

CASTLENET TECHNOLOGY INC.

APPROVAL SHEET

Parts No.: 2AN-C901BK17PDR

Material Description: DUAL BAND ANTENNA PCB(AJDP1J-B0086)

IPEX ϕ 1.13/90mm BLACK 2.4G+5G/4.5/4.5dBi RoHS

Manufacturer/Agency: ANJIE ELEC

Mfg. Parts No.: AJDP1J-B0086

Original Vendor Name: _____

Sample Arrival Date: 2020-11-24

Comment:

Approval Dept. : <input type="checkbox"/> H/W		<input checked="" type="checkbox"/> MD	<input type="checkbox"/> PM	<input type="checkbox"/> ME
D.C.C.	ISSUE	ISSUE	To	
		<input checked="" type="checkbox"/> CTI (IQC)	<input type="checkbox"/> Vendor	
		<input type="checkbox"/> THAILAND (IQC)	<input type="checkbox"/> Other : _____	
		ISSUE	From	
		<input checked="" type="checkbox"/> Headquarter :	5F., No. 10, Daye Rd., Beitou Dist., City Taipei 112, Taiwan Tel:+886-2-7705-8001	
		<input type="checkbox"/> Thailand Factory :	38 M.4 Petchkasem Road, Sapang, Khaoyoi, Petchburi 76140 Thailand Tel:+66-32-447-767	
File No.	AE120B0013	http://www.castlnet.com.tw		

Component Approval Sheet

申請人員: a11127 王李正一 WF1100 硬體課 申請日期: 2020/11/16

Approve Type 零件類別: A.電子料 / 機構料 / 包材 B.機電料 C.Adaptor G.CTI代工(CS)

Parts Number 料號: 2AN-C901BK17PDR

Specifications 品名規格: DUAL BAND ANTENNA_PCB (AJDP1J-B0086) IPEXφ1.13/90mm BLACK

Manufacturer 製造商: ANJIE Agency 代理商:

Mfg. Parts No 原廠料號: AJDP1J-B0086

Recognition Methods 承認方法: Serial 系列 Single 單一 Other 其他

Packing Type: TAPING TRAY TUBE REEL BULK Others 依進貨方式

Test Platform (Product Model): EBM552-AX1800 Regular Parts 一般零件 Specify Parts 指定零件

Sample Testing Result 測試結果

Electrical Spec Review: OK REJECT Note:

Mechanical Spec Review: OK REJECT Note:

Function Test: OK REJECT Note:

Test Item / Method / Result

Function Test OK.

Conclusion: ACCEPT REJECT

送簽前請先確認承認書應附文件是否完整:

電子/機構零件承認應備文件 ●必要 ◎非必要(依要求)

總類	類別名稱	零件承認所需相關資料											
		承認書	機構尺寸圖	樣品	安規證明	測試報告	包裝方式	儲存條件說明	pin 1 標示	顏色 1 樣板	線路圖	各層底片	文字面
1	PCB	●	●	●	●	●	●	●	●	●	●	●	◎
2	IC	●	●	●	●	●	●	●	●	●	●	●	◎
3	PASSIVE	●	●	●	●	◎	●	●	●	●	●	●	◎
4	SEMICONDUCTOR	●	●	●	●	◎	●	●	◎	●	●	●	◎
5	ELE.MECH	●	●	●	●	◎	●	●	●	●	●	●	◎
6	OEM	●	●	●	●	◎	●	●	●	◎	◎	◎	◎
7	ACCESSORY	●	●	●	●	◎	●	●	◎	◎	◎	◎	◎

總類	類別名稱	零件承認所需相關資料											
		承認書	機構尺寸圖	樣品	耐磨擦測試	安規證明	測試報告	包裝方式	刀模圖	破裂強度	剝落測試	硬度測試	鹽霧試驗報告
8	PLASTIC	●	●	●	●	●	●	●	●	●	●	●	◎
9	MECHANICAL	●	●	●	●	●	●	◎	●	●	●	●	◎
10	PACKING	●	●	●	◎	●	●	●	●	●	●	●	◎
11	METAL	●	●	●	●	●	◎	◎	●	●	●	●	◎

Remark 備註:

- 「Approve Type 零件類別」為簽核流程判斷依據，請勿選取錯誤。(CTI 凱碩: 1~3; CTK 沛丰: 4)
- 「Test Item / Method / Result」如有附件也請上傳。 3.依IQC進料檢驗判定規範驗貨。
- RoHS檔案存放路徑 [\\10.27.47.214](http://10.27.47.214)。
- CTK承認書存放路徑 <http://10.27.47.214>。

附件夾帶

檔案類型	原始檔名	附件描述	檔案大小	上傳時間	上傳者	活動名稱
	AJDP1J-B0086.pdf	AJDP1J-B0086 datasheet	445 K 100 byte(s)	2020-11-16 10:11:31	王李正一	申請人
	AJDP1J-B0086環境管理物質成份展開表.xls		93 K 512 byte(s)	2020-11-16 10:11:47	王李正一	申請人
	-2.zip		3 M 1001 K 315 byte(s)	2020-11-16 10:11:57	王李正一	申請人
	TWAJ-051-2020-0528-EBM552-AX1800 Antenna Test Report.pdf		659 K 658 byte(s)	2020-11-24 18:17:42	周貞秀	CTI PE零件承認窗口確認

處理者	建立時間	簽核時間	簽核意見	名稱	狀態
a11127-王李正一	2020/11/16 10:18	2020/11/16 10:19		申請人	已處理
a11437-林澤青	2020/11/16 10:19	2020/11/16 16:39		直屬主管確認	已處理
a11257-周貞秀	2020/11/16 16:39	2020/11/17 17:49		CTIPE窗口確認	已處理
a11285-曹晴蓉	2020/11/17 17:49	2020/11/17 19:58		CTI資材&採購成員確認	已處理
a10727-葉日璋	2020/11/17 19:58	2020/11/21 09:54		CTIQA窗口確認	已處理
a11493-黃啟賢	2020/11/21 09:54	2020/11/23 08:50		CTIPE主管確認	已處理
a11257-周貞秀	2020/11/23 08:50	2020/11/24 18:17		CTIPE零件承認窗口確認	已處理



台灣安潔電子股份有限公司
Taiwan Anjie Electronics Co., Ltd

承認書

APPROVAL SHEET

Customer: 凱碩
Customer Model No.: 2AN-C901BK17PDR
Part No.: AJDP1J-B0086
Product Description: Antenna Internal 2+5GHz I-pex_I
1.13/90mm (Black) Dipole Antenna
Issue Date: 20200703
REV.: A

客戶承認用印	安潔承認用印

核准	審核	承辦
		Anders

Taiwan Anjie Electronics Co., Ltd

台灣安潔電子股份有限公司

ADD: No.236, Sec. 3, Huanbei Rd., Jubei City, Hsinchu County, Taiwan

地址:新竹縣竹北市環北路三段236號1樓

TEL: 886-3-5543399 FAX:886-3-5543062

電話:886-3-5543399 傳真:886-3-5543062



Table of Contents

Item

1. Drawing

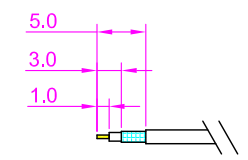
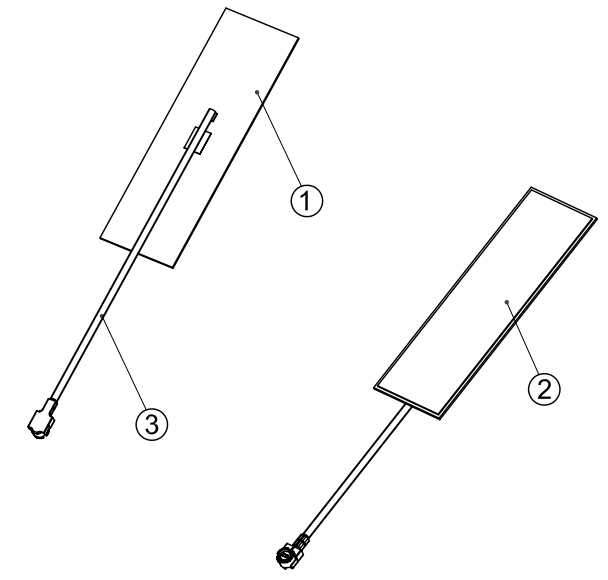
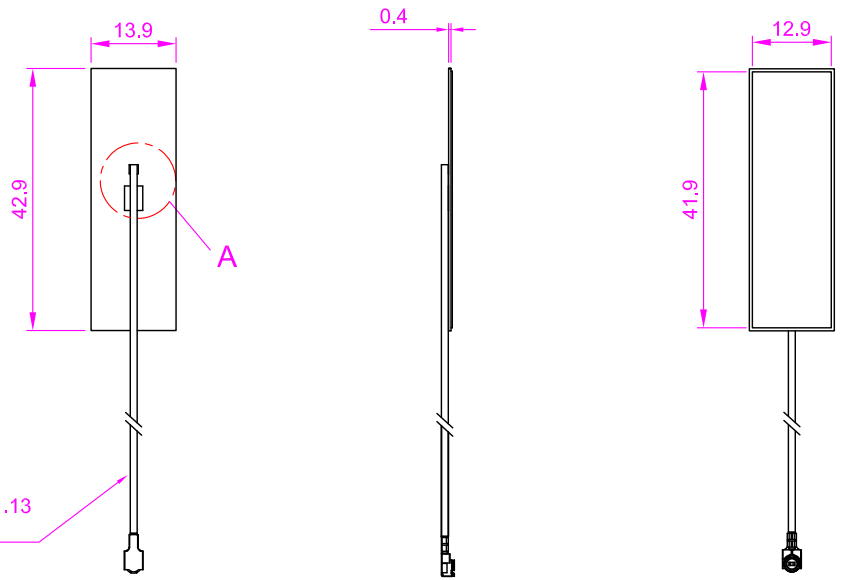
2. Test Report

- Electrical test
 - Pattern test
 - Antenna Gain and Efficiency
-

3. Material Certifications

Dipole Antenna
IPEX

REV	DATE	DESCRIPTION
X1	2020.06.08	New Release



DETAIL A

3	901-02650-00	O.D. 1.13mm IPEX_I ; Lengh=90mm(Black)	1
2	801-03324-00	41.9*12.9mm Adhesive	1
1	501-00390-00	PCB 42,9*13,9*0,4mm	1
No.	Part No.	Description	Q'ty

UNLESS OTHERWISE SPECIFIED Tolerance ON:									
X.X	±0.3	X°					±1.0	Customer Model: EBM552-AX1800	
X.XX	±0.1							Customer Number: --	
			TITLE: Antenna Internal WiFi						
APP BY			CHK BY	DES BY	PART NO.: AJDP1J-B0086				
				Sheet	UNITS	SCALE	REV		
				1 of 1	mm	1 / 1	X1		

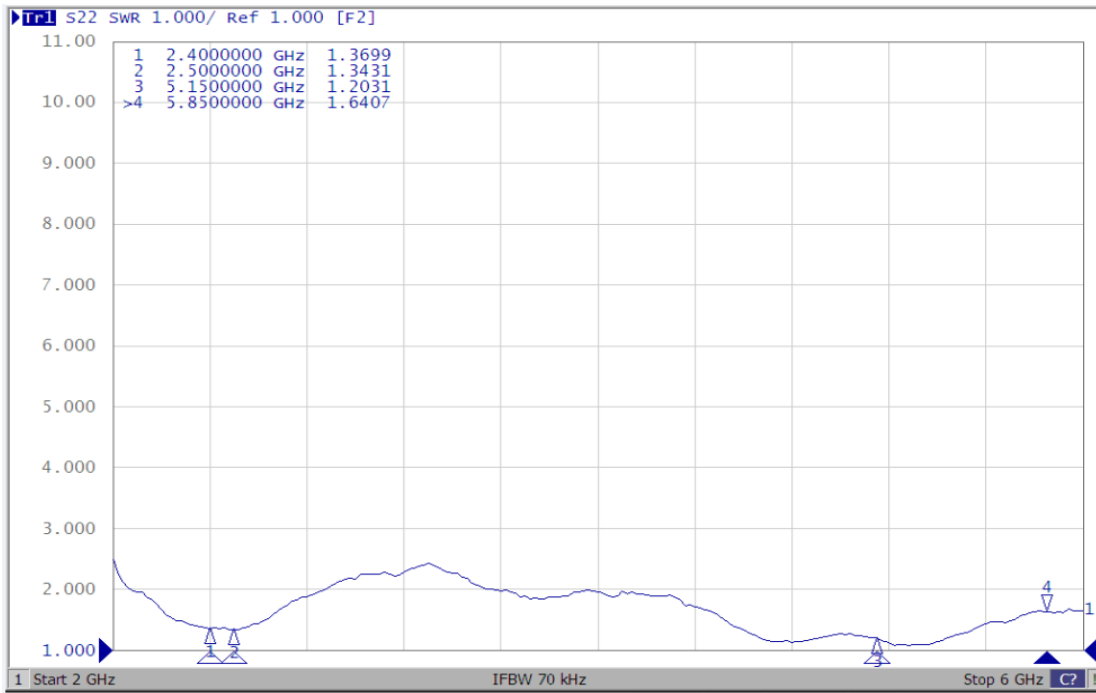


台灣安潔電子股份有限公司
Taiwan Anjie Electronics Co., Ltd

SPECIFICATION						
Frequency Range	2400MHz	2450MHz	2500MHz	5150MHz	5550MHz	5850MHz
Impedance	50Ω			50Ω		
V.S.W.R	2.0			2.0		
Gain	4.5dBi			4.5dBi		



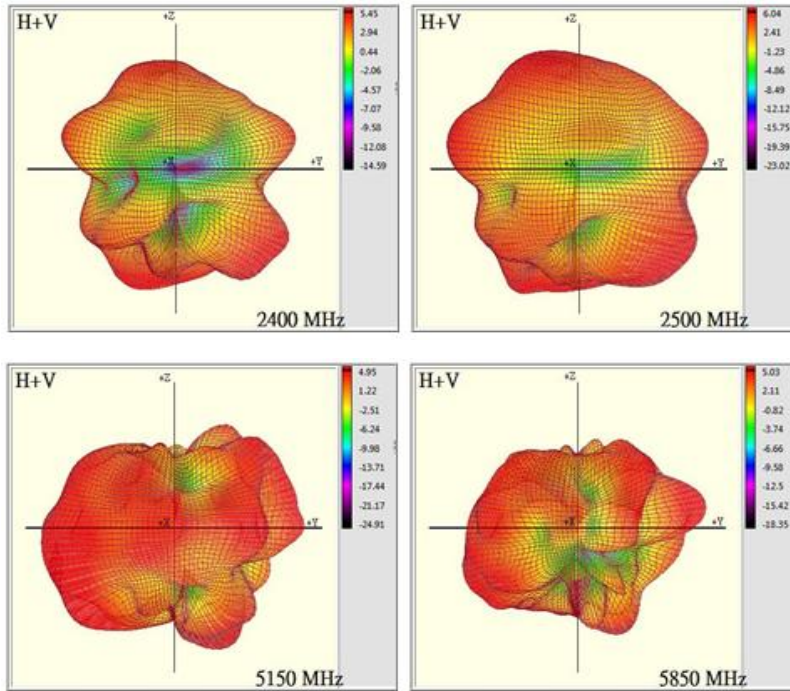
Electrical test





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3D Pattern test





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Taiwan Anjie Electronics Co., Ltd

Antenna Gain and Efficiency

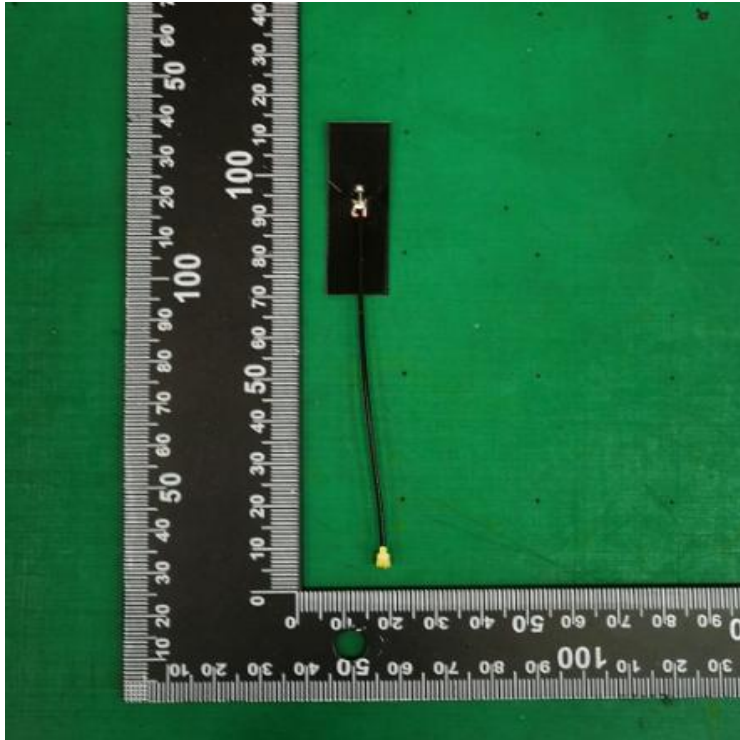
Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Gain (dBi)	4.14	4.18	4.27	4.12	4.32	4.22	4.18	4.26	4.36	4.21	4.52
Directivity (dBi)	5.4	5.53	5.7	5.59	5.68	5.58	5.56	5.62	5.69	5.59	5.77
Efficiency (dB)	-1.27	-1.34	-1.43	-1.47	-1.37	-1.35	-1.38	-1.36	-1.33	-1.38	-1.25
Efficiency (%)	74.72	73.38	71.98	71.26	72.97	73.23	72.79	73.1	73.59	72.75	74.96

Frequency (MHz)	5150	5250	5350	5450	5550	5650	5750	5850
Gain (dBi)	4.12	3.84	3.9	4.29	4.62	3.59	4.11	3.86
Directivity (dBi)	5.88	5.66	5.7	6.1	6.12	5.39	5.71	5.45
Efficiency (dB)	-1.77	-1.81	-1.8	-1.81	-1.5	-1.8	-1.61	-1.59
Efficiency (%)	66.57	65.86	66.09	65.88	70.73	66.04	69.07	69.39



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Taiwan Anjie Electronics Co., Ltd

Product photo





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Taiwan Anjie Electronics Co., Ltd



圖1



圖2



圖3



圖4

1. 數25pcs用珍珠棉包好端子端黃色橡皮筋一扎（圖1）4扎100pcs一包封口機封口（圖2）
2. 2000pcs一箱，共計20包
3. 零件保質期限：1年

昆山康硕电子科技有限公司
KunShan KanShuo Electornic Technology Co., Ltd.

盐水喷雾腐蚀试验报告
NEUTRAL SALT SPRAY CORROSION TEST REPORT

测试日期: 2020 年 10 月 29 日

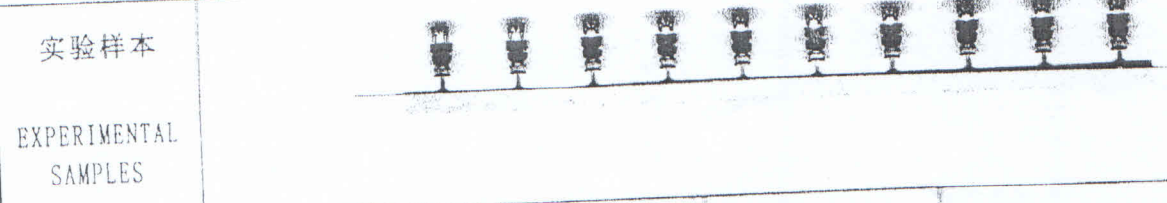
供应商 SUPPLIER	后补	参考资料 REF	ASTM-B117 ISO-3768
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盐雾标签
料号: Xc-MF-17-N-0(QS)
进料批号: 202029
放入时间: 10月29日 15:10
取出时间: 11月2日 15:10
填写人: 陆海清

- 试验条件 (TEST CONDITION):
1. 盐水溶液 (SALT SOLUTION): 浓度 $50 \pm 10 \text{g/l}$, pH值 6.5-7.2.
 2. 试验室温度 (TEMP. IN THE SPRAY DHAMBER): $35 \pm 1^\circ\text{C}$.
 3. 盐水桶温度 (TEMP. OF SALE SOL' N TANK): $35 \pm 1^\circ\text{C}$.
 4. 压力桶温度 (TEMP. LF SAR SUPPLIERY): $47 \pm 1^\circ\text{C}$.
 5. 试验室相对湿度 (R. H. IN THE CHAMBER): 85%.
 6. 压缩空气压力 (COMPRESSED AIR PRESSURE): $1.00 \pm 0.01 \text{kg/cm}^2$.
 7. 喷雾收集量 (COLLECT RATE OF SALT SOL' N): $1-2 \text{ml}/(80 \text{cm}^2 \text{hr})$.
 8. 腐蚀时间 (CORROSION TIME): 72 hr

判定方法 (ADJUDGED METHOD):
试验后以20倍放大镜观察, 无蓝绿色腐蚀物之现象, 即判定合格。 (Inspect the specimen at 20x magnification, no blue or green corrosion products are acceptable.)

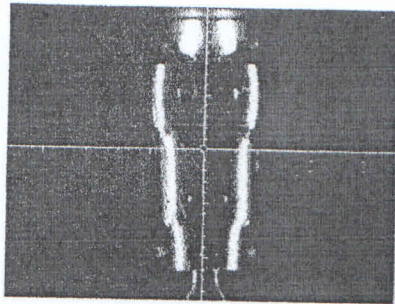
料号 P/N	批号 LOT	来料数量 INCOMING QUANTITY	试验数量 TEST QTY	试验后现象 PHENOMENON AFTER TEST	结果判定 COMMENT	备注 REMARK
Xc-MF-17-N-0(QS)	202029	200K	10PCS	试验合格	OK	
				试验合格	OK	
				试验合格	OK	



主管审核 SUPERVISOR	陆海清	试验人员 TEST BY	陆海清
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爱迪升电镀科技有限公司
 Adscendent Plating Science & Technology Co., Ltd
 膜厚测试报告
 Coating thickness Test Report

Fischerscope? XRAY XULM
 Product: 5 / Au/Ni/CuSn (Au<10u") Dir.: Fischer Block: 577
 Application: 8 / Au/Ni/CuSn (Au<10u")



调校标准:

n =	1	Au =	1.27 μ "	Ni =	62.7 μ "
n =	2	Au =	1.12 μ "	Ni =	64.6 μ "
n =	3	Au =	1.13 μ "	Ni =	60.4 μ "
n =	4	Au =	1.15 μ "	Ni =	63.0 μ "
n =	5	Au =	1.17 μ "	Ni =	62.4 μ "

平均值Mean		1.185 μ "	62.61 μ "
标准偏差Standard deviation		0.073 μ "	1.499 μ "
变动率C.O.V.	5.65 %	2.39 %	
读数数量Number of readings		5	5
最小读数Min. reading		1.12 μ "	60.4 μ "
最大读数Max. reading		1.27 μ "	64.6 μ "
测量时间Measuring time		10 sec	
操作员Operator:			

测试日期Date: 2020-10-29

时间Time: 22:15:20

Environmental Condition

- . Operation Temperature : -30 ~ +65 °C
- . Storage Temperature : -30 ~ +85 °C

環境管理物質成份展開表
breakdown List of Enviromental Management Substances

公司名稱 Company Name	台灣安潔電子股份有限公司
公司印章 Company Seal	

CTK/CTI產品Product			材料/零件 material or Parts			均質材料名稱	CAS no	均質材料中有毒物質含量										測試報告編號	測試日期	RoHS	豁免	有意添加						
名稱 Name	料號 Part No	版本 Rev.	名稱 name	料號 Part No	廠商名稱 Manufacturer	Homogeneous Material	CAS no	Pb	Cd	Hg	Cr6+	PBB	PBDE	Cl	Br	DIBP	DEHP	BBP	DBP	測試報告編號 Test Report No	(pdf) Test	Test Date (YY-MM-)	Compliance	exemption	(intentive add) or			
Antenna Internal 2+5GHz I-pex_I 1.13/90mm (Black) Dipole Antenna	AUDP1J- B0086	A	CABLE	1.13tx	yuanda	FEP-black	25067-11-2	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	A2200344847101012	/	2020/10/13	Y				
				1.13tx	yuanda	Cu	7440-50-8	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	A2200344847101012	/	2020/10/13	Y		
				1.13tx	yuanda	Ag	7440-22-4	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	A2200344847101012	/	2020/10/13	Y		
				1.13tx	yuanda	Sn	7440-31-5	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	A2200344847101012	/	2020/10/13	Y		
			310NF	20278-112R-13	DAL-ICHI	PBT	24968-12-5	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	KA/2020/50243	/	2020/5/11	Y		
				20278-112R-13	DAL-ICHI	Phosphorus flame retardant	7723-14-0	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	KA/2020/50243	/	2020/5/11	Y		
			C5191R	20278-112R-13	HARADA	Cu	7440-50-8	10	N.D	N.D	N.D	N.D	N.D	N.D	/	/	/	/	/	/	/	/	SHAEC2008922719	/	2020/6/4	Y		
				20278-112R-13	HARADA	Sn	7440-31-5	10	N.D	N.D	N.D	N.D	N.D	N.D	/	/	/	/	/	/	/	/	SHAEC2008922719	/	2020/6/4	Y		
				20278-112R-13	HARADA	P	7723-14-0	10	N.D	N.D	N.D	N.D	N.D	N.D	/	/	/	/	/	/	/	/	SHAEC2008922719	/	2020/6/4	Y		
			C5210R	20278-112R-13	HARADA	Cu	7440-50-8	20	N.D	N.D	N.D	N.D	N.D	N.D	/	/	/	/	/	/	/	/	SHAEC2008922725	/	2020/6/4	Y		
				20278-112R-13	HARADA	Sn	7440-31-5	20	N.D	N.D	N.D	N.D	N.D	N.D	/	/	/	/	/	/	/	/	SHAEC2008922725	/	2020/6/4	Y		
				20278-112R-13	HARADA	P	7723-14-0	20	N.D	N.D	N.D	N.D	N.D	N.D	/	/	/	/	/	/	/	/	SHAEC2008922725	/	2020/6/4	Y		
			PLATING Au	20278-112R-13	SANNO	Au	7440-50-7	17	N.D	N.D	N.D	/	/	/	/	/	/	/	/	/	/	/	10500816(1)	/	2020/9/23	Y		
				20278-112R-13	SANNO	Cobalt	7440-48-4	17	N.D	N.D	N.D	/	/	/	/	/	/	/	/	/	/	/	10500816(1)	/	2020/9/23	Y		
			PLATING Ni	20278-112R-13	SANNO	Ni	7440-02-0	N.D	N.D	N.D	N.D	/	/	/	/	/	/	/	/	/	/	/	10500816(4)	/	2020/9/23	Y		
				PCB	NANYA	glass cloth	65997-17-3	6	N.D	N.D	N.D	N.D	N.D	N.D	194	N.D	N.D	N.D	N.D	N.D	N.D	N.D	SHAEC1928645832	/	2020/1/9	Y		
			NY3150	PCB	NANYA	copper foil	7440-50-8	6	N.D	N.D	N.D	N.D	N.D	N.D	194	N.D	N.D	N.D	N.D	N.D	N.D	N.D	SHAEC1928645832	/	2020/1/9	Y		
				PCB	NANYA	Cured phenolic epoxy resin	29690-82-2	6	N.D	N.D	N.D	N.D	N.D	N.D	194	N.D	N.D	N.D	N.D	N.D	N.D	N.D	SHAEC1928645832	/	2020/1/9	Y		
				PCB	gungxin	epoxy resin	29690-82-2	N.D	N.D	N.D	N.D	N.D	N.D	N.D	288	N.D	N.D	N.D	N.D	N.D	N.D	N.D	SHAEC1927079101	/	2019/12/11	Y		
			阻焊油墨	PCB	gungxin	barium sulfate	7727-43-7	N.D	N.D	N.D	N.D	N.D	N.D	N.D	288	N.D	N.D	N.D	N.D	N.D	N.D	N.D	SHAEC1927079101	/	2019/12/11	Y		
				PCB	gungxin	pigment	1333-86-4	N.D	N.D	N.D	N.D	N.D	N.D	N.D	288	N.D	N.D	N.D	N.D	N.D	N.D	N.D	SHAEC1927079101	/	2019/12/11	Y		
				PCB	gungxin	DBE	95481-62-2	N.D	N.D	N.D	N.D	N.D	N.D	N.D	288	N.D	N.D	N.D	N.D	N.D	N.D	N.D	SHAEC1927079101	/	2019/12/11	Y		
				PCB	SAIKETE	DI water	7732-18-5	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	A2200155276101003C	/	2020/6/1	Y		
			OSP	PCB	SAIKETE	Formic Acid	64-18-6	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	A2200155276101003C	/	2020/6/1	Y		
				PCB	SAIKETE	Polysubstituted alkyl benzimidazole	614-97-2	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	A2200155276101003C	/	2020/6/1	Y		
				PCB	SAIKETE	Acetic Acid	64-19-7	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	A2200155276101003C	/	2020/6/1	Y		
				PCB	SAIKETE	Free copper	15158-11-9	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	N.D	A2200155276101003C	/	2020/6/1	Y		
			文字油墨	PCB	xindongfang	barium sulfate	7727-43-7	N.D	N.D	N.D	N.D	N.D	N.D	N.D	663	N.D	N.D	N.D	N.D	N.D	N.D	N.D	SHAEC2000170412	/	2020/1/10	Y		
				PCB	xindongfang	Epoxy acrylic resin	29690-82-2	N.D	N.D	N.D	N.D	N.D	N.D	N.D	663	N.D	N.D	N.D	N.D	N.D	N.D	N.D	SHAEC2000170412	/	2020/1/10	Y		
				PCB	xindongfang	Ether acetate	112-15-2	N.D	N.D	N.D	N.D	N.D	N.D	N.D	663	N.D	N.D	N.D	N.D	N.D	N.D	N.D	SHAEC2000170412	/	2020/1/10	Y		
PCB	xindongfang	naphtha		64742-94-5	N.D	N.D	N.D	N.D	N.D	N.D	N.D	663	N.D	N.D	N.D	N.D	N.D	N.D	N.D	SHAEC2000170412	/	2020/1/10	Y					
PCB	xindongfang	Photoinitiator 907		71868-10-5	N.D	N.D	N.D	N.D	N.D	N.D	N.D	663	N.D	N.D	N.D	N.D	N.D	N.D	N.D	SHAEC2000170412	/	2020/1/10	Y					
G4000	背胶	DEXERIALS	adhesive	机密	N.D	N.D	N.D	N.D	N.D	N.D	172	N.D	N.D	N.D	N.D	N.D	N.D	N.D	CE/2020/22807 CE/2020/22808	/	2020/2/18	Y						

簽署人保證已經獲得公司充分授權，並保證本表格的內容以及所附的測試報告完全準確、真實。

The below undersigned person declares that he/she is duly authorized to sign off as behalf and that the contents, test reports are completely true and accurate.

被授權聲明人 Authorized Declarer	Titan		公司法定代表人姓名 Legal Representative Name
被授權聲明人所屬部門 Dept. of Authorized Declarer	質量部		
被授權聲明人職位 Title of Authorized Declarer	主管		
聲明日期 Date of Declaration	2020年11月3日	職位 Title	主管
被授權聲明人簽字 Signature of Authorized Declarer	Titan		