



P9221-R Wireless Power Receiver for 15W Applications



FEATURES AND BENEFITS

- Single-chip solution supporting up to 15W applications
- WPC-1.2.2 compliant
- Innovative over-voltage protection clamp eliminating external capacitors
- Embedded 32-bit ARM® processor
- Proprietary coil alignment guide
- 87% peak efficiency using P9242-R Tx
- Low synchronous rectifier $R_{DS(ON)}$ for high efficiency
- Supports I²C communication
- 0°C to +85°C temperature range
- Small 52-WLCSP package

High-Efficiency 15W Wireless Power Receiver

The P9221-R is a highly-integrated, Qi-compliant wireless power receiver targeted for 15W applications. Using magnetic inductive charging technology, the receiver converts an AC power signal from a resonant tank into a regulated 9 or 12 V DC output voltage. An integrated, low- $R_{DS(ON)}$ synchronous rectifier and ultra-low-dropout regulator offer high-efficiency, making the product ideally suited for battery-operated applications.

The receiver includes a 32-bit ARM Cortex®-M0 processor offering a high level of programmability. The device includes proprietary alignment guide information for optimum coupling between the receiver and the transmitter, and features a programmable current limit. A proprietary over-voltage protection scheme eliminates the need for additional capacitors generally required by other receivers, minimizing the external component count and cost. Together with the P9242-R transmitter, the P9221-R is a complete wireless power system solution for 15W applications.

The P9221-R is available in a space-saving 2.64 × 3.94 mm 52-WLCSP package. It is rated for 0°C to +85°C ambient operating temperature range.

To request samples, download documentation, or learn more, visit: idt.com/P9221-R