Wireless Charger Working Principle

The wireless charging technology of this product uses electromagnetic induction, which works by generating electromagnetic induction between the transmitting device and the coil of the receiving device, thus achieving wireless charging effect. Electromagnetic induction is a phenomenon in which a conductor placed in a changing magnetic flux will generate an electromotive force. This electromotive force is called induced electromotive force or induced electromotive force, and if the conductor is closed into a circuit, the electromotive force will drive the flow of electrons, forming an induced current (induced current).

The power input is TYPE-C interface, which provides 9V input voltage through QC and other protocols.A stable 5V voltage is generated by the LDO for the MCU to work normally. The MCU generates two sets of PWM to control the working state of the full-bridge MOS, which generates the AC oscillation voltage through the resonant capacitor and the coil, and the energy in the coil is transmitted away from the receiving device through electromagnetic induction.The MCU scans the coil with low power during no-load, when the energy in the coil is extremely small.If a QI-compliant receiver device is placed on top of the coil, the MCU

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detects it and increases the transmitting power, thus rapidly charging the receiver device.Depending on the state of standby and charging, the MCU controls different color LEDs.

The product has various protection functions, such as temperature protection, FOD, over-voltage and over-current protection, etc. The temperature change of the product is detected by thermistor, and the power output will be reduced or aborted when it exceeds a certain temperature.