

### QI WIRELESS CHARGING STATION WITH MAGNETIC MATERIAL INTEGRATED IN PCB

#### TARGET APPLICATIONS

Wireless charging transmitter and/or receiver units for

- Mobile devices
- Headphones
- Hearing aids
- Accessories

#### ADVANTAGES

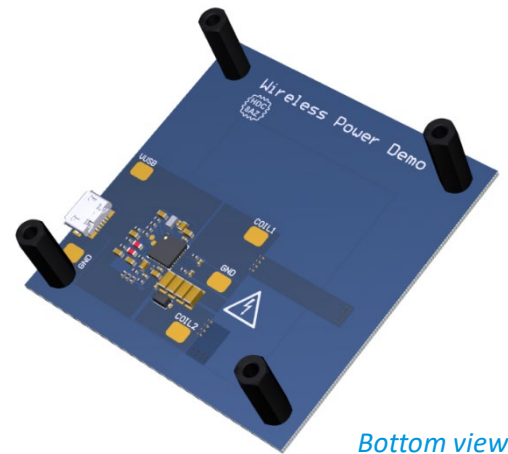
- Miniaturization
- Design flexibility
- Ease of use (everything integrated on one PCB)

#### TECHNOLOGY

ECP® utilizes the free space in an organic, laminate substrate (Printed Circuit Board) for active and/or passive components. In this case, a magnetic core is embedded in the laminate and the copper traces of the PCB are used to form the coil above it.

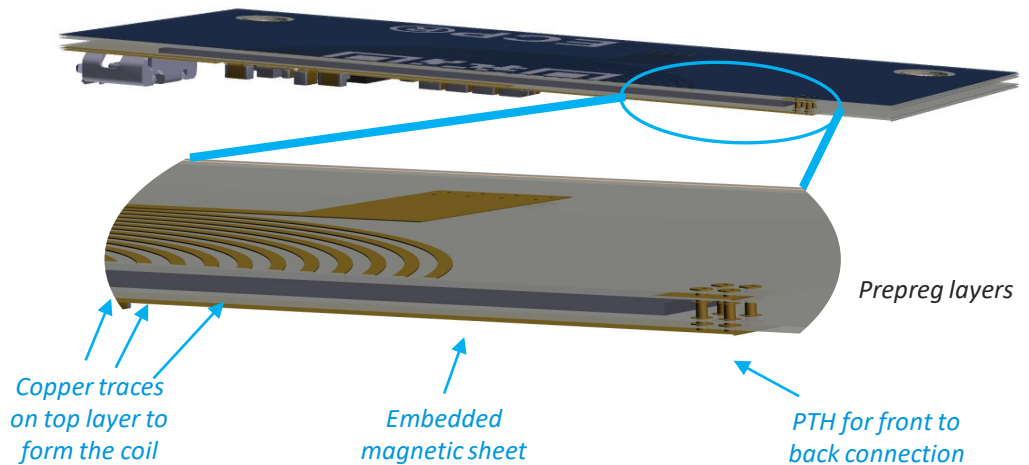


Top view



Bottom view

#### X-SECTIONAL VIEW



#### TECHNICAL DATA

- Qi standard
- Possible charging power < 5W
- Thickness of the PCB is 600  $\mu\text{m}$
- Magnetic core size 45 mm x 45 mm x 0,3 mm

### 采用集成有电磁材料的PCB的Qi无线充电座

#### 应用

无线充电发射机和/或接收单元，可应用于：

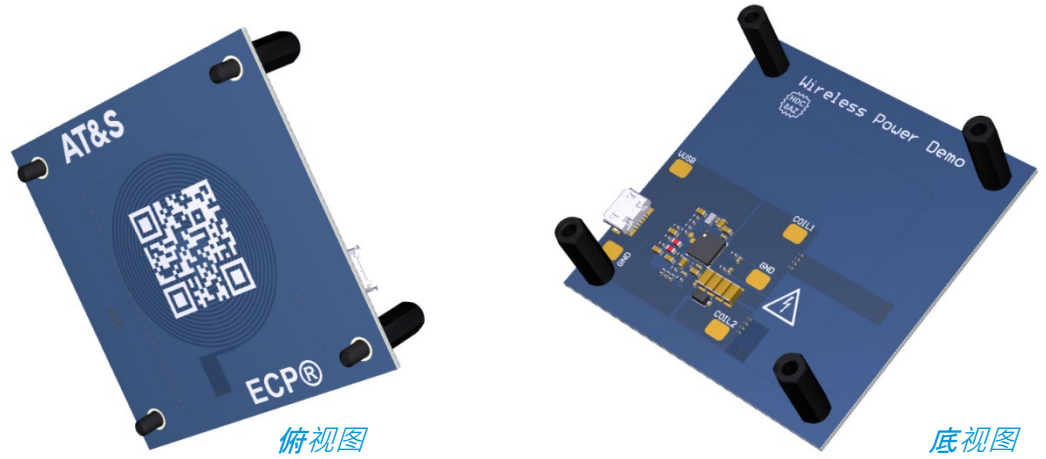
- 移动设备
- 耳机
- 助听器
- 附件

#### 优势

- 小型化
- 灵活设计
- 方便使用 (所有零部件都集成在一块PCB板上)

#### 技术

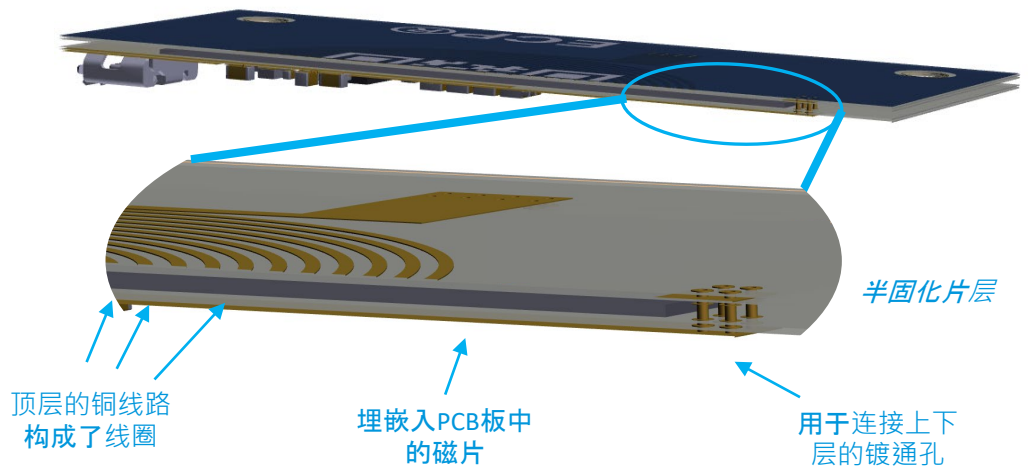
ECP® 利用了有机层压基材板(印刷线路板)上的空余空间，用于布局主动和/或被元件。在这个应用实例中，磁芯板被埋嵌于PCB的层压板中，其上的铜层线路构成了线圈。



俯视图

底视图

#### 界面视图



顶层的铜线路构成了线圈

埋嵌入PCB板中的磁片

用于连接上下层的镀通孔

半固化片层

#### 技术数据

- Qi标准
- 可能的充电功率：小于5瓦
- PCB板的厚度：600微米
- 磁芯尺寸：45毫米 x 45毫米 x 0.3毫米

AT & S Austria Technologie & Systemtechnik  
Aktiengesellschaft  
(Headquarter)  
Fabriksgasse 13,  
8700 Leoben, Austria  
Tel.: + 43 3842 200-5683  
E-mail: g.weidinger@ats.net

AT&S (China) Company Limited  
5000 Jin Du Road,  
Xin Zhuang Industry Park,  
Minhang District  
Shanghai 201108, P.R. China  
Tel.: +86 21 24080 551  
E-mail: w.chen@cn.ats.net