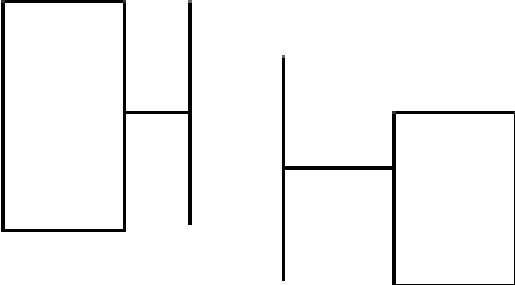
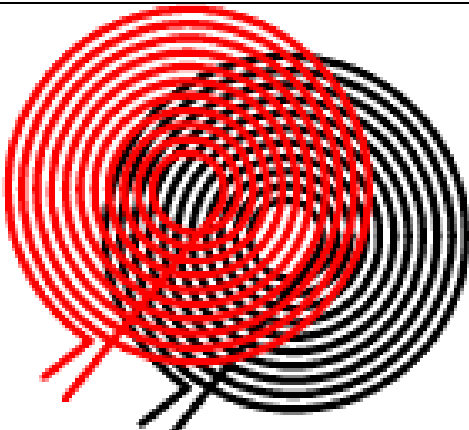
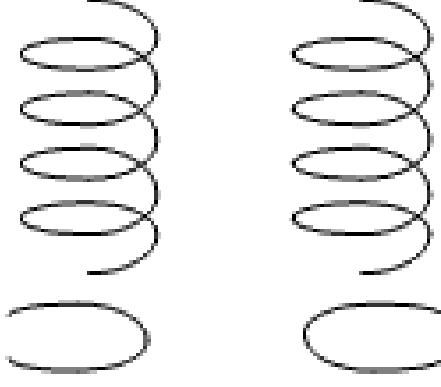
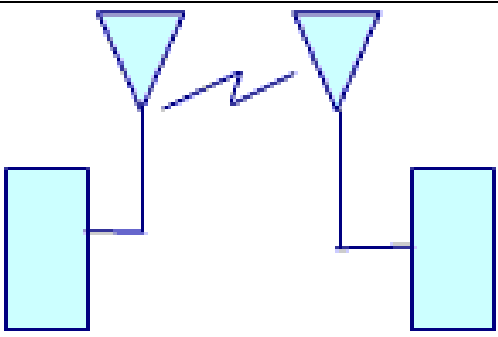


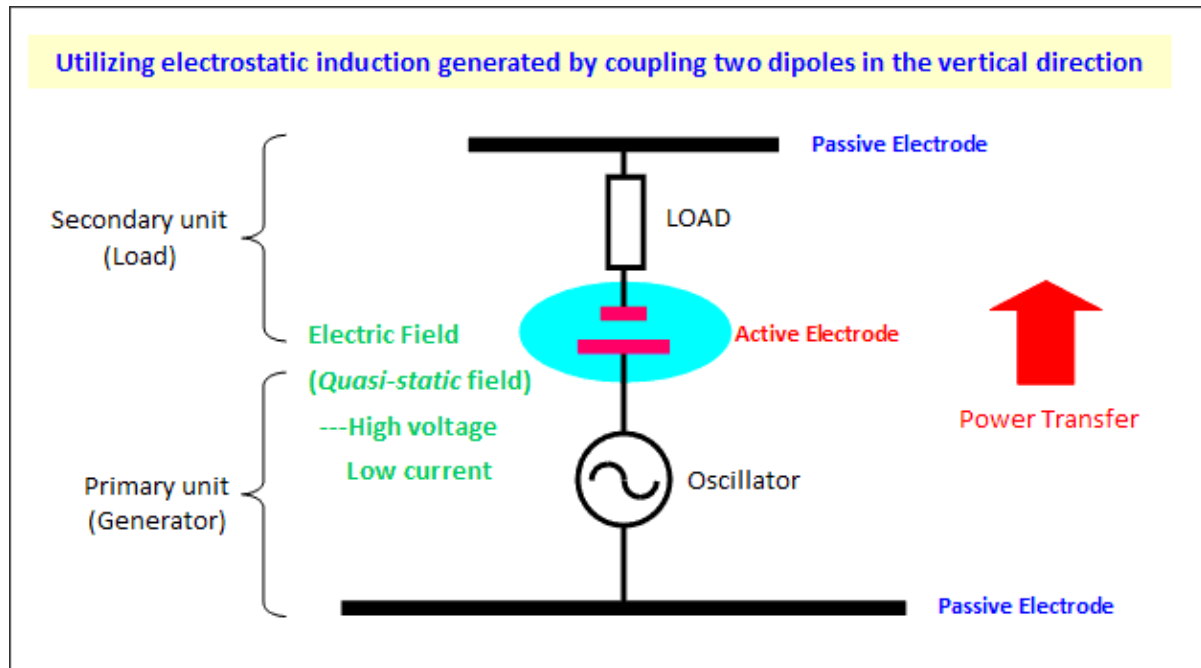
Here are the methods that are used for wireless power transfer, we are mainly focusing on Capacitive and Electromagnetic Induction power transfer. Some details about the Capacitive Coupling power transfer is given below this is just the Idea that we had in our mind we would try to implement it in more better and convenient way.

	Capacitive coupling	Method of transmitting power by capacitive coupling from opposing plane electrodes.
	Electromagnetic induction	Method of transmitting power by induced current from a magnetic field between opposing coils

	Magnetic resonance	Method of transmitting power over a space utilizing resonance phenomenon based on the same principle as electromagnetic induction
	Radiowave	Method of transmitting power over a space utilizing resonance phenomenon based on the same principle as electromagnetic induction

**Capacitive coupling** wireless power transmission modules have two sets of asymmetric dipoles consisting of active and passive electrodes positioned vertically on the power transmitting and receiving sides. Power is transmitted utilizing an induction field generated by coupling the two sets of asymmetric dipoles.

This configuration realizes wireless power transmission with high position freedom and efficiency.



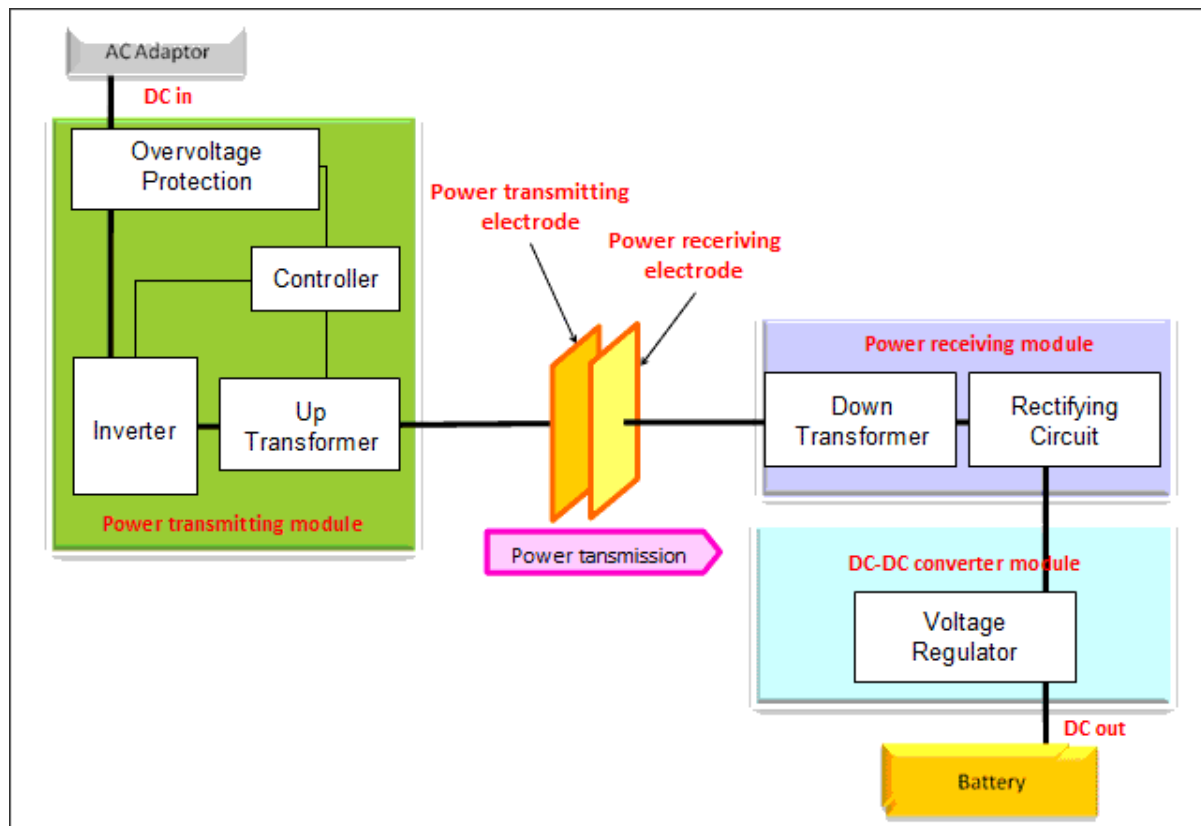
Below is a block diagram showing the entire system, which makes use of this technology.

The power transmitting side consists of a power transmitting module and a power transmitting electrode, and the power receiving side consists of a power receiving electrode, a power receiving module and a DC-DC converter.

The power transmitting module includes a power supply circuit, which makes use of Murata's power supply design technology, and a control circuit to provide safety.

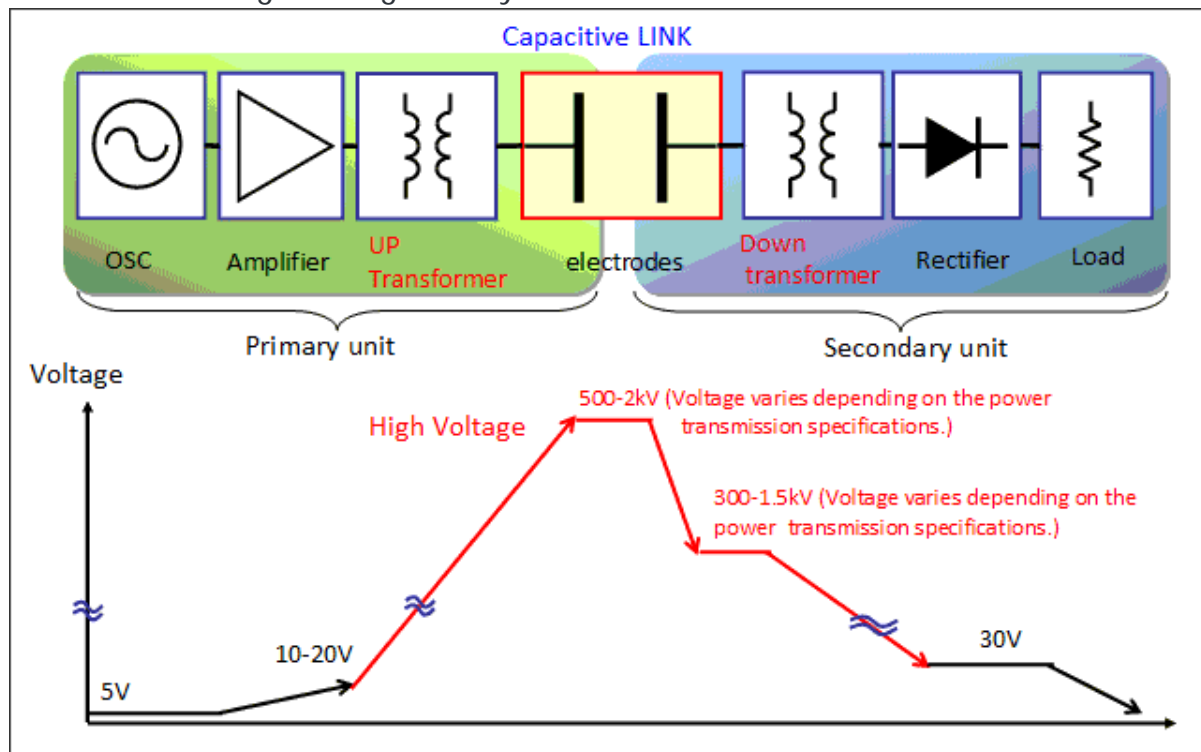
The power converted to AC current by the power transmitting module is transmitted to the power receiving side via a capacitor consisting of a power transmitting electrode and a power receiving electrode.

A rectifying circuit and a voltage conversion circuit are built into the power receiving side to provide stable DC voltage to batteries and equipment.



Voltage is converted during power transmission in capacitive coupling. An example of voltage transition is shown below. The wireless power transmission (capacitive coupling) area is high-voltage but small-current; therefore, there is no risk of heat generation.

Murata's own high-voltage safety measures are described below.



safety measures are applied to high voltage at the wireless power transmission area providing excellent protection.

- Power transmitting modules feature the ability to detect load and transition.
- With the above feature, power transmission is halted if conditions such as the absence of equipment being charged or fully-charged battery are detected.
- When abnormal conditions such as contact by a metal object other than equipment to be charged or a human body is detected, power transmission is also halted.
- If electric discharge occurs, power transmission is halted to prevent smoke emission and fire.