Industry-Leading Wireless Power Solutions

The Most Widely Adopted in the Market

TEXAS INSTRUMENTS



History of TI's Wireless Power Innovation

■ First Qi-compliant system	 World's smallest receiver Highly integrated second-generation solutions 	 WPC 1.1-compliant solutions First integrated receiver with Li-lon battery charger First ICs to support A1, A5, A10, A11, and A6 transmitters 	 Automotive transmitter solutions WPC and PMA dual-mode solutions Next-generation solutions reduce cost, improve efficiency 	 Magnetic resonance solutions WPC medium- power solution
2010	2011	2012 :	2013	2014

The TI Advantage

- Industry leader with first WPC 1.1 ICs
- Innovative, broad portfolio
 5 transmitter types, 7 receiver versions
- Comprehensive design support
 - Reference designs, app notes, complete solutions

Solutions on the Market

- 40+ Qi-compliant receivers
- 20+ Qi-compliant transmitters
- 80% of current Qi-enabled devices use TI technology

Visit ti.com/wirelesspower for product details and design resources.

Design with Proven Wireless Power Solutions

Transmitter Features:

Widest range of transmitter type support

- First A1, A5, A10, A11, and A6 solutions
- Single coil and coil arrays
- Next-generation portfolio reduces BOM with integrated demodulation

5V input with patented Dynamic Power Limit[™]

- Supports 5V, A5, and A11 WPC transmitter types (bq500211A)
- Ensures robust operation from USB port

Continued innovation

- Increased charging area coil array (bq500410A)
- Supports single and multiple coil designs
- Small transmitter form factors
- WPC 1.1-compliant (Foreign Object Detection) for 1.0 and 1.1 receivers

Receiver Features:

Industry's first and smallest receivers

- Monolithic receiver IC with built-in Li-Ion charger
- 93% AC/DC efficiency
- WPC 1.1-compliant (Foreign Object Detection)

Patented system design

- · Adaptive communications current limit for robust communications during transients
- Dynamic efficiency scaling optimizes performance over a wide range of operating power
- Dynamic rectifier control improves load transient performance

Robust and flexible architecture

- 20V maximum input tolerance with patented OVP clamp
- Automatic adaptor detection enables wired or wireless charging
- 5V, 7V, and Li-Ion battery charger options

To download data sheets or evaluate TI's wireless power technology in your lab, visit ti.com/wirelesspower or contact your local TI office.

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bq500211A eval board with 12V coil.

bq500410A eval board with 12V coil array.

Qi-Compliant Transmitter Solutions

Device	Тх Туре	V _{IN} (V)	Magnet	WPC	Key Features
bq500410A	A6	12	No	1.1	1 to 3 coils, large charging area
bq500211A	A5 A11	5 5	Yes No	1.1	Power from low-cost 5V adapter or USB port
bq500210	A1 A10	19 19	Yes No	1.0	Second-generation solution with digital demodulation to reduce component count



Qi-Compliant Receiver Solutions Device Description

bq51013A	WPC 1.0, integrated wireless power receiver, 5V regulated output
bq51013B	WPC 1.1, integrated wireless power receiver, 5V regulated output
bq51050B	WPC 1.1, integrated wireless power receiver and 4.2V Li-lon charger receiver
bq51051B	WPC 1.1, integrated wireless power receiver and 4.35V Li-lon charger receiver



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