

Self-Regulated Wireless Charger IC with Small Form Factor

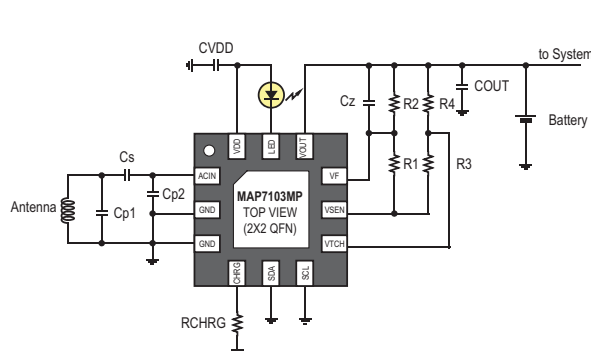
DESCRIPTION

The MAP7103 is a Wireless Charger IC which has small form factor. The device receives an AC power signal from a wireless power transmitter. The MAP7103 can be operated up to 13.56MHz. The self-regulation rectifier generates VDD output from the received AC signal. From VDD supply, the internal charger circuit charges an external battery or batteries. VDD is dynamically adjusted according to battery voltage. The charger parameter such as constant voltage level, bad-battery detection level and charging current are determined by external resistor settings for user convenience. The LED driver indicates charger status such as trickle charging, CC/CV charging and charge complete. Using the integrated 10bit ADC and I2C interface, the users can read charger status, VDD level, charger output voltage level, charging current level and internal chip temperature. All functions are integrated in 2x2mm² 12L QFN small out-line package.

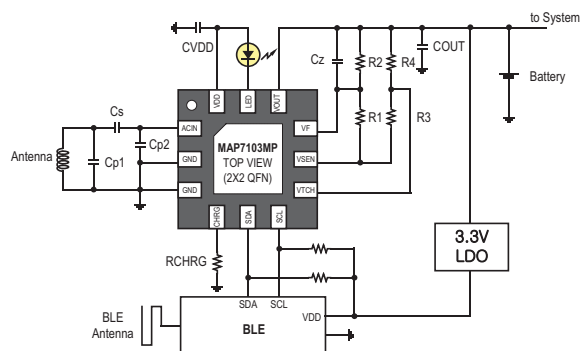
APPLICATIONS

- IoT application battery charger
- Remote controller battery
- Wireless Mouse battery charger
- Wireless electric toothbrush Charger

TYPICAL APPLICATION



Stand-alone Application



BLE Application

FEATURES

- **Self-regulation Half-bridge Rectifier**
- **Charger circuit**
 - User programmable charging current using a resistor up to 100mA.
 - 1C current level programmed: current level with an external resistor
 - Trickle charging current level: 0.2C
 - User programmable constant-voltage level
 - User programmable bad-battery detection level
 - Temperature regulation
- **10bit ADC**
 - VDD level detection
 - VOUT (charger output voltage) detection
 - Charging current detection
 - Internal temperature detection
- **LED driver**
 - 1.5mA driving capability in typical
 - Charger off-state
 - Trickle charging condition
 - Full current charging condition
 - Charge complete
- **I²C interface**
- **QFN package**
 - 12L QFN 2x2mm², 0.55T (typ.) available
- **Green & RoHS**