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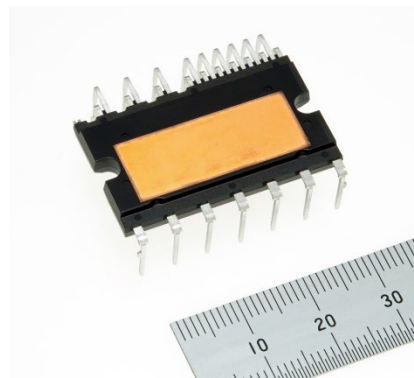
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Mitsubishi Electric to Launch “SLIMDIP-X” Power Semiconductor Module

Reduced thermal resistance and noise will realize simpler, smaller inverter systems for appliances

TOKYO, February 15, 2022 – [Mitsubishi Electric Corporation](https://www.mitsubishielectric.com) (TOKYO: 6503) announced today that its new SLIMDIP-X power semiconductor module, which achieves low thermal resistance and noise for use in home-appliance inverter systems, will be released on February 18. This new module in the SLIMDIP™ series is expected to help simplify and reduce the size of inverter systems used in products such as air conditioners, washing machines and refrigerators.



SLIMDIP-X

Product Features

1) *Reduced thermal resistance will contribute to simpler thermal designs*

- An upgraded insulation sheet reduces thermal resistance between the chip and case by approximately 35% compared to the existing SLIMDIP-L module, and the rating current has been increased to 20A.
- High-temperature suppression in the reverse-conducting IGBT (RC-IGBT) will help to simplify the thermal designs for inverter systems.

2) *Low noise will help realize smaller, lower-cost inverter systems*

- Noise reduction technology deployed in the RC-IGBT helps to reduce the number of noise suppression components, which will lead to smaller and lower-cost inverter systems.

3) *SLIMDIP series package compatibility helps to shorten design time*

- Adopting a SLIMDIP series-compatible package, including dimensions and pin layout (while nevertheless increasing the rating current), will greatly help to shorten inverter-system designing.

Sales Schedule

Product	Model	Shipment
SLIMDIP	SLIMDIP-X	February 18, 2022

Main Specifications

Model	SLIMDIP-X
Dimensions	18.8×32.8×3.6mm
Application	Home air conditioners, washing machines, etc.
Rating voltage	600V
Rating current	20A
Built-in chips	Three-phase inverter bridge with built-in RC-IGBT, HVIC, LVIC and bootstrap diode chips
Functions	<ul style="list-style-type: none">- Short-circuit (SC) protection by means of outer shunt resistor- Controlled power supply under-voltage (UV) protection: Fo output on N-side- Over-temperature protection (on N-side)- Analog temperature voltage output (VOT)
Other	Open-emitter N-side IGBT

Background

In 1997, Mitsubishi Electric commercialized its high-performance IPM (DIPIPM) as an intelligent power module with a transfer mold structure that incorporated a switching device and a control IC for drive and protection. Contributing to the miniaturization and energy-efficiency of inverter systems, it has been widely adapted for use in air conditioners, washing machines and refrigerators as well as inverters for industrial motors.

Environmental Awareness

This product is compliant with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) directive 2011/65/EU and (EU) 2015/863.

DIPIPM and SLIMDIP are trademarks of Mitsubishi Electric.

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About Mitsubishi Electric Corporation

With 100 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. Mitsubishi Electric enriches society with technology in the spirit of its “Changes for the Better.” The company recorded a revenue of 4,191.4 billion yen (U.S.\$ 37.8 billion*) in the fiscal year ended March 31, 2021. For more information, please visit www.MitsubishiElectric.com

*U.S. dollar amounts are translated from yen at the rate of ¥111=U.S.\$1, the approximate rate on the Tokyo Foreign Exchange Market on March 31, 2021