

1. DESCRIPTION

MT5705 is a SoC based wireless power receiver which is designed for applications with up to 5W power delivery and can be configured as a wireless charging transmitter to provide power to other receivers. It is fully compliant with WPC Qi specification (V2.0) of Baseline Power Profile (BPP). The AC input can be converted to fully programmable DC output voltage due to the magnetic induction charging technology. Designed with ARM Cortex M0 processor, integrated with optimized and adaptive full synchronous rectifier control and special LDO, the chip achieves high efficiency, ultra-low bias current and very small power MOSFET $R_{DS(on)}$. MT5705 is embedded with various protection features, such as foreign object detection (FOD), over-voltage, over-current and over-temperature protection which guarantee the system reliability.

2. APPLICATIONS

- Smartphones and wearable devices with high integration and small form factor
- Rx function for power banks where they can be wirelessly charged
- Other wireless power applications

3. FEATURES

- Power delivery: up to 5W
- Fully programmable output voltage and current limit
- Embedded with ARM Cortex M0 processor with 2kB SRAM and 8kB OTP
- AC input to DC output efficiency: up to 95%
- Embedded with various protection features: OVP, OCP, OTP, FOD
- Innovative output LDO with output clamping and fast response to line and load transient
- WPC Qi V2.0 compliant and proprietary communication protocols support with hardware ASK modulation
- Independent I²C slave interface with additional GPIO's
- Halogen free and RoHS compliant
- 4.00mm x 4.00mm QFN32 package

4. TYPICAL APPLICATION CIRCUIT

