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Note: Model name in *Main Specifications* corrected
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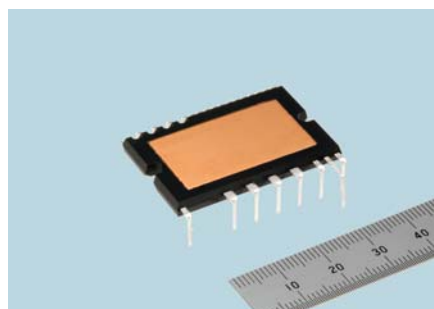
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Mitsubishi Electric to Launch MOSFET-type Super-mini DIIPM

*Contributes to reduced power consumption, miniaturization and lower cost of small-capacity motors for
refrigerators, other products*

TOKYO, February 18, 2013 – [Mitsubishi Electric Corporation](http://www.mitsubishielectric.com) (TOKYO: 6503) announced today it will launch a transfer-mold-type, super-mini dual inline package intelligent power module (DIIPM) primarily used for inverter drive systems of small-capacity motors in refrigerators and other consumer appliances. The module uses a metal oxide semiconductor field effect transistor (MOSFET) switching device featuring low power-on voltage in low current regions. Sales will begin on March 1.

With optimized low-loss-drive ICs and a high-heat dissipation design, the module will help to reduce power consumption, advance miniaturization and lower the cost of inverter systems for small-capacity motor drive applications.



MOSFET-type Super-mini DIIPM

Product Features

1) *Reduced power consumption in small-capacity inverter systems*

- Power-on voltage in low current regions is reduced by about 60% compared to Mitsubishi Electric's existing "PS219B2" DIIPM at 0.5A and 25 degrees Celsius, by employing a MOSFET switching device.
- Reduction of recovered-power loss by optimizing the MOSFET process.
- Reduction of IC power loss by optimizing the control IC.

2) High reliability through high-heat dissipation structure

- Suppression of channel temperature rise by reducing power loss of switching device and applying a high-heat dissipation insulation sheet.

3) Cost reduction and miniaturization of final product

- Facilitation of thermal radiation via the high-heat dissipation design.
- Reduction of external components thanks to built-in bootstrap diode (BSD) with current limiting resistor.

Sale Schedule

Model	Specification	Shipment date
PSM03S93E5/-A/-C	3A/500V	March 1, 2013
PSM05S93E5/-A/-C	5A/500V	

Main Specifications

Model	PSM03S93E5/-A/-C	PSM05S93E5/-A/-C PSM05S93E5/-A/-C
Specification	3A/500V	5A/500V
Dimensions	24×38×3.5 mm (same as super-mini DIIPM)	
Built-in Chips	MOSFET×6 forming a three-phase bridge, HVIC×1, LVIC×1 and Bootstrap Diode×3	
Functions	Protection against short circuits, control power-supply undervoltage and over-heating (LVIC monitoring); and error output	
Others	Divided-source-type N-side MOSFET	

In 1997, Mitsubishi Electric first commercialized its DIIPM transfer-mold-type 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-saving performance in consumer appliances, such as refrigerators. Needs are increasing for reducing loss in rated power, and also in low current regions where a high percentage of power use is concentrated.

DIIPM is a registered trademark of Mitsubishi Electric.

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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 3,639.4 billion yen (US\$ 44.4 billion*) in the fiscal year ended March 31, 2012. For more information visit <http://www.MitsubishiElectric.com>

*At an exchange rate of 82 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2012