

P9022A Wireless Power Receiver High Efficiency, 10 W

POWER MANAGEMENT

RF PRODUCTS

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.

DISCLAMER Integrated Device Technology, Inc. (IDT) and its subsidiaries reserve the right to modify the products and/or specifications described herein at any time and at DTS sold discretion. All information in this document, including descriptions of product features and performance, is subject to change without notice. Performance sepecifications and the operating parameters for the described products a determined in the integredient state and the operation the same investment of the integration contained herein is provided without representation or warranty of any lind, whether express or implied, including, but not limited to, the suitability of IDT's products for any particular purpose, an implied warranty of integration or products and the products of the products are not intended for use in life support systems or similar devices where the failure or malfunction of an IDT product can be reasonably expected to significantly affect the health or safety of users. Anyone using an IDT product in such a manner does so at their own risk, abstract an express, written agreement by IDT.

Integrated Device Technology, IDT and the IDT logo are registered trademarks of IDT. Other trademarks and service marks used herein, including protected names, logos and designs, are the property of IDT or their respective third party owners. © Copyright 2015. All rights reserved.

PB_P9022A_RevA_0215