

## Wireless Power Transmitter/Receiver Controller for Wireless Power Applications

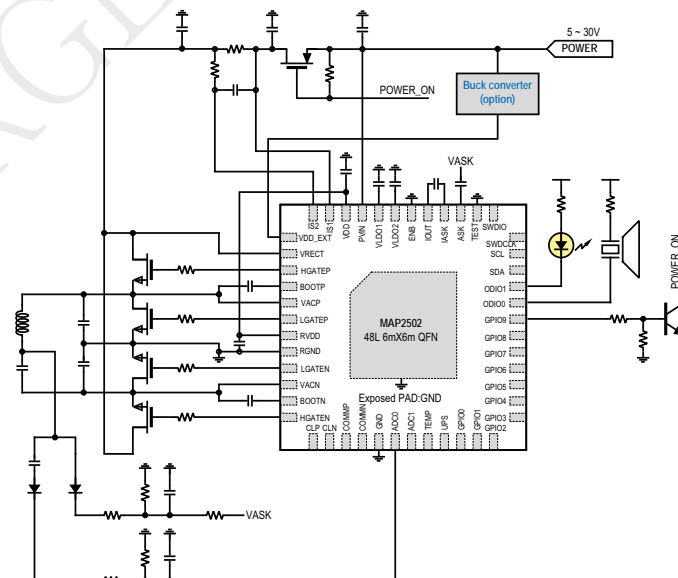
### DESCRIPTION

The MAP2502 is a Wireless Power Transmitter and Receiver controller IC for wireless charging systems. It can be configured for receiving or transmitting inductive coupled or magnetic resonance WPT systems. When it is used as a transmitter, it provides Class-D amplifier controller, PWM generator, analog ASK demodulation circuit for voltage/current mode and digital FSK modulation circuit. As a receiver, Class-D controller operates as an active rectifier controller for receiving AC power signal. To support Qi and PMA receiver application, ASK modulation switches, OVP drivers and digital FSK demodulation circuits are integrated. Therefore, it is ready to support WPC Qi V1.2.x compliant Tx/Rx applications. The integrated 32bit processor and built-in non-volatile memory provides powerful, flexible and compact design for any wireless power systems. The IC includes various serial communication devices such as master/slave I2C, serial debugging interface and UART. For user convenience, 12bit ADC, GPIOs, LED and Buzzer driver are provided.

### APPLICATIONS

- Mobile phone, handsets & accessories
- Game console, STB, audio systems
- Furniture and intelligence kitchen system

### TYPICAL APPLICATION (Qi Tx single antenna application)



### FEATURES

- **High Efficiency Wireless Power Receiver**
  - 30V, 100kHz ~ 6.78MHz full active rectifier controller
  - Built-in ASK modulation switches
  - Built-in OVP clamp drivers
  - Digital FSK demodulation circuit
- **Highly integrated Wireless Power Transmitter**
  - 30V Class-D Amplifier Controller
  - Symmetry/Asymmetry Digital PWM generator
  - Analog ASK demodulation circuits (Voltage/Current mode)
  - Digital FSK modulation circuit
- **Supports 12bit ADC**
- **Integrated 32bit Micro Processor**
  - Programmable non-volatile memory
  - SRAM for data memory
  - Debugging Interface
- **Low Dropout Regulator**
  - 30V high-voltage 5V LDO
  - 3.3V LDO
  - 1.8V LDO
- **Voltage & Current Sensing**
  - 30V high-side current sense amplifier
- **Digital Communication**
  - I2C Interface (Master/Slave)
  - UART Interface
- **LED and Buzzer Drivers**
- **GPIOs and Open-drain IOs**
- **QFN Assembly**
  - 48L QFN 6x6mm<sup>2</sup> (TBD) available
- **Green & RoHS**