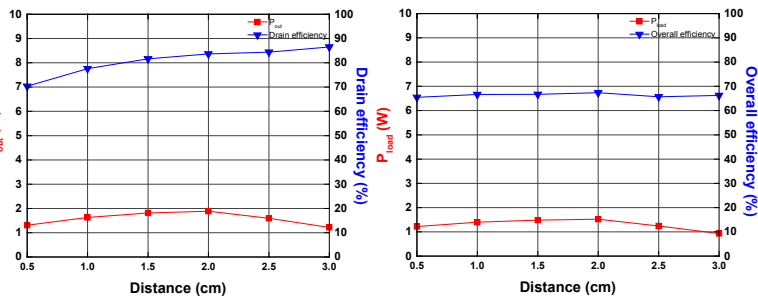
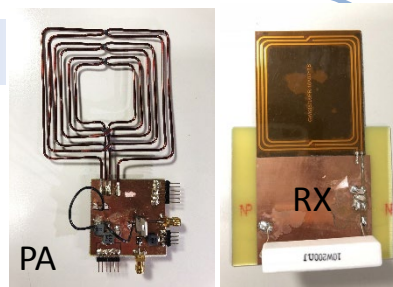
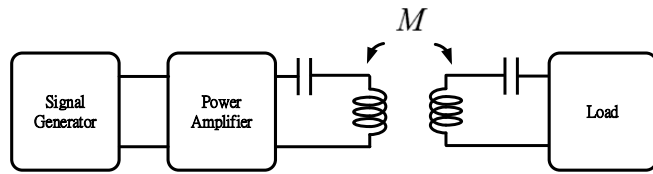


Design and Implementation of Power Oscillator for Resonance-based Wireless Power Transfer System

- Magnetic resonant wireless power transfer system
 - Meet the Airfuel Alliance (AFA) spec. (Class1 PTU, 6.78 MHz)
 - Higher transmission efficiency
 - Longer transmission distance
 - Loose alignment
 - Charge multiple device

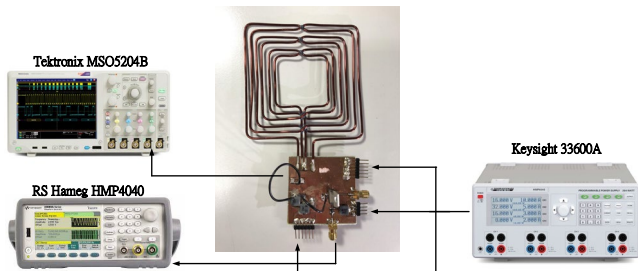
- Series-parallel coil coupling topology
- A high efficiency Class E power amplifier at different distance
- A simplified magnetic resonant wireless power transfer system is proposed
 - High efficiency LC feedback power oscillator
 - Without external signal generator or gate-driving circuits
 - Reducing the complexity of transmitter

Magnetic resonant WPT system w/ Class E PA

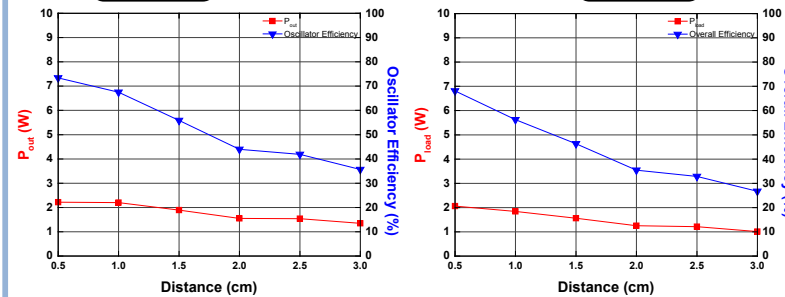
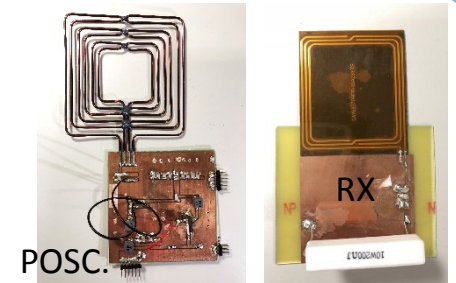
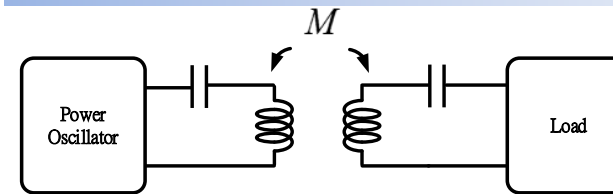


Power amplifier

Topology	Class E
Supply voltage	10 V
Pout	1.89 W
Frequency	6.78 MHz
Efficiency	70.37% - 83.66 %
Distance	0.5 – 3 cm
Overall Efficiency	65.48 % - 67.36 %
IC / Module	Module



Magnetic resonant WPT system w/ POSC



Power oscillator

Topology	LC Feedback
Supply voltage	10 V
Pout	2.06 W
Frequency	6.78 MHz
Oscillator Efficiency	73.4 %
Distance	0.5 cm
Overall Efficiency	68.13 %
IC / Module	Module

