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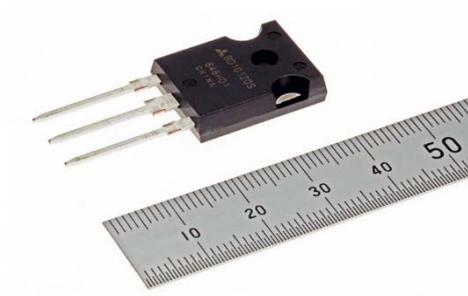
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Mitsubishi Electric to Launch 1200V SiC Schottky Barrier Diode

Reduces power loss and physical size of power supply systems

TOKYO, March 27, 2019– [Mitsubishi Electric Corporation](http://www.mitsubishielectric.com) (TOKYO: 6503) announced today its launch of a new 1200V silicon-carbide Schottky-barrier diode (SiC-SBD) that reduces the power loss and physical size of power supply systems for infrastructure, photovoltaic power systems and more. Sample shipments will start in June 2019 and sales will begin in January 2020.

The diodes will be exhibited at major trade shows, including MOTORTECH JAPAN 2019 during TECHNO-FROTIER 2019 at the Makuhari Messe exhibition complex in Chiba, Japan from April 17 to 19, PCIM Europe 2019 in Nuremberg, Germany from May 7 to 9, and PCIM Asia 2019 in Shanghai, China from June 26 to 28.



1200V SiC-SBD TO-247 package



1200V SiC-SBD TO-247-2 package

Product Features

1) *Silicon carbide helps to reduce power loss and package size*

- Improved energy conversion results in about 21% less power loss compared to silicon (Si) products
- Enables high-speed switching and downsizing of peripheral components, such as reactors

2) *Improved reliability thanks to junction-barrier Schottky (JBS) structure*

- Combines Schottky barrier with p-n junction
- JBS structure helps to achieve high reliability

3) *Expand lineup for various applications*

- The TO-247-2 package, with its enlarged insulation clearance distance, joins the existing TO-247 package to cover a wide range of applications, including consumer goods.
- Compliant with Automotive Electronics Council's AEC-Q101 specification for automotive use (only BD20120SJ)

Sales Schedule

Series	Model	Package	Specification	Sample availability	Release
1200V SiC-SBD	BD10120P	TO-247-2	1200V/10A	June 2019	January 2020
	BD20120P		1200V/20A		
	BD10120S	TO-247	1200V/10A		
	BD20120S		1200V/20A		
	BD20120SJ		1200V/20A AEC-Q101		April 2020

Mitsubishi Electric, since commercializing its first power module incorporating SiC-SBD and SiC-MOSFET in 2010, has continued to contribute to reduce the size and raise the energy efficiency of inverter systems. Consumers are increasingly choosing products that incorporate SiC-SBDs, including energy-efficient power supply systems in air conditioners, industrial equipment, railway vehicles and more. In particular, the new 1200V SiC-SBD series will help meet increasing demands for discrete semiconductors used in photovoltaic power generation and EV charging.

Note: Development of these SiC products have been partially supported by Japan's New Energy and Industrial Technology Development Organization (NEDO).

Main Specifications

Model	BD10120S	BD10120P	BD20120S(J)	BD20120P
Specification	1200V/10A		1200V/20A	
IFSM (max*)	95A		155A	
Forward voltage (typ) T _j =25°C	1.35V			
Package	TO-247	TO-247-2	TO-247	TO-247-2
Size	15.9 × 41.0 × 5.0mm			

*8.3msec, sine wave

SiC-SBD Series Lineup

(New products in bold)

Series	Model	Specification		Package	Supply situation
		Voltage [V]	Current [A]		
SiC-SBD	BD10120S	1200	10	TO-247	Samples available from June 2019
	BD10120P			TO-247-2	
	BD20120S		20	TO-247	
	BD20120SJ			TO-247	
	BD20120P			TO-247-2	
	BD20060S	600		TO-247	Samples now available
	BD20060A			TO-263S	
	BD20060T			TO-220FP-2	MP

Environmental Awareness

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

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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. 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 4,444.4 billion yen (in accordance with IFRS; US\$ 41.9 billion*) in the fiscal year ended March 31, 2018. For more information visit:

www.MitsubishiElectric.com

*At an exchange rate of 106 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2018