Transcutaneous Energy Transmission System for Implantable Medical Devices

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We plan to design a TETS having the following specifications.

- High energy transmission efficiency (90–98%)
- High power transmission (10 m–40 W)
- Free from biological effects

A transcutaneous energy transmission system (TETS) is a transmission system for implantable medical devices, based on electromagnetic induction.

### Biography

Kenji Shiba received Dr.Eng. degrees in electrical engineering from Tokyo University of Science in Chiba, Japan, in 2000. In 2004, he joined the Department of Artificial Complex Systems at Hiroshima University as an Associate Professor. In 2010, he joined the Department of Applied Electronics at Tokyo University of Science, where he is now an Associate Professor.

### Selected Publications


### Applications

Power source of implantable medical devices (Left ventricular assist device, pacemaker, ICD, capsule endoscope, implantable sensors, etc.)

### Advantages

This method can improve the quality of life (QOL) of a patient and reduced the risk of infection relative to percutaneous connections.