

Confidential
PRODUCT SPECIFICATIONS

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28	FQC	28.1	Appearance	Visual	Mark clearly.No dirty,scratch, distortion accepted , carrier should no short shot , damage , over/miss plating, Refer to AIP and golden or limit sample.	Visual Inspection/	AQL=0.4 & C=0	Each Batch	1.Assembly inspection plan 2.FQC inspection record	1.Refer to Procedure SAA/Q-Q-02. 2.Release Inspection R/AIure report to production to improve
		28.2	Key dimension Inspection	CTF	1) 24.7±0.1 2) 9.52±0.1 3) 7.60±0.1 4) 1.55±0.1 5) 2.64±0.1	Smart Scope	10 pcs & C=0	Each Batch	1 Drawing: SS6511-16-000-C-FA 2 Assembly inspection plan & FQR 3 Key dimension,CPK≥ 1.0	1 Refer to Procedure SAA/Q-Q-02. 2 Release Inspection R/AIure report to production to improve. 3.2 & 8.69 & 10
29	Stock in WH	29.1	Quantity & package		Check Quantity Package is no damage, distortion. Label is clear and completed.	Visual	100% & C=0	All stock	1.Product protection control procedure ,SAA/M-Q-03 2.Glowia system	1.Notify the supervisor, arrange to sort or rework. 2.Notify the Planner and CS to adjust plan.
		29.2		Temperature & Humidity	10—30 ℃ 30%—70% RH	Temperature meter/ Humidity meter	Once	A Day	1.Product protection control procedure ,SAA/M-Q-03 2. Air conditioner 3. T&H check record	3 & 6 & Notify WH supervisor
30	Outgoing inspection		Package/ Label		Packaging SOP	Visual	100% & C=0	Every shipment	Outgoing inspection record	Reject,inform Production
31	Ship to customer			Transportation	Forwarder agency agreement	Visual	100% & C=0	Every shipment	Forwarder agency agreement	Inform Forwarder and Arrange new shipment
Note:	Symbol of Special Characteristics (customer)			customer specified (do SPC)		customer specified (monitor)		Internal specified	< C >	

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13 STANDARD OPERATION PROCEDURE (SOP)

13.1 LDS VISUAL INSPECTION

SAA		操作指导书		编制 (ORIGINATED BY)	Chao Jin
生产工程部		(OPERATION INSTRUCTIONS)		版本号 (REVISION NO.)	A
PED.		SOP-LDS W2015 (160)-002		日期 (DATE)	2014-08-12
工序名称 (Process Name)		LDS外观检验	原材料/零件 (Material/Part)	设备/工具/量具 (Equipment/Tools/Gauge)	Project Name:
工序号 (Operation NO.)		LDS visual inspection	品名 (Name)	类别 (Type)	编号/型号 (No./Model)
标准工时 (Standard Cycle Time)		2	Antenna	设备 (Equipment)	W2015
单位: 秒 (Unit : s)		6	Tray	专用工具 (Tool)	Project P/N:
标准产能 (Standard Capability)		540		量具 (Gauge)	C-6511-16-000-51
单位: 片/小时 (Unit: pcs/h)					
序号 (NO.)	操作过程 (WORK ELEMENT)	工序的关键要素 (PROCESS KEY POINTS)			
1	在放大镜下检查塑胶主体的辐射痕迹是否完整? 是否有断开, 过烧, 错位, 发亮, 尺寸偏移等不良。 Use magnifier to inspect if the laser trace of antenna frame is integrate? And to check if any defects such as pattern open, over laser, misalignment, bright, pattern shift and so on.	1. 严格按照检验标准执行, 请参考QC外观检查标准。 Follow the QC cosmetic inspection standard strictly			
2	检查塑胶主体是否有其他刻伤。 Inspect that if there is any scratch on antenna?	2. 务必戴手指套操作 Ensure wear finger when operating			
3	将合格品放入包装盘, 不良品放入不良品红盒。 Transfer good parts to the dispatch tray and flow to the next process. Put NG parts into red box.	3. 需在放大镜下全检产品 Inspecting product must be under magnifier.			
4	重复步骤1~3。 Repeat process 1~3.				
通用 (Apply to)		总体要求 (GENERAL NOTES)			
		1. 遇到质量问题时, 找技术员或负责该项目的工程师。 In case of any quality problem, call technician or responsible Engineer.			
		2. 质检员按过程检查单检查。 QC inspection according to AIP.			
		更改说明 (changed notes)			
		Date	Content	Rev No	Prepare by
		2014-08-12	Initial Release	A	Chao Jin
		批准 (Approval by)			
		质量部	生产部	生产部	生产工程部
		QA Dept	MFG Dept		PED
适用于 (Apply to)		W2015 Mass Production			
		上海安费诺永亿通讯电子有限公司 (Shanghai Amphenol Airwave Communication Electronics CO., LTD.)			

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13.2 RF TEST

[illegible]

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13.3 RESISTANCE TEST

SAA 生产工程部 PED.		操作指导书 (OPERATION INSTRUCTIONS)		编制 (ORIGINATED BY) 版本号 (REVISION NO.) 日期 (DATE)	Chao Jin A 2014-08-12
SOP-W2015-001		Project Name: W2015			
Pattern impedance test		设备/工具/量具 (Equipment/Tools/Gauge)			
工序名称 (PROCESS NAME)		品名 (Name)	料号 (P/N)	名称 (Name)	编号/型号 (No./Model)
工单号 (OPERATION NO.)		Antenna (天线)	C-6511-16-000-52	阻抗测试仪	W2015
标准工时 (Standard Cycle Time) unit: s		1		测试治具 Fixture	Part Number:
标准产能 (Standard Capability) unit: pcs/H		12		专用工具 (TOOL)	
		300		量具 (GAUGE)	SS6511-16-000-C
步骤 (Step.)		工序的关键要素 (PROCESS KEY POINTS)			
1		1. 务必戴手指套和静电环测试, 未带指套请勿接触产品。 Ensure wear fingertip and antistatic ring when operating. Don't touch production if you don't wear fingertip.			
2		2. 技术员需校验测试仪没问题后才能生产。 Only can start production after technician verify the test machine.			
3		3. 测试气压保持在0.3±0.05MPa。 Air pressure should retain to 0.3±0.05MPa.			
4		总体要求 (GENERAL NOTES)			
		1. 遇到质量问题时, 找技术员或负责该项目的工程师。 In case of any quality problem, call technician or responsible Engineer.			
		2. 质检员按过程检查单检查。 QC inspection according to AIP.			
		更改说明 (changed notes)	Date	Content	Rev No
			2014-08-12	Initial Release	A
					Prepare by
					Chao Jin
适用于 (Apply to)		质量部 QA Dept.			
		生产部 MFG Dept.			
		生产工程部 PED			

图1

图2

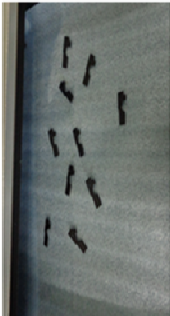
图3

将良品放入周转托盘, 不良品放入红色盒子。
Put good product in the transfer tray, and put NG products in the red box.

重复流程1~3。
Repeat step 1~3.

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13.4 COATING JIG DESORPTION PROCESS

		file name Standard work instructions	file number LV-AF-6511-005	customer AF01	model SM-W2015	Work number AF-6511	name APPEARANCE			Part NO. SS6511-16-000-C	People 6	Management unit Paint department								
操作步骤及图解说明:							 1、After spray paint products (with the fixture)  2、Plastic base mold (Concave groove)  3、The products placed on the mould  4、Hands press the green button at the same time, start the plunger down products  5、Receiving the product						Location process		Before the process		process		After the process	
The required process		Finish coat with roast		Disassembling fixture		packaging														
Job purpose		feedstock		Paint		shipment														
Matters needing attention: 1. According to the semi-automatic manual open the machine and check machine can work normally. 2. Wear finger during operation. Every 2 h to replace a set of finger, to keep the table clean clean. Waiting for inspection, fine products, non-conforming area according to put, can not be mixed with.							semi-automatic Disassembling fixture													
equipment		Semi-automatic disassembly jig machine																		
tool		/																		
Packing way or Technical parameters		/																		
NO.		name of material																		
Required materials		1 dactyloloxa																		
		2																		
		3																		
Approved by		confirm		made		song. jijun														
change history		Date 2014-08-18		Revise the content formulate		Version A/0		LV-FOR-1023 A/0												

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14 HAZARDOUS SUBSTANCE REPORT

14.1 REQUEST FOR HAZARDOUS SUBSTANCE ANALYSIS

제품환경 승인의뢰서(Rev.19)						의뢰확인(협력사) 구분 입안 결정 서명 <i>Sara.dong</i> <i>Jun</i> 날짜 08. 15. 2014 08. 15. 2014	
※ 협력사 작성란							
■ 의뢰자 (개발담당자)							
모델/출항지	SM-W2015	의뢰자	박진우 사원	부 서	H/ 中國향	연락처	☎ +82-10-5186-6466
■ 협력사 및 부품정보							
협력사명	SAA	생산처	Shanghai (중국)	작성자 및 연락처	☎ Sara Dong (86 21 6125 5236)		
부품명	BT/WIFI LDS ANTENNA	Vendor Code	DWKN	SEC CODE	GH42-05110A		
Maker Code	AMPSAA	Maker P/N	SS6511-16-000-C	e-CIMS 등록	☐ YES 등록일 :		
의뢰 목적	☒ 신규승인 ☐ 설계변경 ☐ 양산변경 ☐ 추가칼라 ☐ 이원화 ☐ 재질변경	주요 변경사항	-	부품 구분	☒ 기구 ☐ 전기 ☐ 반도체 ☐ Chip ☐ 응용제품 ☐ 메입상품 ☐ 기타()		
페널티적용시(횟수)	☐ 1회 ☐ 2회	페널티 기간		성적서 확인	유효기간1년 ☐ YES		
■ 보증능력							
보유장비	☒ XRF Desktop ☐ XRF Portable ☐ Non XRF		검출 허용 오차율	☐ ±15% ☐ ±30% ☒ 기타(±%)		표준시편현황	☒ 플라스틱용 ☒ 금속용 ☐ 기타()
RoHS 분석능력	☒ Cd(유/무기) ☒ Pb(유/무기) ☒ Hg ☒ Cr		Halogen 분석능력	☒ Br(유기) ☒ Cl(유기)		기타물질 분석능력	☒ Sb(유/무기) ☒ Sn(유기) ☒ S(포장재/고무)
■ 의뢰정보 보증평가(유해물질 승인담당자)							
구분(배점)	평가 항목	보증평가		검증등급	평가대상/판정기준		
		평가 배점	평가				
의뢰서 정보 (25점)	(15점) 기본정보 작성	- 부적합 항목 건당 : -5		A ()	○ 대상: 10件/月 以上 의뢰 협력사 ○ 평가방법: 의뢰정보 정확성 ○ TAPS 반영기준 - 95% 이상 : +3점 - 85~ 94% : 0점 - 84% 이하 : -3점		
	(5점) PART LIST 정보						
	(5점) 자가검증						
e-CIMS 정보 (50점)	(10점) e-CIMS 미등록	- 부적합 항목 건당 : -10		B ()			
	(10점) 기본문서(성적서, MSDS 등)						
	(10점) 부품종량 정보						
	(10점) 재질정보						
	(10점) RoHS 예외조항						
샘플 정보 (25점)	(10점) 현물일치	- 부적합 항목 건당 : 10 * 단, 수량 : -5		D ()	※ 월간 평가결과 평균값		
	(10점) 원재질						
	(5점) 수량						
페널티 (감점 -20점)	(-20점) 부적합 검출, 의뢰반려, 지연	- 조치 2일:-5, 5일 ↓:-10, 5일 ↑:-20 * 부적합 의뢰반려 : -20		접수일/담당자	검증일/평가결과		
※ 정밀분석 : 대상부품별 정밀분석 기준에 따름 (Sheet7. 분석 기준표 참조) ※ 성적서 유효기간 : 각 원재질별 2년(단, PENALTY 적용시 1년/2년간) ※ 샘플의뢰 수량 : 설계변경- 변경자재+원제품, 양산변경-변경점심고서+변경자재+원제품, (시트8 참조)							
REV. 19 ('14. 3. 07.)							

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14.2 PART LIST INFORMATION & SELF XRF DATA

E-CIMS(P-EHS) PART DATA				중량관리		표준중량(g)		0.1		Self XRF or ICP REPORT													
				실측중량(g)		0.1																	
				오차율(±5%)		0%																	
SEC CODE	Ass'y 부품명	원재질 구분	Material Name	성적서 정보			유기물or 무기물	장비명	EDX-1800				maker		Skayray		측정일		2013-08-15				
				분석기관	분석일자	성적서No.			Cd	Pb	Hg	Cr	Br	Cl	Sb	Ni	Sn						
									유:50 무:70	유:200 무:700	700	700	유:900	유:900	700	무:700	유:900	판정 (Spot 포함) 및 예외조항					
GH42-05110A	Carrier	기존 등록	NX10302	Organic	12/24/2013 6/5/2014	Sabic Statement (RoHS) Sabic Statement (HF)	Organic	N.D	25.8	N.D	10903.8	N.D	N.D	73.8	N.A	N.A	Pass (공인기관 성적서 Cr6+ 미 검출)						
	Cu Plating	기존 등록	REC-A	Inorganic	2013-03-22	RLSHF001414260001C (RoHS)	Inorganic	N.D	19.1	N.D	11055.1	5.6	N.D	N.D	N.A	N.A	Pass						
		기존 등록	REC-M	Inorganic	2013-03-22	RLSHF001414260002C (RoHS)	Inorganic																
		기존 등록	REC-MS	Inorganic	2013-03-22	RLSHF001414260003C (RoHS)	Inorganic																
		기존 등록	REC-D	Inorganic	2013-03-22	RLSHF001414260004C (RoHS)	Inorganic																
		기존 등록	REC-C	Inorganic	2013-03-22	RLSHF001414260005C (RoHS)	Inorganic																
		기존 등록	REC-CS	Inorganic	2013-03-22	RLSHF001414260006C (RoHS)	Inorganic																
		기존 등록	REC-S	Inorganic	2013-03-22	RLSHF001414260007C (RoHS)	Inorganic																
	Ni Plating	기존 등록	Ni Plating 200A	Inorganic	2012-09-05	CAMEC1211797502 (RoHS)	Inorganic																
		기존 등록	Ni Plating 200B	Inorganic	2012-09-05	CAMEC1211797502 (RoHS)	Inorganic																
		기존 등록	Ni Plating 200C	Inorganic	2012-09-05	CAMEC1211797502 (RoHS)	Inorganic																
	Painting	기존 등록	CSR-20009(A)SM	Organic	2014-02-20	I02186000704D (RoHS&HF&Sb)	Organic	1.5	20.2	N.D	13120.3	N.D	52.6	N.D	N.A	N.A	Pass						
		기존 등록	CPH-200	Organic	2014-08-04	NCL02G002516003 (RoHS&HF&Sb)	Organic																
		기존 등록	DLS-540K	Organic	2014-06-12	NCL02G000513001 (RoHS&HF&Sb)	Organic																
		기존 등록	DUH-540	Organic	2014-01-24	I01226000704D (RoHS&HF&Sb)	Organic																
		기존 등록	CHF-20004	Organic	2013-08-26	H08226002104D (RoHS&HF&Sb)	Organic																
		기존 등록	CPH-40	Organic	2014-08-04	NCL02G002516004 (RoHS&HF&Sb)	Organic																
		기존 등록	COC-M4100(SJ)CLEAR	Organic	2014-08-04	NCL02G002516006 (RoHS&HF&Sb)	Organic																
		기존 등록	COC-M4100(SJ)MATT	Organic	2014-08-04	NCL02G002516007 (RoHS&HF&Sb)	Organic																
	※ 원재질 구분 및 물질구분은 셀룰러후 선택, 신규협력사 승인시 "2-2 시트작성" 필수								※ XRF 장비 보유 협력사 전체 Self Test 측정할것														
※ 이원화 진행되는 부품이 있을시 필히 구분을 하여 모두 기입								-. 미보유시 정밀분석 성적서 결과 작성할것(기준은 별도)															
※ 측정결과에는 소수점 이하 버림하여 기입, 0 이하는 N.D 로 기입.																							
※ 정밀분석 대상 부품/원재료 경우에 반드시 2년이내 성적서 필요함																							
■ SEC Import 기능으로 불러온 원재질 - 타 협력사에서 승인된 코드 사용시																							
No	SEC-CODE	Maker	Maker P/N			중량	유기물or무기물	Cd	Pb	Hg	Cr	Br	Cl	Sb	Ni	Sn	판정 (Spot 포함) 및 예외조항						
1								유:50 무:70	유:200 무:700	700	700	유:900	유:900	700	무:700	유:900							
2																							
3																							

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15 FINAL QUALITY REPORT

										
上海安费诺永亿通讯电子有限公司										
Shanghai Amphenol Air Wave Communication Electronics Co.,Ltd										
Final Quality Report										
Model	SM-W2015			Color	Black			Total Q'ty		
SAA P/N	SS6511-16-000-C			Inspector By				Sampling Q'ty		
Samsung P/N	GH42-05110A			Approved By				Final Result		
Inspection Information										
1.Visual Inspection : MIL-STD-105EII Inspect result: ☐ OK ☐ NG										
2.Cross Cutting Test Result (5Pcs): ☐ OK ☐ NG										
3.RF Inspection Result (10pcs): ☐ OK ☐ NG										
4.XRF Test Result(1pcs): ☐ OK ☐ NG										
5.TVOC Test Result(1pcs): ☐ OK ☐ NG										
6.Plating Thickness Test Result(10pcs): ☐ OK ☐ NG										
7.Dimension Inspection Result(10pcs): ☐ OK ☐ NG										
8.Reamrk:										
Inspection Data										
No.	Spec.	Tolerance		Data					Equipment	Result
		+	-	1	2	3	4	5		
				6	7	8	9	10		
1. Visual Inspection										
1-1	Follow Assembly Inspection Plan								Visual; Microscope	
2. Cross Cutting Test										
2-1	Refer to Qualification								Knife	
3. RF Inspection										
1540MHz	3.00	0.5	0.5						Network analyzer	
	3.00	0.5	0.5							
1781MHz	3.00	0.5	0.5							
	3.00	0.5	0.5							
4.XRF Test Result (ppm)										
4-1	区分	Pb	Cd	Hg	Cr6+	Br	Cl	Sb	Tolerance	
	Organism	200	50	700	700	900	900	700	± 15%	
	Inorganics	700	70			\	\			
Point 1(Coating)										
Point 2(Plating)										
Point 3(Carrier)										
5.TVOC Test Result (ppm)										
5-1	区分	TVOC 20ppm	甲苯 Toluene 10ppm	苯 Benzene 1ppm	甲醛 Formaldehyde 0.1ppm	磷化氢 Phosphine 0.1ppm	Portable TVOC detector	—		
	ppbRAE3000 手持式TVOC检测仪									
	GASTEC检测管									
SAA/L-00-02(Rev:A)										

Specification No. SS6511-16-000-C	Description SM-W2015 BT/WIFI Product Specification	
Customer Samsung Electronics Co, Ltd.	Date August. 18 th , 2014	Rev 1.0

 上海安费诺永亿通讯电子有限公司 Shanghai Amphenol Air Wave Communication Electronics Co.,Ltd Final Quality Report										
Model	SM-W2015	Color	Black	Total Q'ty						
SAA P/N	SS6511-16-000-C	Inspector By		Sampling Q'ty						
Samsung P/N	GH42-05110A	Approved By		Final Result						
Inspection Information										
1. Visual Inspection : MIL-STD-105EII Inspect result: ☐ OK ☐ NG										
2. Cross Cutting Test Result (5Pcs): ☐ OK ☐ NG										
3. RF Inspection Result (10pcs): ☐ OK ☐ NG										
4. XRF Test Result(1pcs): ☐ OK ☐ NG										
5. TVOC Test Result(1pcs): ☐ OK ☐ NG										
6. Plating Thickness Test Result(10pcs): ☐ OK ☐ NG										
7. Dimension Inspection Result(10pcs): ☐ OK ☐ NG										
8. Remark:										
Inspection Data										
No.	Spec.	Tolerance		Data					Equipment	Result
		+	-	1	2	3	4	5		
				6	7	8	9	10		
6. Plating Thickness Test										
6-1 Copper	12.50	2.50	2.50						Thickness tester	
	12.50	2.50	2.50							
6-2 Nickel	3.00	2.00	2.00							
	3.00	2.00	2.00							
7. Dimension Inspection										
7-1 (4)	24.70	0.10	0.10						Smartscope	
	24.70	0.10	0.10							
7-2 (7)	9.52	0.10	0.10						Smartscope	
	9.52	0.10	0.10							
7-3 (8)	2.84	0.10	0.10						Smartscope	
	2.84	0.10	0.10							
7-4 (9)	2.64	0.10	0.10						Smartscope	
	2.64	0.10	0.10							
8. Remark:										
										SAA/L-00-02(Rev:A)

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16 TVOC REPORT

TVOC TEST REPORT			
Customer part number	GH42-05110A	SAA part number	SS6511-16-000-C
Test Qty	1pcs	Date	2014-08-15
Possibility of use VOC in material , for example,bonding tape,rubber,leather,coating, plastic and so on, need to satisfy the threshold levels specified as below.			
level 1	Possibility of use VOC :Yes ☒ No ☐		
level 2	use of VOC in our material ,satisfy the threshold levels specified as below.		
Item	Type	Content Limit(ppm)	test result(ppm)
ENVIRONMENT-RELATED SUBSTANCES	TVOC Total Content	20	0.521
	Toluene	16	0.000
	Benzene	0.8	0.000
	Formaldehyde	0.08	0.000
test instrument	ppbRAE3000 Portable TVOC detector,GASTEC hand Pump,GASTEC Testing Tube		
test condition	test condition:40°C × 30min,PE bag 24cm×7cm		
MSDS	Material MSDS need to be attached 1.adhesive agent 2.plastic 		

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