Wireless Charging Of Mobile Devices
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ABSTRACT
This is a wireless power transfer project utilising PCB etched coils which uses inductive coupling. The aim of this project was to be able to transfer enough power to power a USB device, 2.5W wirelessly. A working prototype was constructed which used PCB etched coils. Several different factors were tested to see their impact on the efficiency of the system. These included distance between coils, coil offset, and supply voltage. Sections were tested independently of each other to identify where losses were occurring. In testing it was discovered that this setup can easily transfer the targeted power, and can also achieve above 50% efficiency.

Figure 1: System testing setup

Figure 2: Graph showing efficiency against distance between coils.