

SPECIFICATION FOR APPROVAL

CUSTOMER: _____

MODEL NO. : ILMU15QR-6011C1C1

PART NO. : ILMU15QR-6011C1C1-XX-1

MODEL NAME: 15W receiving module

REVISION: A3

DATE: 2024/10/18

APPROVED SIGNATURES

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Model No.	ILMU15QR-6011C1C1	Model Name	15W receiving module
Part No.	ILMU15QR-6011C1C1-XX-1	Size	90~110*40*1.5mm

Product Specification

产品规格书

Product name/产品名称:

15W receiving module

Model No/ 产品型号:

ILMU15QR-6011C1C1

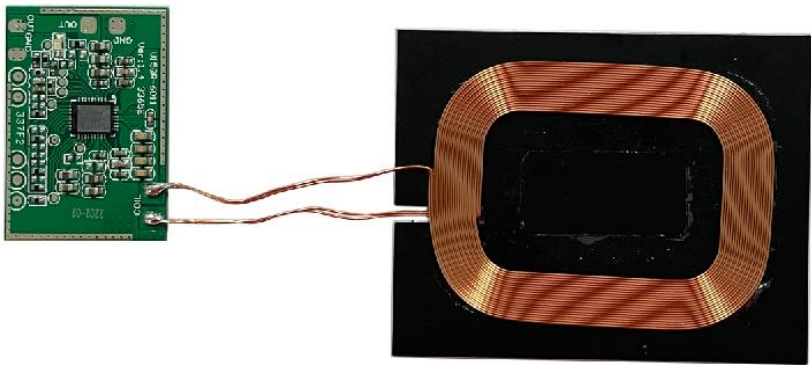
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Date/日期:

2024-10-18



APPROVED BY 批准	CHECKED BY 审核	DESIGNED BY 制作

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Reversion History / 更新記錄

Revision	Date	Changes
A0	2024-1-11	初版發行
A1	2024-08-30	Added PCB PAD descriptions
A2	2024-10-10	Added checksum.
A3	2024-10-18	修改產品料號為 ILMU15QR-6011C1C1 Revised Model No. is ILMU15QR-6011C1C1

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1. Scope/概述

The U15QR-6011 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 15W of transmission power. It can power or charge any Qi certified product.

U15QR-6011 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%，可提供高達 15W 的傳輸功率。

2. Product Characteristic/产品特点

U15qr-6011 is WPC 1.2.4 Qi compatible medium power wireless charging and receiving module: its transmission efficiency can reach 75% ± 5%, and it can also provide transmission capacity up to 15W. It can provide DC5V × 1.0A, DC9V × 1.25A and DC12V × 1.25A, and the maximum output power is 15W.

U15QR-6011 是 WPC 1.2.4 Qi 相容的中功率無線充電接收模块：其傳輸效率可達 75%±5%，也可提供高達 15W 的傳輸容量。它可以提供 DC5V×1.0A；DC9V×1.25A；DC12×1.25A 三種輸出選擇，最大輸出功率 15W。

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 WPC1.2.4 The console will process the corresponding power adjustment based on the encoding of the receiving unit. This module has fulfilled the WPC1.2.4 Qi requirement and is certified by Qi.

它採用智慧識別系統，並且它的發射和接收單元採用 UART（通用非同步接收器/發送器）加密傳輸控制信號，這是規定的 WPC1.2.4 控制將基於接收單元編碼對應的功率調整。此模組達到了 WPC1.2.4Qi 的要求也是 Qi 的認證產品。

3. Performance Parameter / 性能参数

3.0	Compatible transmitter/兼容发射端	WPC Qi_1.1 ~ 1.2.4
3.1	Input AC voltage /输入交流电压	6.5 ~ 15.5 VAC
3.2	Output power/输出功率	5W ~ 15W MAX
3.3	Power Transfer Efficiency /转换效率	70%±5%
3.4	15W Frequency / 15W 频率	frequency conversion 110KHz-205KHz /
3.5	Ripple noise/纹波及噪音	≤5%
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℃
3.8	Relative humidity/相對濕度	10% ~ 80%
3.9	Checksum / 校驗碼	0x1C1364

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時應能自行恢復。

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。

4.3. Over-temperature Protection/過溫保護

The temperature protection setting for PCBA patch NTC is 85 °C ± 5 °C. When the temperature exceeds the set value, the receiving end stops working, and the receiver is repositioned to resume normal operation or the temperature of the PCBA patch NTC at the receiving end drops to 55-60 °C before resuming function output

PCBA 貼片 NTC 溫度保護設定值為 85°C±5°C，當溫度超過設定值，接收端停止工作，重新放置接收恢復正常工作或者待接收端的 PCBA 貼片 NTC 溫度降到 55-60°C再恢復功能輸出。

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》

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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。

7. Execution Standards/執行標準

7.1. EMC Standards 電磁相容標準

EN55032	EN55035
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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

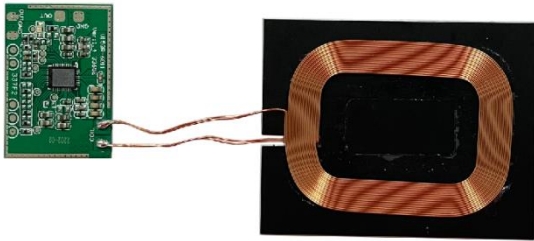
8. Appearance Requirements/結構與外觀要求

Please refer to LinkCom's appearance inspection specification.

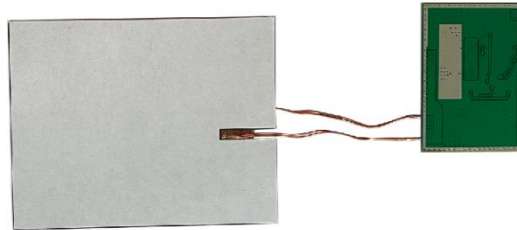
請參考聯寶電子外觀檢驗規範

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9. Photo of Product/产品照片



Module Front Side



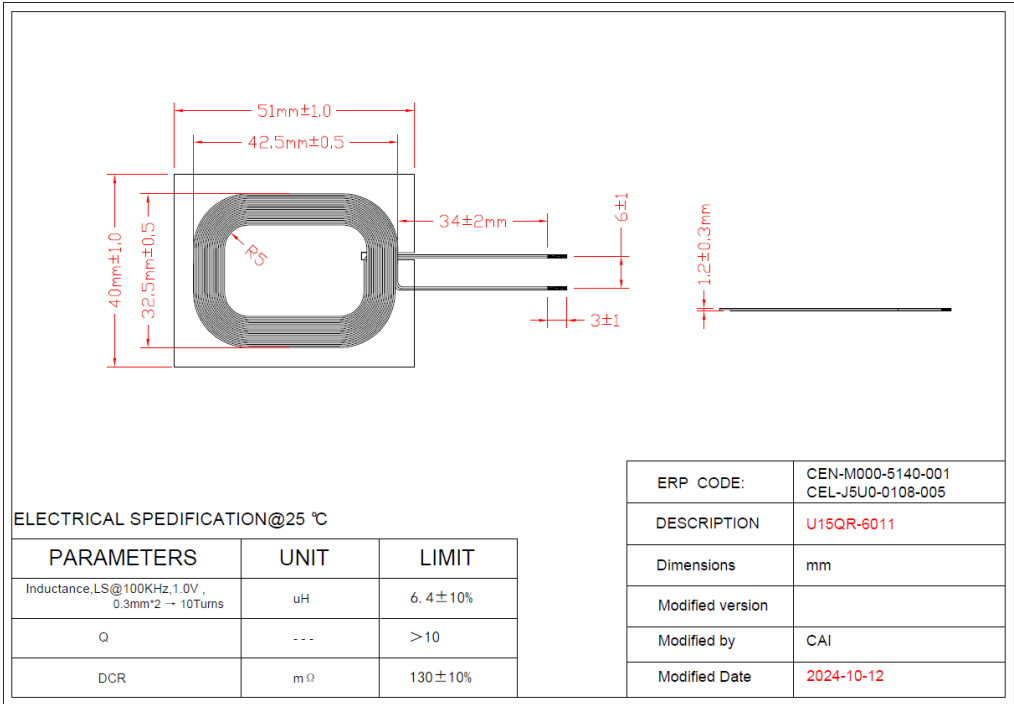
Module Back Side

Description:

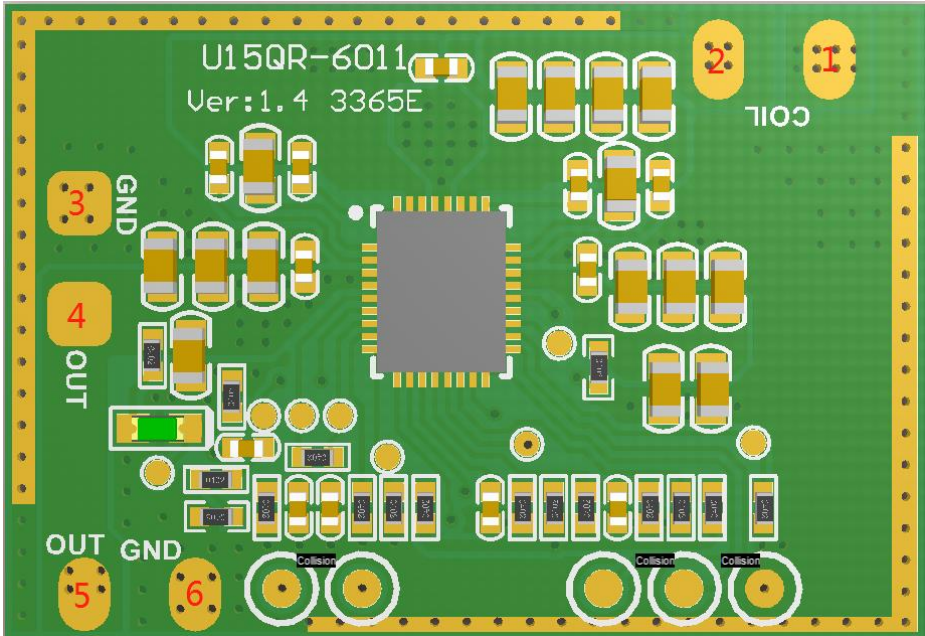
1. The minimum distance between PCBA and other metal components is 4.50mm;
PCBA 与其他金属元件的最小距离为 4.50mm
2. The distance of the surface of Rx coil and the surface of product (Working Face) is 1.0-2.0mm, which means the thickness of the working face plastic is not more than 1.8mm;
Rx 线圈表面与产品表面(工作面)的距离为 1.0-2.0mm, 表示工作面的塑料厚度不超过 1.8mm
3. The surface distance between Tx Coil and Rx Coil Ideal value is 3.0 – 4.5mm
输出线圈和接收线圈之间的表面距离最理想值为 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
由于玻纤板做微割的误差偏大, 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. PCBA Port Functional Illustration/PCBA 功能说明



PCBA 图

PCBA : 29*20*2.0 mm

Port	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6
Function	Coil_1	Coil_2	OUT_GND	OUT_VCC	OUT_VCC	OUT_GND

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11. Dimensions/外观特性

11.1 L * W * H

PCBA : 29* 20* 1.5 mm (Max)

Coil + Shielding : 51*40*1.2 (± 0.3) mm

Distance between PCBA and Coil + Shielding ≥ 3.0 mm

12. Weight /重量

6.1g $\pm$ 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.