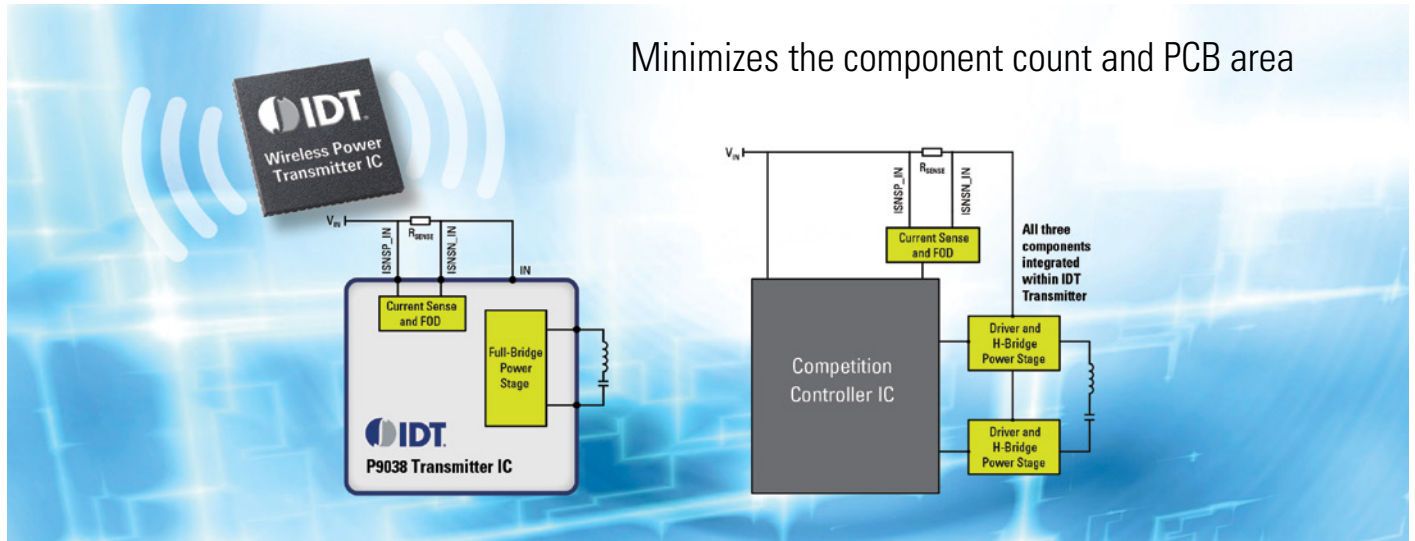
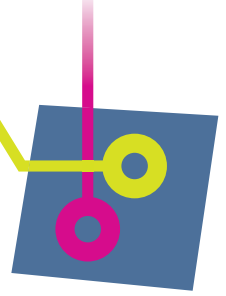


P9038 8W, Qi-Compliant Wireless Power Transmitter



BENEFITS AND FEATURES

- V_{IN} range: 4.5 to 6.9 V
- Supports up to 8W power transfer
- WPC 1.1.2 compliant for A5 or A11-type coils
- Integrated power stage
 - Very low $R_{DS(ON)}$ offering high efficiency
- Input source voltage flexibility
 - USB or AC adapter
 - USB Dedicated Charger Port (DCP) detection
- Input in-rush control
 - Supports both USB and AC adapter
 - Prevents surges with low cost adapters
- Integrated current sense & FOD
 - Minimizes real estate & BOM cost
- Proprietary slew rate control
 - Eliminates the need for EMI filter
- Input over-voltage protection
 - Protection from unregulated adapters
- Security and encryption up to 64-bit
 - Secure communication between Rx to Tx
- Over-current protection
- Package: 7 x 7 mm 56-VFQFN

IDT'S TRANSMITTER SOLUTION enables the development of USB-powered wireless charging bases with 75% fewer ICs than competing solutions. The P9038 is a highly-integrated, WPC 1.1.2-compliant wireless power transmitter targeted for A5 and A11-type coils.

It is designed to support both USB and AC adapter input voltages ranging from 4.5 to 6.9 V and is capable of supporting receivers with up to 8W of power, exceeding the power transfer requirement specified by the WPC standard.

The transmitter includes integrated full-bridge inverter, current sense, and Foreign Object Detection (FOD) circuitry to minimize overall printed circuit board real estate and Bill of Material (BOM) cost. The $19m\Omega$ $R_{DS(ON)}$ typical values for the full-bridge inverter output FETs make them ideal for high efficiency applications. A proprietary slew rate control design results in extremely low EMI that is well below the CISPR standard, eliminating the need for a separate EMI filter and further reducing the overall BOM cost.

The transmitter offers output short circuit and thermal shutdown protection to safeguard the device under extreme operating conditions. An enable pin provides on/off control of the device with power consumption of under $600\mu A$ when in the off state.

TARGET APPLICATIONS

- Charging mats or pads
- Portable instruments
- Public facilities – shops, libraries

To request samples,
download documentation,
or learn more, visit:
idt.com/P9038

