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Mitsubishi Electric to Add Three New Power Semiconductor Modules to Lineup of Super-mini DIPIPM Embedded with SJ-MOSFET

Expanded lineup will offer extremely high power-efficiency for full power range of air conditioners

TOKYO, March 4, 2015 – <u>Mitsubishi Electric Corporation</u> (TOKYO: 6503) announced today the launch of three new transfer-mold power semiconductor models in its lineup of Super-mini Dual-In-line Package Intelligent Power Modules (DIPIPMTM) embedded with Super-Junction Metal-Oxide-Semiconductor Field-Effect Transistors (SJ-MOSFET), including new 10A/600V and 20A/600V models and a revised 15A model that offers improved performance. The 15A and 20A models will launch on May 22.



SJ-MOSFET embedded Super-mini DIPIPM

Product Features

1) Expanded lineup will cover full power range of air conditioners

- Air conditioners ranging from 2.2kW to 8kW will be covered thanks to the new 10A/600V and 20A/600V models.

2) Reduced power consumption in inverter systems

- SJ-MOSFET chip uses high-precision processing method to reduce power loss by about 14% compared to Mitsubishi Electric's existing Super-mini DIPIPM products.

3) Simplified design for inverter systems

- Footprint and pin configuration are compatible with Mitsubishi Electric's existing Ver.6, PSSxx92x6 series, etc. of Super-mini DIPIPM.
- Fewer external components due to use of embedded bootstrap diode with current-limiting resistor.

Sale Schedule

Model	Specification	First Shipment
PSM10S94F6	10A/600V	June 19, 2015
PSM15S94H6	15A/600V	May 22, 2015
PSM20S94H6	20A/600V	May 22, 2015

Main Specifications

Model	PSM10S94F6	PSM15S92F6	PSM15S94H6	PSM20S94H6	
Specification	10A/600V	15A/600V		20A/600V	
Dimensions	24.0×38.0×3.5 mm (same as Super-mini DIPIPM versions 5 and 6)				
Build-in Chips	Three-phase inverter bridge with build-in SJ-MOSFET, FWD, HVIC, LVIC and bootstrap diode chips				
Functions	Short-circuit protection with external shunt resistor Control power-supply under-voltage protection: Fo output on N-side protection Analog temperature voltage output function				
Other	Inverter with divided-emitter N-side (3 shunts)				

In 1997, Mitsubishi Electric commercialized its first DIPIPM transfer-mold intelligent power semiconductor module, representing a great contribution to downsizing and energy savings in inverter systems. In line with growing demands for environmental protection and energy savings, especially in the Japanese market, consumers are increasingly choosing air conditioners that offer high power efficiency. In response, Mitsubishi Electric launched its lineup of DIPIPM products embedded with SJ-MOSFET in August 2013.

Environmental Awareness

The products mentioned in this release are compliant with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) directive 2011/65/EU.

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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

DIPIPM is a registered trademark of Mitsubishi Electric Corporation.