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Mitsubishi Electric Launches 1200V/50A Large-Type Dual In-line Package Intelligent Power Module

Tokyo, January 26, 2012 – Mitsubishi Electric Corporation (TOKYO: 6503) announced today the launch of the 1,200-volt large-type transfer-mold Dual In-line Package Intelligent Power Module (DIPIPM) Ver.4 (model PS22A79) with an industry-leading current rating of 50 amperes. Sales of the power module, designed for use in package air conditioners and other industrial motors, will begin on January 31.

To save energy and elevate performance, a wide variety of current ratings ranging between several amperes and hundreds of amperes are rapidly being adopted for inverter-based motor drive systems. DIPIPM, transfer molded intelligent power modules commercialized globally by Mitsubishi Electric in 1997, are widely used in inverter-equipped appliances such as air conditioners, refrigerators and washing machines, as well as inverter motor drive systems for industrial applications. Mitsubishi Electric's current 1,200V, Large-Type DIPIPM Ver.4



PS22A79

series with a current rating of 5–35 amperes, launched in 2008, is noted for helping to minimize inverter system size.

Product Features

Enlarged output and downsized motor control systems

The PS22A79 employs the newly developed sixth-generation IGBT (LPT-CSTBT: Light-Punch Trough
Carrier Stored Trench-gate Bipolar Transistor), in which carrier storage is improved through cell pitch
reduction and power loss is minimized through application of the thin wafer process. The model
reduces power loss by 15% compared to the preceding fifth-generation IGBT.

• Reduced power loss enables the current rating to be raised to 50 amperes, up from 35 amperes in the 1,200V/35A Large-Type DIPIPM Ver.4 PS22A78-E.

Lower production costs thanks to built-in temperature sensor

- The model's built-in temperature sensor offers vastly improved linearity and precision compared to that of the existing PS22A78-E model, resulting in more efficient heat control.
- Manufacturers will benefit from further downsizing of inverter systems, as well as reduced system costs.

Note: DIPIPM and CSTBT are registered trademarks of MITSUBISHI ELECTRIC CORPORATION.

Main Features

| | PS22A79 | | |
|---------------------------|---|--|--|
| Collector-emitter voltage | 1,200V | | |
| Collector current | 50A | | |
| Precision of temp. sensor | +/- 5 degree | | |
| Dimensions | 31.0 x 79.0 x 8.0 mm (same as conventional 1200V Large-Type DIPIPM Ver.4) | | |
| Built-in chips | Three-phase inverter with driver | | |
| | (6 IGBT chips, 6 FWD chips, 3 HVIC chips, LVIC chip) | | |
| Pin configuration | Three-shunt open-emitter type | | |

Lineup

| 5A | 10A | 15A | 25A | 35A | 50A (new) |
|---------|---------|---------|---------|-----------|-----------|
| PS22A72 | PS22A73 | PS22A74 | PS22A76 | PS22A78-E | PS22A79 |

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About Mitsubishi Electric

With 90 years of experience in providing reliable, high-quality products to both corporate clients and general consumers all over the world, 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. The company recorded consolidated group sales of 3,645.3 billion yen (US\$ 43.9 billion*) in the fiscal year ended March 31, 2011. For more information visit http://www.MitsubishiElectric.com

*At an exchange rate of 83 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2011