

## 2.5W highly integrated Wireless Power Receiver IC for inductive and resonant system

### DESCRIPTION

The MAP75032 is a Wireless Power Receiver IC which supports AirFuel resonant, PMA and WPC(Qi) wireless power transfer systems. The device receives an AC power signal from a wireless power transmitter and converts it into a regulated 5V output voltage.

It integrates a half-bridge active rectifier, which can operate for an AirFuel resonant, PMA and WPC(Qi) system, synchronous buck converter with 5V output, a 3.3V low-dropout regulator (LDO) for external devices, 10-bit ADC, PMA communication circuits, NFC protection circuit and digital communication (I<sup>2</sup>C) to control the VOUT and to report rectifier voltage/current and output voltage/current without any external circuitry.

### APPLICATIONS

- Handsets & accessories
- Sports, fitness, smart-watch
- Healthcare & audience systems

### FEATURES

- **High Efficiency Wireless Power Receiver**
- **All Integrated Single Chip Solution**
  - Half-bridge active rectifier operates up to 6.78MHz
  - Synchronous buck converter
  - 5V reverse-current blocking bypass switch at VOUT output
  - Parallel resonant capacitor tank selection
  - Communication circuit for WPC(Qi) and PMA
  - External OVP driver for AirFuel
  - Internal OVP circuits for WPC(Qi) and PMA
  - No external circuits for rectifier and output current sense
  - 3.3V Low dropout regulator (LDO) for external device
  - NFC Protection circuits
  - 10-bit ADC
  - Internal EEPROM for PMA identification information
  - AirFuel Resonant/WPC(Qi)/PMA detection logic
  - I<sup>2</sup>C interface
- **Voltage & Current Sensing**
  - Rectifier and output voltage sensing
  - Rectifier and output current sensing
- **Protections**
  - Over voltage protection for rectifier
  - Over current limit for buck converter
  - Over current limit for LDO
  - Thermal shutdown
  - Under-Voltage Lock-Out (UVLO)
- **WLCSP Assembly**
  - 30 Ball WLCSP 2.62x2.17mm<sup>2</sup>, 0.35T(typ)
- **Green & RoHS**

### TYPICAL APPLICATION

