

SPECIFICATION FOR APPROVAL

CUSTOMER: 公司中性產品

MODEL NO: U05QT-6082

PART NO : SBM-U05QT6082-U-01

MODEL NAME: 5W three-coil wireless charging and transmitting module

REVISION: A1

DATE: 2024/9/5

APPROVED SIGNATURES

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Model No.	U05QT-6082	Model Name	5W three-coil wireless charging and transmitting module
Part No.	SBM-U05QT6082-U-01	Size	Product Size : L107.5 ^{±0.5} × W52 ^{±0.5} × T8 ^{±0.5} mm

Product Specification

產品規格書

Product name/產品名稱:

5W three-coil wireless charging and transmitting module

Model No/ 產品型號 :

U05QT-6082

File number /文件編號:

Revision/版本號 :

A1

Date/日期 :

2024-09-05



APPROVED BY	CHECKED BY	DESIGNED BY
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Reversion History / 更新記錄:

Revision	Date	Changes
A0	2024-01-24	初版發行
A1	2024-09-05	增加PCB尺寸

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1. Scope/概述

The U05QT-6082 is a WPC Qi 1.2.4 certified multi-function three-coil fast charge wireless charging transmitter module: its transmission efficiency curve reaches 70% at its highest point, providing up to 5W of transmission power. It can power or charge any WPC-Qi certified product.

U05QT-6082 是一款 WPC Qi 1.2.4 認證的多功能三線圈快充無線充電發射模組：其傳輸效率曲線最高點可達 70%，可提供高達 5W 的傳輸功率。它可以對任何 WPC-Qi 認證產品供電或充電。

2. Product Characteristic / 產品特點

- ◆ PD3.0/ QC3.0 power communication protocol
PD3.0/ QC3.0 電源通信協議；
- ◆ DC5V direct power supply
DC5V 電源直接供電；
- ◆ Passed Qi 1.2.4 certification.
Qi 1.2.4 認證.

3. Performance Parameter / 性能參數

3.0	Power input protocol / 電源輸入協定	PD3.0/ QC3.0 / DC5V
3.1	Input voltage & current / 輸入電壓電流	4.90~5.50V * 2.0A
3.2	Working voltage current / 工作電壓電流	5V/0.05~1.75A Max
3.3	Wireless charging output power 無線充電輸出功率	5W
3.4	Power Transfer Efficiency / 轉換效率	70% Max
3.5	Operating frequency / 工作頻率	Frequency range: 110KHz-205KHz / 頻率範圍: 110KHz-205KHz
3.6	Ripple noise / 紋波及噪音	≤ 5%
3.7	Operating temperature / 工作溫度	0-30℃
3.8	Relative humidity / 相對濕度	40%~60%

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4. Safety Control/安全機制

4.1. Short Circuit Protection/短路保護

In the case of short-circuit at the receiver output, 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 triggered and 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. Foreign Object Detect (FOD) (1 RMB coin as the standard.)

異物檢測 (以一元 RMB 硬幣為標準。)

4.3.1 When placing the coin onto the center of the product under no-load condition, the transmitter detected foreign object and reports an error, then stops working. Removes the foreign object to resume normal operation .

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。

4.3.2 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。

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4.4. Over-temperature Protection/過溫保護

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

The NTC temperature protection of the PCBA is 65 °C± 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°C±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 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

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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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8. Indicator light 指示燈

- ◆ Power In : Blue+Red LED On for 0.5S / 通電: 藍+紅色 LED 亮 0.5S
- ◆ Standby: LED light is not on / 待機：無燈
- ◆ Charging:Pulsing Blue LED / 充電時: 藍燈常亮
- ◆ Charge Complete: Red & Blue LED Off / 充電完成：藍燈熄滅
- ◆ Abnormal: Red LED On / 異常: 紅燈長亮
- ◆ FOD:Blinking Blinking Red LED / 檢測到異物: 紅燈閃爍

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9. 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；

10. Size / 尺寸:

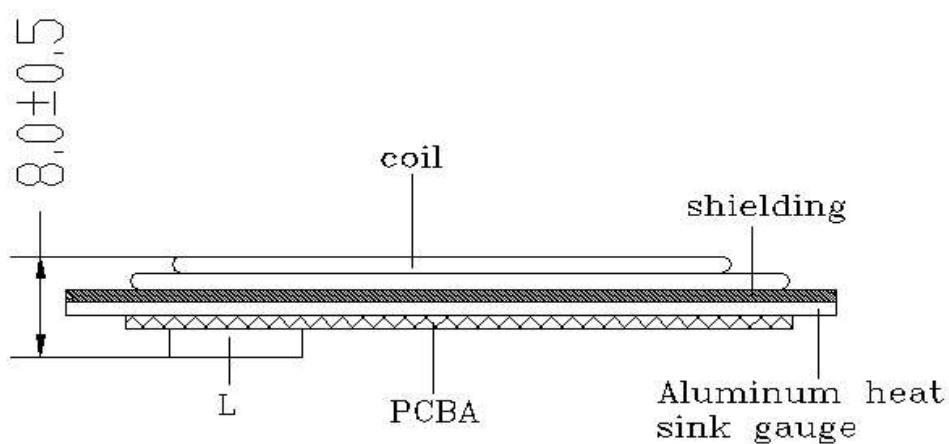
Product Size : $L107.5^{±0.5} \times W52^{±0.5} \times T8^{±0.5}$ mm



Module Back Side 模組後面



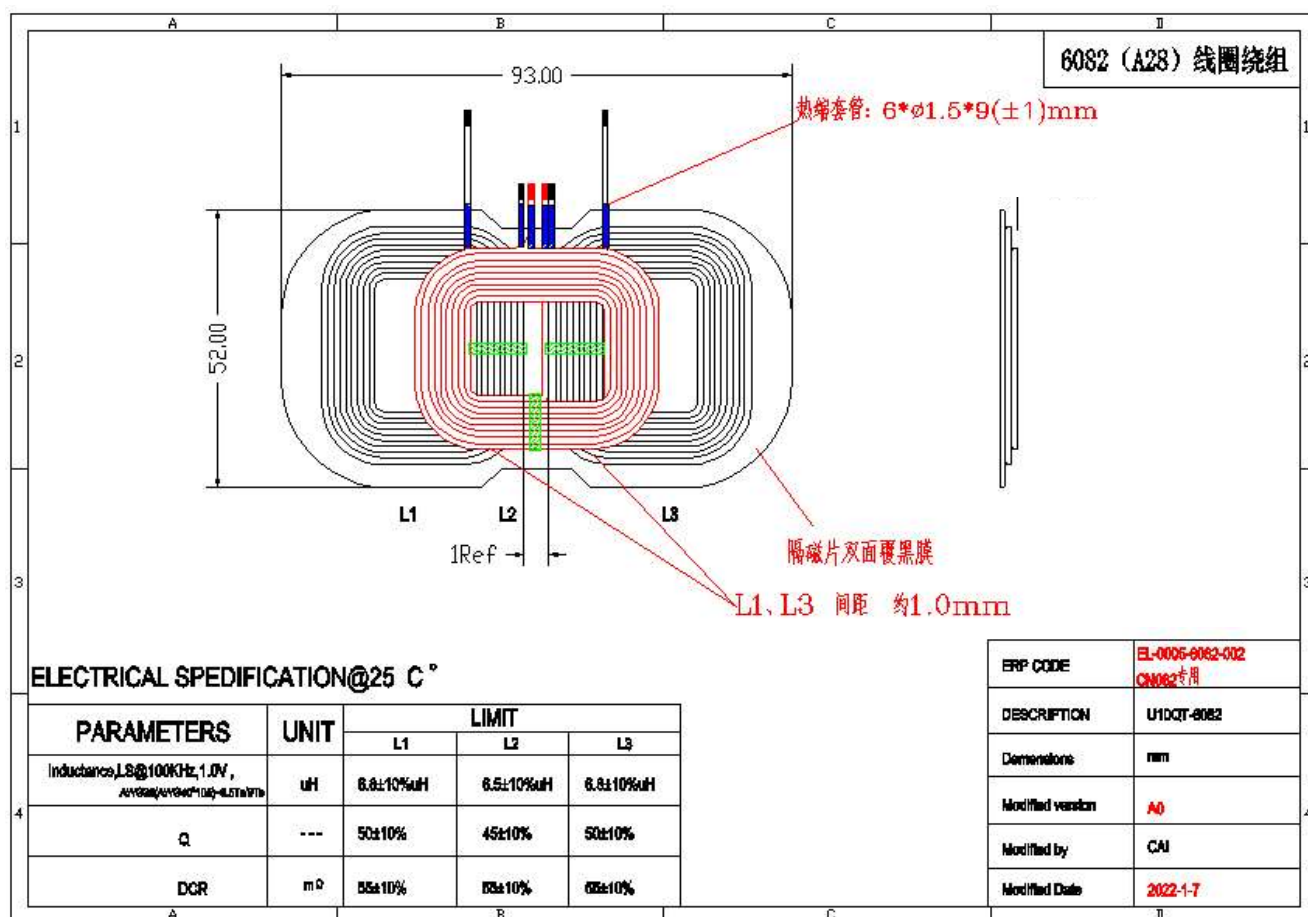
Module Front Side 模組前面



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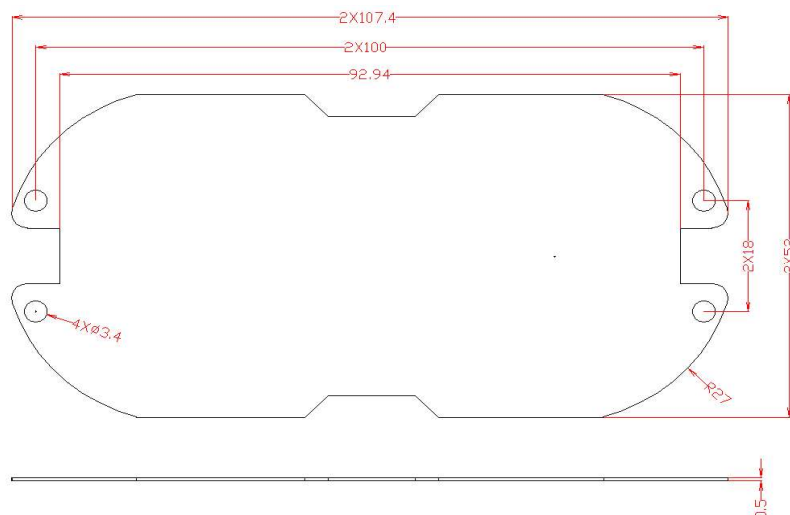
Tx_Coil Spec : TX線圈規範

Coil + Shielding : 93^{±0.5} * 52^{±0.5} * 4.0^{±0.5}mm



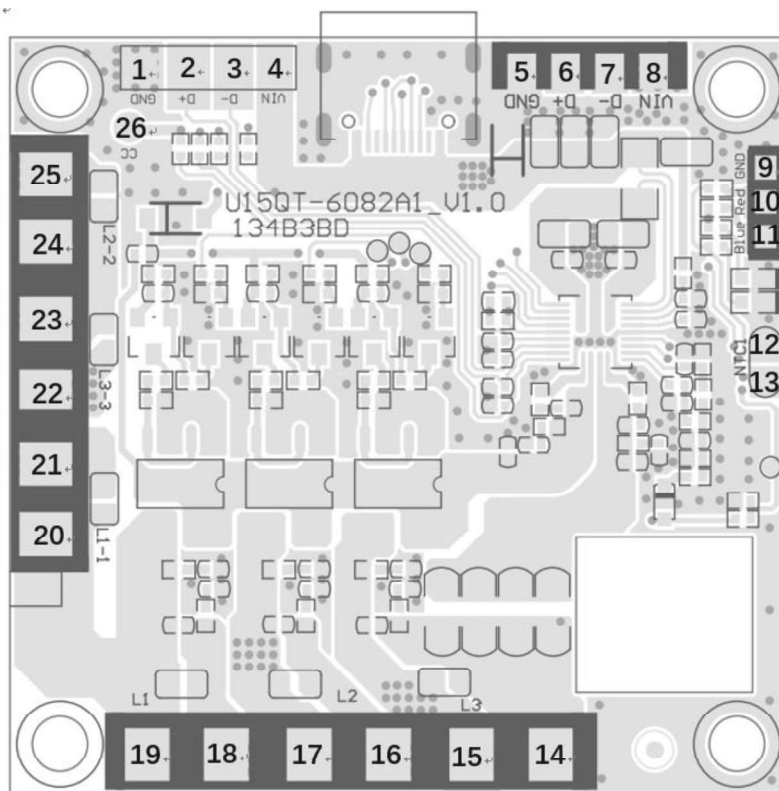
luminum heat sink gauge Spec 鋁散熱片規格

107.4(±0.5)*52(±0.5)*0.5(±0.1)mm



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11. PCBA Port Functional Illustration/PCBA 功能說明



PCB 圖

PCBA Size: 44(±0.5)*45(±0.5)*3.8 (±0.2)mm

Port	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7
Function	Burn_GND	Burn_DM	Burn_DP	Burn_VIN	GND	USB/D+	USB/D-
Port	Pin8	Pin9	Pin10	Pin11	Pin12	Pin13	Pin14
Function	VIN	LED_GND	LED_Red	LED_Blue	NTC1-	NTC1+	CoilL3_1
Port	Pin15	Pin16	Pin17	Pin18	Pin19	Pin20	Pin21
Function	CoilL3_2	CoilL2_1	CoilL2_2	CoilL1_1	CoilL1_2	CoilL1-1_1	CoilL1-1_2
Port	Pin22	Pin23	Pin24	Pin25	Pin26	Pin27	Pin28
Function	CoilL3-3_1	CoilL3-3_2	CoilL2-2_1	CoilL2-2_2	CC		

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12. Weight / 重量

52±2g

13. Statement / 聲明

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About warranty, please refer to LinkCom company warranty policy.