

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

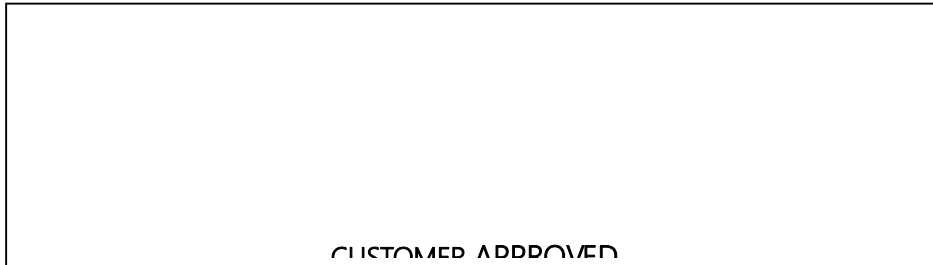


保存年限：至文件廢止日

# 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



## CONTENTS

|   |                     |
|---|---------------------|
| 1 | DRAWING.....        |
| 2 | FAI.....            |
| 3 | CPK.....            |
| 4 | RF TEST REPORT..... |

## REVISION

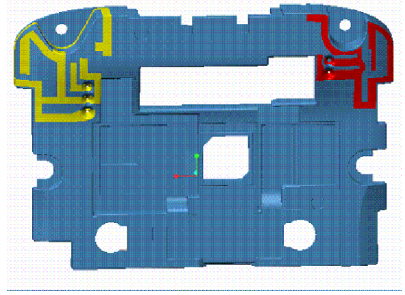
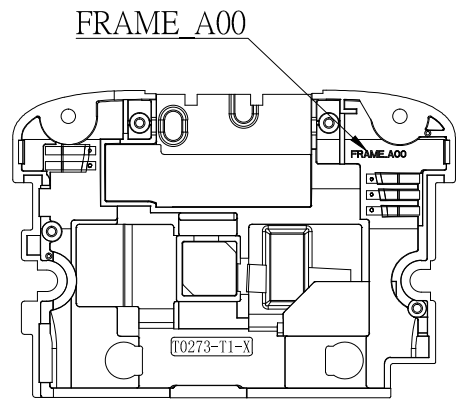
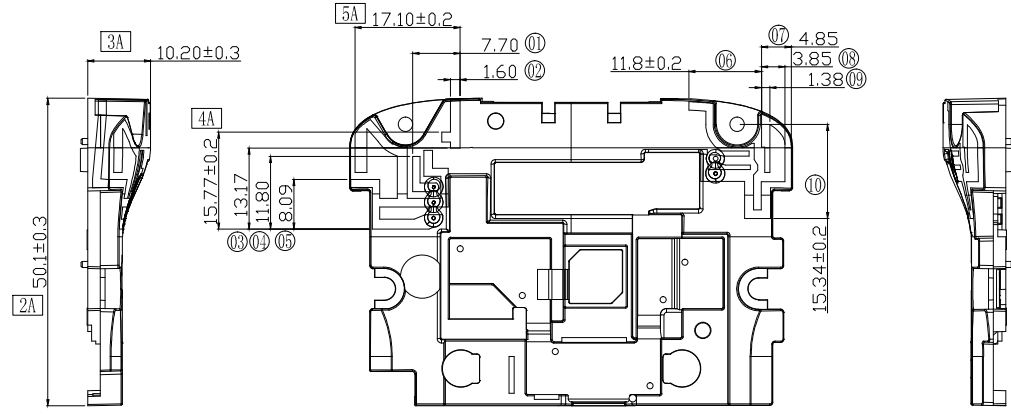
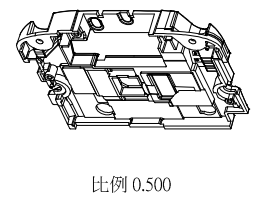
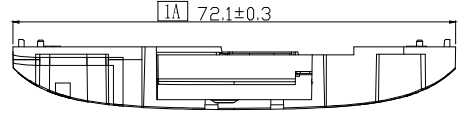
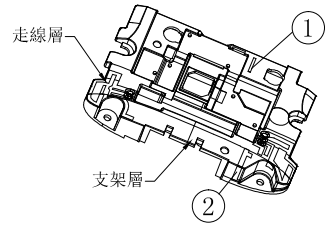
| REV. NO. | DATE       | DESCRIPTION  |
|----------|------------|--------------|
| A        | 2020/09/14 | Initial spec |
|          |            |              |
|          |            |              |
|          |            |              |

---

|                       |            |            |            |                           |
|-----------------------|------------|------------|------------|---------------------------|
| E. C. O. N.<br>工程变更单号 | Ver.<br>版次 | AREA<br>区域 | DATE<br>日期 | CONTENT OF CHANGE<br>变更事项 |
|                       | A          |            | 2020/09/14 | 量產圖面發行                    |

正式總裝圖

A  
B  
C  
D  
E  
F  
G



- 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如需 / 否不需

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

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  
 镉, Cd <100      汞, Hg <1000  
 铅, Pb <1000      六价铬, Cr(VI) <1000  
 多溴联苯, PBBs <1000  
 多溴二苯醚, PBDEs <1000  
 邻苯二甲酸二(2-乙基己基)酯, DEHP <1000  
 邻苯二甲酸甲苯基丁酯, BBP <1000  
 邻苯二甲酸二丁基酯, DBP <1000  
 邻苯二甲酸二异丁酯, DIBP <1000

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  $\nabla \nabla$   $\nabla \nabla \nabla$   $\nabla \nabla \nabla \nabla$

|               |  |        |     |                            |                    |         |     |           |    |                                    |  |
|---------------|--|--------|-----|----------------------------|--------------------|---------|-----|-----------|----|------------------------------------|--|
| 图 名           |  |        |     | 料 号                        |                    | 表面处理    |     | 适用机种      |    | 开发单号                               |  |
| FRAME ANT 總裝圖 |  |        |     | B11858-00<br>4GTC-602AAA11 |                    | -       |     | M1B_FRAME |    | T0273_M1B_FRAME_ANT                |  |
| 材 质           |  | 參照技术要求 |     | 投 影                        |                    | 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                      |  |

|    |        |                  |    |           |
|----|--------|------------------|----|-----------|
| 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 |

环境物质要求: HF  
 BR <900      CL <900  
 BR+CL <1500

|  |                                    |  |     |      |     |        |     |         |
|--|------------------------------------|--|-----|------|-----|--------|-----|---------|
|  | 耀登科技股份有限公司<br>AUDEN TECHNO CO. LTD |  | 作 成 | Tony | 检 图 | Jessie | 确 认 | Vincent |
|  | AUDEN TECHNO CO. LTD               |  |     |      |     |        |     |         |

# 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<br>(零件名称)      |          | 总装        |          |          |          |          |          |                  |           |                           |       | INCHES <input type="checkbox"/> MILLIMETER <input checked="" type="checkbox"/> |         |                     |          |                 |        |       |        |    |       |        |        |        |
| 日期          |           | 2020/7/16 |        |        |     | MEASURED DIMENSION(实测尺寸) |          |           |          |          |          |          |          | T-0273 FRAME ANT |           | Rev(版本)                   | X04   | DISPOSITION  |         | ACCEPTABLE VARIANCE |          |                 |        |       |        |    |       |        |        |        |
| DIM         | DIMENSION | DRAWING   | + TOL. | - TOL. | NOT | SAMPLE 1                 | SAMPLE 2 | SAMPLE 3  | SAMPLE 4 | SAMPLE 5 | SAMPLE 6 | SAMPLE 7 | SAMPLE 8 | SAMPLE 9         | SAMPLE 10 | % TOLERANCE USED(公差使用百分比) |       | DISPOSITION  |         | ACCEPTABLE VARIANCE |          |                 |        |       |        |    |       |        |        |        |
|             |           |           |        |        |     |                          |          |           |          |          |          |          |          |                  |           | UPPER                     | LOWER | 0%-25%   | 25%-50% | 50%-75%             | 75%-100% | Re-Work         | Accept | Fix T | 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: 孙赞赞



# 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

## RF TEST REPORT

### 1.ELECTRICAL SPECIFICATIONS

#### 1-1 FREQUENCY BAND

| Freq. Band   | Frequency                         |
|--------------|-----------------------------------|
| GPS band     | 1559 ~ 1606MHZ                    |
| BT/WiFi band | 2400 ~ 2500MHZ&<br>5150 ~ 5850MHZ |

#### 1-2 IMPEDANCE

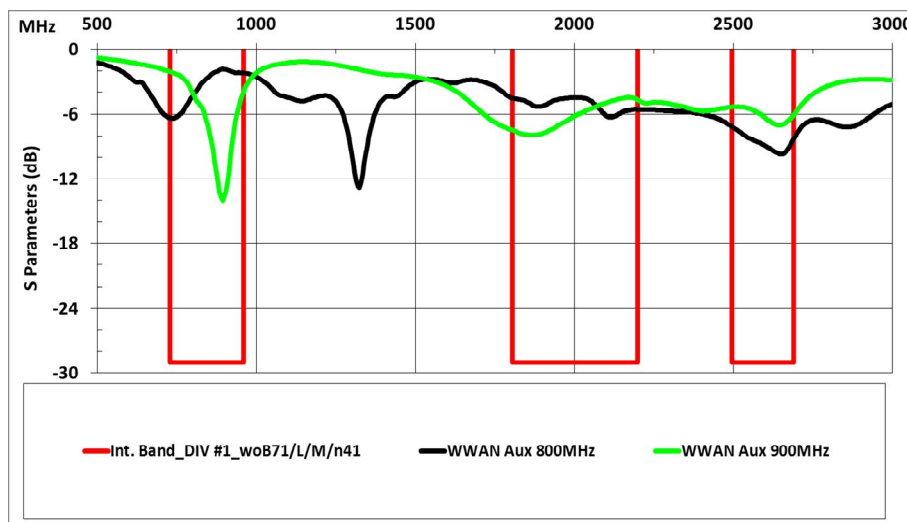
Nominal Impedance (including matching circuit) : **50 ohms**

#### 1-3 MATCHING REQUIREMENTS

N/A

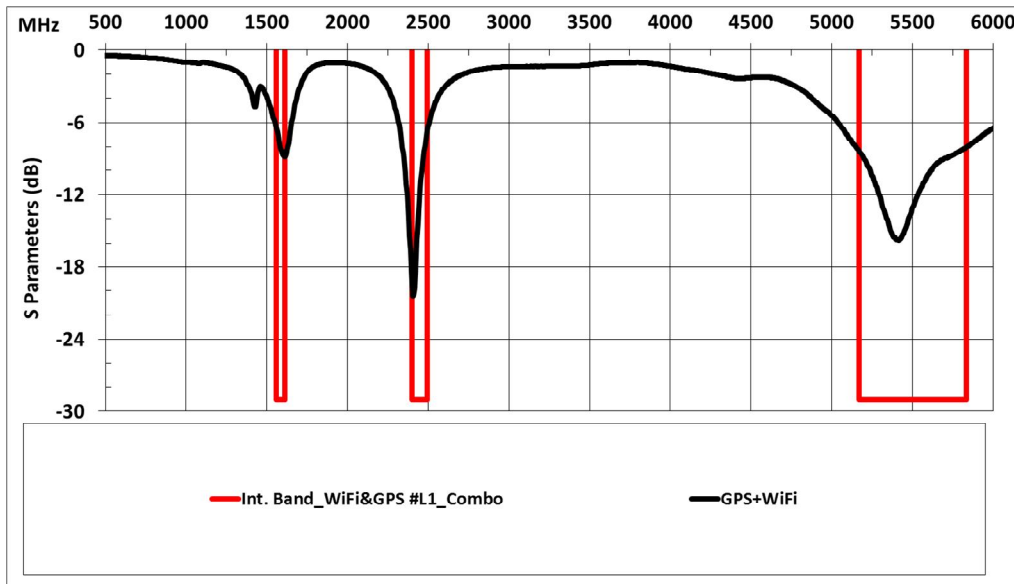
#### 1-4 Antenna S11

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 S<sub>11</sub>.
- ※ 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<br>2. use the LDS sample |     |           |
| Chamber        |              | Auden GTS  |     |           |
| MHz            | Draft 5 (dB) | MHz  | Rx1 | Avg. (dB) |
|                | FS           |  | Rx2 |           |
| 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      |



# No Perfect Status, Always Seek for Better

| Date           |              | 2019/20/16                                       |     |           |
|----------------|--------------|--|-----|-----------|
| Antenna (Rev.) |              | WWAN Aux Antenna                                 |     |           |
| Detail         |              | 1. Use the antenna tune<br>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<br>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      |

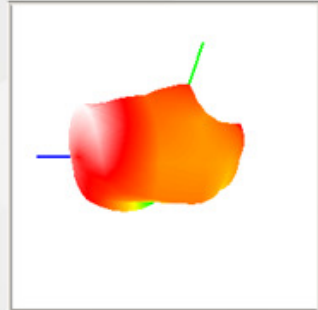
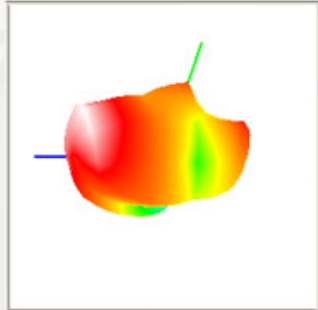
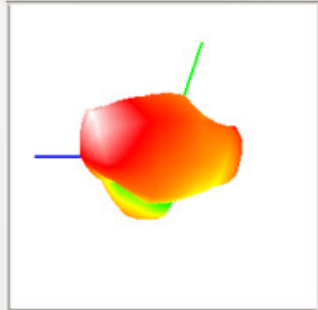


# No Perfect Status, Always Seek for Better

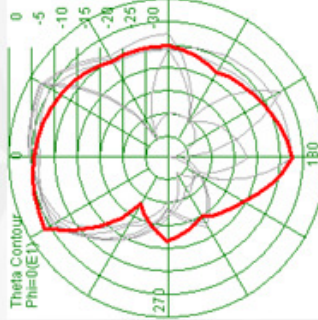
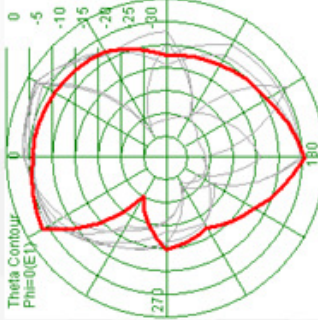
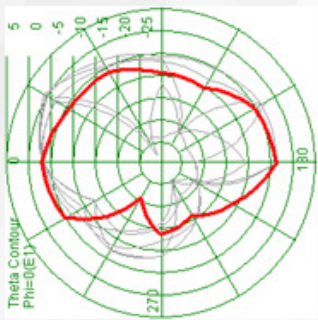
| Date           |              | 2019/20/16                                       |     |           |
|----------------|--------------|--|-----|-----------|
| Antenna (Rev.) |              | WWAN Aux Antenna                                 |     |           |
| Detail         |              | 1. Use the antenna tune<br>2. use the LDS sample |     |           |
| Chamber        |              | Auden GTS  |     |           |
| MHz            | Draft 5 (dB) | MHz  | Rx1 | Avg. (dB) |
|                | FS           |  | Rx2 | 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:

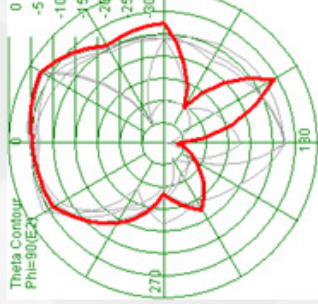
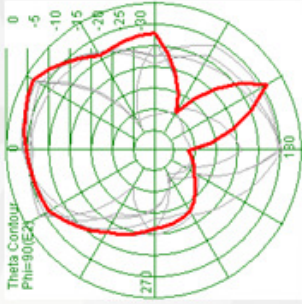
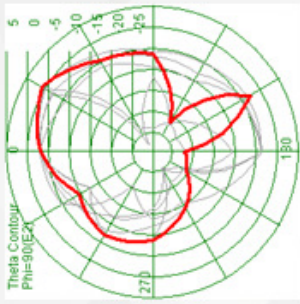
| Date    |                         | 2020/1/16         |           |          |               |
|---------|-------------------------|-------------------|-----------|----------|---------------|
| Antenna |                         | GPS+WiFi          |           |          |               |
| Detail  |                         | 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      |          |               |



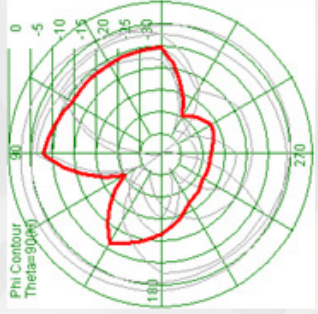
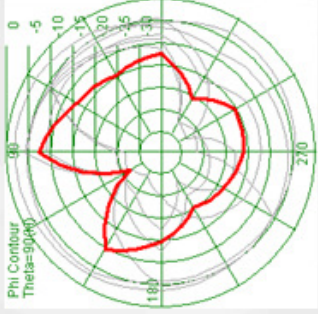
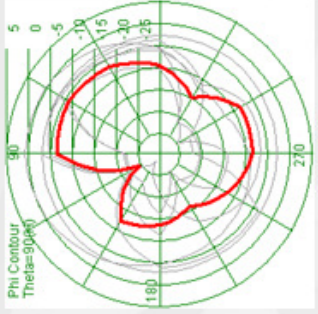
E1

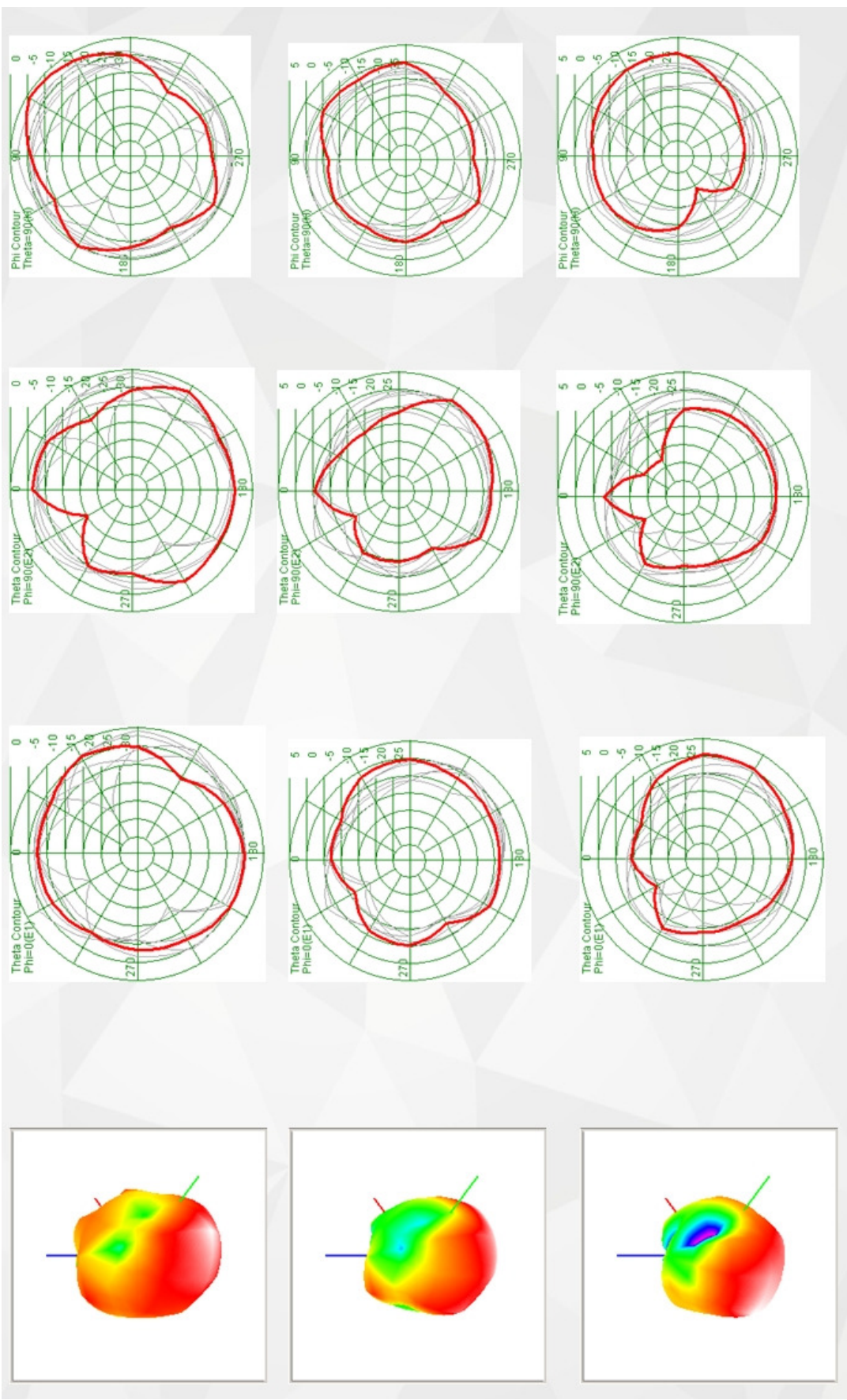


E2



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



# 精聯電子

|                                   |   |  |     |  |
|-----------------------------------|---|--|-----|--|
| 2013/2/EU<br>(包裝材料)<br>(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<br>(電池材料)<br>(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。<br>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禧路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



掃描全能王 创建

