



TABLE OF CONTENTS

1	SCOPE	2
1.1	GENERAL DESCRIPTION.....	2
2	ELECTRICAL SPECIFICATION	3
2.1	INPUT REQUIREMENT	3
2.1.1	Input voltage range	3
2.1.2	Input current.....	3
2.1.3	Low power consumption	3
2.2	OUTPUT REQUIREMENT.....	3
2.2.1	Output power.....	3
2.3	PERFORMANCE REQUIREMENT	3
2.3.1	Efficiency.....	3
2.4	LED INDICATE	4
2.4.1	LED-Green BEHAVIOR 1.....	4
2.4.2	LED-Green BEHAVIOR 2.....	4
3	ENVIRONMENTAL SPECIFICATION	4
3.1	COOLING	4
3.2	TEMPERATURE.....	4
3.3	HUMIDITY	4
3.4	VIBRATION AND SHOCK	4
3.5	DROP TEST	4
3.6	CALCULATED MEAN TIME BETWEEN FAILURES (MTBF)	5
3.7	WEIGHT.....	5
4	REGULATORY COMPLIANCE	5
4.1	EMC SPECIFICATION	5
4.1.1	FCC requirements	5
4.1.2	CISPR requirements	5
4.2	AGENCIES CERTIFICATIONS.....	5
4.2.1	Product safety compliance	5
4.3	CAUTION: EXPOSURE TO RADIO FREQUENCY RADIATION	5
5	MECHANICAL.....	6
6	FCC.....	7



MODEL NO : WTD1A05 Transmitter of WPC Qi BPP

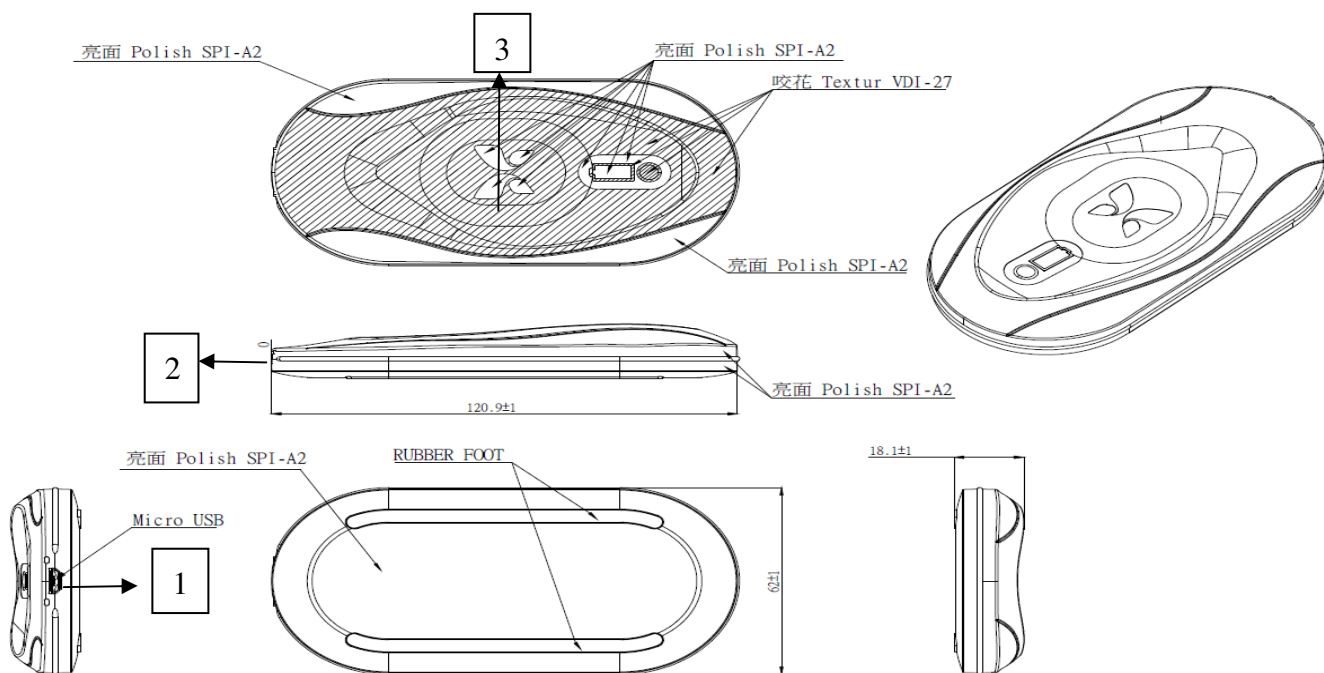
Operational description

1 SCOPE

This document describes the basic electrical characteristics of WTD1A05 wireless power transmitter with WPC A11 module. WTD1A05 is designed based on the technology of electromagnetic induction Power charging from Input 5V/2A and wireless charging output 5W. It is a widely used final product to the end users. This is a new concept of charging devices without interconnecting wires and cables.

1.1 GENERAL DESCRIPTION

WTD1A05 is a Wireless Power Consortium (WPC) Qi compatible table top wireless power transmitter product. The transmitter module inside is functional with devices compatible to Qi standard. The transmitter controller IC in WTD1A05 wireless power transmitter product is designed. This excellent and highly integrated transmitter module is using magnetic induction process technology with stable performance and high reliability. Wireless charging maintains power efficiency, sustainable development and follows WPC Qi 1.2 low power.



Model: WTD1A05 CHARGE ONLY

Function Description			
Location	Name	DESCRIPTION	
(1)	Input Connector	Micro USB input 5V/1.5A	
(2)	LED interface	Wireless Charging display	
(3)	TX sensing area	Wireless Charger Sensing Area	

Table 1 - Function Description



MODEL NO : WTD1A05 Transmitter of WPC QI BPP
Operational description

2 ELECTRICAL SPECIFICATION

2.1 INPUT REQUIREMENT

2.1.1 INPUT VOLTAGE RANGE

DC Input shall operate within specification from 2ADB010B 5Vdc/2A Adapter. The table below shows common input voltage range.

Input Range	Minimum	Nominal	Maximum	Unit
5Vdc	4.75	5	5.25	Vdc, rms

Table 2 - Input Voltage Range

2.1.2 INPUT CURRENT

Maximum steady state input current shall not exceed 1.5 A for any line voltage specified in 2.1.1.

2.1.3 LOW POWER CONSUMPTION

Input Source - 2ADB010B 5Vdc /2A Adapter

WTD1A05	No Load	Power consumption
on	0A(LED OFF / wireless standby)	< 1W (Standby mode) by AC=230V
on	0A(LED OFF / wireless standby)	< 1W (Standby mode) by AC=110V

Table 3 - low power consumption

2.2 OUTPUT REQUIREMENT

Wireless Charger TX WTD1A05 to Receiver WRM1A05 5V/1A.

2.2.1 OUTPUT POWER

Unit total output power, under steady state conditions, shall not exceed 5 W.

2.3 PERFORMANCE REQUIREMENT

2.3.1 EFFICIENCY

Output Full Load	Wireless Charging With WRM1A05 (Receiver) 5V/1A, Charging distance is 2mm and Center to Center.
Efficiency	75%(min)

Table 5 – Efficiency



MODEL NO : WTD1A05 Transmitter of WPC QI BPP

Operational description

2.4 LED INDICATE

LED Color	Standby	Transfer	Charge Complete	Fault Condition
LED-Blue	OFF	Breathing	OFF	OFF
LED-Red	ON	OFF	OFF	Blink
LED-Green	OFF	OFF	ON	OFF

Table 6 – LED Indicate

2.4.1 LED-GREEN BEHAVIOR 1

The charger should change to solid green when EITHER an OTP (over temp) or EPT (end charge) signal is sent from the Probe.

2.4.2 LED-GREEN BEHAVIOR 2

After switching to a solid green state, charging should stop and then resume after 5 minutes, without having to pick up the Probe and place it back on the charger.

3 ENVIRONMENTAL SPECIFICATION

3.1 COOLING

Natural Air Cooling

3.2 TEMPERATURE

Operation within specification: 0 to 35degrees C.

Storage: -25 to 70 degrees C

3.3 HUMIDITY

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

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

3.4 VIBRATION AND SHOCK

PARAMETER	NON-OPERATING	Note
VIBRATION	Frequency range: 10-55 Hz, amplitude 2G over entire freq. range. Sweep rate 0.5 octave/minute, one sweep all 3 x, y, z axis, Vibration duration 60 minutes	The purpose of this test is to simulate shipping vibrations, for example, from a truck. The power supply is not operating, and no cables connected. Fasten the power supply to the vibration table with a fixture.

Table 7 – VIBRATION

3.5 DROP TEST

PARAMETER	OPERATING	NON-OPERATING
Drop test	N/A	Dropped 30" (76 cm) onto 1 corner, 3 edges, and all 6 sides one time onto a concrete floor (with no cables

	MODEL NO : WTD1A05 Transmitter of WPC QI BPP Operational description
	attached and not placed into a gift box)

Table 8 – Drop test

3.6 CALCULATED MEAN TIME BETWEEN FAILURES (MTBF)

WTD1A05 shall have a calculated MTBF of greater than 300,000 hours, calculated utilizing MIL-HDBK-217F with the following assumptions:

Input voltage: 5Vdc

Output load: Rated full load

Ambient temperature: 25 degrees C

3.7 WEIGHT

300 g $\pm$ 10%

4 REGULATORY COMPLIANCE

4.1 EMC SPECIFICATION

4.1.1 FCC REQUIREMENTS

WTD1A05 shall comply with the radiated and conducted emission requirements for FCC Part 15B.

4.1.2 CISPR REQUIREMENTS

WTD1A05 shall comply with the radiated and conducted emission requirements for CISPR 22 Class B.

4.2 AGENCIES CERTIFICATIONS

The WTD1A05 is designed to meet Comply to WPC QI V1.2.4 BPP compliance testing, and will also be tested by the relevant verification unit.

4.2.1 PRODUCT SAFETY COMPLIANCE

Certification	Certification
FCC(option)	CE(option)
WPC QI BPP(option)	

Table 9 - Safety Compliance

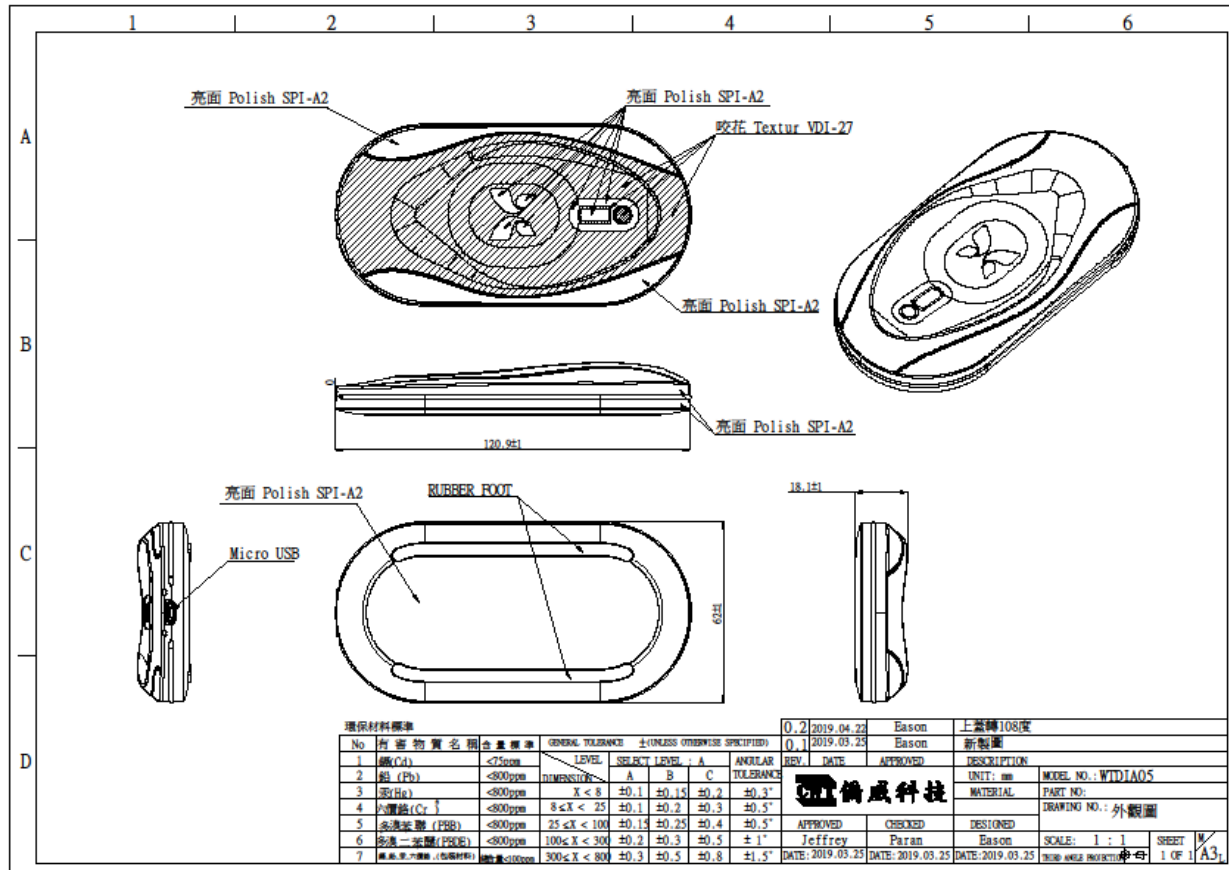
4.3 **CAUTION: EXPOSURE TO RADIO FREQUENCY RADIATION**

It is harmless to human body, a separation distance of at least 20 cm must be maintain between the antenna of this device and all persons.



MODEL NO : WTD1A05 Transmitter of WPC QI BPP Operational description

5 MECHANICAL





6 FCC

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