MITSUBISHI ELECTRIC
Changes for the Better

for a greener tomorrow

MITSUBISHI ELECTRIC CORPORATION
PUBLIC RELATIONS DIVISION
7-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo, 100-8310 Japan

FOR IMMEDIATE RELEASE **No. 2843**

Customer Inquiries

Power Device Overseas Marketing Dept.A and Dept.B
Mitsubishi Electric Corporation

http://www.MitsubishiElectric.com/semiconductors/

Media Inquiries

Public Relations Division
Mitsubishi Electric Corporation
prd.gnews@nk.MitsubishiElectric.co.jp
http://www.MitsubishiElectric.com/news/

Mitsubishi Electric to Ship Sample Hybrid SiC Power Semiconductor Modules for High-frequency Switching Applications

Will contribute to efficiency, downsizing and weight reduction of power equipment

TOKYO, May 15, 2014 – Mitsubishi Electric Corporation (TOKYO: 6503) announced it has started shipping samples of new hybrid silicon carbide (SiC) power semiconductor modules for high-frequency switching applications. Featuring SiC diodes, the modules achieve high efficiency, downsizing and weight reduction in inverters for power conditioners and other power equipment, uninterrupted power supplies (UPS) and medical device power supplies.

CMH100DY-24NFH
CMH150DY-24NFH

CMH 200DU-24NFH
CMH 300DU-24NFH

CMH 400DU-24NFH
CMH 600DU-24NFH

These modules are the latest addition to Mitsubishi Electric's NFH Series of next-generation hybrid SiC power semiconductor modules, which are noted for significantly reducing electric power loss in high-frequency switching applications thanks to their SiC diodes.

The new models will be exhibited at Power Conversion Intelligent Motion Europe 2014, which will be held in Nuremberg, Germany from May 20 to 22.

Samples

Product	Model	Specifications	Shipments Begin
Hybrid SiC power modules for high-frequency switching applications	CMH100DY-24NFH	1200V/100A 2in1	May 15
	CMH150DY-24NFH	1200V/150A 2in1	
	CMH200DU-24NFH	1200V/200A 2in1	
	CMH300DU-24NFH	1200V/300A 2in1	
	CMH400DU-24NFH	1200V/400A 2in1	
	CMH600DU-24NFH	1200V/600A 2in1	

Product Features

1) 40% reduction in power loss contributes to efficiency, downsizing and weight reduction of total system

- Incorporates SiC Schottky Barrier Diode (SBD) and Si-IGBT for transistors in high-frequency switching applications.
- Contributes to system efficiency because SiC-SBD does not have recovery current, so power loss is reduced about 40% through significantly lower switching loss.
- Contributes to downsizing and weight reduction of system components, such as reactor and heat sink, thanks to high-frequency switching and significant reduction of power loss.

2) Suppresses surge voltage through internal inductance reduction

- Low-inductance package adopted for high-frequency switching applications.
- 100A and 150A modules reduce internal inductance by about 30% compared to conventional IGBT module using silicon.

3) Compatible with conventional power modules

- The package is compatible with conventional power modules for easy replacement.

Main Specifications

Application	Type	Voltage	Current	Connection	W x D
General industry	CMH100DY-24NFH	1200V	100A	2in1	48x94mm
	CMH150DY-24NFH		150A		
	CMH200DU-24NFH		200A		62x108mm
	CMH300DU-24NFH		300A		
	CMH400DU-24NFH		400A		80x110mm
	CMH600DU-24NFH		600A		

Note: Development of these modules has been partially supported by Japan's New Energy and Industrial Technology Development Organization (NEDO).

Environmental Awareness

Mitsubishi Electric's new hybrid SiC power semiconductor modules are compliant with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS).

###

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