

This product adopts the integrated MCU of Qi BPP EPP certification protocol, and supports and extends the wireless charging control chip solution of mainstream third-party fast charging protocols.

Main features of the solution:

1. Utilizing the arm m0 32-bit processor, it provides excellent charging management computing capabilities. It achieves superior power supply ripple anti-interference ability compared to other solutions, without the phenomenon of delayed exit when removing RX charging, and ensures that no abnormal discharging occurs during the continuous charging process.
2. Phase-shifted PWM + frequency-modulated PWM power control, stable charging current, excellent EMI performance. Special integrated current detection, driver, 10m Ω - 20m Ω MOS chips. Software real-time offset voltage correction to ensure the accuracy of FOD, and can flexibly change to more cost-effective models.
3. Real-time measurement and calculation of coil energy loss for FOD in real time, ensuring consistent FOD reception in different receiving areas within the charging distance, without the need for correction for different mobile phones.
4. Dual-channel current and voltage decoding signal ADC high-speed sampling, FIR digital filtering algorithm, charging response speed, low packet loss rate.
5. FSK modulation algorithm, compatible with Qi EPP, LG 10W-15W, Samsung 10W fast charging, Apple 7.5W fast charging, Huawei 10W fast charging and all mainstream mobile phone fast charging series.
6. Automatically detects and supports DC5V, DC9V, QC2.0/3.0, AFC power input.
7. Input voltage sudden change detection, overcurrent detection, coil peak limit, overheating limit, to ensure that the receiving mobile phone is within the safe working range.
8. Integrated stepper motor drive

I. Electrical Performance

Input Parameters

Serial Number	Project	Parameter	Remarks
1	Input Voltage (0-13V)	5V/9V/12V, QC2.0, QC3.0, AFC	
2	Input Current	2A Max	

Output Parameters

Serial Number	Project	Parameter	Remarks
1	Fast Overcurrent	2.3A	
2	Coil Peak Limit	15V@5W, 20V@10W, 25V@15W	
3	Working Frequency	110kHz - 205kHz	
4	Fast Overcurrent Detection	62.5us	
5	Working Distance	Maximum effective height 6mm	
6	Foreign Object Detection	Yes	
7	Temperature Protection	Yes	Power limit when temperature > 65℃, When the temperature exceeds 75℃ and remains so for 30 seconds, an over-temperature protection mechanism will activate.
8	Conversion Efficiency	$\geq 75\%$	

Backup power supply parameters

Serial Number	Project	Parameter	Remarks
1		Super capacitor capacity	1F
2		Charging current	450mA MAX
3		Number of power outages used	2 to 3 times The number of times the test clamp arm moves back and forth within 10 seconds after power loss
4		Charging duration	3 to 5 minutes Fully charging the super capacitor in just 5 minutes

II. Display Modes:

LED: The blue light is constantly on during power-on and standby, the blue light flashes when there is a foreign object, the blue light breathing is constantly on during charging.

III. Working Environment Working Temperature: 0~+40℃ Storage Temperature: -20~+40℃
Relative Humidity: ≤90% Atmospheric Pressure: 85~106KPa

FCC WARNING

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.

Any 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.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body:
Use only the supplied antenna.