

SPECIFICATION FOR APPROVAL

CUSTOMER: _____

MODEL NO: U15QT-6072

PART NO : _____

MODEL NAME: 15W magnetic emission module

REVISION: A0

DATE: 2023-12-26

APPROVED SIGNATURES

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- ☐ 聯寶電子股份有限公司
☐ 東莞聯寶光電科技有限公司
☒ 深圳聯驊科技股份有限公司
☐ LinkCom USA, Inc.
☐ 其他: _____

(Taiwan Headquarter)

5F., No.127, Ln. 235, Baoqiao Rd., XindianDist, New Taipei City 231 ,Taiwan(R.O.C.)

Tel: (886) 2-8919-1380

Fax: (886) 2-8919-1370

E-mail: sales@linkcom.com.tw

(China Plant)

810, Building C, LongbangLongxing Science Park, Matan Street, Guangming New District,
Shenzhen

Tel: (86-755) 29429700

E-mail: sales@linkcom.com.tw

Model No.	U15QT-6072	Model Name	15W magnetic emission module
Part No.		Size	PCBA Size :L28.5 ※ W21.5 ※ T2.0 mm Coil Size : Ø 43.5 ^{±1} ※ T1.6mm

Product Specification

產品規格書

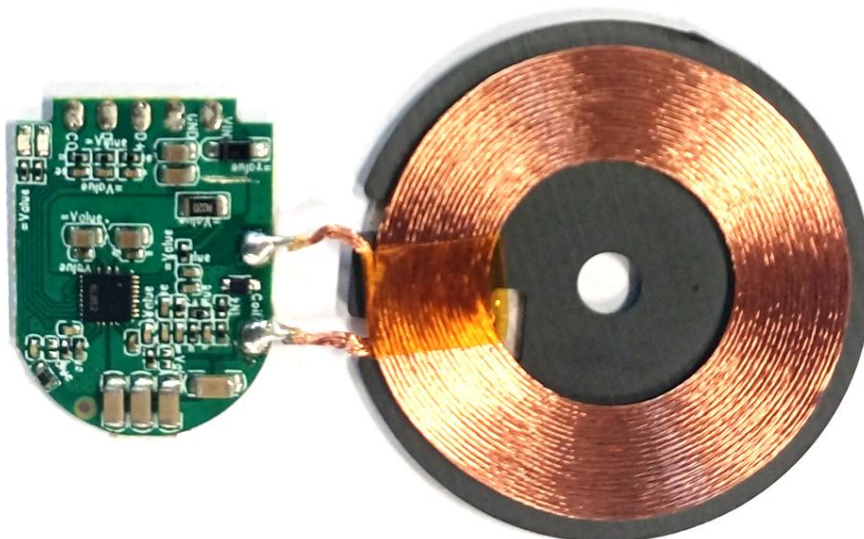
Product name/產品名稱: 15W magnetic emission module

Model No/ 產品型號 : U15QT-6072

File number /文件編號: _____

Revision/版本號 : A0

Date/日期 : 2023-12-26



APPROVED BY 批 准	CHECKED BY 審 核	DESIGNED BY 制 作

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Reversion History / 更新記錄:

Revision	Date	Changes
A0	2023-12-26	初版發行

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1. Scope/概述

1.1.U15QT-6072 is a multi-functional wireless charging transmitter with magnetic suction function.

This product not only supports wireless charging of the latest iPhone 12, but also is compatible with various mobile phones with wireless charging function such as early iPhone series and Samsung series. The module is fully functional, input support (PD2.0 / QC2.0 / DC9V power supply) flexible convenient customer use, module design for circular, beautiful surface, first-class technology, the design of the module group customer oriented, flexible design the appearance of the product into a separate wireless charging transmitter use, can also be embedded in all kinds of electronic products added to the products used in the wireless charging function.

U15QT-6072是一款带磁吸功能的多功能无线充电发射端，本产品不仅支持最新iPhone12手机无线充电、还兼容到早期iPhone系列、三星系列等各种带无线充电功能的手机；该模组功能全面，输入端支持（PD2.0/QC2.0/DC9V供电）方便客户灵活使用，模组设计为圆形，表面美观大方、一流工艺，模组的设计面向群体客户考虑，可灵活设计产品的外观成为一个单独的无线充电发射端使用，也可嵌入到各类电子产品中使用为产品增添无线充电功能。

1.2.The Wireless Power supply's Tx Module should meet the ROHS requirement.

无线供电的TX模块应符合ROHS要求

2. Product Characteristic / 產品特點

- ◆ PD2.0/ QC2.0 power communication protocol
PD2.0 / QC2.0 電源通信協議；
- ◆ DC9V direct power supply
DC9V 電源直接供電；
- ◆ Meets Qi 1.2.4 certification requirements and is compatible with Samsung[®] and iPhone[®] mobile fast charging .
符合 Qi 1.2.4認證要求並相容 三星[®] 和 iPhone[®] 手機快速充電；

3.Performance Parameter / 性能參數

3.0	Power input protocol / 電源輸入協定	QC2.0 / PD2.0
3.1	Input voltage & current / 輸入電壓電流	5V/2A 、9V/2.2A
3.2	Working voltage¤t / 工作電壓電流	5V/1.65A 、9V/1.5A
3.3	Wireless charging output power 無線充電輸出功率	5W/7.5W/10W/15W Max
3.4	Power Transfer Efficiency / 轉換效率	70% Max

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3.5	5W/10W/15W Frequency / 5W/10/15W 頻率	frequencyconversion 110KHz-205KHz / 變頻 110KHz-205KHz
3.6	Apple 7.5W frequency/蘋果 7.5W 頻率	Constantfrequency 127.7KHz/定頻 127.7KHz
3.7	Ripple noise / 紋波及噪音	≤ 5%
3.8	Operatingtemperature / 工作溫度	5-25℃
3.9	Relativehumidity / 相對濕度	40%~60%

4. Safety Control/安全機制

4.1. Short Circuit Protection/短路保護

In the case of short-circuit at the receiveroutput, the transmitter stop output. When removed the receiver or short circuit, the transmitter will resume normal operation.

在接收端輸出短路的情況下，發射端停止輸出。當移除接收或者短路解除時，發射端將恢復正常工作。

4.2. Over Current Protection/過流保護

When the receiver load exceeds the rated value(110% - 130%), the overcurrent protection is triggeredand the transmitter stops working. When removed the receiver, the transmitter will resume normal operation.

當接收器負載>額定值的 110% - 130%時，觸發過電流保護，發射端停止工作，當接收器被移除時，發射端將恢復正常工作。

4.3. Overvoltage Protection/过压保护

The product would stop working when the input voltage exceeds the rated value (13V). The Product would be restarted working when the voltage returns to the set value range.

P/S: The input voltage shall not exceed 13.5V in case damage the product.

輸入端超过设定过压电压值 13V 时，发射端停止工作。电压恢复设定值范围时重新启动工作。

注意：输入电压不可以超过 13.5V，以防损坏本产品。

4.4. Foreign Object Detect (FOD) (1 RMB coin as the standard.)

異物檢測（以一元 RMB 硬幣為標準。）

4.4.1 Whenplacing the coin onto the center of the productunder no-load condition, the transmitter detected foreign object and reports an error, then stops working. Removes the foreign object to resume normal operation .

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空載時放置產品中心，發射端檢測到異物並報錯，停止工作，移除異物可恢復正常工作。

4.4.2 When placing the load and coin together onto the center of the product, an error is reported within 10s (time varies with different mobile phone models) and the output is closed.

Removes the foreign object to resume normal operation.

負載和硬幣一起放置產品中心時，10 秒(不同手機型號時間不同)之內報錯並關閉輸出，移除異物可恢復正常工作。

4.5. Over-temperature Protection/過溫保護

4.5.1. Wireless charging over-temperature protection/無線充電過溫保護

The NTC temperature protection of the PCBA is 65± 5°C (5W/7.5W/10W) 80°C ± 5°C (15W).

The transmitter stops working when the temperature exceeds the value. Resets the receiver or cools to 55-60°C, the transmitter returns to normal operation (optional replacement with external NTC)

PCBA 貼片 NTC 溫度保護設定值為 65± 5°C (5W/7.5W/10W) 80°C ± 5°C (15W)，當溫度超過設定值，發射端停止工作，重新放置接收或者降溫至 55-60°C 時，發射器恢復正常工作。(可選擇更換成外接 NTC)

5. Reliability Requirements / 可靠性要求

5.1. Reliability Test/可靠性測試

Please refer to Link Com's reliability standard and reliability test Report.

請參考聯寶標準《可靠性測試規範》與《可靠性測試報告》

6. Environment Requirement / 環境要求

6.1 Operating Temperature and Relative Humidity/操作溫度和相對濕度 5°C -25°C / RH40~60%

6.2 Storage Temperature and Relative Humidity/儲存溫度和相對濕度 0°C -35°C / RH20~80%

6.2.1 Avoid direct exposure to the storage environment, and do a good temperature and humidity control, room temperature should be controlled at 5°C -25°C, relative humidity RH40~ 60%. In order to maintain good functionality of the product, please observe the following storage conditions. 儲存環境應避免產品受陽光直接照射，並作好溫濕度管控，室溫宜控制在 5°C -25°C / RH40~60%。為使產品維持良好之功能性，請確實遵守以下保存條件

6.2.2 Keep away from high humidity, salt spray or oil spray. 儲存需避開高濕，鹽霧或油霧之環境

When storing, the storage environment temperature should be avoided too drastic, and the humidity should be avoided too high or too low. High humidity and large temperature difference tend to cause

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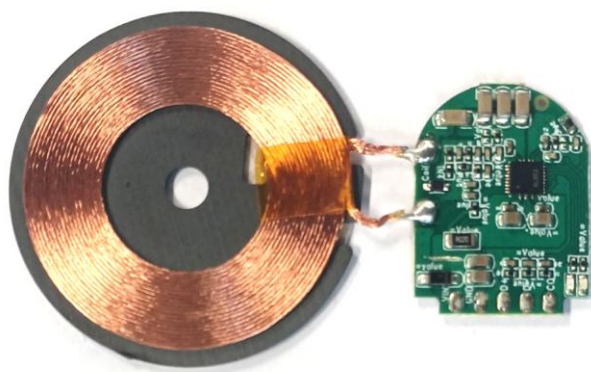
water Vapor condensation phenomenon, too low humidity easily cause the high electrostatic strength. Therefore, humidity will cause the electron ionization, and eventually cause the product functional abnormalities. 儲存時應避免儲存環境溫度變化過於激烈，同時避免濕度過高或過低。濕度過高和溫差過大容易導致水 蒸氣凝結現象，濕度過低容易導致靜電強度過高。故濕度會造成電子遊離，最終導致產品功能性異常。

7. Execution Standards/執行標準

7.1. EMC Standards 電磁相容標準

EN55032	EN55035
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8. Photo of Product/產品照片



9. Module/模块

9.1. Product design proposal / 產品設計要求

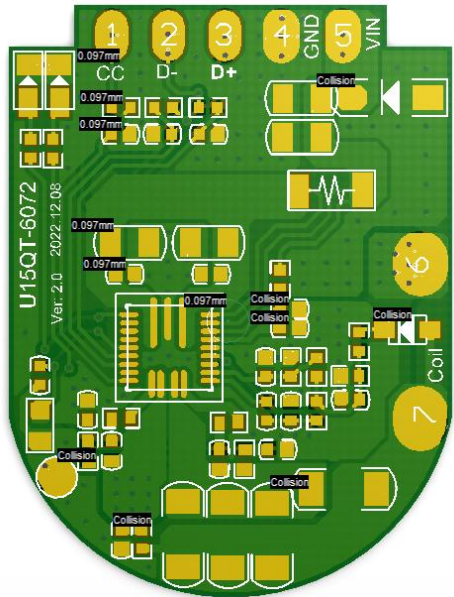
According to the standardization of Qi, Please note below 4 points :

為了要符合 Qi 的標準，有 4 個專案要注意：

1. The distance between Tx Coil with PCB and other metal components is Min: 4.5mm/
輸出線圈，PCB 和其他金屬部件之間的最小距離：4.50mm；
2. The distance between the surface of Tx coil and the surface of product (Working Face) is $3.0+0.5-0.2\text{mm}$, which means the thickness of the working face plastic is not more than 2.25mm;
Tx 線圈表面和產品的表面之間的距離（正面）是 $3.0+0.5-0.2\text{ mm}$ ，即正面塑膠的厚度不超過 2.25mm
3. The surface distance between Tx Coil and Rx Coil is 3.0 – 4.5mm
輸出線圈和接收線圈之間的表面距離為 3.0– 4.5mm
4. In order to pass EMI, it is recommended to use a DC 9V power supply plus a common mode inductor to connect the PCBA power supply.
為了好通過 EMI，建議用 DC9V 的電源外加共模電感連接 PCBA 的電源。

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9.2 PCBA Port Functional Illustration/PCBA 功能說明

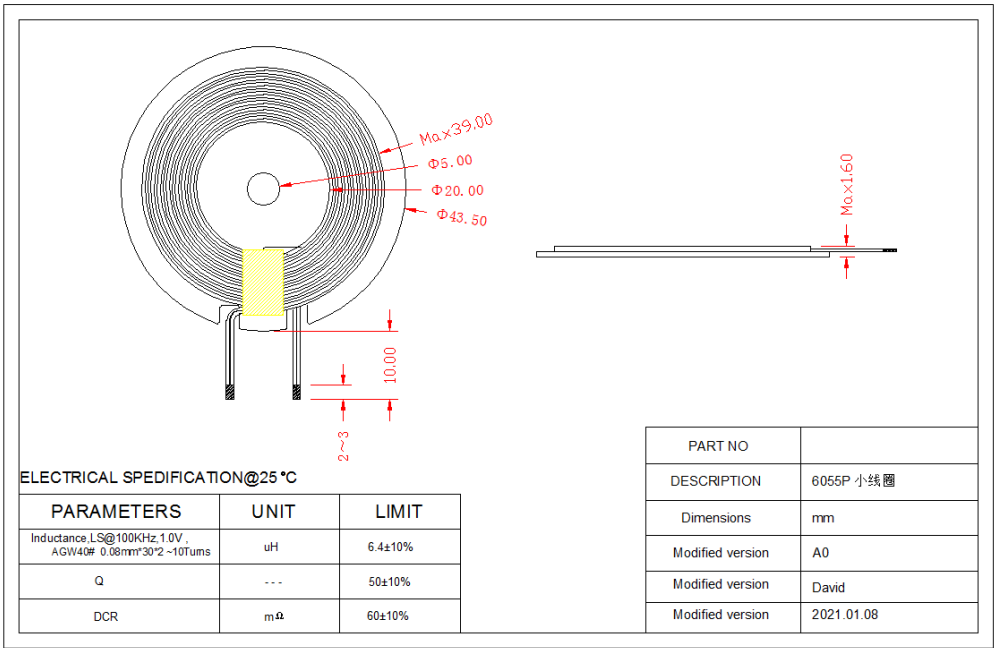


PCBA 圖

PCBA Size :L28.5 ※ W21.5 ※ T2.0 mm

Port	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7
Function	PD_CC	USB D-	USB D+	GND	VIN	Coil-1	Coil_2

9.3. Tx_Coil Spec : TX 線圈規範
Coil + Shielding : ϕ 43.5(±1.0)*1.6mm (Max)



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10. Attentions 使用注意事項

- ◆ Please use the correct rated AC Adapter, to ensure the normal function.
請使用配置的正确規格火牛，保證功能正常；

11. Weight / 重量 $7^{\pm 2}$ g**12. Statement / 聲明**

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About warranty, please refer to LinkCom company warranty policy.