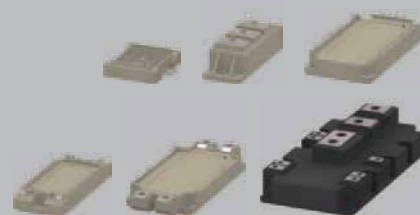


Next Generation Power Module Contributing to Miniaturization and High Efficiency of Power Converters

The IGBT module is a key device for achieving energy savings and stable power supply in industrial equipment such as motor drive inverters, uninterruptible power supplies (UPS), and power conditioners for wind and photovoltaic power generation equipment. In recent years, there has been a strong demand for energy savings, miniaturization, space savings, and increased reliability in industrial equipment and devices. In order to meet this demand, we developed the 7th Generation "X Series" IGBT Module.

- Contributes to energy savings by reducing power loss, while also reducing inverter loss by 10% and chip temperature by 11°C (Comparison with the 6th Generation V Series EP3 Package (75 A), at $f_c = 8$ kHz)
- Achieves equipment miniaturization
Footprint size can be reduced by 36% by replacing the previous 6th Generation V Series EP3 (75 A) with the new 7th Generation X Series EP2 (75 A) (See *1)
- Contributes to improved equipment reliability
Achieves guaranteed continuous operation at $T_{vj(op)} = 175^\circ\text{C}$

*1 Application example



Package (typical example)

Application example: General motor drives
UPS, PCS, others

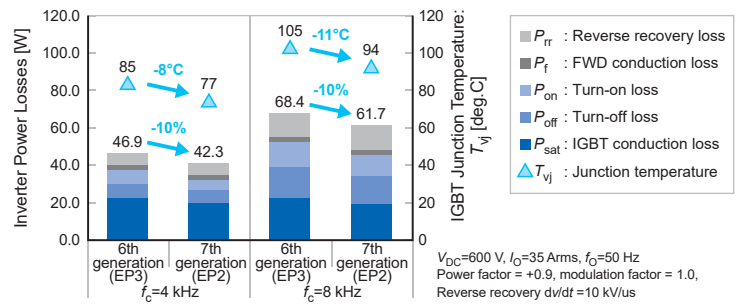


1. Low loss

The module has been optimized by thinning the thickness and miniaturizing the structure of the IGBT chip and diode chip that makes up the module.
This reduces power losses during inverter operation compared with previous products (our 6th generation V series).



Reduces inverter loss by 10% and chip temperature by 11 °C (Comparison with the 6th Generation V Series EP3 Package (75 A), at $f_c = 8$ kHz)

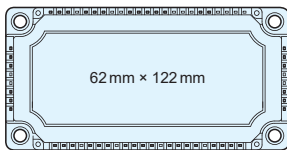


2. Miniaturization

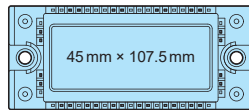
The application of the newly developed insulating board has improved the heat dissipation of the module. A smaller footprint of about 36% has been achieved by reducing power loss and suppressing heat generation compared with the previous product.

Application example)

36% reduction



EP3 75 A (6th Generation V Series)

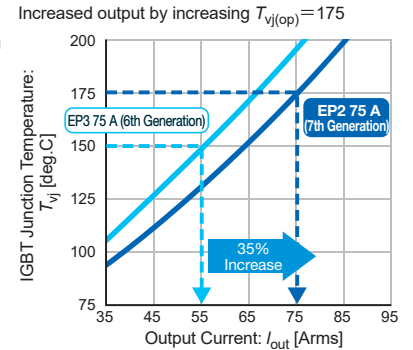


EP2 75 A (7th Generation X Series)

3. High-temperature operation

Achieves continuous operation at 175 °C through chip optimization and improved package reliability and heat resistance.

- Up to 35% more output than the previous generation
- ΔT_{vj} power cycle capability improvement (twice as high as before)



Product series (tentative) 1700 V /1200 V /650 V

Package	External appearance	Size (mm)	10A	15A	20A 25A	30A 35A	50A	75A	100A	150A	200A 225A	300A	400A 450A	600A 650A	800A 900A	1000A 1200A	1400A	1800A
Small PIM		33.8 x 48.0	1200V															
		56.7 x 48.0		1200V			650V											
EconoPIM™		45.0 x 107.5				1200V		650V										
		62.0 x 122.0						1200V		650V								
6-PACK		62.0 x 122.0						1200V										
										1200V								
Standard 2-PACK		34.0 x 94.0						1700V		1200V								
		45.0 x 92.0								1200V		650V						
		62.0 x 108.0								1700V			1200V					
		80.0 x 110.0									1700V			1200V	650V			
Dual XT		62.0 x 150.0									1700V							
											1200V							
PrimePACK™		89.0 x 172.0												1700V		1700V		
		89.0 x 250.0														1200V		1700V

Power Integrated Modules are products that integrate multiple circuits in one module.
EconoPIM™ and PrimePACK™ are registered trademarks of Infineon Technologies AG.

⚠ Safety Precautions

- * Before using this product, read the "Instruction Manual" and "Specifications" carefully, and consult with the retailer from which you purchased this product as necessary to use this product correctly.
- * The product must be handled by a technician with the appropriate skills.

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