

EE-595 lab4

Wireless Charging Device

Team 2



Dianlin Huang



Chenshuo Wu



Shilun Liu



Pengcheng Jiang



EE-595 lab4

Toothbrush Wireless Charging Device

Team 2

- **Purpose of Product**

This device can charge toothbrush wirelessly without using a charger and socket

- **Feature 1:** convenient

- **Feature 2:** environmental-friendly

- **Feature 3:** economical

- **Market :** Asia,Europe, North America

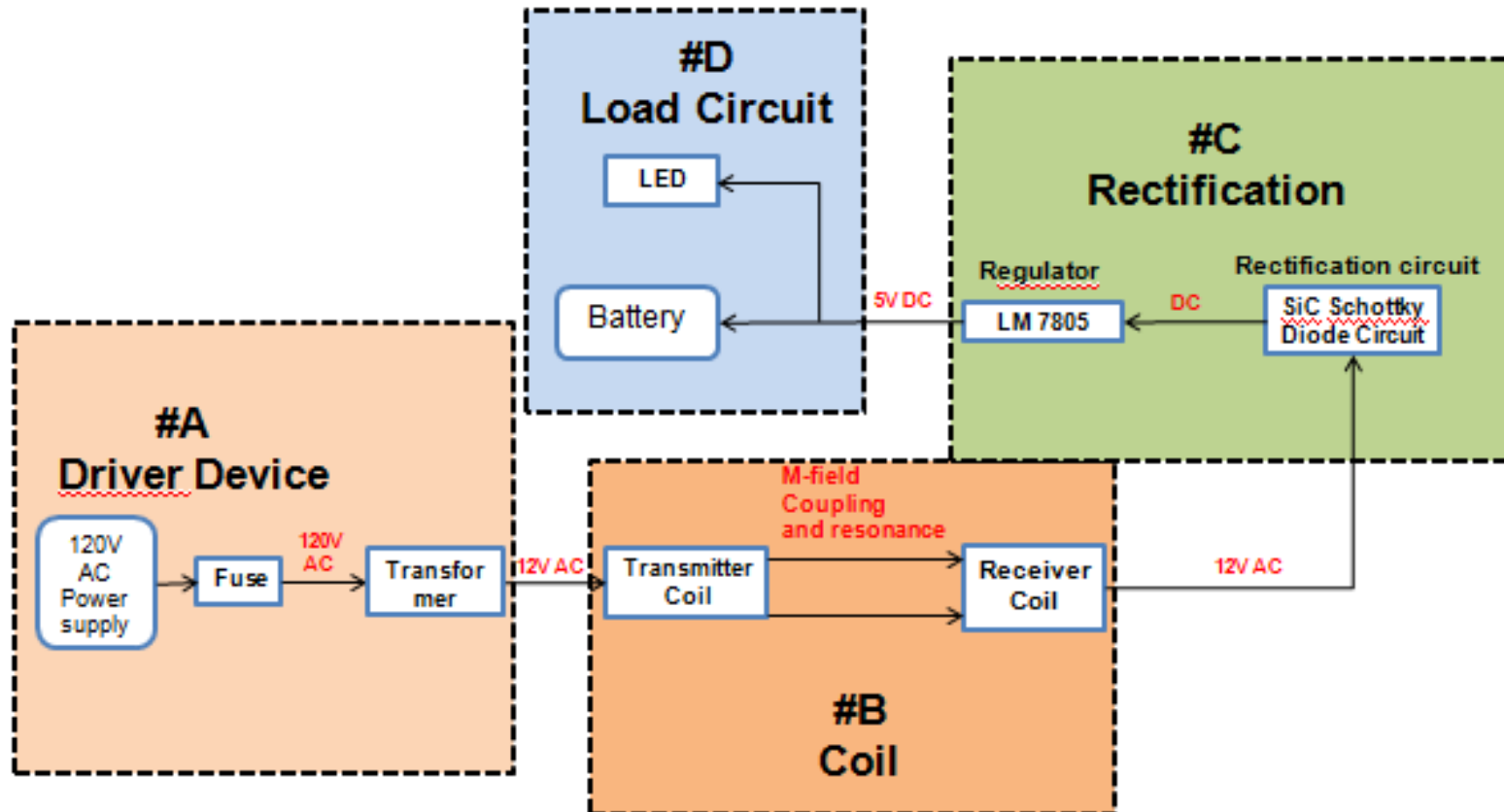
EE-595 lab4

Key Requirements

- **Cost**
 - Sales Price: \$30, Component Cost: \$20, Assembly & Test Costs: \$5
- **Environment**
 - Indoor
 - Operating Temp Range: (-10°C to 45°C)
 - Operating Humidity Range: (30% to 90%)
- **Power Input(s)**
 - Residential AC Power: 100 – 240 VAC @ 50 – 60 Hz @ Max 2 Amps
- **Major Functions, Quantities Measured, Displayed**
 - Charging efficiency: 40% – 70%
 - Charging speed: Approximately 2~3 hours to be fully charged

EE-595 lab4

Block Diagram



A. Driver Device: Chenshuo Wu

B. Coil : Pengcheng Jiang

C. Rectification: Shilun Liu

D. Load circuit: Dianlin Huang