

# Product Specifications

Product number: EMX-FG20012

Version: V1.2

Version	Date	Version Update	Editor
V1.2	2021/7/3	first version	Shen gui feng

# Content

1. Overview
2. PCBA Design specifications
3. Electrical parameters
4. Protection parameters
5. Coil parameters
6. NTC parameters
7. LED status parameters
8. Packaging Specifications
9. FCC STATEMENT :
10. FCC Radiation Exposure Statement:

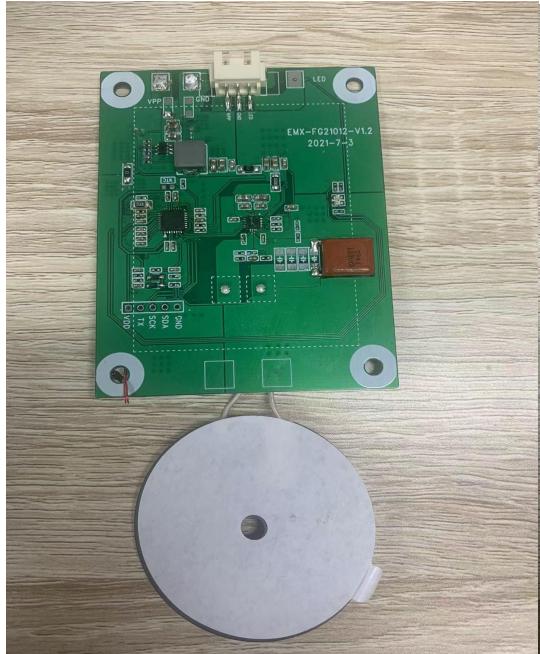
## 1. Overview

This product adopts Lingtong GPM8F8007C+GPMD3241A, supports 10W, 7.5W, 5W single-coil solutions; complies with WPC 1.2.4 protocol, can pass Qi BPP certification, and supports wireless charging of mobile phones with all Qi protocols. The program has FOD metal external body inspection function, undervoltage protection, overvoltage protection, overcurrent protection, and short circuit protection functions.

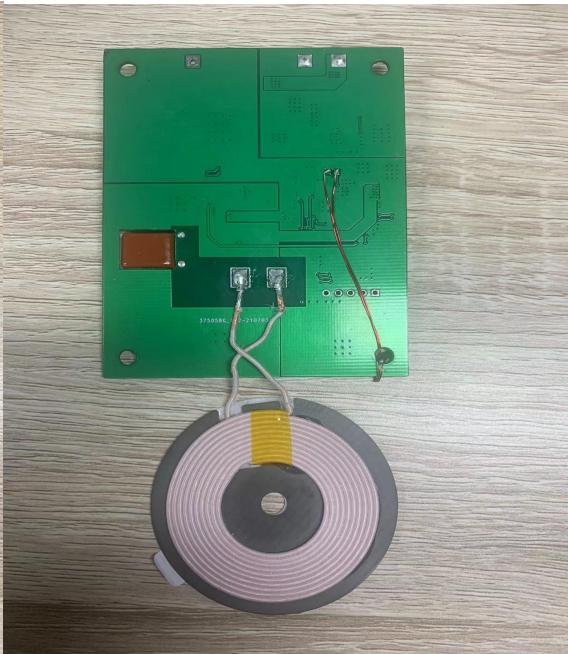
## 2. PCBA shape specifications

### 2.1 PCBA Hardware Design

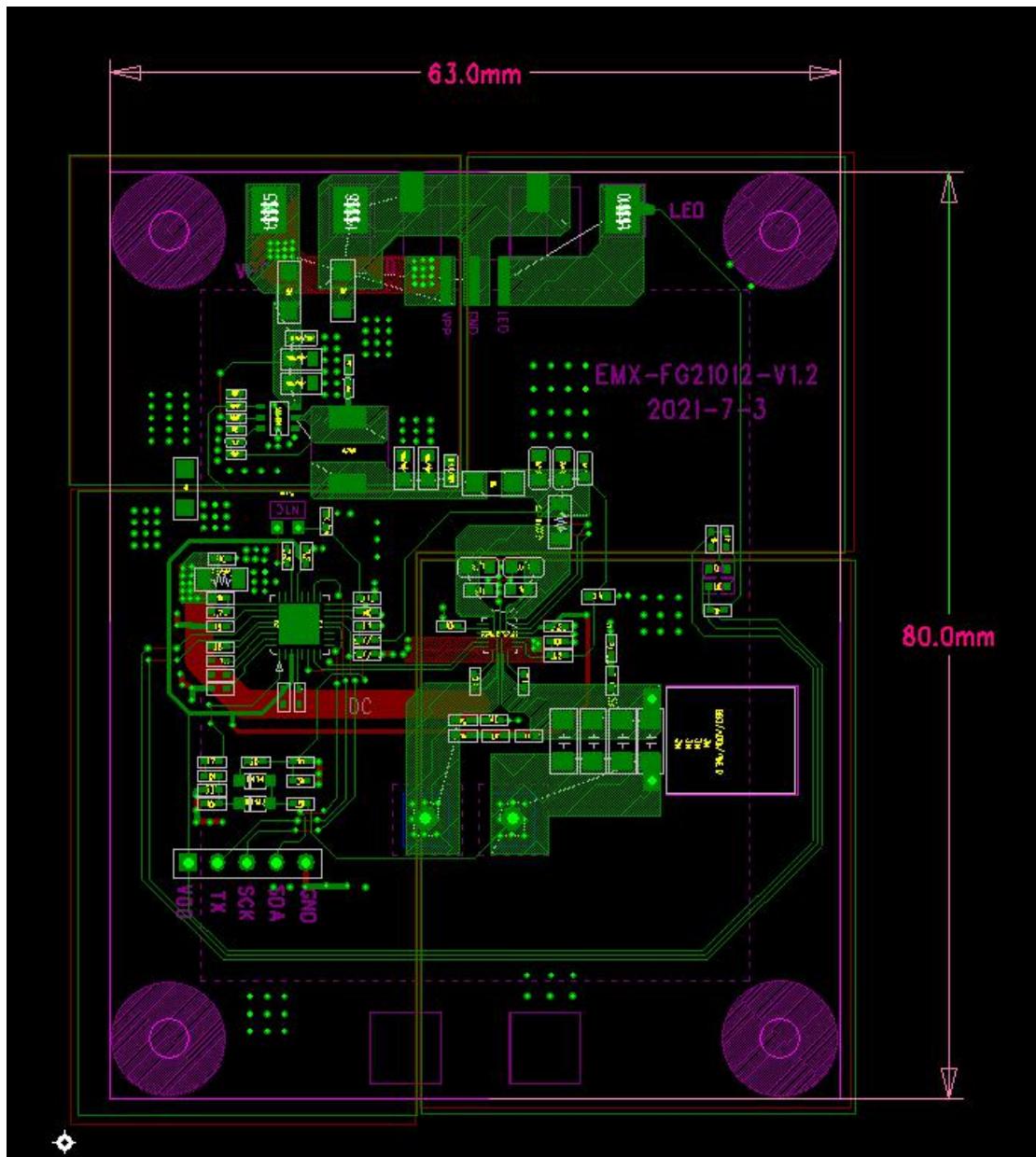
Front View



Back View



2.2 PCB Size: 80MM\*63MM\*1.0MM



### 3. Electrical parameters

#### 3.1 Technical parameters

Technical Parameters	Content Description
Solution Function	Comply with WPC1.2.4 A11 single coil wireless charging transmitter
Charging Method	Electromagnetic induction
Operational Frequency	110~205KHz
Operational Voltage	7.5V----15V
Input Power	7.5V/1.5A or 9V/1.67A
Output Power	5W/7.5W/10W
Conversion Efficiency	5W/80%、7.5W/81%、10W/83%
Maximum effective working distance	7mm
No-load power consumption	70~150mW

#### 3.2 Maximum Ratings

Parameter	Symbol	Rating	Unit
Operational Temperature	Ta	−20~+85	°C
Stored Temperature	Tstg	−45~+150	°C
Storage Humidity	Tstr	<95%	RH
Maximum Supply Voltage	Vcc	15	V
Maximum Input Current	I <sub>max</sub>	3	A

### 3.3 Compatibility

Mobile Brand	Compatibility
Samsung S9	Yes
Huawei Mata30	Yes
Iphone 11	Yes
Iphone XS MAX	Yes
Iphone 12	Yes
Xiaomi 10	Yes

## 4. Protection parameters

4.1 NTC temperature protection: 65 °C; when the NTC detects 65 °C, the wireless charging has no output; when the temperature reaches 45 °C, it will work again.

4.2 FOD metal external body protection: put a 1 yuan coin at 2/3 of the coil, after detecting a metal external body, the LED flashes, and the wireless charging has no output.

4.3 Short circuit protection: use RX module, center alignment, Z=4mm. RX with rated output power. Short-circuit the RX output terminal for 1s, remove it, and repeat the test 10 times, the output rated power can still be restored, and there is no component damage or abnormality during the test.

#### 4.4 Overcurrent protection:

	5W Test (A)	10W Test(A)
9V	1.1A	1.8A

#### 5. Coil parameters

A11 standard coil, wire length 35MM, slotted, adhesive.

#### 6. NTC parameters

6.1 10K+-1%, B value 3950, lead length 50MM, red enameled wire.

6.2 Dispensing after welding.

#### 7. LED Status Parameters

LED State Definition Table			
Condition	P06 (28Pin) Red Light	P07 (27Pin) Blue Light	External pad
Power ON	P36 on 1S off 1S turn P37 on 1S off 1S turn P36 P37 on at the same time for 1S		
Standby	OFF	OFF	
Charging	OFF	Steady ON	
Fully Charged	Always ON	OFF	

FOD		Flashing (ON for 0.25S, OFF for 0.25S)
Abnormal		Flashing (ON for 0.25S, OFF for 0.25S)
Note: OFF is high level, always ON is low level		

The Following Table

## 8. Packaging Specifications

Product packaging: bubble bag + carton

## 9. 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.

**Warning:** 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.

## 10. FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.