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Mitsubishi Electric to Supply Railcar Traction Inverter with All-SiC Power Module to Odakyu Electric Railway

Odakyu's 1000 series urban train will achieve dramatic lower energy and remodeling costs

TOKYO, April 30, 2014 – Mitsubishi Electric Corporation (TOKYO: 6503) announced today that it has received an order for its railcar traction inverter with all-silicon carbide (SiC) power modules made with SiC transistors and SiC diodes, which was placed by Odakyu Electric Railway Co., Ltd. This is the world's first order for the 3.3kV, 1,500A traction inverter designed for 1,500V DC catenaries.

The inverters will be installed in a 1000 series urban train comprising four cars in December 2014, following the completion of running tests.

Compared to an existing 1000 series train, energy savings in the new traction inverter-installed 1000 series train's main circuit, which also comprises high-efficiency main motors and filter reactor, are expected to reach approximately 36% when the train is very crowded or 20% at normal occupancy. More detailed figures will be compiled when Odakyu and Mitsubishi Electric conduct the running tests.

Also, the main circuit of the new traction inverter-installed 1000 series train will achieve 80% reductions in both size and weight thanks to fewer components in the all-SiC power modules, leading to drastic reductions in car-remodeling costs.

Specifications of Main Circuit

Input voltage:	1,500V DC
Main circuit system:	Two-level PWM inverter with regenerative brakes
Control system:	Four traction motors with 190kW, parallel control
Cooling system:	Self cooling



Odakyu 1000 series train



Railcar traction inverter with
all-SiC power modules

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About Mitsubishi Electric Corporation

With over 90 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of 4,054.3 billion yen (US\$ 39.3 billion*) in the fiscal year ended March 31, 2014. For more information visit <http://www.MitsubishiElectric.com>

*At an exchange rate of 103 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2014