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## Characteristics of SWPT according to the number of transmitting and receiver coils.

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Recently, The use of electronic devices such as mobile phones and notebooks, tablet PCs, etc. is rapidly increasing. But, There is an inconvenience that electronic devices frequently need to be charged because battery life is short. To solve this problem, The wireless power transfer(WPT) system is drawing much attention. However, WPT system used in real life requires more research for increasing distance. In this research team, transmitter and receiver coils were fabricated using a superconductor for increasing distance and efficiency of WPT system. It was confirmed that the efficiency of wireless power transfer using superconducting coils(SWPT) was increased. In this paper, The characteristics of SWPT according to the number of transmitter and receiver coils was investigated. As the number of coils, the mutual inductance also changed. At this time, We analyzed resonance frequency of SWPT by mutual inductance. As a result, The optimum number and distance of transmitter and receiver coils were estimated with maximum efficiency.

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