P9022A Wireless Power Receiver
High Efficiency, 10 W

FEATURES

- Supports up to 10 W power transfer enabling faster charging of small form factor devices
- Conforms to WPC 1.1.2 specification
- Integrated full-bridge synchronous rectifier (FBSR)
- Foreign object detection (FOD)
- Security and encryption up to 64-bit
  - Secure communication between RX to TX
- Open-drain LED indicator outputs
- Integrated µController
- I²C interface
- Proprietary bi-directional communication
- Pre-Qi certification
- Over-current & over-temperature protection
- Available in 4.058 x 3.898 mm, WLCSP-79, 0.4 mm pitch
- -40 to +85°C temperature range

TARGET APPLICATIONS

- Phablets
- Tablets
- Accessories
- Medical

To learn more about IDT's wireless charging technology visit:
idt.com/go/wirelesspower

The P9022A is a 10 W, highly-integrated WPC-compliant wireless power receiver IC. The device operates with an AC power signal from a compatible wireless transmitter and converts it into a regulated 5 V output voltage, which can be used to power devices or supply the charger input in mobile applications.

The P9022A solution integrates a high-efficiency full-bridge synchronous rectifier (FBSR), and control circuits used to modulate the load to transmit WPC-compliant message packets to the base station to optimize power delivery. The product interfaces to an external buck converter or switching battery charger to achieve 10 W operation.

The receiver includes over-temperature, over-voltage, and over-current protection to safeguard the device and the system under fault conditions. In addition, the receiver is WPC 1.1.2 FOD compliant to protect the base station and mobile device from over-heating in the presence of a metallic foreign object. Fault conditions associated with power transfer are managed by the embedded MCU which also controls status LEDs to indicate operating and fault modes.

The P9022A is available in a space-saving 4.058 x 3.898 mm WLCSP-79 pin package. The product is rated over an operating temperature range of -40 to +85°C.

PB_P9022A_RevA_0215