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Mitsubishi Electric to Launch Super-mini DIPIPM Ver.6

Contributes to reduced power consumption and lower cost of small-capacity motors for air conditioners and other consumer appliances

TOKYO, June 13, 2013 – <u>Mitsubishi Electric Corporation</u> (TOKYO: 6503) announced today it will launch its Ver.6 Series transfer-molded super-mini dual in-line package intelligent power module (DIPIPMTM) using a seventh-generation IGBT with a CSTBT structure. The module reduces both power loss and the cost of inverter drive systems for motors used in air conditioners and other small-capacity motor drive applications. Sales begin June 21.

This product will be exhibited at Power Conversion Intelligent Motion (PCIM) Asia 2013, which will be held in Shanghai, China from June 18 to 20.



Super-mini DIPIPM Ver.6

Product Features

- 1) Top-class low-power consumption for consumer appliances
 - Built-in seventh-generation IGBT with CSTBT structure reduces $V_{CE(sat)}$ by 15% compared with Mitsubishi Electric's Ver.5 series. Also helps to reduce power consumption in consumer appliances.
 - V_{CE(sat)} dispersion of IGBT is reduced, so V_{CE(sat)} specification has a 33% narrower range than the Ver.5 series.
- 2) Expanded current rating in super-mini package
 - A current rating lineup ranging from 10A to 35A. (Existing products have a max. rating of 30A)
 - Bootstrap diodes feature built-in current limiting resistors.
- 3) More flexible inverter board design
 - Short-circuit detection accuracy improved to +/-5%, compared to +/-10% for existing products.
 - Package and pin assignment are compatible with Ver.5 and Ver.4 series.

Sale Schedule

Model	Specification	Shipment date	
PSS10S92E6/F6-AG	10A / 600V	June 21, 2013	
PSS15S92E6/F6-AG	15A/600V		
PSS20S92E6/F6-AG	20A / 600V		
PSS30S92E6/F6-AG	30A / 600V	August 28, 2013	
PSS35S92E6/F6-AG	35A/600V		

Main Specifications

Model	PSS10S92E6	PSS15S92E6	PSS20S92E6	PSS30S92E6	PSS35S92E6		
	/F6-AG	/F6-AG	/F6-AG	/F6-AG	/F6-AG		
Specification	10A / 600V	15A/600V	20A / 600V	30A / 600V	35A / 600V		
Dimensions	24.0×38.0×3.5mm (same as Super-mini DIPIPM Ver.4/Ver.5 series)						
Built-in	Three-phase inverter bridge with built-in						
Chips	IGBT, FWD, HVIC, LVIC and bootstrap diode chips						
Functions	 Short circuit protection by external shunt resistor Controlled power supply under-voltage (UV) protection: Fo output on N-side Selectable over temperature protection (OT, on N-side) or analog temperature voltage output (VOT)* 						
Others	Open emitter type N-side IGBT						

*PSS05S92<u>E</u>6: Over temperature protection type, PSS05S92<u>F</u>6: Analog temperature voltage output type (notations are consistent with other current-rating products.)

In 1997, Mitsubishi Electric commercialized its first DIPIPM transfer-molded intelligent power module, which has contributed greatly to miniaturization and energy-savings in inverter systems. The technology has gained increased importance because annual power consumption has become an important index of energy savings in consumer appliances, such as air conditioners.

Environmental awareness

The Super-mini DIPIPM Ver.6 Series is compliant with the European Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS).

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About Mitsubishi Electric

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 3,567.1 billion yen (US\$ 37.9 billion*) in the fiscal year ended March 31, 2013. For more information visit http://www.MitsubishiElectric.com

*At an exchange rate of 94 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2013

DIPIPM and CSTBT are registered trademarks of Mitsubishi Electric.