The No. 1 in Power Semiconductor Modules*

Continuous further development and modern production facilities are key factors in the high quality of our high-performance modules.

Semiconductors are indispensable components of products that are increasingly more efficient. They are the raw material of the future. Mitsubishi Electric is a worldwide leader in the semiconductor industry. Innovative thinking, modern production lines and high-capacity research and development are the key factors in maintaining this leading position. The customers profit from comprehensive technical services as well as a widespread sales and distribution network.

Our power semiconductors have been very successful thanks to our extensive know-how.

The German headquarters of Mitsubishi Electric are in Ratingen, North Rhine-Westphalia. It is responsible for carrying out technical service, sales and marketing activities and also export activities for Europe, Russia and South Africa.

The ongoing success of our power semiconductor technology is based on extensive expertise in four product fields: high frequency, opto electronics, power semiconductors and TFT-LCD modules. In line with our key values of quality and reliability, Mitsubishi Electric Europe B.V. has continuously complied with the strict ISO 9001 and 14001 certification rules.

It is no wonder that Mitsubishi Electric is a leading manufacturer of power semiconductors.
Our power semiconductors have a broad spectrum of application fields including high-voltage
direct-current transmission, railway technology, regenerative energies, motor control, uninterruptible power supply (UPS), white goods, medical technology, elevators, escalators, welding and pumps.

The concept of the intelligent power module (IPM) builds the basis for current switching, current management and current flow. For example, our integrated intelligent modules reduce the development time and cost of frequency inverters for driver, monitor and control circuits. The necessary peripheral electronic is always integrated.

The power semiconductor devices started from the current-controlled GTO (Gate Turn-off Thyristor) and bipolar Darlington transistor (all current controlled) developed by Mitsubishi Electric to the first voltage-controlled IGBT modules. Their compact form offers distinct advantages for rough environmental conditions such as in the drive technology. Further advantages of the IGBTs compared to predecessor technologies are higher switching frequencies, lower switching losses as well as substantial cost savings due to a simple control mechanism.

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Conclusion

Today Mitsubishi Electric looks back on over 30 years of experience in the development and production of power modules. The company will continue to pursue the market trend towards more compact, high-efficiency modules. The future aims of Mitsubishi Electric are the utilization and development of new materials and processes.

This leads to miniaturization of products, affordable prices and the sustainable protection of the environment – these are, naturally, at all times products of top quality.

* worldwide after turnover, IHS Report 2016

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