Communication Technology Limited

Approval sheet of
国虹 W20 荷兰版 三合一天线
Internal Antenna

Customer/Project		国虹 W20 荷兰版 三合一天线	Frequency Band		BT/WIFI/GPS
SCT P/N		A-AJ-0604	Version		R: B
Date		2013-11-12			
SPEED					
Checked by	RF		Design by	RF	潘金
	ME			ME	杜秋良
	QC		Remark		11.12
Customer					
Date					
Confirmed by	RF				
	ME				
Remark					

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1.Indication

This report summarizes the electrical performance results of the proposed Internal antenna to support the W20 荷兰版-BT/WIFI/GPS program. The antenna is an assembly1575M~2.4G band. (see Figure1).

Figure 1: W20 荷兰版-BT Proposed Antenna

2.Electrical Performance

2.1Specification

W20 荷兰版-BT **Ant.（free）**						
	Frequency (MHz)	**VSWR**	**Gain (dBi) Free Space**	**Frequency (MHz)**	**VSWR**	**Gain dBi) Free Space**
Band	**TX**			**RX**		
2.4G	2400~2490	≤3. 5	≥0. 00			

2.2 Matching Circuit Description

无

2.3 Test Set-up

The antenna was evaluated using the customer provided bar phone. Figure 2 shows the antenna mounted on the test fixture. This section of the report describes the testing on this test fixture.

Figure 2: Antenna Mounted on W20 荷兰版-BT Test Fixture

2.3.1 VSWR

VSWR measurements (S_{11}) were performed using RS Zvb4 Network Analyzer and the previously described test fixture. A ferrite-loaded coaxial cable was used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

2.3.2 Gain & Radiation Patterns

The gain and efficiency of the antenna was measured in the Speed Communication Technology anechoic chamber. The chamber provides less than –40 dB reflectivity from 800 MHz through 6 GHz and 25cm diameter spherical quite zone. The measurement results are calibrated using both dipole and leaky wave horn standards.

2.4 Measurement Data

2.4.1 VSWR

	W20 荷兰版-GPS Antenna		W20 荷兰版-BT/WIFi Antenna	
Freq (MHz)	1560	1590	2400	2500
VSWR	1.73	1.40	3.42	1.74

2.4.2 Peak gain& Efficiency

		Freq. (MHz)	efficiency(%)	Peak Gain(dBi)
Frequency	GPS	1560	27	1.79
		1570	30	2.34
		1580	31	2.05
		1590	31	1.46
	BT/WIFI	2400	15.97	0.27
		2420	25.09	0.58
		2440	29.77	1.22
		2460	16.94	1.67
		2480	15.18	1.31
		2490	23.15	0.84
		2500	33.66	0.57

3. Suggestions and Conclusion

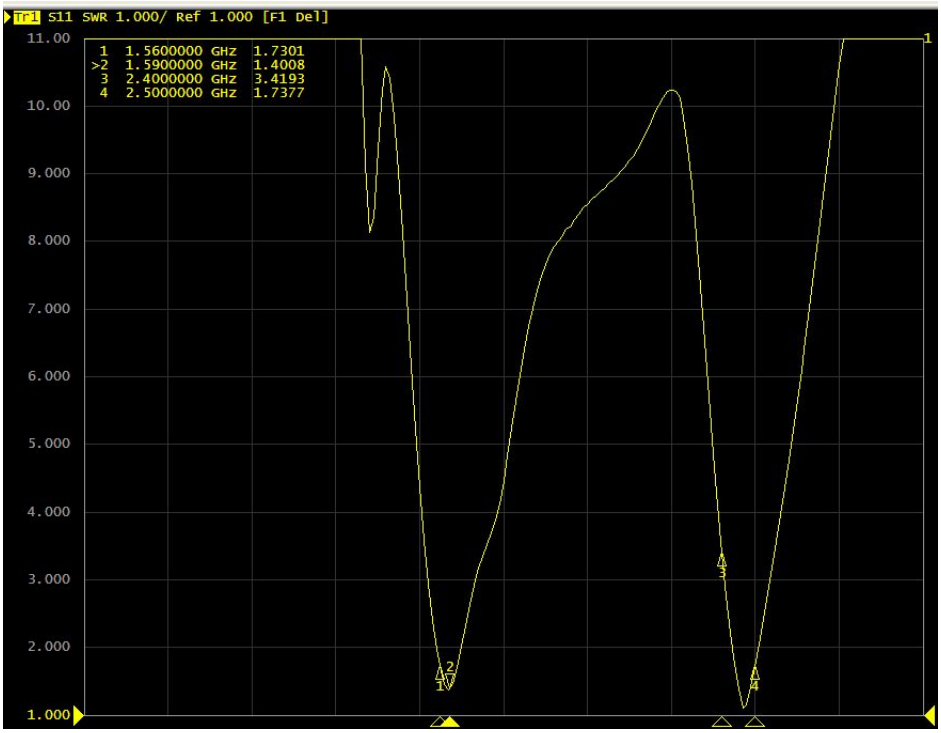
Thisreport summarizes the electrical performance of internal **PIFA** antenna for W20荷兰版-BT .The antenna was tested using the customer provided bar phone test fixture.

In order to get best performance, we tune the resonance frequency higher of 2.4G band. SCT team is looking forward to getting your approval.

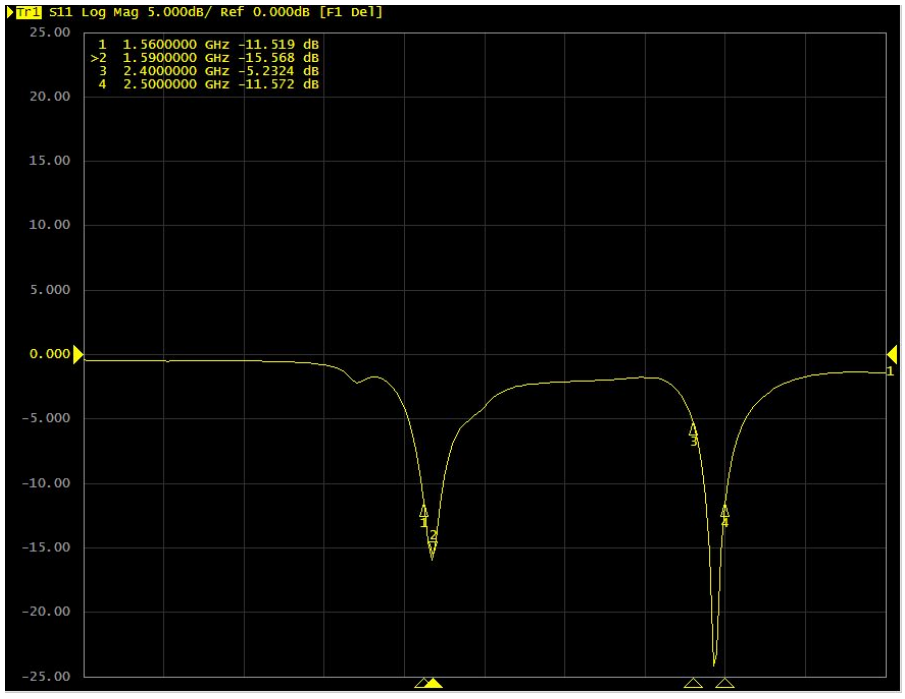
Thanks for your cooperation.

4.Attachment

4.1 S11 Parameter

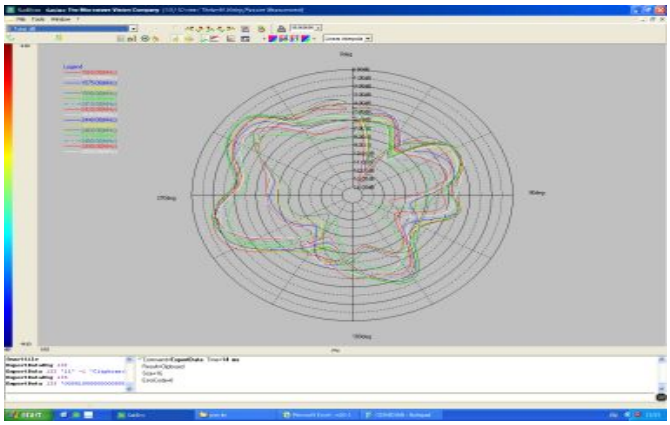


VSWR - W20 荷兰版-BT/WIFI+GPS **Antenna**

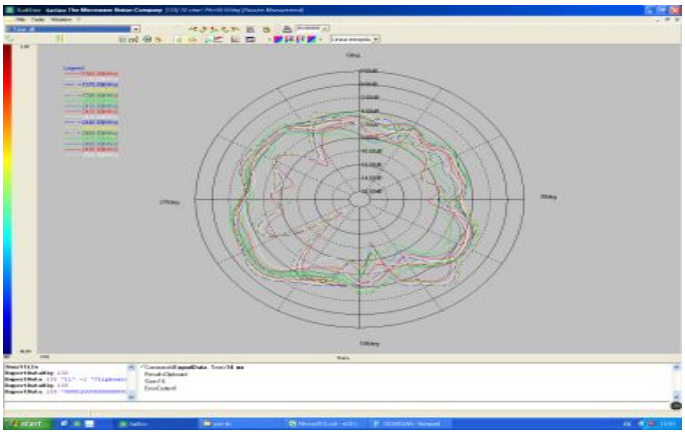


Return Loss - W20 荷兰版-BT/WIFI+GPS **Antenna**

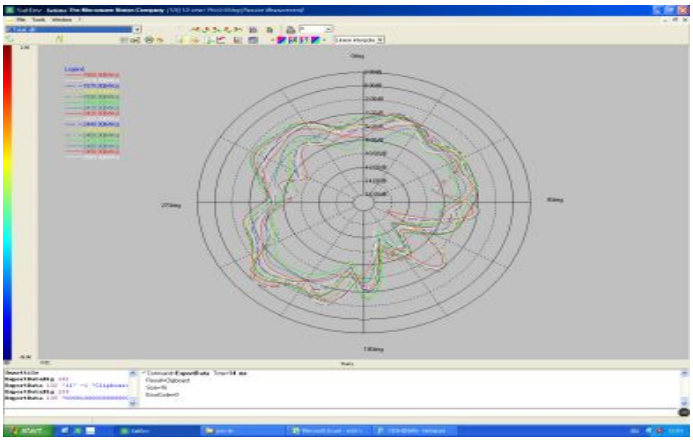
4.2 Radiation Pattern



E1



E2



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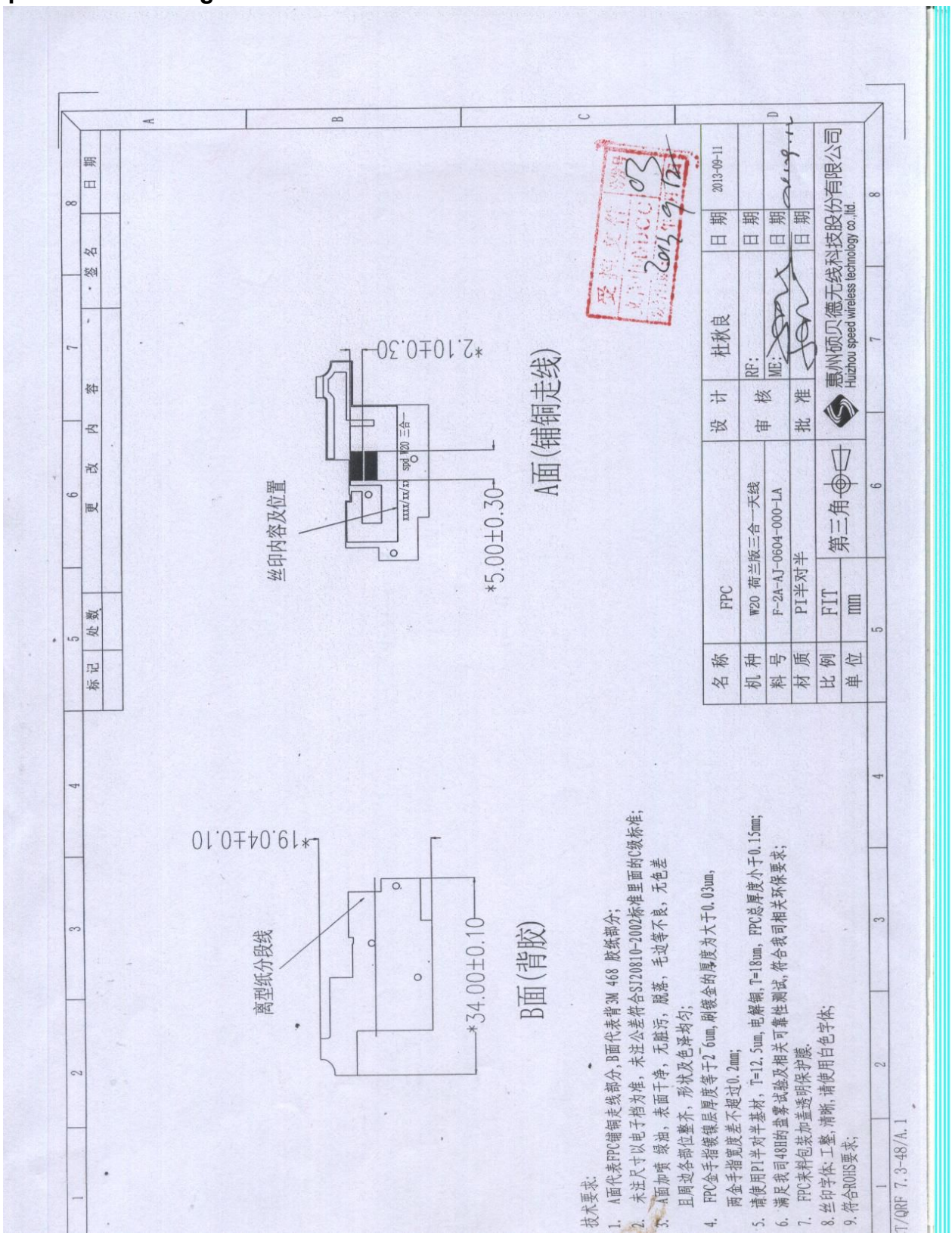
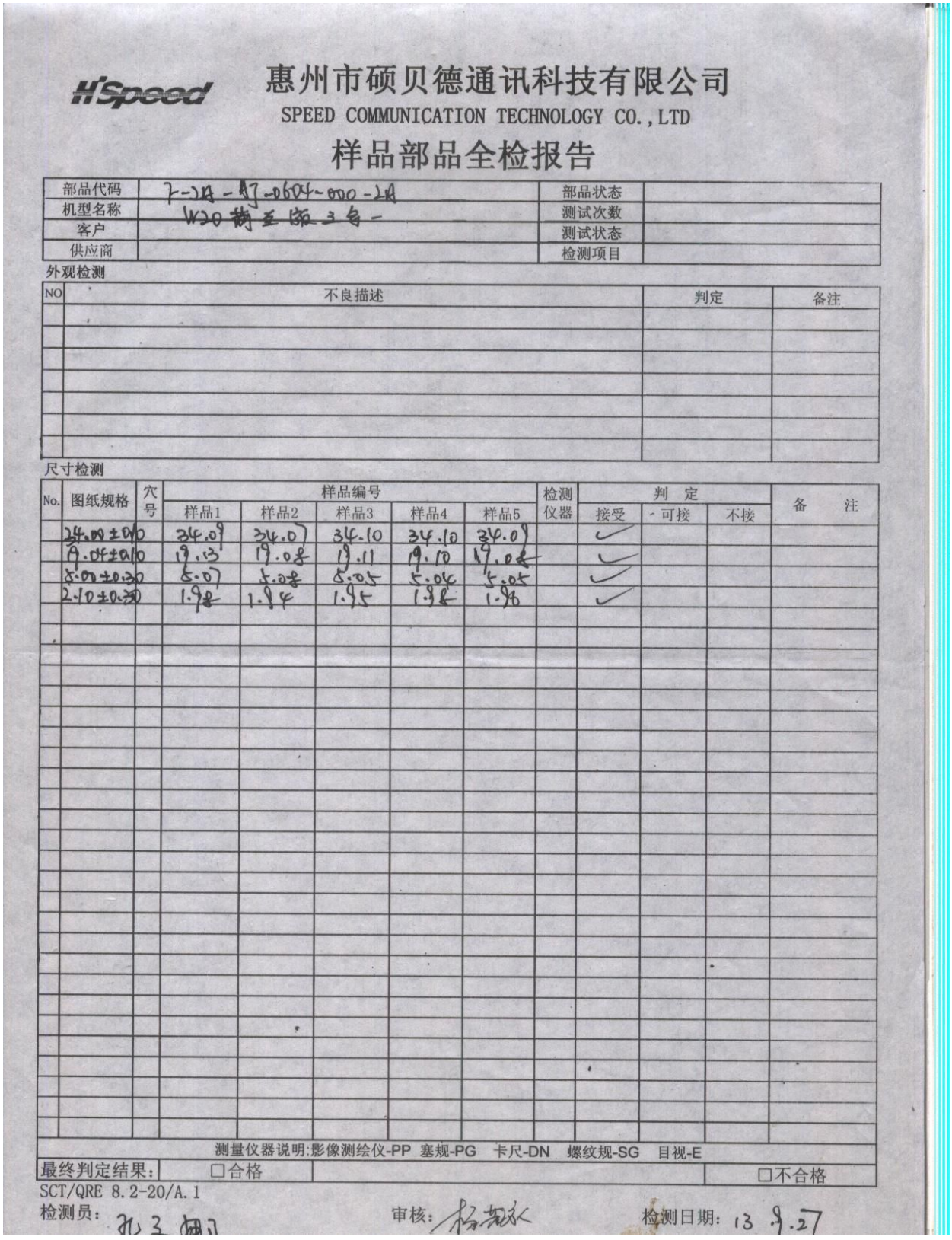
4.3 Appearance drawing



4.4 Full-size test report



惠州市硕贝德通讯科技有限公司
SPEED COMMUNICATION TECHNOLOGY CO.,LTD
样品部品全检报告

部品代码	7-14-07-0604-000-24	部品状态	
机型名称	W20 前主板 3 台	测试次数	
客户		测试状态	
供应商		检测项目	

外观检测

NO	不良描述	判定	备注

尺寸检测

No.	图纸规格	穴号	样品编号 样品1	样品2	样品3	样品4	样品5	检测仪器	判定 接受	可接	不接	备注
	34.00±0.10		34.09	34.07	34.10	34.10	34.09		✓			
	19.05±0.10		19.13	19.08	19.11	19.10	19.08		✓			
	5.00±0.30		5.07	5.08	5.05	5.06	5.05		✓			
	2.10±0.30		1.98	1.94	1.95	1.98	1.96		✓			

测量仪器说明:影像测绘仪-PP 塞规-PG 卡尺-DN 螺纹规-SG 目视-E

最终判定结果: □合格 □不合格

SCT/QRE 8.2-20/A.1

检测员: 审核: 检测日期: 13.9.27

惠州硕贝德无线科技股份有限公司
Huizhou Speed Wireless Technology Co.,Ltd.

可靠性测试报告

客户	国虹	样品来源	A	项目名称	W20荷兰版三合一	成品料号	AJ-0604	送检人	邓润溪	测试日期	2013-9-3

可靠性测试项目及要求

项目	测试项目	测试仪器	测试条件	判定标准	测试结果					备注
					1	2	3	4	5	
1	高温试验	恒温恒湿箱	将产品放置在温度为85℃±2℃的高温环境存贮48H，试验完成后在常温环境下放置2H后检查产品外观	部件无裂痕、明显的变形、脱落，FPC金手指无氧化及FPC无起翘、起泡、起皱等不良；RF测试通过为合格	OK	OK	OK	OK	OK	
2	低温试验	恒温恒湿箱	将产品放置在温度为-40℃±2℃的低温环境存贮48H，试验完成后在常温环境下放置2H后检查产品外观	部件无裂痕、明显的变形、脱落，FPC金手指无氧化及FPC无起翘、起泡、起皱等不良；RF测试通过为合格	OK	OK	OK	OK	OK	
3	盐雾试验	盐雾试验机	将产品放于盐雾试验机中，在35℃±2℃的密闭环境中，PH值在6.5-7.2范围内，用5%±1%的Nacl溶液连续24H盐水喷雾后，将样品用清水冲洗干净后检查天线弹片、FPC金手指等五金电镀件的外观	表面无锈蚀、镀层剥落、变色、起泡等不良现象，FPC金手指无氧化及FPC无起翘、起泡、起皱等不良；RF测试通过为合格	OK	OK	OK	OK	OK	
4	冷热冲击试验	冷热冲击试验机	将天线放入温度冲击试验箱中：先在-40℃±2℃的低温环境下保持1h，在3min内将温度切换到+85℃±2℃的高温环境下并保持1h，共做30个循环。试验完成后在常温环境下放置2H以上后检查产品外观	部件无裂痕、明显的变形、脱落，FPC金手指无氧化及FPC无起翘、起泡、起皱等不良；RF测试通过为合格	OK	OK	OK	OK	OK	
试验结果判定				可靠性试验合格						

注：样品来源分为以下五种：A、新品开发 B、5MIE变更产品 C、量产品 D、客户提供样品 E、竞争对手产品

QT/QRF 8.4-01/A.4

审批：

测试人：

制作日期：6/9-12