



EJEK Technology

SPECIFICATION

SPEC. NO. : _____ REV : _____ 1.0

DATE : _____ 2022.11.22

PRODUCT NAME : _____ WTM1C10

	APPROVED	CHECKED	PREPARED	DCC ISSUE
NAME				

EJEK

WTM1C10

Wireless Power Transmitter
Module Specification

Revision History

Date	Revision Content	Revised By	Version
2022/11/22	- Preliminary	Eric	1.0

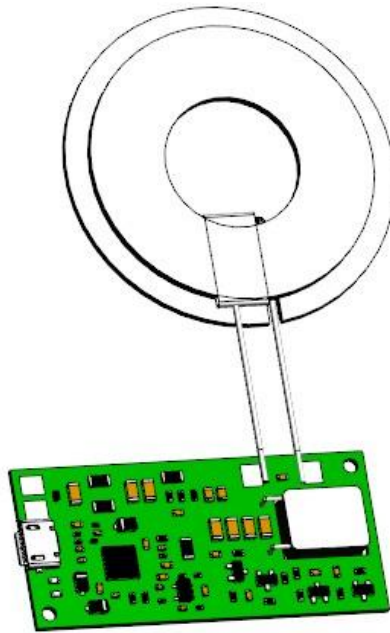
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1 SCOPE

This document describes the basic electrical characteristics of WTM1C10 wireless power transmitter module. WTM1C10 is designed based on the technology of electromagnetic induction.

It is a widely used module for many different applications. This is a new concept of charging devices without any wires and cords.



1.1 GENERAL DESCRIPTION

WTM1C10 is a Wireless Power Consortium (WPC) Qi 1.2.4 compatible wireless power transmitter module. This transmitter module is Qi certified and can function with devices compatible to Qi standard. This excellent and highly integrated transmitter module is using magnetic induction process technology with stable performance and high reliability. This specification defines the performance characteristics (include electrical function, EMC, safety, and product test requirements and so on) of a internal signal coil wireless charger (transmitter), which provide configurable charging mode to support WPC Qi 1.2.4 standard.

2 ELECTRICAL SPECIFICATION

2.1 DESIGN STANDARDS

WTM1C10 with follow WPC Qi Wireless Power Transfer System Power Class 0
Specification Power Transmitter A11.

2.2 INPUT REQUIREMENT

The power supply must operate on a DC input voltage 9V with $\pm 5\%$ tolerance.
Input current should lower than 2A.

Input Range	Minimum	Nominal	Maximum	Un
9	8.5	9	9.4	Vd

Table 1 - Input Voltage Range

2.3 OUTPUT REQUIREMENT

The wireless charger can support WPC qi V1.2.4 BPP 5W , downward support
BPP 5W, Apple 7.5W, Samsung 10W Fast Charge.

2.4 NO LOAD CONSUMPTION

Input Range	Minimum	Nominal	Maximum	Uni
5V	4.75	5	5.25	Vdc
9V	8.55	9	9.45	Vdc

Table 2 - No load consumption

2.5 EFFICIENCY

The efficiency shall be >75% at 5W maximum loading, 5V/1A efficiency
measurements are performed at coil center with 2mm vertical distance between
TX coil and RX coil.

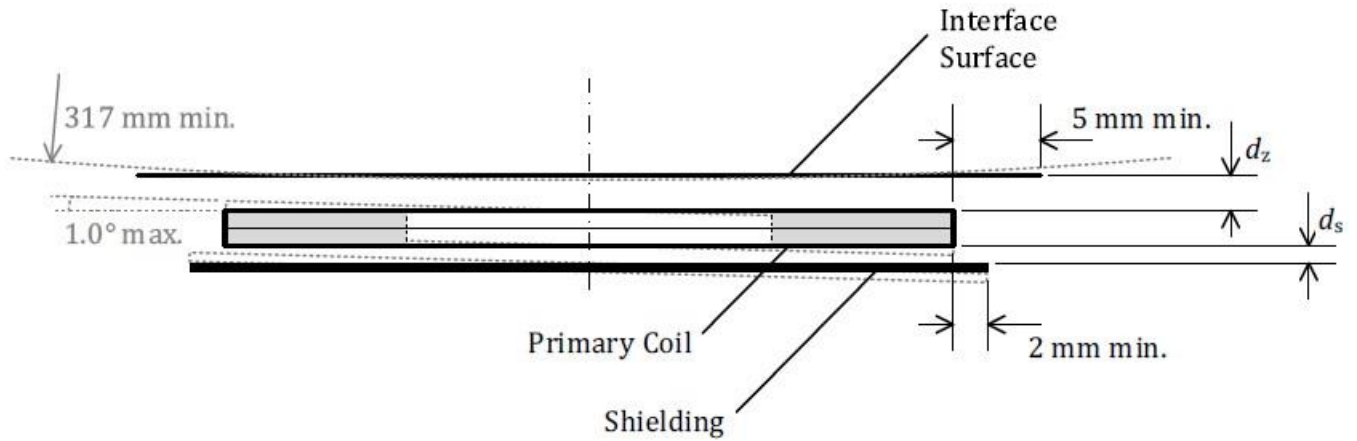
Load	Efficiency	Receiver
5W	75%	IDT P9225

Table 3 - Efficiency

2.6 FREQUENCY

The Operating Frequency is 113~205 kHz

2.7 INTERFACE SURFACE



2.7.1 DISTANCE

Distance from the Primary Coil to the Interface Surface of the Base Station is $d_z = 2.0$ mm across the top face of the Primary Coil.

2.7.2 WITHOUT METAL

The Interface Surface of the Base Station extends at least 5.0 mm beyond the outer dimensions of the Primary Coil.

2.8 LED INDICATE

LED*/Color	Standby	Transfer	Charge Complete	Fault Condition
LED1-Green	OFF	Breathing	ON	OFF
LED2-Red	OFF	OFF	OFF	Breathing

Table 4 - LED indicate

3 ENVIRONMENTAL SPECIFICATION

3.1 COOLING

Natural Air Cooling

3.2 TEMPERATURE

Operation within specification: -10 to 50 degrees C. Storage: -20 to 85 degrees C

3.3 HUMIDITY

Operation: 10% to 85% relative humidity, non-condensation. Storage: 10% to 85% relative humidity, including condensation.

3.4 CALCULATED MEAN TIME BETWEEN FAILURES (MTBF)

Power Bank shall have a calculated MTBF of greater than 400,000 hours, calculated utilizing MIL-HDBK-217F with the following assumptions:

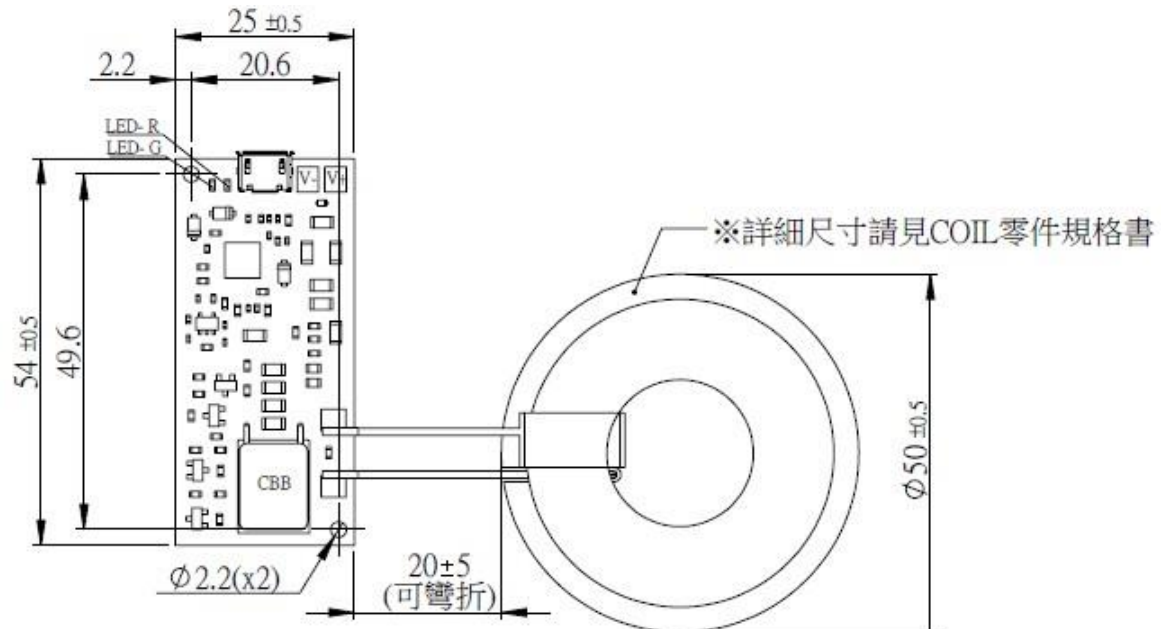
Output load: Rated full load Ambient temperature: 25 degrees C

3.5 WEIGHT

<70g

4 MECHANICAL

Unit: cm



5 Product Photos



FCC Statement

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.

Changes or modifications not explicitly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Note: 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 candidate 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.

The equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. During the operation of device a distance of 15 cm surrounding the device and 20 cm above the top surface of the device must be respected.

ISED Statement

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

- This device may not cause interference; and
- 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:

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

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment.

During the operation of device a distance of 10 cm surrounding the device and 10 cm above the top surface of the device must be respected.

Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé.

au cours de l'opération de l'appareil sur une distance de 10 cm autour de l'appareil et de 10 cm au-dessus de la surface supérieure de l'appareil doit être respecté.