



## Development of High Voltage Impulse Generator for Application to Large Load

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Pulsed power technology has been applied in society in fields such as semiconductor lithography equipment and exhaust gas treatment<sup>[1]</sup>. In recent years, pulse power has been used to generate plasma<sup>[2]</sup> and high electric fields for sterilization<sup>[3]</sup>.

In the experiments, the bacteria are suspended in high impedance, highly purified water and a voltage is applied. However, it is not easy to apply a high voltage to a liquid containing many impurities, such as sewage and domestic wastewater, because of its low impedance.

Therefore, this study has developed an impulse power supply for applying high voltage impulses to a load. This paper reports on the improvement of the circuit configuration and selection of inexpensive magnetic materials to increase the output capacity of the impulse power supply.

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