

Wireless power transfer coil unit: Development of ultra-thin receiving coil unit for wireless power transfer

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TDK Corporation announced the development of a TDK wireless power transfer coil unit designed for Smartphones and other mobile devices. The receiving coil designed for integration in smartphones and similar represents an industry-leading achievement, featuring a thickness of a mere 0.57 mm.

The development reflects TDK's extensive expertise in fields such as magnetic materials technology and process technology, and involved the creation of a unique, extremely thin and flexible metal magnetic sheet. As a result, the coil unit not only is ultra thin and lightweight, it also is highly resistant to shock and therefore provides excellent reliability. Furthermore, in spite of its 0.57 mm profile, the coil's design minimizes

the tendency towards rising resistance and achieves a power [transfer efficiency](#) that allows clearing the requirements of the WPC "Qi" standard. The low height of the unit is a key aspect for use in Smartphones. At this point, output current is on the order of 0.5 to 0.6 [Amperes](#), but an even thinner 0.50 mm type with equal or better output current is already in development, with a view towards starting mass production in 2013.

As smartphones incorporate more and more functions, their [power consumption](#) also tends to increase, making charging of the battery a more frequent requirement. With the aim of establishing an infrastructure environment that allows easy charging anywhere at any time, the WPC and other promotional organizations are working towards the standardization of wireless power transfer. To contribute to these efforts and meet the expected rise in demand in the near future, TDK is developing and offering products that reflect its extensive know-how in a number of relevant fields. This includes [magnetic materials](#) technology and process technology, winding pattern technology expertise gained through the manufacture of a wide range of various kinds of coils, as well as magnetic circuit design technology.

Provided by TDK Corporation

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