Mitsubishi Electric has produced the world’s first large-capacity power modules equipped with silicon-carbide diodes to be applied in the manufacture of inverters used in railcar systems. This pioneering achievement is contributing to the dissemination of eco-conscious railcar systems at the global scale.

**Features**

1. **Energy-saving operation**
   - SiC modules operate at high temperatures with minimal power loss enabling operation under high-current and high-frequency modulation conditions
   - Regenerative braking at all speeds ensures effective utilization of regenerative power
   - Actualization of optimal main circuit systems, including traction motors

2. **Compact / Lightweight**
   - Possible to achieve energy savings of up to ca. 30%* for railcars
   - Volume and weight reduced approx. 40%

* Value estimate by simulation