

# User Manual

## FCC Statement

1. 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.

(2) This device must accept any interference received, including interference that may cause undesired operation.

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

The device has been evaluated to meet general RF exposure

requirement. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body

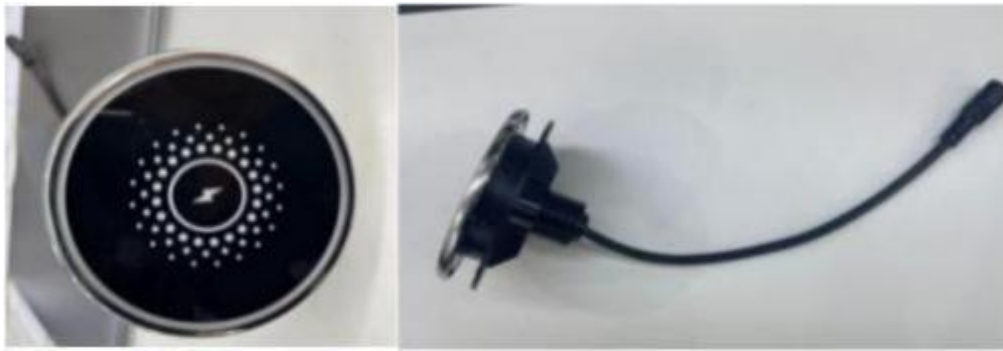
### 1. Product profile

Product name: WPSOW20003 / 15W mobile phone wireless charging finished product

Scope of application: mobile phone wireless charging compatible with Qi protocol standard Product usage instructions Place a mobile phone with wireless charging on this device to enable wireless charging Operating Frequency 144KHZ

### 2. Product-related pictures

## 2.1 Finished products



technical specifications

### 3.1 Input properties

#### 3.1.1 Input voltage / frequency

project	minimum	standard	maximum
input voltage	11.55 Vdc	12 Vdc	12.55 Vdc

input voltage	Receive module categories				
	Qi-5W	Qi-10W	Qi-15W	Apple7.5W	Samsung 10W
12.0 Vdc	✓	✓	✓	✓	✓
9.0 Vdc	✓	✓	/	✓	✓
5.0 Vdc	✓	/	/	/	/
USB: QC2.0/ QC3.0	✓	✓	✓	✓	✓
Note: When USB_QC2.0/QC3.0 input, the maximum USB output power is 20W, to support 15W, wireless charge.					

3. 1.2 Input current: 2 Amax . @ 9 / 12 Vdc Full load

3. 1 .3 Surge current: 2 Amax .@9/ 12 Vdc Full load & Ambient temperature25℃

3. 1 .4 Loss: At 11.55 VDC or12 .55 VDC, Energy Consumption≤0 . 625W

### 3.2 Output characteristics

#### 3.2.1 Static output characteristics (output & ripple + noise)

Output Power	Rated Load / Rated load		Peak Load	Output Range Output voltage range	R + N / ripple + noise	Remark
	Min. Load	Max. Load				
15W	0.10A	1.25A	1.50A	12V±5%	≤600mVp-p	Rx
10W	0.10A	1.1A	1.25A	9V±5%	≤600mVp-p	
5W	0.10A	1A	1.15A	5V±5%	≤600mVp-p	

Note : ripple and noise : when measuring the oscilloscope to choose 20 MHz bandwidth limit, the output end to parallel a 0.1 uF ceramic capacitor and a 47 uF electrolytic capacitor.

#### 3.2.2 Linear & load adjustment rate

Output	Load Condition / Load condition		Line Regulation Linear adjustment rate	Load Regulation Load adjustment rate
Power	Min. Load	Max. Load		
15W	0.10A	1.25A	±5%	±5%
10W	0.10A	1.1A	±5%	±5%
5W	0.10A	1A	±5%	±5%

### 3.2.3 Main specifications

project	specifications
Wireless charging standard	Compatible with WPC 1.2.4
Coil type	A11
Enter the power supply	DC 12V/2A( max)
Power interface	<b>bonding wire</b>
charge efficiency	≥75%
output power	5W 、 7.5W 、 10W 、 15W
Effective charging distance	2-6 mm (transmit coil to receiving coil)
Over temperature protection	Over-temperature protection of 70℃± 5
undervoltage protection	4.5V
overvoltage crowbar	13.5V
attestation	Customer customization
working temperature	0℃ ~35℃ (ring temperature above 30℃ is easy to trigger overtemperature protection)
defensive function	Overcurrent protection, foreign body detection, overtemperature protection, overpressure protection, undervoltage protection

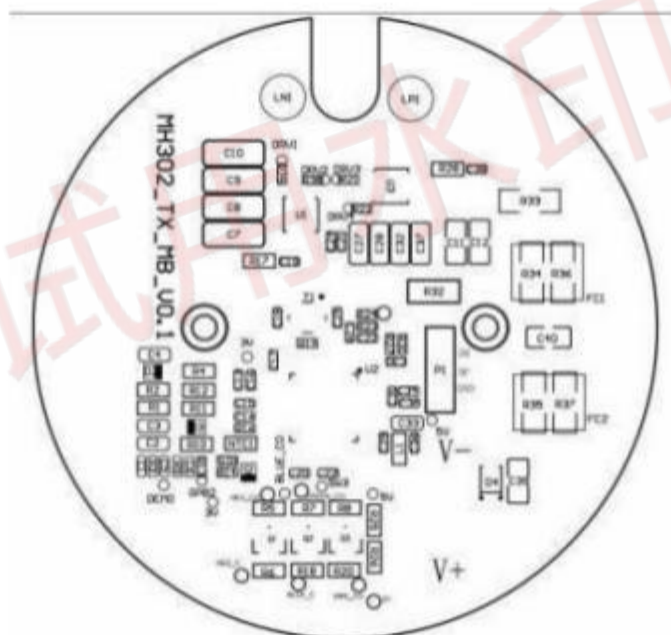
### 3.3 Description of the indicator light

LED	Operational States / Operation status					
	Power On On the chip	Standby Stand by	Charger In- process of chargin g	Charge Complete Charging is complete	Fault unus ual	
blue	Slim 4	go out	bright	/	/	
red	/	/	/	/	twinkle	

\* Support customers to choose LED li ghtcolor.

\* Support customers to choose the LED light colors.

### 3.3.1. PCBA Port Functional Illustration / PCBA function



The PCBA layout diagram

**PCBA Size (Size):** Diameter 55.5mm\*1.0mm ( $\pm 0.2$ ) mm