TG0803 Wireless Charger Module Specifications

Module launch synopsis：

Transmitter Module for wireless charger is a transmitter designed specifically for non-QI standard wireless reception requirements. The module doesn't meet WPC1.1standard. Using chips from Shenzhenheshen Technologies Co Ltd, it has advantages of Stable performance, and low power consumption, etc. The unique PWM modulation mode is adopted that transfer efficiency get markedly improved. The convenient of wireless can easy implementation, module output efficiency is high, compared with the wireless Built-in transmitting power and wireless receiving power, it can control the loss of emission energy more accurately. The number of module components is small that have high performance cost ratio, after the debugging can implement "install and play". This can easily satisfactory the various demands of customers, and it's perfect for doesn't meet QI standards for various types of wireless charging equipment. For instance： used in Bluetooth devices with wireless charging function、 table computer、 electric toothbrush、 cosmetic instrument、waterproof electronic equipment、electric automobile, etc. this IC can drive up to 10KW power, at present.

ONE. Module features

1： Stringent enforcement design with safe as the core, incompatible with QI various standard reception；

2： The module equipped with overcurrent protection, short-circuit protection, FOD ,

etc.

3: The standby power is less than 200MA when 5V input ,efficiency were around 65%-72% , temperature rise is small；

TWO. Product dimensions

PCBA Module dimensions	F63*1.0mm
Magnetic sheet and coil dimensions	Φ70*3.5mm
Module weight	

THREE. Electrical features

Supply voltage	5V2A
Wireless output voltage and current	5V 1.3A
Transmitting frequency	125KHZ
Standby current	<200MA
Wireless distance	2MM-6MM
The coil type	Silk-covered wire 2.9UH

Transfer efficiency	70%
Temperature protection	adjustable
Defensive function	Over-temperature overcurrent short circuit FOD
Directive function	LED
Working temperature and humidity	0-60℃ 10%-85%
Storage temperature and humidity	-20-80℃ 10%- 95%

FOUR. Electrical test

NO.	Test Item	Required value	Tested value	Conclusion	Remark
1	On-load output test		5.0V		
2	Full load aging test		Aging test 30 minute OK		
3	Efficiency test		68%		
4	Bellows test				
5	Short test		exist		
6	Metal foreign body test		exist，put the coin in the middle，the current stops at 9MA		
7	NTC protection test				
8	Full load temperature test		Launch operation panel 28-55℃		
9	Light pattern		The green and blue lights are lit after power-up, one		

			second, the green light goes off. Green light illuminates and blue light goes off at reception, take off the load blue light illuminate.		
10	Cell phone signal interference test		Nothing		
11	Transmitting receiving distance		1~4mm		
12	Detection of no-load and load any noise		No abnormalities		
13	Full load starting		normal		
14	Standby consumes		0.06A~0.200A		

	power automatically				

FIVE. LED Instructions state

LED INDICATOR	STAND-BY	DEVIATION STATE	CHARGING STATE	END OF THE CHARGING	FOD
BLUE LIGHT	BRIGHT	NOT BRIGHT	NOT BRIGHT	NOT BRIGHT	BLINKING
GREEN LIGHT	NOT BRIGHT	BRIGHT	BRIGHT	BRIGHT	NOT BRIGHT

SIX. Module working description

1：Put the tablet PC near the center of the transmitter coil , the green LED on the module will light up, the tablet PC should have voltage and current input, the green LED light is stand for charging.

2：When the module is energized, the blue light and green light are lit for a second and then the blue light goes off and starts charging, The green light keeps on and the blue light goes off, put a foreign body, the blue light was flashing.

3：If the tablet PC is far away from the center of the module，the module doesn’t enter the charging state。LED in blue light illuminated steady state. at this point, you need to move the tablet PC back to the module launch center, the module will automatically enter the charging state.

4：If the module detects an exception on the tablet PC receiver, The module will stop working, at this point, you need to move the tablet PC away from the launch, put the tablet PC on the launch module again to enter the charging state.

SEVEN．The usage environment of wireless charger

A. LAUNCHING BASE

1、The principle of wireless charging is to convert direct current into electromagnetic field, and then send the electromagnetic field up. The general launch distance is 2-7MM. Left and right deviation center point can’t exceed 7MM, the received current will be small or can’t establish a direct connection if more than 7MM.

2、The conversion efficiency is low when the distance is offset, under normal circumstances, the current received by the vertical offset of 1MM is reduced by 100MA, the current received by a lateral offset of 1MM is reduced by 150MA, efficiency will also drop below 70%.

3、Strong magnetic interference, please make sure there is no magnet within 20mm of the surrounding environment. The transmitting power will be reduced if there exist a magnet, this will directly affect the use effect。

4、Metal interference, please don’t allow metallics on the surface of the launch base, the metal on the base must dig a hole that is 15mm greater than the radius of magnetic separator of the transmitting coil if it can’t be avoided according to the structural requirements. This is to prevent electromagnetic fields from cutting meta, it causes abnormal operation of the transmitting base and power loss.

5、Other terminal devices are placed on the TG0803 wireless charging base, there are different responses depending on terminal equipment, the device on the phone type will display the charge icon, but there is no current input. Some devices are placed on the launch base will be directly identified as foreign matter, at this point, the launch base will directly enter the foreign body protection state, and the blue light flashing.

B. RECEIVING CIRCUIT

1、Both the receiving coil and the circuit are built into the tablet PC, try not to charge the TG0803 with other wireless chargers, because the quality of wireless launch base is uneven in the market. some launch base without foreign matter detection capabilities in the market, this makes it easy to damage the terminal equipment, both the IPHONEXAND and SAMSUNG PHONE have been damaged by inferior wireless chargers.

2、Don’t put the terminal equipment in the induction cooker or with the electromagnetic launch of coffee table, if placed on these electromagnetic emitting objects, it will cause the device to burn.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located 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.
(2) This device must accept any interference received, including interference that may cause undesired operation.

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
- This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user’s authority to operate the equipment.