



**MODEL NO : WCMT1005  
ENGINEERING SPECIFICATION SHEET**

**CWT**

**Purpose:** This specification document represents the design criteria of the product identified herein, for the approval of the designated recipient (customer). Prior to production and delivery of this product by CWT, the customer shall endorse its approval of this specification document, upon review of the detailed information provided herein. The customer's endorsement (approval) verifies that the product description is determined to be fully compliant to the customer's design requirements. If one or more samples are included with this specification, the customer's endorsement (approval) further verifies that the product has been tested by the customer, for which the product satisfactorily meets all aesthetic, mechanical, electrical, and operating requirements for its intended usage with the customer's suitable indoor equipment or applications.

**To Approve:** An authorized employee or agent of the customer shall endorse approval of this specification. Please sign & date this cover-page, and initial each subsequent page in the lower left corner to signify all sections have been read and found to be acceptable. A completed, original copy (signed, dated, initialed) of this specification must be returned to CWT to record the approved customer design. The customer shall keep one or more copies for its records. Upon receipt, CWT shall manufacture the product to the approved customer design. If design revisions are otherwise required, a revised specification and/or modified samples shall be provided by CWT for the endorsement (approval) by the customer.

<b>Approved</b>

**Customer Signed**

<b>Issued</b>	<b>Checked</b>	<b>Planned</b>
<b>Yc Lin</b>	<b>Yc Lin</b>	<b>Leo Chen</b>

**Channel Well Technology Co., Ltd.**

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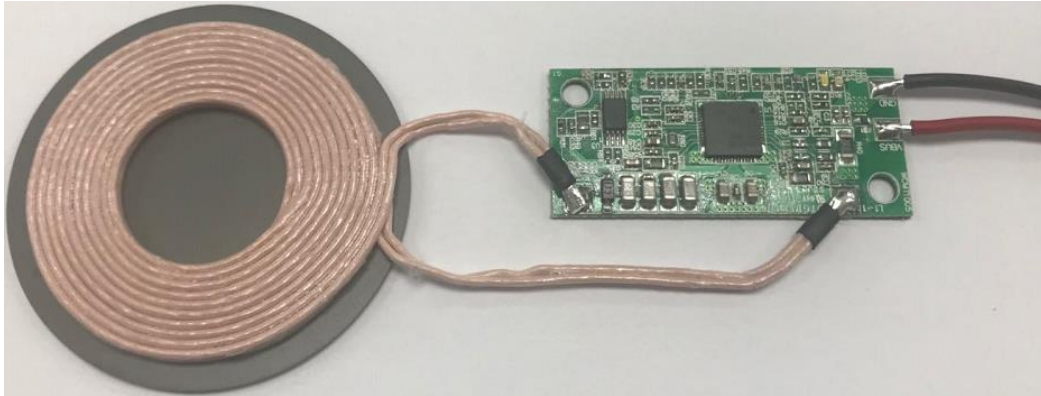


## 1 SCOPE

This document describes the basic electrical characteristics of Wireless power transmitter module for WCMT1005. WCMT1005 is based on electromagnetic induction, and it is a widely use module in many different applications. This is a new concept of charging the devices without any wires and cords.

### 1.1 GENERAL DESCRIPTION

- WCMT1005 is a Wireless Power consortium (WPC) Qi 1.2 compatible wireless power transmitter module. Transmitter module with Qi certificate and this transmitter works with the devices, which are compatible with Qi Standard. The IC and Solution in WCMT1005 wireless power transmitter module is made from Integrated Device Technology (IDT). This excellent performance of the highly integrated transmitter module is using a magnetic induction process technology with a stable performance and high reliability. Wireless charging maintains power efficiency and sustainable development with an overheating detection system (WPC 1.2).



## 2 ELECTRICAL SPECIFICATION

### 2.1 INPUT REQUIREMENT

#### 2.1.1 INPUT VOLTAGE

WCMT1005 shall operate within specification from 4.75 to 5.25Vdc. The table below shows common input voltage range.

Input Range	Minimum	Nominal	Maximum	Unit
5V±5%	4.75	5	5.25	Vdc

Table 1 - Input Voltage Range

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**2.1.2 INPUT CURRENT**

WCMT1005 maximum steady state input current shall not exceed 2 A for any line voltage specified in 2.1.1.

**2.1.3 LOW POWER CONSUMPTION**

Vin	Load	Power consumption
5Vdc	0A	< 0.1W

**2.2 OUTPUT POWER**

WCMT1005 requires to work with a receiving chip or device, which complies with Wireless Power Consortium Qi V1.2 standard (Qi-compatible). The output range must be 5W (5V/1A).

For the best charging result, please use the wireless receiver from a series of WCR \ 2ABI CWT designed.

**2.3 PERFORMANCE REQUIREMENT**

**2.3.1 EFFICIENCY**

Use Qi V1.2 Wireless Charger Receiver 2ABI004B Efficiency shall be > 72 % at 5V/1A load and TX Coil to RX Coil gap = 2mm.

**2.4 LED INDICATOR**

LED*/Color	Standby	Transfer	Charge Complete	Fault Condition	FOD Warning
LED3-White	OFF	BLINK SLOW	ON	OFF	OFF
LED1-Amber	OFF	OFF	OFF	BLINK FAST	BLINK FAST

**3 ENVIRONMENTAL SPECIFICATION**

**3.1 COOLING**

Natural Air Cooling

**3.2 TEMPERATURE**

Operation within specification: -10 to 60 degrees C.

Storage: -25 to 85 degrees C

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**3.3 HUMIDITY**

Operation: 10% to 90% relative humidity, non-condensation.

Storage: 10% to 95% relative humidity, including condensation.

**3.4 CALCULATED MEAN TIME BETWEEN FAILURES (MTBF)**

Power Bank shall have a calculated MTBF of greater than 300,000 hours, calculated utilizing MIL-HDBK-217F with the following assumptions:

Output load: Rated full load

Ambient temperature: 25 degrees C

**3.5 WEIGHT**

< 45g

**4 REGULATORY COMPLIANCE**

**4.1 EMC SPECIFICATION**

**4.1.1 FCC REQUIREMENTS**

WCMT1005 shall comply with the radiated and conducted emission requirements for FCC Part 15 Class B.

**4.1.2 CISPR REQUIREMENTS**

WCMT1005 shall comply with the radiated and conducted emission requirements for CISPR 22 Class B.

**4.2 AGENCIES CERTIFICATIONS**

The WCMT1005 is designed to meet Comply to WPC QI V1.2 . .

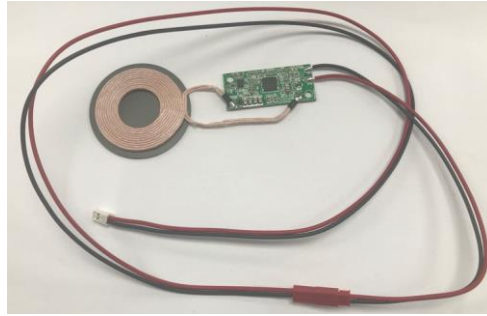
**5 MECHANICAL**

Refer to drawing

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# NCC

低功率電波輻射性電機管理辦法 (930322)

## 第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

## 第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。



# FCC

## Federal Communications Commission (FCC) Statement

15.19

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- 1) this device may not cause harmful interference and
- 2) this device must accept any interference received, including interference that may cause undesired operation of the device.

15.21

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

### **FCC RF Radiation Exposure Statement:**

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

For body worn operation, this device has been tested and meets FCC RF exposure guidelines. When used with an accessory that contains metal may not ensure compliance with FCC RF exposure guidelines.

# IC

**This device complies with Industry Canada licence-exempt RSS standard(s).**

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio

exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RF Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 10cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 10cm de distance entre la source de rayonnement et votre corps.