Texas instruments introduces industry's smallest wireless power receiver chip

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Texas Instruments today introduced its next generation of wireless power technology, which is 80-percent smaller than TI's previous receiver chip.

The tiny, highly integrated device makes it easy for designers to implement wireless charging in their existing and new designs for portable consumer devices, such as smart phones, gaming systems, digital cameras, and medical and industrial equipment.

The bq51013 receiver integrated circuit (IC) combines voltage conditioning and full wireless power control in a small 1.9-mm x 3-mm WCSP package. The new circuit supports up to 5 W of output power, provides up to 93-percent efficient AC/DC power conversion and is the only IC required between the receiver coil and system.

"Smartphone and consumer electronics manufacturers are demanding wireless power, and TI is well positioned to help our customers drive

widespread adoption of this technology that makes life easier for people on the go to charge their devices," said Sami Kiriaki, senior vice president over TI's Power Management business. "Designers can use the bq51013 to quickly integrate wireless power into existing and new applications with minimal impact to overall solution size."

Key features and benefits

• Highly integrated and efficient wireless power receiver IC includes full-bridge synchronous rectification, voltage conditioning and wireless power control in a single device.

• 1.9-mm x 3-mm WCSP package allows for easy integration with minimal size impact. Device area is 80 percent less than TI's first-generation receiver.

• The receiver and its associated bq500110 transmitter IC are Wireless Power Consortium (WPC) Qi-compliant. This compliance ensures interoperability between various charging pads and portable devices.

• Built-in protection against voltage, current and temperature fault conditions, assures safe and reliable system operation.

• 93-percent peak efficiency reduces thermal rise inside the system while allowing charge rates comparable to an AC adapter.

The bq51013 wireless power receiver is available now in a 1.9-mm x 3-mm WCSP package, priced at $3.50 in quantities of 1,000.

More information: www.ti.com/bq51013-pr

Source: Texas Instruments