

Single-chip wireless power receiver integrates battery charger



Texas Instruments Incorporated introduced a single-chip wireless power receiver with integrated battery charger and a new “free-position” transmitter integrated circuit. The two bqTESLA circuits are positioned to give smart phone users a simpler, stress-free charging experience and help designers implement wireless power technology in places such as automotive consoles, charging pads and office furniture. The bq51050B is said to be industry’s first Wireless Power Consortium (WPC) 1.1 Qi-compliant wireless power receiver with integrated direct battery charger, and enables faster, more efficient charging of smart phones, wireless keyboards and other portable electronics. The 20-V receiver combines rectification, voltage conditioning, communication control and Li-Ion charging capability in a single, tiny integrated circuit, – eliminating the need for a separate battery charger circuit. The inductor-free, single-stage design delivers the industry’s highest system efficiency and saves up to 60-percent board space compared to a multi-stage implementation, according to the company. The bq500410A is a WPC 1.1-ready wireless power transfer controller to support A6 transmitters. The controller allows a Qi-compliant smart phone or other portable device to charge in a surface area of at least 70 mm x 20 mm. It achieves greater than 70-percent efficiency, according to the company, and relies on a unique parasitic metal and foreign object detection feature to safely protect the system and stop delivering power if a metal object is detected between the transmitter and receiver.

Texas Instruments

800-477-8924, www.ti.com [1]

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