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FOR IMMEDIATE RELEASE

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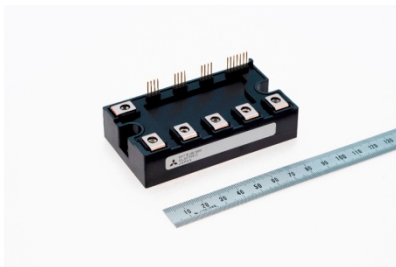
Mitsubishi Electric to Ship Samples of IPM G1 Series with 7th Generation IGBT

Helps to reduce power loss and improve reliability of industrial equipment

TOKYO, April 13, 2016 – [Mitsubishi Electric Corporation](http://www.mitsubishielectric.com) (TOKYO: 6503) announced today that it will begin shipping samples of its new G1 series intelligent power module (IPM¹) featuring seventh-generation insulated-gate bipolar transistors (IGBTs), comprising three different packages and 52 models in total. The new modules deliver reduced power loss and improved reliability for general-purpose inverters, servo amplifier, elevators and other industrial equipment. Sample shipments will begin in May.

The modules will be exhibited at major trade shows including MOTORTECH JAPAN 2016 during TECHNO-FRONTIER 2016 in Japan from April 20 to 22.

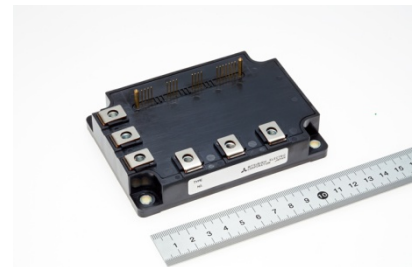
¹ Intelligent Power Module: high-function module with a dedicated IC offering self-protection functions



IPM G1series
A Package



IPM G1series
B Package



IPM G1series
C Package

Product Features

1) *Reduced power loss thanks to upgraded IGBT and diode*

- Seventh-generation CSTBT^{TM2} chip achieves lower power loss and EMI noise.
- Relaxed Field of Cathode (RFC) diode³ chip incorporating new backside diffusion process achieves low power loss and suppression of recovery-voltage surge.

² Mitsubishi Electric's original IGBT chip construction incorporating carrier-store effect

³ P layer is added partially on cathode side and the hole is injected during recovery term to soften the recovery waveform and to suppress the surge voltage

2) New package technology downsizes industrial equipment and improves its reliability

- New compact packaging achieved by optimizing the main terminal shape realizes approximately 30 percent reduction in package size compared to the previous product⁴, thereby contributing to the provision of compact, lightweight inverters.
- Integration of insulation and copper base in the substrate helps to increase thermal cycle life⁵, leading to more reliable equipment performance.

⁴ Comparing IPM G1 series PM200CG1C065 with IPM L1 series CM200CL1A060

⁵ The life proven in stress tests of relatively long-term temperature cycling between two case temperatures

3) Two new functions eases design in customers' development processes

- Easily spot the cause of errors through adoption of a new error mode identification process⁶.
- Improved trade-off between energy losses and noise by adopting new automatic two phase switching speed change function.

⁶ Three error mode cause isolation function: Over Temperature Protection (OT), Supply Under Voltage-lock Protection (UV), Short-Circuit Protection (SC)

Sample Shipments

Package	Voltage Rating	Current Rating	Circuit	Shipment
A Package	650V	50,75,100A	6in1	May 2016
		50,75A	7in1	
	1200V	25,50A	6in1	
		25A	7in1	
B Package	650V	50,75,100,150A	6in1	June 2016
		200A		October 2016
		50,75,100,150A	7in1	June 2016
	1200V	25,50,75A	6in1	June 2016
		100A		October 2016
		25,50,75A	7in1	June 2016
C Package	650V	200A	6in1	October 2016
		300,450A		September 2016
		200A	7in1	October 2016
		300A		
	1200V	100,150A	6in1	September 2016
		200A		October 2016
		100,150A	7in1	September 2016

Sample Shipment Targets

Variable frequency inverters are being increasingly used in a wide range of motor control systems to deliver enhanced energy efficiency. In the output stage of these inverters, IPMs are commonly used for switching electric currents at high speeds. There is growing demand for IPMs offering low power loss, high output and small package sizes.

Other Features

1) PC-TIM module (optional)

- This module, which uses PC-TIM⁷ of optimized thickness, eliminates the need for thermal grease.

⁷Phase Change Thermal Interface Material: high thermal conductivity grease, which becomes solid at room temperature and then softer as the temperature rises

2) Flexible layout and shape of main terminal (A Package)

- For the 6in1 circuit module, users can select between straight or L-shape main terminal layout and between screw or solder pin shape; for the 7in1 circuit they can select between screw or solder pin shape main terminal layout.

Main Specifications

Package	Main Terminal Layout	Model	Voltage Rating	Current Rating	Circuit	Package Size W×D (mm)		
A Package	Straight Layout	PM50CG1AP065	650V	50A	6in1	50 × 90		
		PM75CG1AP065		75A				
		PM100CG1AP065		100A				
		Soldering Pin		PM50RG1AP065	1200V		50A	7in1
				PM75RG1AP065			75A	
				PM25CG1AP120			6in1	
				PM50CG1AP120				50A
		PM25RG1AP120		25A				
	Straight Layout	PM50CG1A065	650V	50A	6in1			
		PM75CG1A065		75A				
		PM100CG1A065		100A				
		Screw		PM50RG1A065	1200V		50A	7in1
				PM75RG1A065			75A	
				PM25CG1A120			6in1	
				PM50CG1A120				50A
		PM25RG1A120		25A				
	L-shaped Layout	PM50CG1APL065	650V	50A	6in1			
		PM75CG1APL065		75A				
		PM100CG1APL065		100A				
		Soldering Pin		PM25CG1APL120			1200V	25A
				PM50CG1APL120				50A
	L-shaped Layout	PM50CG1AL065	650V	50A	6in1			
		PM75CG1AL065		75A				
		PM100CG1AL065		100A				
Screw		PM25CG1AL120		1200V		25A		
		PM50CG1AL120				50A		

Package	Main Terminal Layout	Model	Voltage Rating	Current Rating	Circuit	Package Size W×D (mm)
B Package	L-shaped Layout	PM50CG1B065	650V	50A	6in1	55 × 120
		PM75CG1B065		75A		
		PM100CG1B065		100A		
		PM150CG1B065		150A		
		PM200CG1B065		200A		
		PM50RG1B065		50A	7in1	
		PM75RG1B065		75A		
		PM100RG1B065		100A		
		PM150RG1B065		150A		
	Screw	PM25CG1B120	1200V	25A	6in1	
		PM50CG1B120		50A		
		PM75CG1B120		75A		
		PM100CG1B120		100A		
		PM25RG1B120		25A		
		PM50RG1B120		50A		
		PM75RG1B120		75A		
		C Package		L-shaped Layout	PM200CG1C065	
PM300CG1C065	300A					
PM450CG1C065	450A					
PM200RG1C065	200A		7in1			
PM300RG1C065	300A					
Screw	PM100CG1C120		1200V	100A	6in1	
	PM150CG1C120			150A		
	PM200CG1C120			200A		
	PM100RG1C120			100A	7in1	
	PM150RG1C120			150A		

Environmental Awareness

The products mentioned in this release are compliant with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) directive 2011/65/EU.

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About Mitsubishi Electric Corporation

With over 90 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 4,323.0 billion yen (US\$ 36.0 billion*) in the fiscal year ended March 31, 2015. For more information visit:

<http://www.MitsubishiElectric.com>

*At an exchange rate of 120 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2015