



Capacitive Wireless Power Transfer System for Drone

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The wireless power transfer (WPT) technology is a safe and convenient charging solution for various applications such as electric vehicles and mobile devices. As the power can be transferred without metallic contact, the WPT technology can be very useful in unmanned vehicles or devices. As the market of drone is significantly increasing in delivery, surveillance, or assistance in disaster, the application of WPT technology for drones will be more emphasized in near future.

In this presentation, the capacitive WPT system for drone is discussed. To satisfy the requirements of the lighter weight, higher efficiency, and more tolerance in the misalignment of drone, the capacitive coupler for drone wireless charging has been developed. The structure and design of separated circular capacitive coupler for drone application is analyzed, explained, and compared with inductive coupling WPT systems.