

SPECIFICATION FOR APPROVAL

CUSTOMER: _____

MODEL NO. : _____ ILMU05QR-6058C1C1

PART NO. : _____ ILMU05QR-6058C1C1-XX-1

MODEL NAME: _____ 5W receiving module

REVISION: _____ A3

DATE: _____ 2024/10/18

APPROVED SIGNATURES

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Model No.	ILMU05QR-6058C1C1	Model Name	5W receiving module
Part No.	ILMU05QR-6058C1C1-XX-1	Size	48.5*35.5*1.5mm

Product Specification

產品規格書

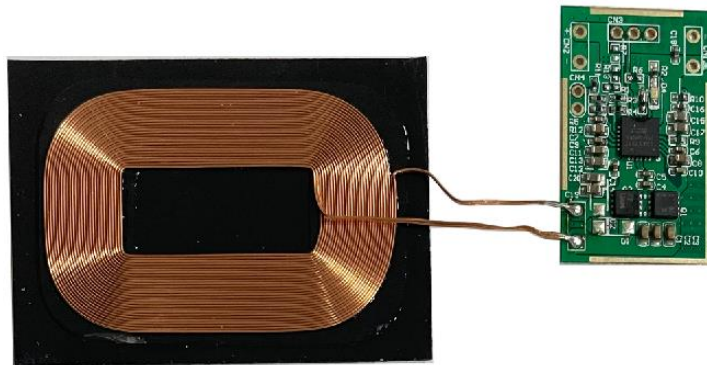
Product name/產品名稱: 5W receiver module

Model No/ 產品型號: ILMU05QR-6058C1C1

File number /文件編號:

Revision/版本號: A3

Date/日期: 2024-10-18



APPROVED BY 批准	CHECKED BY 審核	DESIGNED BY 製作

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Reversion History / 更新記錄

Revision	Date	Changes
A0	2024-01-11	初版發行
A1	2024-08-30	Added PCBA PAD descriptions.
A2	2024-10-10	Added Checksum.
A3	2024-10-18	修改料號為ILMU05QR-6058C1C1 Revised Model No. is ILMU05QR-6058C1C1

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1. Scope/概述

The U05QR-6058 is a compatible Qi 1.2.4 certified single-coil fast charge wireless charging receiver module: its transmission efficiency curve reaches 70% at its highest point, providing up to 5W of transmission power.

U05QR-6058 是一款兼容 Qi 1.2.4 認證的單線圈快充無線充電接收模組：其傳輸效率曲線最高點可達 70%，可提供 5W 的傳輸功率。

2. Product Characteristic/產品特點

U05QR-6058 is a WPC Qi V1.1.2.4 compliant wireless power receiver module. It complies with all Qi wireless charging platform. Its conversion efficiency is up to 75%, can provide up to DC5V/ 1A transmission capacity. This module enables powering or charging for any DC5V electronic products.

U05QR-6058 是 WPC Qi V1.2.4 相容的無線電源接收模組。符合全 Qi 無線充電平臺，其轉換效率高達 75%，可提供高達 DC5V/ 1A 的傳輸能力，這個模組可以為任何 DC5V 電子產品供電或充電。

It adopts intelligent identification system while its transmitter and receiver unit adopts UART (Universal asynchronous receiver/ transmitter) encrypted transmission control signal which is stipulated by WPC. The console will process the corresponding power adjustment based on the encoding of the receiving unit. This module has fulfilled the WPC Qi requirement and is certified by Qi V1.1.2.4

採用智慧識別系統，發射和接收單元採用 WPC 規定的 UART(通用非同步接收/發射)加密傳輸控制信號，控制台將根據接收單元的編碼進行相應的功率調整。該模組滿足 WPC Qi 要求，通過 Qi V1.1.2.4 認證

3. Performance Parameter / 性能參數

3.0	Compatible transmitter/相容發射端	WPC Qi_1.1 ~ 1.2.4
3.1	Input AC voltage /輸入交流電壓	6.5 ~ 15.5 VAC
3.2	Output power/輸出功率	5W MAX
3.3	Power Transfer Efficiency /轉換效率	70%±5%
3.4	5W Frequency / 5W 頻率	frequency conversion 110KHz-205KHz /
3.5	Ripple noise/紋波及噪音	≤250mVp_p
3.6	Indicator light display/指示燈顯示	1、 The blue light is on during work/工作時藍燈亮; 2、 No indicator light when abnormal/異常時無指示燈;

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3.7	Operating temperature/工作溫度	0-30°C
3.8	Relative humidity/相對濕度	10% ~ 80%
3.9	Checksum / 校驗碼	0x3F253E

4. Protection Requirements/保護要求

4.1. Short Circuit Protection/短路保護

The input power shall decrease when the output is short to GND, the power supply shall not damage, and shall be self-recovery when the fault condition is removed.

當接收端輸出對地短路，應減少或停止功率輸入，使電源不至於損壞；並且在解除故障條件應時能自行恢復。

4.2. Over Current Protection/過流保護

OCP Point Limited:110%-130% auto restart

OCP 限制：110% - 130%自動重啟

The output shall hiccup when the over current applied to the output, and shall be self-recovery when the fault condition is removed.

當接收端的電流輸出超過額定值時應停止功率輸出，然後在解除故障時會自動恢復。

5. Reliability Requirements / 可靠性要求

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 0°C-30°C / RH40~60%

6.2 Storage Temperature and Relative Humidity / 儲存溫度和相對濕度 -20°C-40°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 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。

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7. Execution Standards/執行標準

7.1. EMC Standards 電磁相容標準

EN55032

EN55035

Note: EMI testing with enclosure and actual TX equipment required

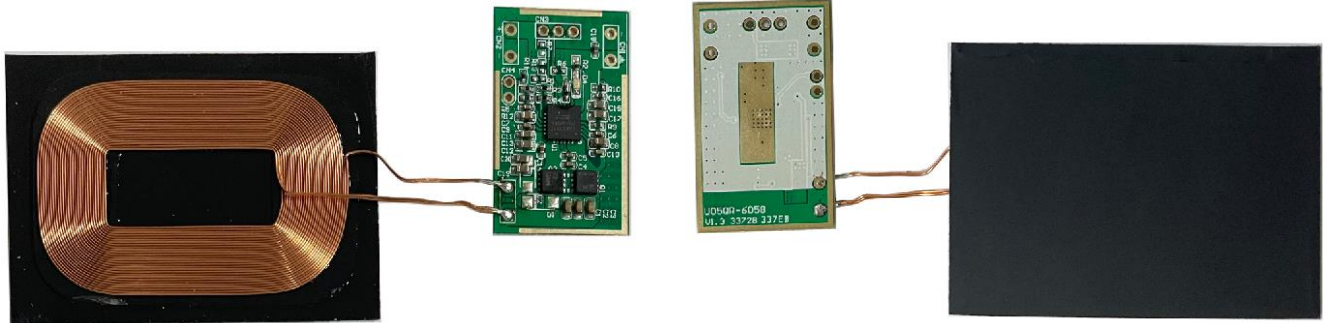
備註: EMI 測試需帶外殼及 TX 待測物實際測試

8. Appearance Requirements/結構與外觀要求

Please refer to LinkCom's appearance inspection specification.

請參考聯寶電子外觀檢驗規範

9. Photo of Product/產品照片



Module Front Side

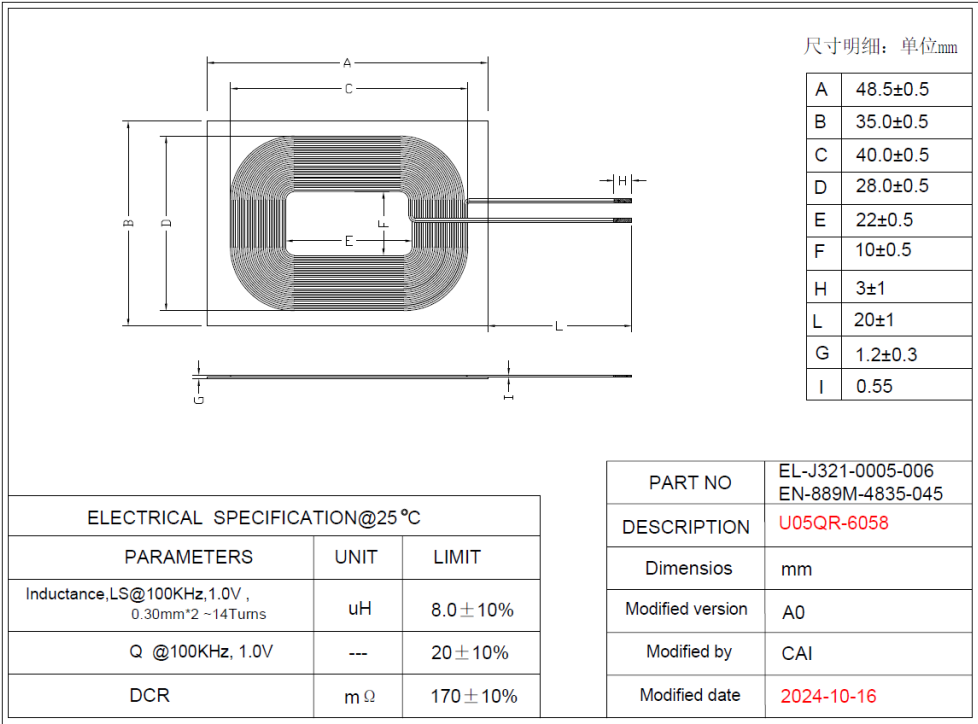
Module Back Side

Description:

1. The minimum distance between PCBA and other metal components is 4.50mm;
PCBA 與其他金屬元件的最小距離為 4.50mm
2. The distance of the surface of Rx coil and the surface of product (Working Face) is 1.0-2.0mm, which means the thickness of the working face plastic is not more than 1.8mm;
Rx 線圈表面與產品表面(工作面)的距離為 1.0-2.0mm, 表示工作面的塑膠厚度不超過 1.8mm
3. The surface distance between Tx Coil and Rx Coil Ideal value is 3.0 – 4.5mm
輸出線圈和接收線圈之間的表面距離最理想值為 3.0– 4.5mm
4. Due to the large error of micro-cutting of glass fiber board, the deviation of + / - 0.2mm can be achieved with CNC dividing board
由於玻纖板做微割的誤差偏大, 要用 CNC 分板可以做到±0.2mm 的偏差

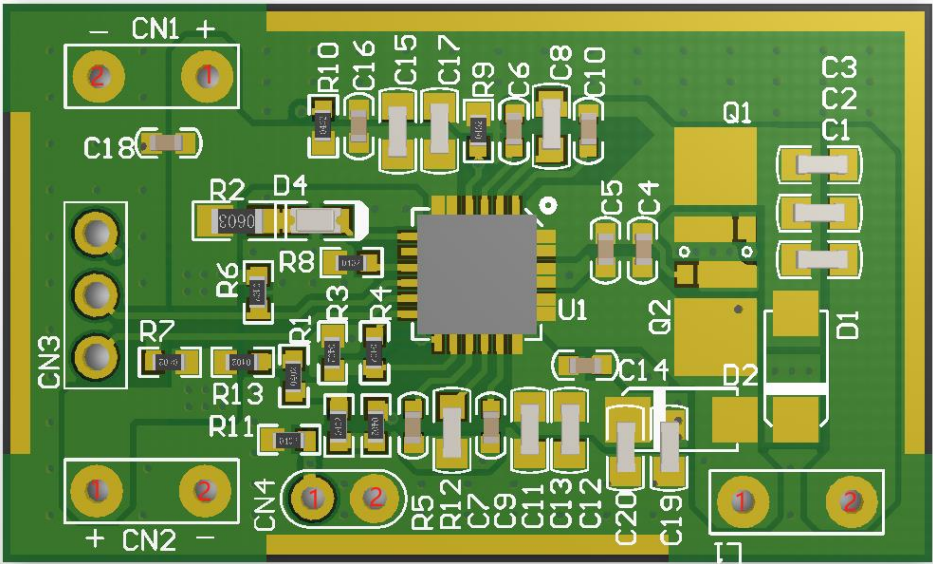
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RX Coil Spec: RX 線圈規格



10. Module 模組

10.1 PCBA Port Functional Illustration/PCBA 功能說明



Port	CN1		CN2		CN4		L1
	Pin1	Pin2	Pin1	Pin2	Pin1	Pin2	
Function	+5V_OUT	GND	+5V_OUT	GND	GND	外接 NTC	RX_Coil

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11. Dimensions/外观特性

11.1 L * W * H

PCBA : 32* 18* 1.5 mm (Max)

Coil + Shielding : 48.5 * 35.5 * 1.5mm (Max)

Distance between PCBA and Coil + Shielding $\geq$ 3.0mm

12. Weight /重量

6.0g $\pm$ 1g

13. Statement 聲明

All rights reserved by LinkCom Manufacturing Co., Ltd. for all of this specification for approval.
About warranty, please refer to LinkCom company warranty policy.

