



WCTC401- Wireless Power Transmitter Module-20W Preliminary Specifications (Rev.01)

General Description

WCTC401 Wireless Power Base Transmitter is the transmitter part of a wireless power transceiver module pair. A transceiver module pair consists of a transmitter module and a receiver module, carefully tuned to be highly resonant with each other in order to accomplish efficient wireless power transfer. The transmitter module transmits “resonant power” from the surface area of its antenna (coil) defined by X & Y = power area and to a Z= height which is the distance from the antenna surface. The receiver module, when positioned within the space defined by X,Y and Z, receives the resonant power and performs the necessary conversions to supply to a load which is typically the battery to be charged.

Specification

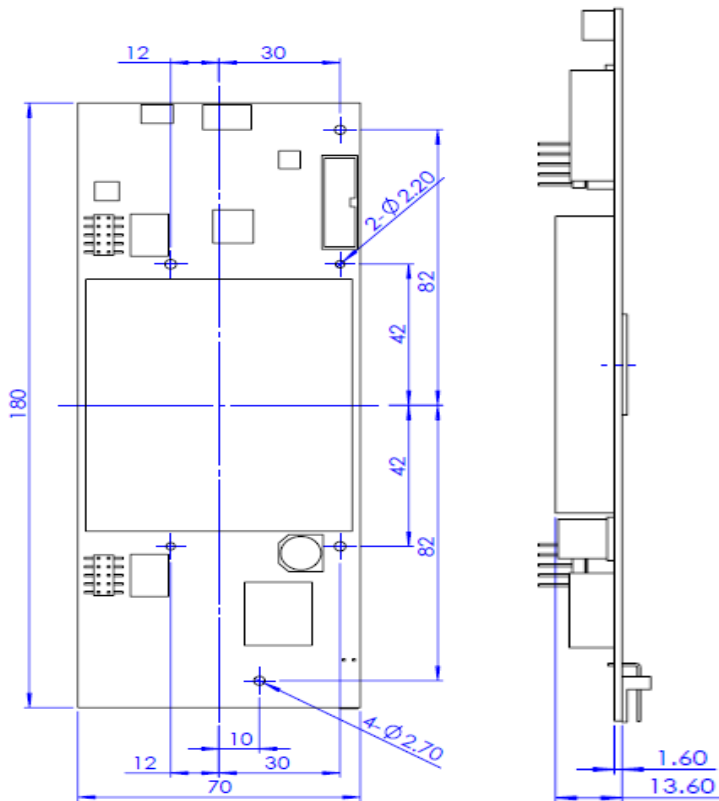
Power Input Interface	DC In Jumper x 1 with Power LED indicator
Input Power Requirement	DC: 24V 2A
Output Power	20W max, 9.3V/ 2.15A. delivery to the load
Power Area (X & Y)	150 mm (l) x 100 mm (w)
Power Distance (Z)	Optimum 30 mm
Footprint (Two boards solution)	180 mm (l) x 70 mm (w) x 14 mm (h) (Control board)
	240 mm (l) x 140 mm (w) x 9 mm (l) (Coil board)
Coil Type	PCBA balanced spiral

Electrical Specification

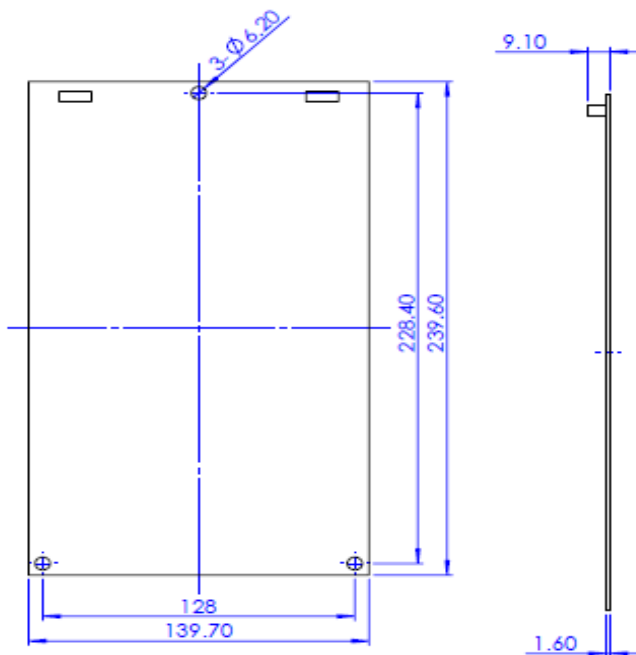
Characteristics	Condition	Min.	Typ.	Max.	Units
Input voltage		22	24	26	Voltage
Rated input current				2	Amp
Resonator Output			18.6		Watt
Operating Frequency			6.78		Mhz
(Centered)	System DC-DC efficiency (PTU & PRU)		50		%
	PRU efficiency		85		%
Over Power Protection				40	Watt
Over Temperature protection				90	°C

Mechanical Specification

Control Board Dimension 180 mm (l) x 70 mm (w) x 13.6 mm (h)



Coil Board Dimension 239.6 mm (l) x 139.7 mm (w) x 9.1 mm (l)



Environmental Specification

Operating Condition:

Temperature range: 0°C ~ +35°C

Humidity: 10% ~ 90 %

Storage Condition:

Temperature range: -20°C ~ +70°C

Humidity: 10% ~ 90 %

Warning

Foreign Objects

Care should be taken to avoid the presence of RFID devices and un-intentional metal objects in the path of magnetic field between the transmitter and receiver.

Working Environment

Care should be taken to avoid operating this transmitter/receiver on or over metallic work surfaces including any support or structural frames which may contain metal within 50 mm proximity.

Federal Communication Commission Interference Statement

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 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 Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

End Product Labeling

This transmitter module is authorized only for use in devices where the antenna may be installed such that 0.5 cm may be maintained between the antenna and users. The final end product must be labeled in visible area with the following: "Contains FCC ID: W23-WCTC401"

”

End Product Manual Information

The user manual for end users must include the following information in a prominent location "IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 0.5 cm from all persons and must not be colocated or operating in conjunction with any other antenna or transmitter." 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.

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or colocation with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for reevaluating the end product (including the transmitter) and obtaining a separate FCC authorization. This device is intended only for OEM integrators under the following conditions: The antenna must be installed such that 0.5 cm is maintained between the antenna and users. As long as a condition above is met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).