

Qi Certified: Assuring a Safe, Reliable Wireless Charging Experience



Demand for wireless charging is taking off

Wireless charging has become a key feature for many consumers. IHS Markit forecasts the wireless charging market will **grow by 80%** this year with more than **325 million receivers and 115 million chargers** (transmitters) shipping in 2017. All wireless mobile phone chargers for the consumer market are based on the Qi standard (pronounced “Chee”).

In the recent IHS Markit Q1 2017 survey of US consumers¹, awareness of wireless charging remains high. More significantly, there was a jump in usage with 35% of consumers indicating they now use wireless charging, up from 25% last year. Among these consumers, **98% said they were satisfied, and 61% were very satisfied.**



Beware of fake, knock-off wireless charging products and risks

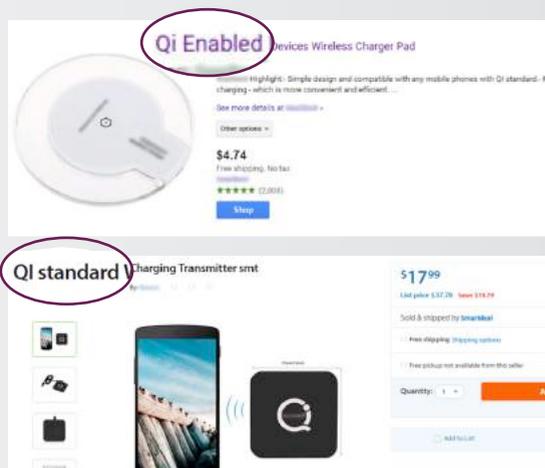
Wireless chargers are sophisticated products that are safe, efficient, and easy to use. Millions of wireless charging products based on Qi are used safely every day. The rapid growth of wireless charging adoption has led to many low quality, counterfeit products that are potentially unsafe. Cheap and counterfeit wired chargers have well known safety issues – wireless charging products should warrant the same level of concern.

The **Wireless Power Consortium (WPC)** is addressing this challenge with a certification program for wireless charging products built to the Qi standard. Qi certified products have passed a rigorous series of tests related to safety, interoperability, and usability. The WPC tests specific properties, each of which can involve multiple test procedures:

- Transmitters (Qi wireless chargers) - *17 properties tested*
- Receivers (Qi enabled smartphones or cases/covers) - *10 properties tested*

These tests verify the product uses all mandatory safety features, as well as features that are necessary to ensure compliance to the Qi standard, energy efficiency, and interoperability of wireless power transmitters and power receivers.

Examples of uncertified products using misleading claims



Only products that have passed these tests can use the Qi logo and are considered “Qi certified.” Click [here](#) to see the current list of Qi certified products.

Be cautious of claims of “Qi compliant,” “Qi compatible,” “Qi enabled” or “works with Qi,” as these may indicate a product has not undergone Qi certification testing.

Imitation or fake products pose serious risks, including:

Safety risks due to overheating

Testing conducted in independent labs on uncertified products found temperatures reaching up to 205°F if there was a metal “foreign object”, such as a coin, placed between a charger (transmitter) and smartphone (receiver). The resulting temperature could cause injury, such as third-degree skin burns.

The Qi specification mandates thermal testing of wireless chargers and effective magnetic shielding of the battery to minimize heating of the battery and mobile phone.

Example of WPC Certification Lab testing results

Test Procedure*	Max Temp Reached	Time	Result
#1	172.6°F (78.1°C)	After 2:59 min	FAIL
#2	169.2°F (76.21°C)	After 8:47 min	FAIL
#3	205°F (96.1°C)	After :51 min	FAIL

* actual WPC Lab test results for an uncertified charger tested with different foreign objects.

Risk of device damage

Uncertified products may induce electric currents in other products, interfering with how they operate and possibly leading to damaged components. For example, an uncertified charger may interfere with car electronics such as a wireless key fob when used inside a vehicle. In a study that tested 50 car models, half the models suffered from interference caused by uncertified after-market chargers, causing the key fobs to stop working. (Note: factory installed Qi chargers are all certified.)

Uncertified products may cause additional heating of smartphone batteries. The temperature of smartphone batteries will normally increase while charging, but

wireless charging accessories should not cause additional heating. For example, when a uncertified smartphone cover (or case) doesn’t provide sufficient magnetic shielding, it will allow the magnetic field of the charger to reach the smartphone and induce heat in the metal back of the phone. Over time, the elevated temperature will degrade and shorten the battery life.

The Qi specification dictates magnetic field strength limiting measures that control the voltages that are induced in mobile phones. The Qi specification also has a way to determine if there are foreign objects present and will immediately stop charging.

Risk of incompatibility

Uncertified products may be incompatible with other wireless charging products.

The Qi specification ensures products from multiple manufacturers interoperate and work with previous versions of the standard, so there is backwards compatibility.



Always look for the Qi logo

Manufacturers are urged to print the Qi logo on all products and packaging, as it's a clear sign the product has passed all tests necessary for Qi certification. A lack of a Qi logo on the product or its packaging could indicate that the wireless charging product is uncertified.

Only Qi certified products can legally use the Qi logo, but imitation or counterfeit charging products may use the Qi logo illegally.

So, how can you be assured that a product is really Qi certified? There are two easy ways to find out:

1. WPC issues an official Qi Certificate of Registration that manufacturers can provide to retailers or other companies demanding proof.
2. Search the product on the WPC's Qi [Certified Product Database](#).



WPC's Certificate of Registration



Qi is the global standard for smartphone wireless charging



Source: Aircharge; Automobiles such as BMW offer in-vehicle Qi wireless charging and branded products

From charging pads, to furniture to cars, Qi wireless charging is a simple, efficient and reliable technology used by millions of consumers worldwide.

Qi wireless charging just works and is brilliantly simple. Wireless chargers transfer power without connecting a cable to the phone. No need to plug in, simply place the phone on the charger. There is no need to position the smartphone accurately or fiddle with a connector and cable. Picking up the phone while charging has never been easier.



About the WPC and the global ecosystem supporting Qi

The WPC is an open standards development organization dedicated to creating safe, efficient and compatible wireless charging products that just work and work well – regardless of the manufacturer or brand. The WPC's 210+ industry leading members include **Apple, Belkin, Dell, IKEA, HTC, Lenovo, LG, Panasonic, Philips, Samsung, Sony, Verizon Wireless**, and other top brands and innovators.

Qi is built into more devices and locations – homes, offices, cars, retail, airports, restaurants, cafes, hotels and stadiums – than any other wireless charging standard:

- More than **375 million** commercially proven products in use.
- **Hundreds of product models** to give consumers more choice.
- Qi is **the only wireless standard available in all smartphone** wireless chargers.
- Qi is the only wireless charging standard available in all automobile models that have wireless charging. That includes **nearly 70 models today**, including Audi, BMW, Chevrolet, Ford, Honda, Hyundai, Jeep, Kia, Lexus, Land Rover, Mercedes, MINI Cooper, Toyota, Volkswagen, and numerous others.
- **Thousands of retail, restaurant, hotel and other hospitality locations worldwide** and expanding faster than any other wireless charging technology.

Qi charging stations at London McDonald's



Source: WPC; Over 300 of McDonald's in the U.K. offer Qi wireless charging

To learn more about wireless charging and the Qi certification process, please contact Paul Golden, WPC vice president of market development, at +1 972.854.2616 or paul.golden@wirelesspowerconsortium.com.

[¹IHS Markit 2017 Wireless Power Tracker](#)