

承認書

PRODUCT APPROVAL SHEET

料 號 : 386446G
PART NO

類 別 : Antenna
CATEGORY

品名規格 : FRAME WiFi/GPS&DIV Antenna
SPECIFICATION

廠牌廠商 : 耀登科技股份有限公司
MANUFACTURER

廠商品號 : B11858-00
MANUFACTURER PART NO

材料類型 : ☒ 訂製 ☐ 選購
MATERIAL TYPE CUSTOMIZE PURCHASE

確認日期 : 2022 年 月 日
DATE

確認部門 : R&D 審核 : 製表 :
DEPARTMENT APPROVED CREATED

保存年限：至文件廢止日

注意事項：

NOTE

unitech

1. 尺寸大小形狀必須與樣品及圖面相同
SAMPLE AND DRAWING MUST MATCH
2. 顏色：
COLER
3. 材質：
MATERIAL
4. 穴數：
CAV.
5. 重點檢驗項目：
CRITICAL ITEM
 1. 依照 UNITECH 進貨檢驗標準
 2. 重點尺寸—參照圖面
 3. 每批隨貨附出貨檢驗報告

附件：

ATTACHMENT

1. 圖面 DRAWING
2. 全尺寸檢驗紀錄表（訂製品） FAI
3. 製程能力指數 CPK
4. 材質證明 MATERIAL DECLARING
5. SGS 報告（每三年更新報告） SGS REPORT
6. 零件測試報告 TEST REPORT
7. 包裝 PACKAGE

供應商簽章

Vender signature

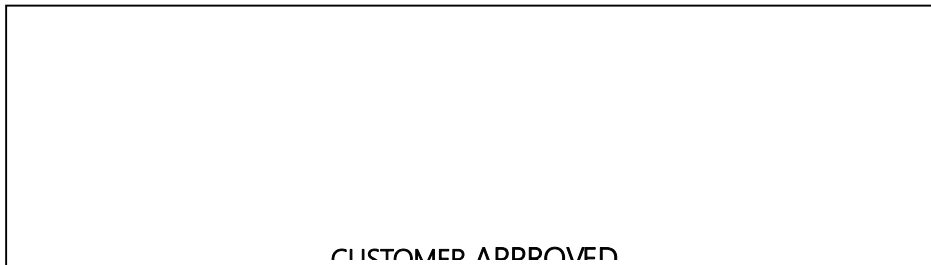


保存年限：至文件廢止日

SPECIFICATION

APPLICATION FOR APPROVAL

CUSTOMER : I Waylink Inc.
CS P/N : 4GTC-602AAA11
PART NAME : FRAME Antenna
DEVE NO. : M1B
AUDEN NO. : B11858-00



Auden Techno Corp.			
RF	MECHANICAL	R&D	PRODUCT
ENGINEER	ENGINEER	MANAGER	MANAGER
CHECKED	CHECKED	CHECKED	CHECKED
Jessie. Chien	Tony. Cheng	Franky. Lai	Tony Lee



No Perfect Status, Always Seek for Better

Auden Techno Corp.

NO.19,LANE 772 HO-PING ROAD,PA-TE CITY, TAO-YUAN HSIEN,TAIWAN

(TEL) : 886-3-3631901

(FAX) : 886-3-3660619

<http://www.auden.com.tw>

E-mail:service@auden.com.tw



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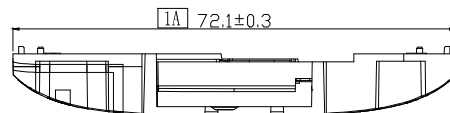
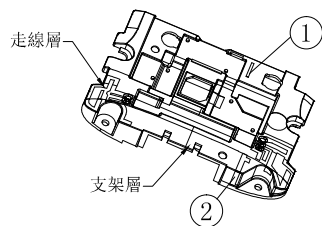
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2	FAI.....
3	CPK.....
4	RF TEST REPORT.....

REVISION

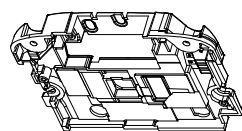
REV. NO.	DATE	DESCRIPTION
A	2020/09/14	Initial spec

A

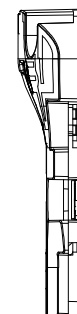
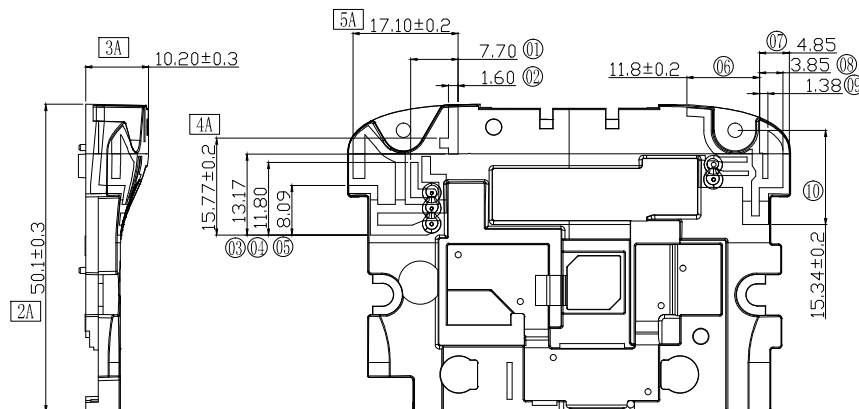
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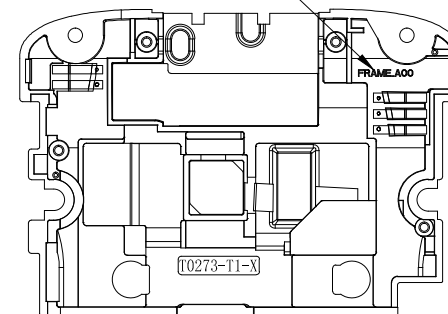
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比例 0.500

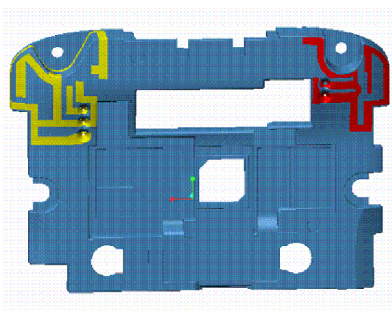


FRAME A00



D

E



技术要求:

- 1、組裝後無明顯外觀不良
- 2、需通过品质部门要求的各项测试
- 3、未注公差见公差列表；
- 4、带“A”尺寸为进料必检尺寸。
- 5、芯线/网线焊点是否需点胶 ☐ 需 / ☒ 不需

DIMENSION	TOLERANCE
0~10.....	±0.20
11~50.....	±0.30
51~100.....	±0.40
100以上.....	±0.80

F

G

2	LDS	LDS 鍍銅+鍍鎳	1	-
1	HOLDER	中塑 7015-LM BK701	1	黑色
序号	名称	材质 / 规格	用量	表面处理 / 备注

附:产品需符合耀登外观检验 标准及可靠度测试要求	
环境物质要求: ROHS	
锡, Pb <100	汞, Hg <1000
镉, Cd <1000	六价铬, Cr (VI) <1000
多溴联苯, PBBs <1000	
多溴联苯醚, PBDEs <1000	
邻苯二甲酸二(2-乙基己基)酯, DEHP <1000	
邻苯二甲酸甲苄基酯, BBP <1000	
邻苯二甲酸二丁基酯, DBP <1000	
邻苯二甲酸二异丁酯, DIBP <1000	
环境物质要求: HF	
BR <900	CL <900
BR+CL <1500	

注:标注1A, 2A, 3A---等为重点尺寸, 总计5A, 全尺寸共计10 (不含重点尺寸) / 表面加工 

图 名					料 号		表面处理		适用机种		开发单号	
FRAME ANT 總裝圖					B11858-00 4GTC-602AAA11		-		M1B_FRAME		T0273_M1B_FRAME_ANT	
材质		参照技术要求			文件編號/版本		档 名		T0273_M1B_FRAME_ANT_ASM_200914_A00			
单位	MM	比例	1:1		AD-QP-0002-24/B(T)		图纸	A4	第 1 页 / 共 1 页			
 耀登科技股份有限公司 AUDEN TECHNO CO. LTD					作 成	Tony		检 图	Jessie		确 认	Vincent

全尺寸测量报告

Vendor(供应商)		材质名称		天线		Part NO(料号)		B11858-00								Tool Number(模号)			Cav. Number(穴数)				Unit(单位)						Comments(设计者签字)			
耀登						Part Name (零件名称)		总装															INCHES ■MILLIMETER									
日期		2020/7/16				MEASURED DIMENSION(实测尺寸)											% TOLERANCE USED(公差使用百分比)		DISPOSITION								ACCEPTABLE VARIANCE					
DIM.	DIMENSION	DRAWING	+ TOL.	- TOL.	NOTED	SAMPLE 1	SAMPLE 2	SAMPLE 3	SAMPLE 4	SAMPLE 5	SAMPLE 6	SAMPLE 7	SAMPLE 8	SAMPLE 9	SAMPLE 10		UPPER	LOWER	0%±	25%	50%	75%	100%	Re-NEW	Accept	Fix Tolerance	Accept	pt Width	MENSIO	+ TOL.	- TOL.	
1	72.10	1A	0.30	0.30		72.10	72.11	72.12	72.10	72.13	72.10	72.11	72.12	72.10	72.13		10%	0%	##													
2	50.10	2A	0.30	0.30		50.10	50.11	50.12	50.13	50.11	50.10	50.11	50.12	50.13	50.11		10%	0%	X													
3	10.20	3A	0.30	0.30		10.20	10.21	10.22	10.21	10.20	10.20	10.21	10.22	10.21	10.20		7%	0%	X													
4	15.77	4A	0.20	0.20		15.77	15.78	15.76	15.77	15.78	15.77	15.78	15.76	15.77	15.78		5%	5%	X													
5	17.10	5A	0.20	0.20		17.10	17.11	17.10	17.12	17.13	17.10	17.11	17.10	17.12	17.13		15%	0%	X													
6	7.70	1	0.10	0.10		7.70	7.71	7.72	7.70	7.73	7.70	7.71	7.72	7.70	7.73		30%	0%	##	X												
7	1.60	2	0.10	0.10		1.60	1.62	1.61	1.63	1.62	1.60	1.62	1.61	1.63	1.62		30%	0%	##	X												
8	13.17	3	0.25	0.25		13.17	13.18	13.16	13.17	13.18	13.17	13.18	13.16	13.17	13.18		4%	4%	##													
9	11.80	4	0.25	0.25		11.80	11.82	11.81	11.83	11.80	11.80	11.82	11.81	11.83	11.80		12%	0%	##													
10	8.09	5	0.10	0.10		8.09	8.08	8.07	8.08	8.10	8.09	8.08	8.07	8.08	8.10		10%	20%	##													
11	11.80	6	0.20	0.20		11.81	11.80	11.82	11.82	11.83	11.81	11.80	11.82	11.82	11.83		15%	0%	##													
12	4.85	7	0.10	0.10		4.85	4.86	4.84	4.85	4.86	4.85	4.86	4.84	4.85	4.86		10%	10%	##													
13	3.85	8	0.10	0.10		3.85	3.86	3.84	3.85	3.87	3.85	3.86	3.84	3.85	3.87		20%	10%	##													
14	1.38	9	0.10	0.10		1.38	1.39	1.37	1.38	1.36	1.38	1.39	1.37	1.38	1.36		10%	20%	##													
15	15.34	10	0.20	0.20		15.34	15.36	15.35	15.34	15.33	15.34	15.36	15.35	15.34	15.33		10%	5%	##													
核准： 邹菊 审核：麦建国 制表：孙贊贊																																

T-0273 FRAME ANT 总装CPK Report

Part Number(料号)	B11858-00			Vendor(供应商)	耀登
Description(零件名称)	天线			Inspected(确认者)	孙赞赞
Tool Number(模号)	T-0273 FRAME ANT总装			Inches/MM(英寸/毫米)	mm
Cavity(穴号)				Material Name(材质名称)	
				Material Code(材质牌号)	
Revision(版本)	X04			Date(日期)	2020/7/16
Designator(尺寸序号)	1A	2A	3A	4A	5A
Nominal(公称尺寸)	72.10	50.10	10.20	15.77	17.10
+ Tolerance(正公差)	0.30	0.30	0.30	0.20	0.20
- Tolerance(负公差)	-0.30	-0.30	-0.30	-0.20	-0.20
Upper Limit(规格上限)	72.40	50.40	10.50	15.97	17.30
Lower Limit(规格下限)	71.80	49.80	9.90	15.57	16.90
1	72.14	50.10	10.20	15.77	17.10
2	72.10	50.01	10.03	15.70	17.10
3	72.15	50.10	10.20	15.77	17.11
4	72.11	49.99	10.05	15.71	17.12
5	72.10	50.16	10.20	15.77	17.10
6	72.11	50.10	10.30	15.72	17.10
7	71.99	50.05	10.10	15.73	17.13
8	72.10	50.10	10.20	15.77	17.10
9	72.12	50.10	10.16	15.75	17.10
10	72.01	50.10	10.26	15.77	17.02
11	71.98	50.15	10.20	15.72	17.10
12	72.10	50.10	10.28	15.68	17.03
13	72.10	50.10	10.20	15.70	17.10
14	72.03	50.12	10.13	15.72	17.04
15	72.00	50.10	10.20	15.70	17.01
16	72.04	50.14	10.18	15.68	17.07
17	72.10	50.18	10.11	15.77	17.10
18	71.95	50.02	10.22	15.73	17.06
19	72.06	50.15	10.24	15.77	17.10
20	71.99	49.96	10.20	15.68	17.05
21	72.05	50.12	10.10	15.66	17.02
22	72.10	50.01	10.20	15.77	17.03
23	72.16	49.97	10.20	15.73	17.05
24	72.02	49.98	10.23	15.75	17.10
25	72.02	50.15	10.12	15.77	17.02
26	72.01	50.03	10.22	15.72	17.10
27	72.12	50.10	10.20	15.70	17.13
28	72.10	50.02	10.10	15.76	17.10
29	72.13	50.10	10.20	15.77	17.00
30	72.10	50.10	10.20	15.79	17.10
31	72.00	50.12	10.21	15.77	17.11
32	72.10	50.10	10.20	15.75	17.10
MAX.	72.16	50.18	10.30	15.79	17.13
MIN.	71.95	49.96	10.03	15.66	17.00
AVERAGE	72.07	50.08	10.18	15.74	17.08
STDEV	0.06	0.06	0.06	0.04	0.04
CP	1.76	1.68	1.63	1.88	1.74
Cpk	1.58	1.58	1.54	1.56	1.55
TOOLING(测量工具)	2.5D	2.5D	2.5D	2.5D	2.5D

审核：麦建国

制表：：孙赞赞



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SPECIFICATION FOR LTE Main Antenna

Auden P/N :

DEVE NO.: Main ANT

Application Date: Oct 20, 2020

Rev: 0

Page 1

RF TEST REPORT

1.ELECTRICAL SPECIFICATIONS

1-1 FREQUENCY BAND

Freq. Band	Frequency
GPS band	1559 ~ 1606MHZ
BT/WiFi band	2400 ~ 2500MHZ& 5150 ~ 5850MHZ

1-2 IMPEDANCE

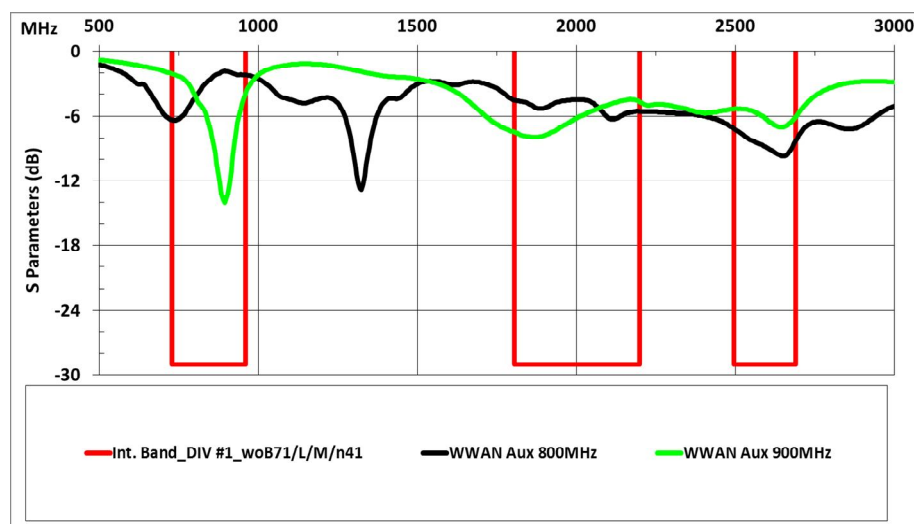
Nominal Impedance (including matching circuit) : **50 ohms**

1-3 MATCHING REQUIREMENTS

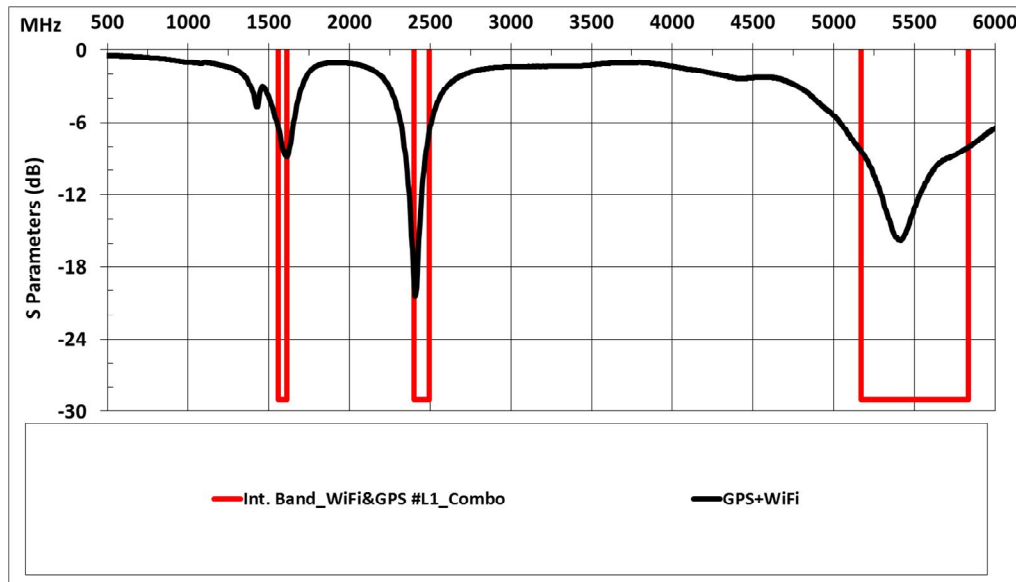
N/A

1-4 Antenna S11

1-4-1 Antenna S11 Plot. Aux LTE Antenna



1-4-2 Antenna S11 Plot. GPS WiFi Antenna



- ※ Measuring a 50Ω test jig is connected to a network analyzer to measure the S₁₁.
- ※ All test value is done in customer approval fixture.

1-5 Antenna Efficiency:

1-5-1 Aux LTE Antenna Efficiency:

Date	2019/20/16			
Antenna (Rev.)	WWAN Aux Antenna			
Detail	1. Use the antenna tune 2. use the LDS sample			
Chamber	Auden GTS			
MHz	Draft 5 (dB)	MHz	Rx1	Avg. (dB)
	FS		Rx2	FS
698	-8.0	698	Rx2	
703	-8.0	703	Rx2	
704	-8.0	704	Rx2	
707	-8.0	707	Rx2	
710	-8.0	710	Rx2	
716	-8.0	716	Rx2	
726	-8.0	726	Rx2	
728	-8.0	728	Rx2	-6.6
734	-8.0	734	Rx2	-6.5
737	-8.0	737	Rx2	-5.5
740	-8.0	740	Rx2	-6.2
746	-8.0	746	Rx2	-6.2
748	-8.0	748	Rx2	-6.2
751	-8.0	751	Rx2	-6.3
756	-8.0	756	Rx2	-6.3
758	-8.0	758	Rx2	-6.4
777	-8.0	777	Rx2	-6.5
781	-8.0	781	Rx2	-7.0
782	-8.0	782	Rx2	-6.8
787	-8.0	787	Rx2	-6.7
791	-8.0	791	Rx2	-6.2

Date		2019/20/16		
Antenna (Rev.)		WWAN Aux Antenna		
Detail		1. Use the antenna tune 2. use the LDS sample		
Chamber		Auden GTS		
MHz	Draft 5 (dB)	MHz	Rx1	Avg. (dB)
	FS		Rx2	FS
803	-6.0	803	Rx2	-7.0
806	-6.0	806	Rx2	-7.2
821	-6.0	821	Rx2	-7.4
824	-6.0	824	Rx2	-7.3
832	-6.0	832	Rx2	-7.8
837	-6.0	837	Rx2	-6.3
847	-6.0	847	Rx2	-6.6
849	-6.0	849	Rx2	-6.1
862	-6.0	862	Rx2	-6.0
869	-6.0	869	Rx2	-5.8
880	-6.0	880	Rx2	-6.5
882	-6.0	882	Rx2	-6.4
894	-6.0	894	Rx2	-6.1
898	-6.0	898	Rx2	-6.0
915	-6.0	915	Rx2	-5.9
925	-6.0	925	Rx2	-5.8
943	-6.0	943	Rx2	-6.2
960	-6.0	960	Rx2	-6.8

Date		2019/20/16		
Antenna (Rev.)		WWAN Aux Antenna		
Detail		1. Use the antenna tune 2. use the LDS sample		
Chamber		Auden GTS		
MHz	Draft 5 (dB)	MHz	Rx1	Avg. (dB)
	FS		Rx2	FS
1710	-4.5	1710	Rx2	
1733	-4.5	1733	Rx2	
1745	-4.5	1745	Rx2	
1748	-4.5	1748	Rx2	
1755	-4.5	1755	Rx2	
1780	-4.5	1780	Rx2	
1785	-4.5	1785	Rx2	
1805	-4.5	1805	Rx2	-5.0
1843	-4.5	1843	Rx2	-5.2
1850	-4.5	1850	Rx2	-5.2
1880	-4.5	1880	Rx2	-4.9
1910	-4.5	1910	Rx2	-5.0
1920	-4.5	1920	Rx2	-4.6
1930	-4.5	1930	Rx2	-4.4
1950	-4.5	1950	Rx2	-4.0
1960	-4.5	1960	Rx2	-3.8
1980	-4.5	1980	Rx2	-4.4
1990	-4.5	1990	Rx2	-3.9
2110	-4.5	2110	Rx2	-4.0
2133	-4.5	2133	Rx2	-4.2
2140	-4.5	2140	Rx2	-4.4
2155	-4.5	2155	Rx2	-4.6
2170	-4.5	2170	Rx2	-4.8
2200	-4.5	2200	Rx2	-5.2



No Perfect Status, Always Seek for Better

SPECIFICATION FOR LTE Main Antenna

Auden P/N :

DEVE NO.: Main ANT

Application Date: Oct 20, 2020

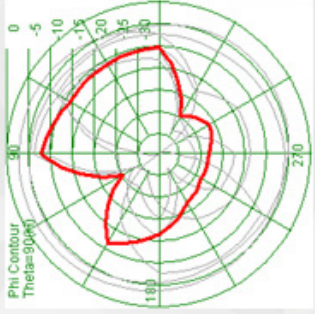
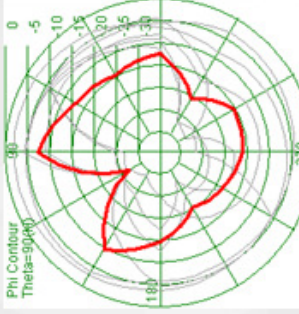
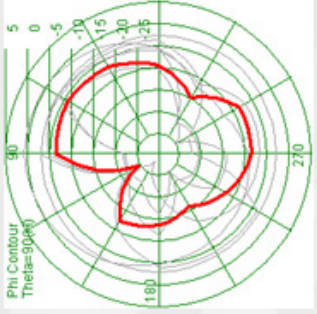
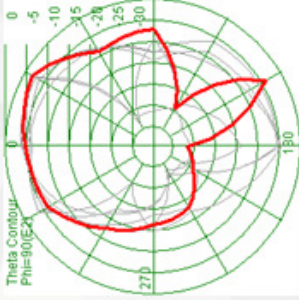
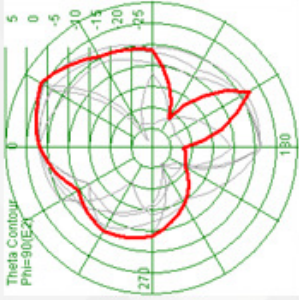
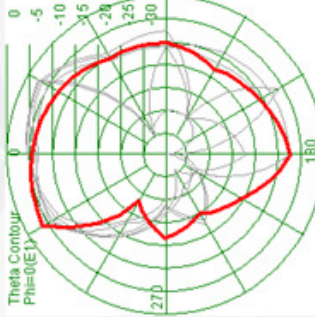
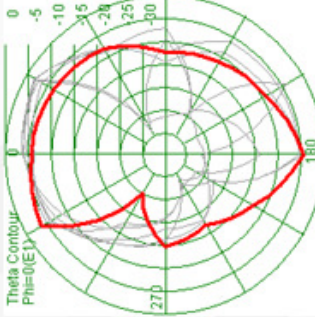
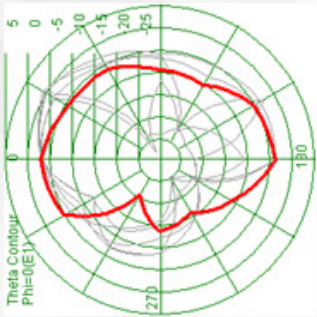
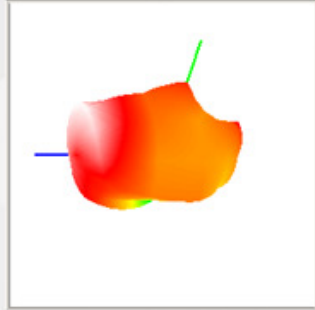
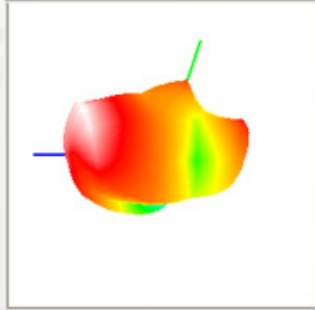
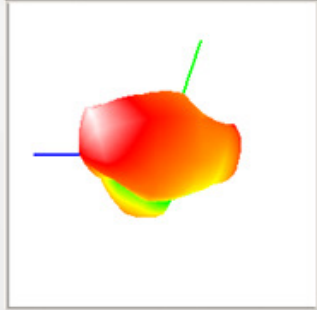
Rev: 0

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Date		2019/20/16		
Antenna (Rev.)		WWAN Aux Antenna		
Detail		1. Use the antenna tune 2. use the LDS sample		
Chamber		Auden GTS		
MHz	Draft 5 (dB)	MHz	Rx1 Rx2	Avg. (dB)
	FS			FS
2300	-4.5	2300	Rx2	-6.5
2305	-4.5	2305	Rx2	-6.3
2310	-4.5	2310	Rx2	-7.3
2315	-4.5	2315	Rx2	-7.0
2350	-4.5	2350	Rx2	-7.5
2355	-4.5	2355	Rx2	-7.4
2360	-4.5	2360	Rx2	-7.1
2400	-4.5	2400	Rx2	-6.9
2402	-4.5	2402	Rx2	-6.4
2442	-4.5	2442	Rx2	-6.2
2494	-4.5	2494	Rx2	-6.1
2500	-4.5	2500	Rx2	-6.1
2535	-4.5	2535	Rx2	-6.3
2570	-4.5	2570	Rx2	-5.8
2620	-4.5	2620	Rx2	-5.3
2655	-4.5	2655	Rx2	-5.0
2690	-4.5	2690	Rx2	-4.7

1-5-2 GPS WiFi Antenna Efficiency:

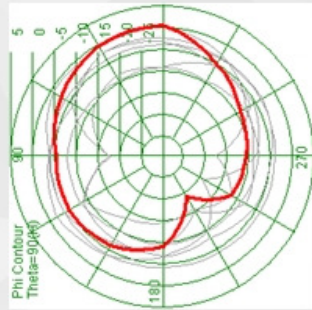
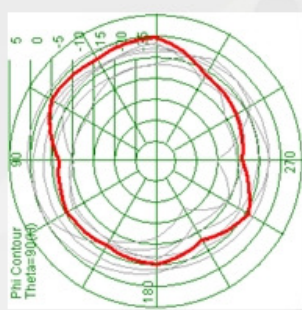
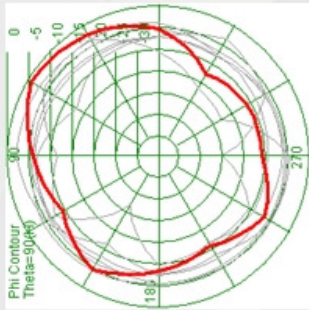
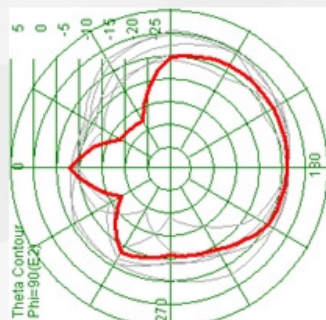
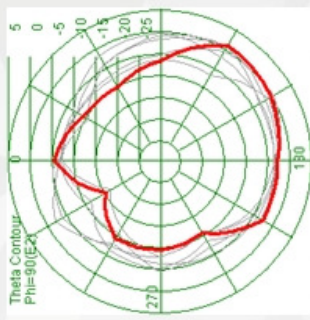
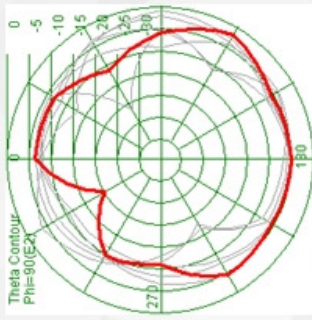
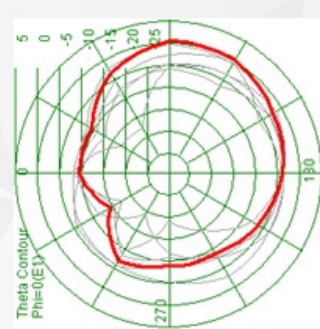
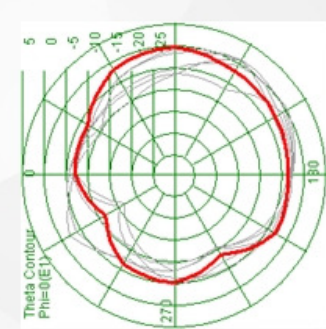
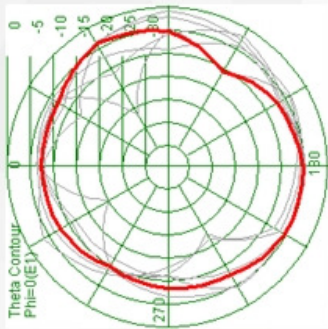
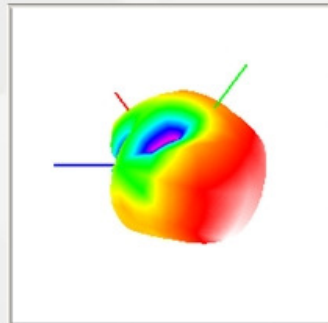
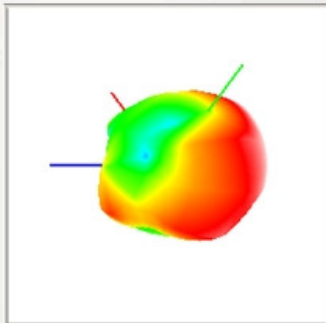
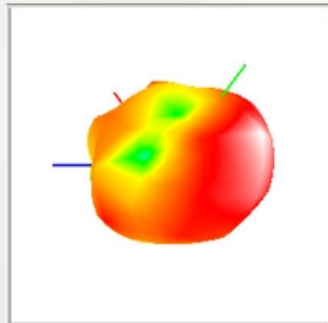
Date		2020/1/16			
Antenna		GPS+WiFi			
Detail		1. use LDS sample			
Chamber		Auden GTS		MHz	JHS Avg. (dB)
MHz	Spec (dB) (avg. & min.)	MHz	Avg. (dB)		FS
	FS		FS	UHS Eff.	
1559	-4.0 -5.0	1559	-3.1	1559	-5.5
1585	-4.0 -5.0	1585	-2.9	1585	-5.3
1606	-4.0 -5.0	1606	-3.1	1606	-5.8
2402	-4.5 -5.5	2402	-3.6		
2442	-4.5 -5.5	2442	-3.2		
2494	-4.5 -5.5	2494	-4.0		
5180	-3.5 -4.5	5180	-4.4		
5500	-3.5 -4.5	5500	-4.2		
5825	-3.5 -4.5	5825	-3.8		



E1

E2

H



Unused Harmful Substance Guarantee

此致

精聯電子股份有限公司 Unitech Electronics Co;Ltd

茲提出此保證書，保證本公司所生產或代理提供之產品之各項有害物質符合 EC RoHS Directive 2011/65/EU & (EU) 2015/863、PPW(2013/2/EU)、電池(2006/66/EC)、REACH(EC 1907/2006)。

Provided this Guarantee Letter to ensure our manufacture/ represent products with appendix harmful substance to be compliant with the EC RoHS Directive 2011/65/EU & (EU) 2015/863、PPW(2013/2/EU) Battery(2006/66/EC)、REACH(EC 1907/2006).

法規 Laws	物質	Material	含量標準 (ppm)	備註 Remark
2011/65/EU & (EU) 2015/863 (一般材料) (RoHS Directive)	鎘及其化合物 (Cd)	Cadmium and its Compounds	100	1.包裝用物件(依照 PPW 2013/2/EU 之要求): (鎘(Cd)+鉛(Pb)+水銀(Hg)+ 六價鉻(Cr 6+)合計 <100 PPM)。 1. Packing parts (compliant with the PPW Directive 2013/2/EU) : (Cadmium (Cd)+ Lead (Pb)+ Mercury (Hg)+ Hexavalent chromium (Cr 6+) total < 100ppm).
	鉛及其他化合物 (Pb)	Lead and its Compounds	1000	
	水銀及其化合物 (Hg)	Mercury and its Compounds	1000	
	六價鉻化合物 (Cr 6+)	Hexavalent chromium compounds	1000	
	聚溴化聯苯類 (PBBs)	Polybrominated Biphenyls	1000	
	聚溴化二苯醚類 (PBDEs)	Polybrominated diphenyl ethers	1000	
	鄰苯二甲酸二(2-乙基 己基)酯(DEHP)	Di- (2-ethylhexyl) phthalate (DEHP)	1000	
	鄰苯二甲酸丁苯甲酯 (BBP)	Butyl Benzyl phthalate (BBP)	1000	
	鄰苯二甲酸二丁酯 (DBP)	Dibutyl phthalate (DBP)	1000	
	鄰苯二甲酸二異丁酯 (DIBP)	Di-isobutyl phthalate (DIBP)	1000	



精聯電子

2013/2/EU (包裝材料) (PPW)	鎘(Cd)+鉛(Pb)+水銀(Hg)+六價鉻(Cr 6+) 合計 <100 PPM	Cadmium + Lead + Mercury+ Hexavalent chromium total <100 PPM	100	
2006/66/EC (電池材料) (Battery)	鎘及其化合物 (Cd)	Cadmium and its Compounds	20	1.包裝用物件(依照 PPW 2013/2/EU 之要求): (鎘(Cd)+鉛(Pb)+水銀(Hg)+六價鉻(Cr 6+)合計 <100 PPM)。
	水銀及其化合物 (Hg)	Mercury and its Compounds	5	1. Packing parts (compliant with the PPW Directive 2013/2/EU) : (Cadmium (Cd)+ Lead (Pb)+ Mercury (Hg)+ Hexavalent chromium (Cr 6+) total < 100ppm).
REACH(EC 1907/2006)	依照 2020.01.16 歐洲化學總署公告的高度關切物質進行控管，當法規更新時，需主動遵循最新的法規要求項目。 In accordance with the Candidate List of substances of very high concern (SVHC) publicized by European Chemicals Agency substances were controlled. When regulation is updated, need to actively comply the latest regulatory requirements.			

保證本公司任何製程，材質或規格之變更，均將以書面通知(含 Mail)貴公司。

This engagement is to promise that production change notice delivery to both parties which include PROCESSING ENGINEER CHANGE, MATERIAL CHANGE, and SPECIFICATION by paper.

保證如經檢驗或於市場被抽查發現所述不實，本公司願意以最大誠意協助貴公司應對之。

We guaranty we will take the responsibility if our product do not comply with EC RoHS Directive 2011/65/EU & (EU) 2015/863、PPW(2013/2/EU)、Battery(2006/66/EC)、REACH(EC 1907/2006).

往後貴公司採購單上之型號若最後面一碼為”G”，皆屬於上述不含有害物質並符 EC RoHS Directive 2011/65/EU & (EU) 2015/863、PPW(2013/2/EU)、Battery(2006/66/EC)、REACH(EC 1907/2006)。

Effective now, if the model number last digit is “G” on your company purchase order, it is ensured that the product does not contain the deleterious substance described above and conforms to EC RoHS Directive 2011/65/EU & (EU) 2015/863、PPW(2013/2/EU)、Battery(2006/66/EC)、REACH(EC 1907/2006).

公司名稱(Company) : 昆山耀登電通科技股份有限公司

公司簽章 (Seal) : 

地址(Address) : 江苏省昆山市周市鎮迎海路5號

電話(Telephone) : 0512-57646998

代表人(Chairman): 李金 簽(signature)

中華民國 2022 年 03 月 14 日 (DATE, YYYY/MM/DD)

保存期限: 至文件廢止

表單 NO. E10R022 C 版 4 次



扫描全能王 创建