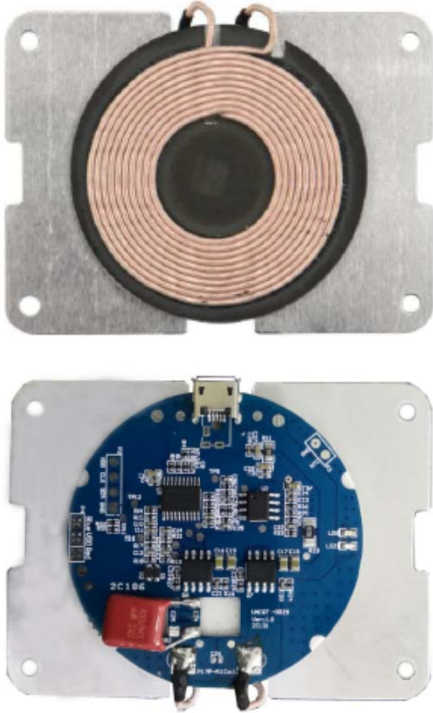


# 5W Wireless Charger Transmitter

Pulse Part Number WM5V

V04

## Features



- WM5V is a WPC1.2.4 Qi (5W) wireless charging platform: Its transmission efficiency is up to 76% and can provide up to 5W transmission capacity. It enables powering or charging for any WPC-Qi certified products.
- It adopts intelligent identification system while its transmitter and receiver unit adopts UART (Universal asynchronous receiver/transmitter) encrypted transmission control signal which is stipulated by WPC1.2.4 The console will process the corresponding power adjustment based on the encoding of the receiving unit. This module has fulfilled the WPC1.2.4 Qi requirement and is certified by Qi.

Multiple LED indication scheme available for options

LED	Operational States					
	Power on	Standby	Charger	Charge complete	Fault	Dynamic Power Limiting
LED1: RED	0.5S	OFF	OFF	OFF	ON	Blink slow
LED2: BLUE	0.5S	OFF	ON	OFF	OFF	OFF

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## 1. Input Characteristics / 输入特性

### 1.1 Input Voltage & Frequency 输入电压&频率

QC2.0/3.0	Minimum 最小	Normal 标准	Maximum 最大
Input Voltage/ 输入电压	4.75Vdc	5.0Vdc	5.5Vdc
Charging Mode 输出模式	Qi_5W		
Frequency 频率	110~205KHZ		

### 1.2. Input Current/输入电流

1.5Amax. @5.0Vdc Full load

### 1.3. Inrush Current (cold) /浪涌电流 (冷电流)

1.8Amax. @5.0Vdc Full load & Ambient temperature 25 °C

### 1.4. Energy Consumption/损耗

At 4.75VDC or 5.6VDC, Energy Consumption  $\leq$  0.625W

## 2. Output Characteristics (Rx\_Module) /输出特性

### 2.1. Static Output Characteristics <Vo & R+N>/ 静态输出特性 (输出&纹波+噪音)

Output	Rated Load/额定负载		Peak Load	Output Range 输出电压范围	R+N/纹波+噪音	Remark
Power	Min. Load	Max. Load				
5W	0.10A	1A	1A	5V $\pm$ 5%	$\leq$ 100mVp-p	

Note: Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output end paralleled a 0.1uF ceramic capacitor and a 47uF electrolysis capacitor.

注意: 纹波与噪声:量测时示波器选用 20MHz 带宽限制,输出端要并联一颗 0.1uF 的陶瓷电容和一颗 47uF 的电解电容。

### 2.2. Line & Load Regulation/线性&负载调整率

Output	Load Condition/负载条件		Line Regulation 线性调整率	Load Regulation 负载调整率	Remark
Power	Min. Load	Max. Load			
5W	0.10A	1A	$\pm$ 5%	$\pm$ 5%	

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## 3. Protection Requirement/保护要求

### 3.1. Short Circuit Protection/短路保护

When the output is short circuit to ground, the input power should decrease, the power supply remains undamaged and automatically recover when fault condition is removed

输出对地短路, 输入功率减少, 电源不得损坏, 并应自恢复时解除故障条件

### 3.2. Over Current Protection/过流保护

OCP Point Limited: 120%-130% auto restart

OCP 限制: 120% - 130% 自动重启

The output will be blocked when output is over-current, and should automatically recover when fault condition is removed

当电流输出过量时会有阻碍, 然后会自动恢复并解除故障。

## 4. Reliability Requirements/可靠性要求

### 4.1. Reliability Test/可靠性测试

Test Items/测试项目	Test conditions/测试条件
Storage at high temperature test/ 高温存储	+60°C 16Hrs
Storage at low temperature test/ 低温存储	-20°C 16Hrs
Operating at high temperature test/高温操作	+40°C 8Hrs
Operating at low temperature test/ 低温操作	-20°C 8Hrs
High/low Temperature cycle test 高低温循环测试	40°C(2Hrs)→-20°C(2Hrs)→40°C(2Hrs) →-20°C(2Hrs) Continually work 24 Hours

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## 4.2. Vibration Test /震动测试

Vibration Condition: vibration amplitude 2mm ;Vibration frequency :12.4Hz;Vibration direction :X, Y ;  
Vibration time :30 minutes / pc 振动条件: 振动幅度 2mm; 振动频率 12.4Hz; 振动方向: X、Y;  
振动时间: 30 分钟/个

## 4.3. Dropping Test/跌落测试

Test height: Determined by the weight level; Drop times: drop 10 times (one triangle ,3 edge, six surface );  
Drop platform: 1~2cm thickness solid wood 测试高度: 由重量决定高度; 跌落次数: 跌落次数 10 次  
(1 个角, 3 个边, 6 个面,) 跌落环境: 1~2 cm 厚的实心木板

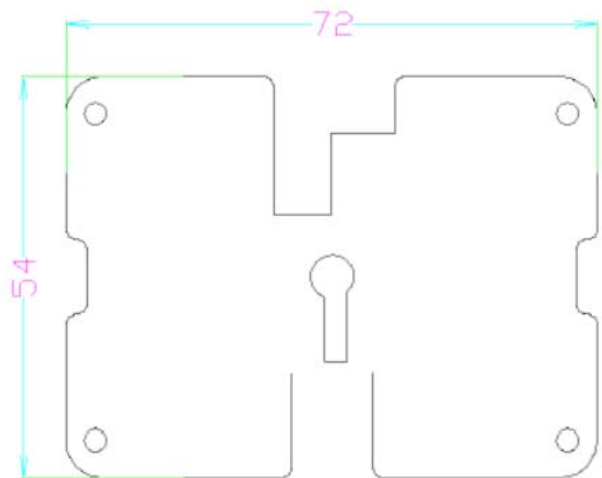
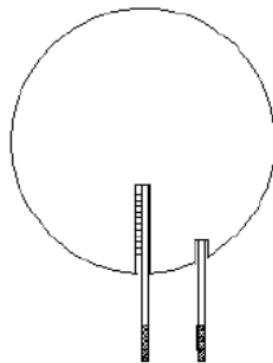
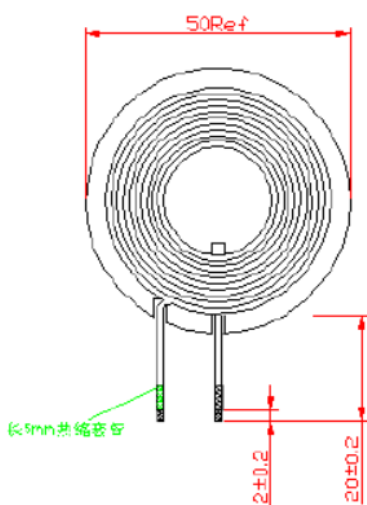
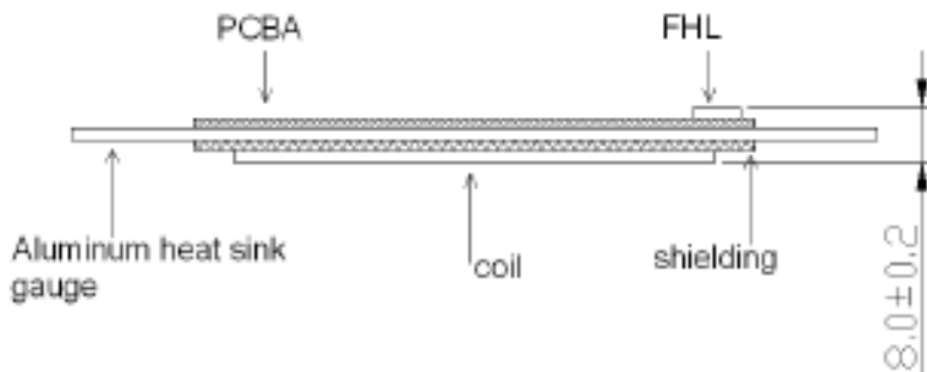
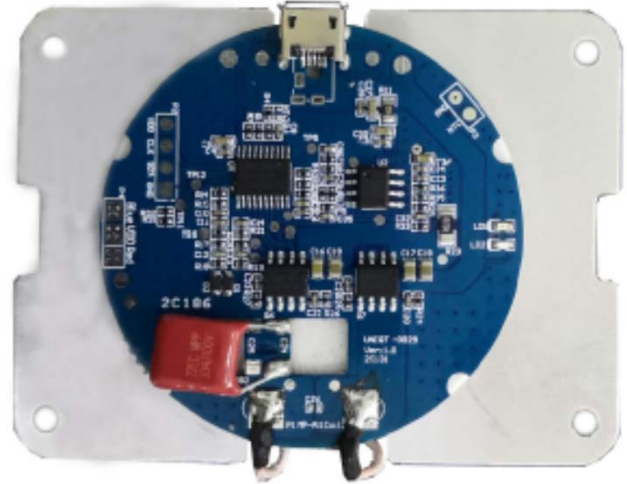
Equal to or greater than		But Less than		Free Fall	
lb	Kg	lb	Kg	In	mm
0	0	21	10	30	760
21	10	41	19	24	610
41	19	61	28	18	460
61	28	100	45	12	310
100	45	150	68	8	200

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## Mechanical dimensions



\* All dimensions in mm

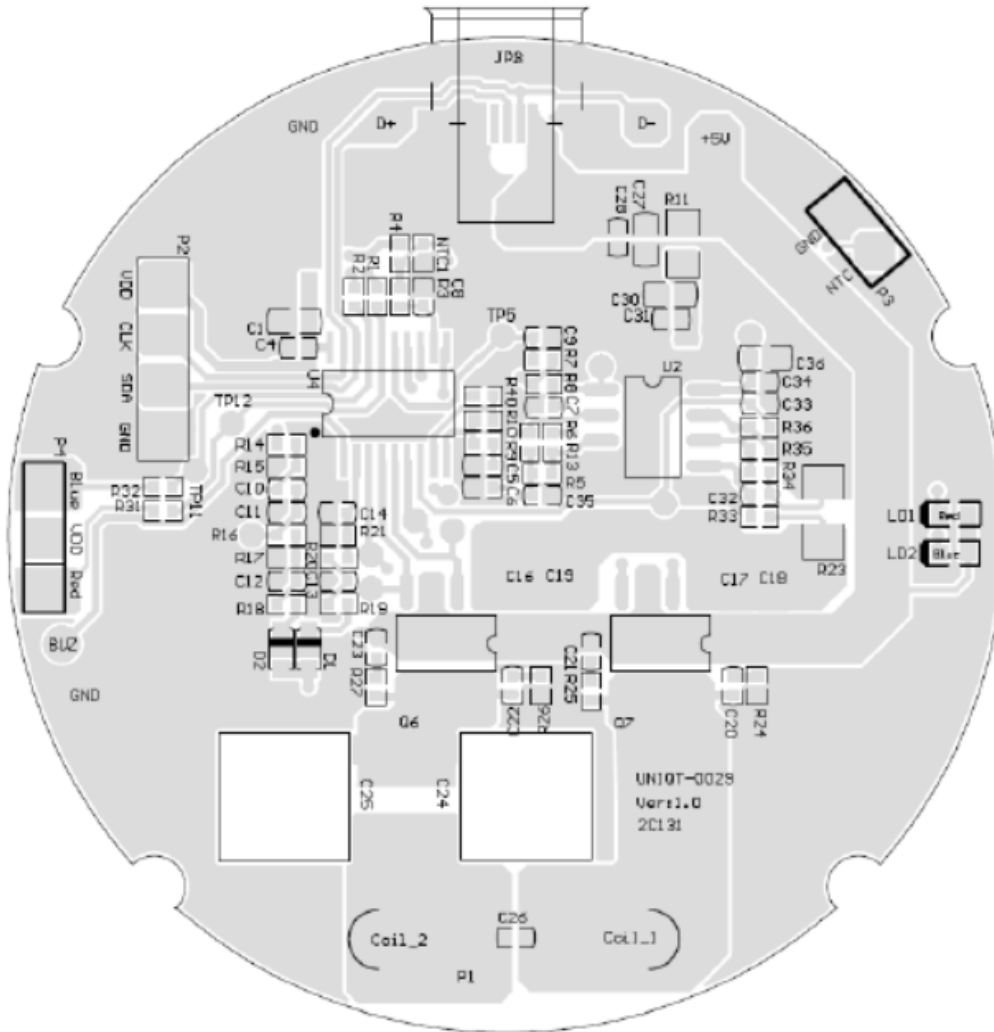
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## Mechanical dimensions



PCB 图

PCBA : 50\*50\*1.0mm (±0.2)mm

Port	P3-1	P3-2	VDD	RED	BLUE
Function	NTC	GND	LED VCC	Red LED-	Blue LED-
Port	GND	D+/D-	Vin	CL1-1	CL1-2
Function	DC5V GND		DC5V VDD	TX Coil	

\* All dimensions in mm

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## Packing

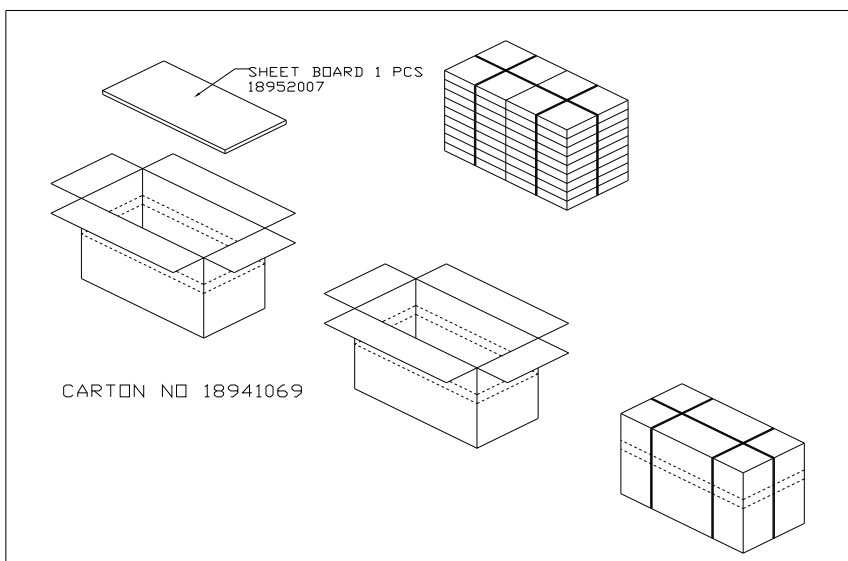
- Put 1pcs product in the poly bag, then add the info label.
- Align the finished goods into the tray.
- Cardboard sheet under and on the top of the tray stack in the tray stack. Every second tray must be rotated 180 degrees, binding of the stack-1 strap lengthwise and 2 stray crosswise.
- Add foam paper between two trays.
- First put down 1pcs sheet board in box, then put binding tray in box, empty 1 pcs on the top of the box.
- Binding of the carton: scaled with tape, 1 strap length wise and 2 strap crosswise.



Label content:

P/N:  
Project Name:  
Inductance:

- P/N, e.g. SWA1380
- Project Name, e.g. A6 Wireless Charge Coil
- Inductance, e.g. 12.5uH



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