

MITSUBISHI ELECTRIC CORPORATION
PUBLIC RELATIONS DIVISION
7-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo, 100-8310 Japan

FOR IMMEDIATE RELEASE

No. 3389

Customer Inquiries

Media Inquiries

Power Device Overseas Marketing Dept.A and Dept.B
Mitsubishi Electric Corporation

Public Relations Division
Mitsubishi Electric Corporation

www.MitsubishiElectric.com/semiconductors/

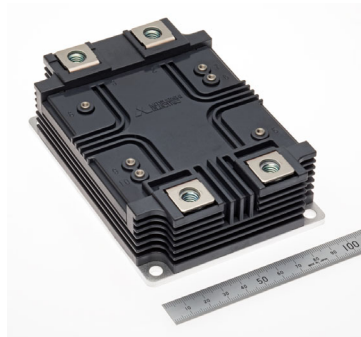
prd.gnews@nk.MitsubishiElectric.co.jp
www.MitsubishiElectric.com/news/

Mitsubishi Electric to Launch HV100 dual type X-Series HVIGBT Modules

For extra powerful and efficient inverter systems in railways, electric power systems and more

TOKYO, December 17, 2020 – [Mitsubishi Electric Corporation](https://www.mitsubishielectric.com) (TOKYO: 6503) announced today the coming launch of two new HV100 dual type X-Series HVIGBT modules for higher power, efficiency and reliability in inverter systems for large industrial equipment such as railways and electric power systems. The modules achieve industry-leading* dual type 600A current ratings with 10kVrms isolation voltage, believed to be unmatched among silicon HVIGBT modules rated at 3.3kV. Sample shipments will start in April 2021.

* According to Mitsubishi Electric research as of December 17, 2020.



X-Series HVIGBT module HV100 dual type

Product Features

1) *Industry-leading 600A rating for increased capacity*

- Current rating of 600A, tops among high-current-density dual types with 10 kVrms isolation voltage and 3.3kV collector-emitter voltage, will help realize high-power, high-efficiency inverter systems for large industrial equipment such as electric railways and DC transmission systems.
- Seventh-generation IGBTs incorporating CSTBT and RFC diodes achieve 8.57A/cm² power density, unsurpassed by other Si-modules (3.3kV/600A version).

2) *High isolation voltage and easy parallel connection for flexible circuit configurations and capacities*

- HV100 package with 10kVrms isolation voltage will help simplify insulation design in multi-level circuits for large industrial equipment.
- Terminal layout is optimized for easy paralleling and more flexible inverter configurations.

3) *New package structure for more reliable inverter systems*

- Integration of the isolating plate and heat sink increases the thermal cycle lifetime for relatively long-term cycling of case temperatures.
- Lower thermal resistance increases power cycle lifetime for relatively short-term cycling of chip temperatures.

Sales Schedule

| Product | Model | Rating | Sample shipments |
|---|-------------|------------|------------------------|
| X-Series HVIGBT module HV100 dual type | CM450DE-66X | 3.3kV/450A | April 2021 or later |
| | CM600DE-66X | 3.3kV/600A | |

Main Specifications (new modules in bold)

| Product | Model | Collector-emitter voltage | Rating | Isolation voltage | Connection | Dimensions (WxDxH) |
|---|--------------------|---------------------------|-------------|---------------------------|-------------|--------------------------|
| X-Series HVIGBT module HV100 dual type | CM450DE-66X | 3.3kV | 450A | 10kV_{rms} | 2in1 | 100 x 140 x 40 mm |
| | CM600DE-66X | | 600A | | | |
| X-Series HVIGBT module LV100 dual type | CM450DA-66X | 3.3kV | 450A | 6kV _{rms} | 2in1 | 100 x 140 x 40 mm |
| | CM600DA-66X | | 600A | | | |

High-power modules are mainly used in drive systems, such as inverters for traction, DC transmission, etc. in large industrial equipment. Due to rising environmental awareness in recent years, the market is demanding products that enable inverters to achieve higher output, efficiency and reliability. Mitsubishi Electric's previous HVIGBT module X-Series dual type LV100, was released in September 2017. The new HVIGBT module X-Series dual type HV100 (3.3kV/450A and 600A) are suitable for various applications requiring high density and multi-level circuit configurations.

###

About Mitsubishi Electric Corporation

With nearly 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 corporate statement, "Changes for the Better," and environmental statement, "Eco Changes." The company recorded a revenue of 4,462.5 billion yen (U.S.\$ 40.9 billion*) in the fiscal year ended March 31, 2020. For more information, please visit www.MitsubishiElectric.com

*U.S. dollar amounts are translated from yen at the rate of ¥109=U.S.\$1, the approximate rate on the Tokyo Foreign Exchange Market on March 31, 2020