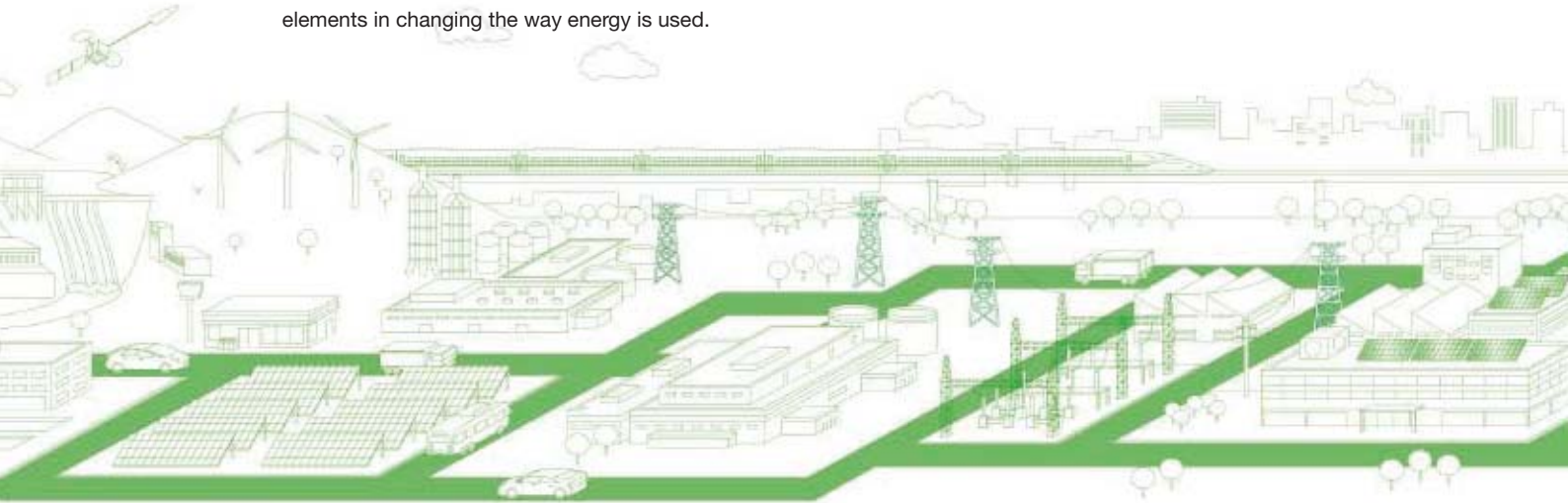


# Power Modules



# Innovative Power Devices for a Sustainable Future

Mitsubishi Electric power modules are at the forefront of the latest energy innovations that seek to solve global environmental issues while creating a more affluent and comfortable society for all. Some of these innovations are photovoltaic (PV) and wind power generation from renewable energy sources, smart grids realizing efficient supply of power, hybrid/electric vehicles (HVs/EVs) that take the next step in reducing carbon emissions and fuel consumption, and home appliances that achieve ground-breaking energy savings. Whether in appliances, railcars, EVs or industrial systems, our power modules are key elements in changing the way energy is used.



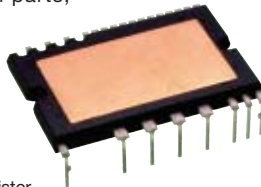
## Focus Products

### Optimizes household electrical appliances with inverters for lower power consumption

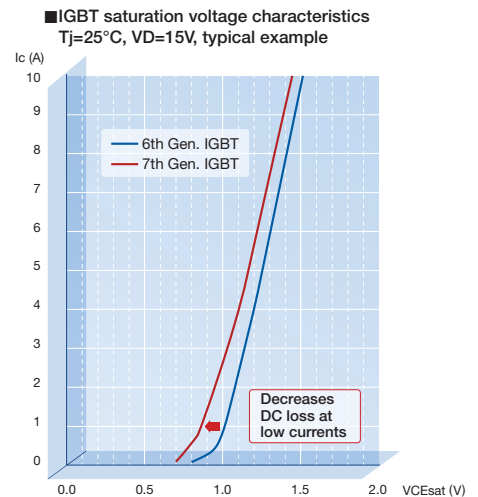
Super mini DIPIPM™ Ver.6 series that equip 7th generation IGBT with CSTBT™ structure

#### Characteristics

- Equipped with a 7th generation IGBT to improve loss in low-current regions by up to approximately 15%. This can help improve efficiency during long periods of operation of low-load applications such as room air-conditioners, and helps to optimize household electrical appliances with inverters for lower power consumption
- Product lineup expanded up to 35A rated current to suit a wide range of applications
- Many functions such as a temperature output function and boot strap diode eliminate the need for additional parts, reducing the overall cost of customer circuit boards
- The same external packaging as other conventional products such as the Super mini DIPIPM Ver.5 series ensures full pin compatibility, making replacing components easy



\* CSTBT: Carrier Stored Trench-Gate Bipolar Transistor

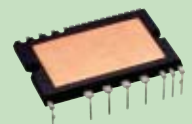


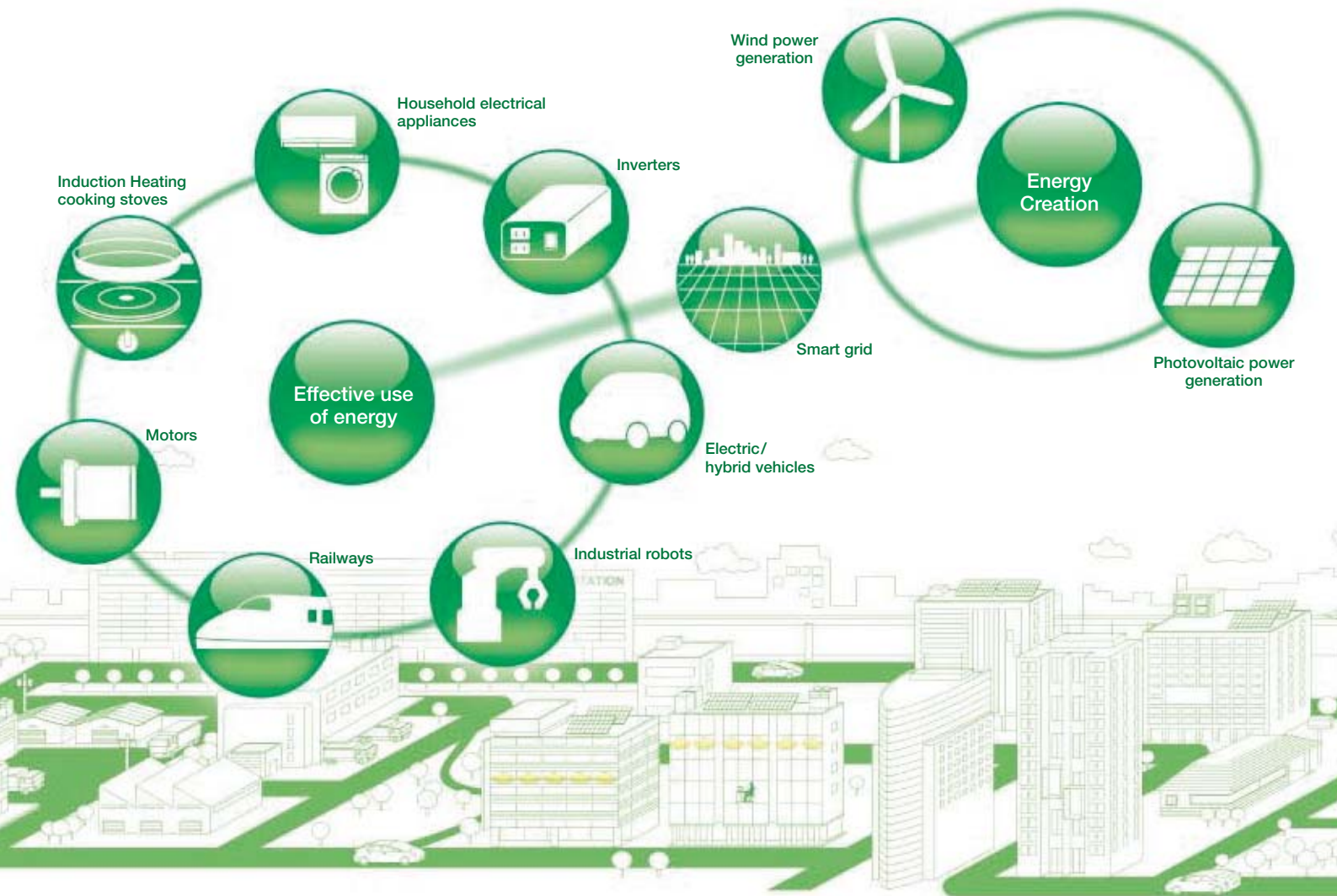
### Modules realizing single-control power supply and photocoupler-less systems for household appliances and low-capacity inverters

#### Key Features

- Transfer-molded structure with insulation sheet having high heat conductivity simultaneously provides heat dissipation and insulation
- High-voltage IC equipped with drive, protection and level-shift circuits for direct control via input signals from a CPU or microcomputer
- Compact board and highly reliable equipment realized through single power-supply and photocoupler-less systems
- Includes built-in bootstrap diode (BSD)

DIPIPM™  
Dual In-Line Package  
Intelligent Power Modules





### Modules with built-in control and protection circuits for AC servo robots and PV power generation

#### Key Features

- Built-in protection circuit for short-circuiting, power supply undervoltage and overheating
- Highly compatible package with simplified printed circuit board (PCB) design
- Special intelligent power modules (IPMs) for power conditioners in PV power generation systems

**IPM**  
Intelligent Power Modules

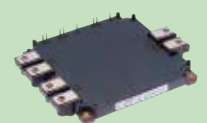


### IGBT modules used in general-purpose inverters for various applications

#### Key Features

- Various low-inductance packages and power chips available
- Available for high-frequency, high-voltage (1700V) applications
- Large-capacity modules available for renewable energy systems

**IGBT Modules**  
Insulated Gate Bipolar Transistor Modules

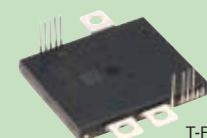


### Modules realizing high performance and reliability as motor drives in HVs/EVs

#### Key Features

- Built-in temperature analog output function realizing highly reliable motor drive
- High-power/temperature cycle life ensures high reliability
- Compliant with the End-of-Life-Vehicles Directive, regulations relating to substances of environmental concern
- High traceability in managing materials/components throughout the entire production process for each product

**Power Modules for Vehicles**  
Power Modules for EV/PHEV



### Modules meeting the high voltage, current and insulation requirements of inverters for railway systems

#### Key Features

- High isolation package (10.2kVrms: AC60Hz 1min) matched to high catenary voltage
- Lightweight modules with aluminum silicon carbide (AlSiC) baseplate available
- Range of HV diode modules enabling highly efficient comprehensive converter design

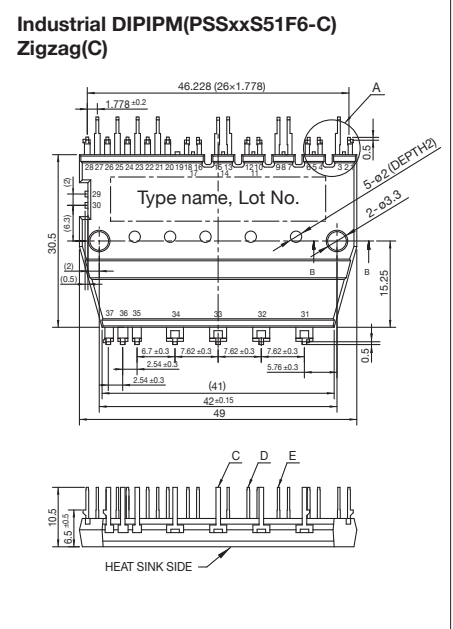
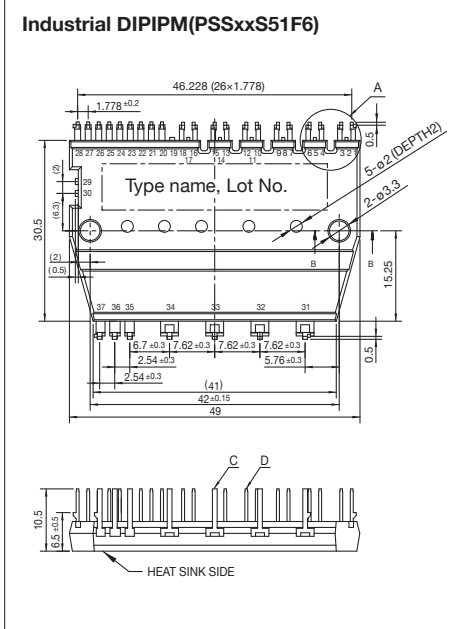
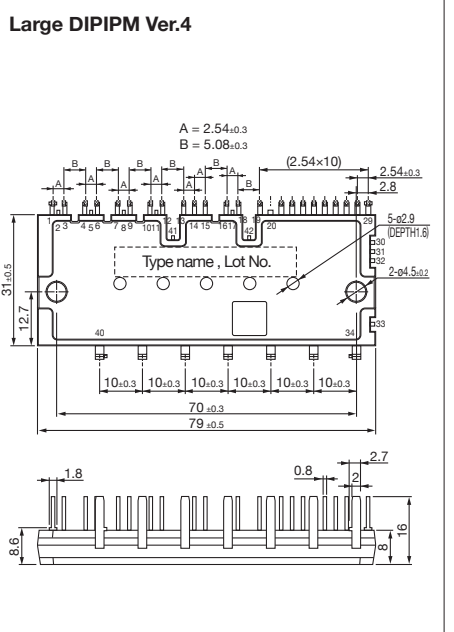
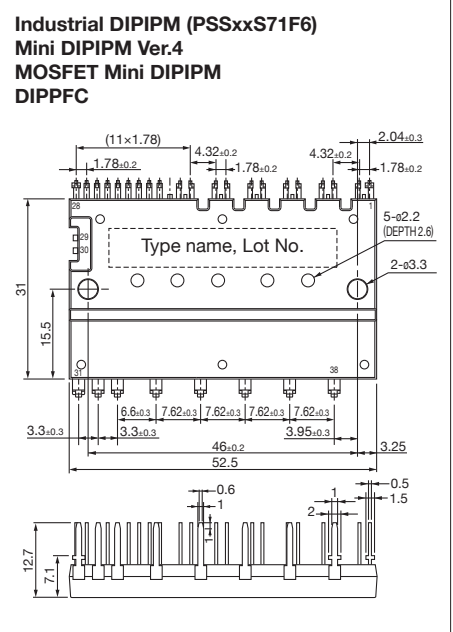
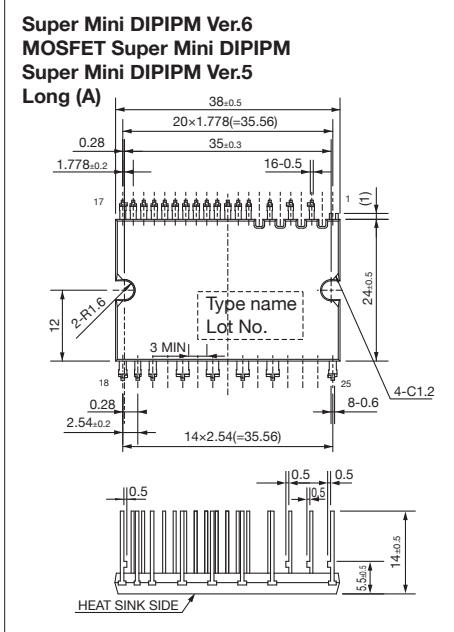
**HVIGBT Modules**  
High Voltage Insulated Gate Bipolar Transistor Modules





Outline Drawing of DIPIP™

Unit: mm



# Line-up of IPM

## Series Matrix of 600V IPM (No.: Number of Outline Drawing, see page 7)

Vces (V)	600V																					
	L1 Series			S1 Series			V1 Series			Photovoltaic			L Series			S-DASH Series						
Ic (A)	Series	Connection	No.	Series	Connection	No.	Series	Connection	No.	Series	Connection	No.	Series	Connection	No.	Series	Connection	No.				
50	PM50CL1A060	C	01	PM50CS1D060		05				PM50B4LA060	B4	01	PM50CLA060	C	PM50CSD060	C						
	PM50CL1B060	C	02							PM50B5LA060	B5	01							PM50CLB060	C	PM50CSE060	C
	PM50RL1A060	R	01							PM50B6LA060	B6	01							PM50RLA060	R	PM50RSD060	R
	PM50RL1B060	R	02							PM50B4LB060	B4	02							PM50RLB060	R	PM50RSE060	R
	PM50RL1C060	R	03							PM50B5LB060	B5	02										
75	PM75CL1A060	C	01	PM75CS1D060		05				PM75B4LA060	B4	01	PM75CLA060	C	PM75CSD060	C						
	PM75CL1B060	C	02							PM75B5LA060	B5	01							PM75CLB060	C	PM75CSE060	C
	PM75RL1A060	R	01							PM75B6LA060	B6	01							PM75RLA060	R	PM75RSD060	R
	PM75RL1B060	R	02							PM75B4LB060	B4	02							PM75RLB060	R	PM75RSE060	R
										PM75B5LB060	B5	02										
100	PM100CL1A060	C	01	PM100CS1D060		C 05							PM100CLA060	C	PM100CSD060	C						
	PM100CL1B060	C	02																PM100RLA060	R	PM100CSE060	C
	PM100RL1A060	R	01																		PM100RSD060	R
	PM100RL1B060	R	02																		PM100RSE060	R
150	PM150CL1A060	C	01	PM150CS1D060		C 05							PM150CLA060	C	PM150CSD060	C						
	PM150CL1B060	C	02																PM150RLA060	R	PM150CSE060	C
	PM150RL1A060	R	01																		PM150RSD060	R
	PM150RL1B060	R	02																		PM150RSE060	R
200	PM200CL1A060	C	04	PM200CS1D060		C 05							PM200CLA060	C	PM200CSD060	C						
	PM200RL1A060	R	04																PM200RLA060	R	PM200CSE060	C
300	PM300CL1A060	C	04										PM300CLA060	C	PM300CSD060	C						
	PM300RL1A060	R	04																PM300RLA060	R	PM300CSE060	C
400/450							PM400DV1A060	D	06				PM450CLA060	C	08							
600							PM600DV1A060	D	06				PM600CLA060	C	08							
800							PM800DV1B060★	D	07													
IGBT Chip	CSTBT*1 Built-in Emitter Sensor Built-in Temperature Sensor			CSTBT*1 Built-in Emitter Sensor Built-in Temperature Sensor			CSTBT*1 Built-in Emitter Sensor Built-in Temperature Sensor			CSTBT*1 Built-in Emitter Sensor Built-in Temperature Sensor			CSTBT*2 Built-in Emitter Sensor Built-in Temperature Sensor			Planar Built-in Emitter Sensor						
Fault Output	UV	P-side/N-side			N-side			P-side/N-side			P-side/N-side			P-side/N-side			N-side*3					
	OT	P-side/N-side			N-side			P-side/N-side			P-side/N-side			P-side/N-side			N-side					
	SC	P-side/N-side			N-side			P-side/N-side			P-side/N-side			P-side/N-side			N-side*3					
	OC	-			-			-			-			-			N-side*3					
RoHS Directive	Compliant			Compliant			Compliant			Compliant			Compliant			Compliant						
Compatibility	L Series			S-DASH SERVO			V Series			-			-			-						
Connection																						

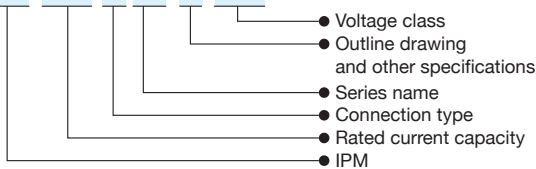
[Term] UV: Supply Under Voltage-lock protection, SC: Short-Circuit Protection, OT: Over-temperature protection, OC: Over-current protection, CSTBT™: Carrier Stored Trench-Gate Bipolar Transistor.

[Non-Recommended] : Please refrain from adopting newly. ★: New Products

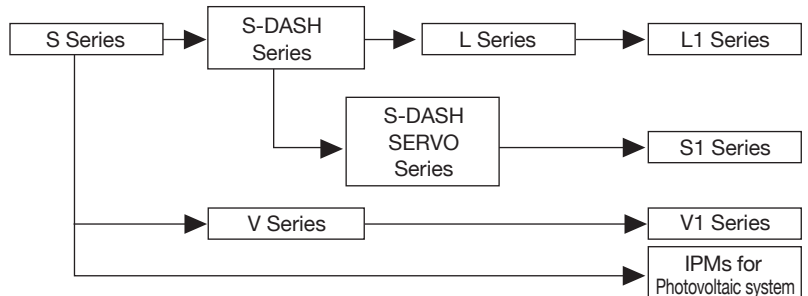
[Notes] \*1: Full-gate CSTBT™ \*2: PCM (Plugged Cell Merged) CSTBT™ \*3: CSD/RSD have P-side

## Type Name Definition of IPM

**PM 100 R L1 A 120**



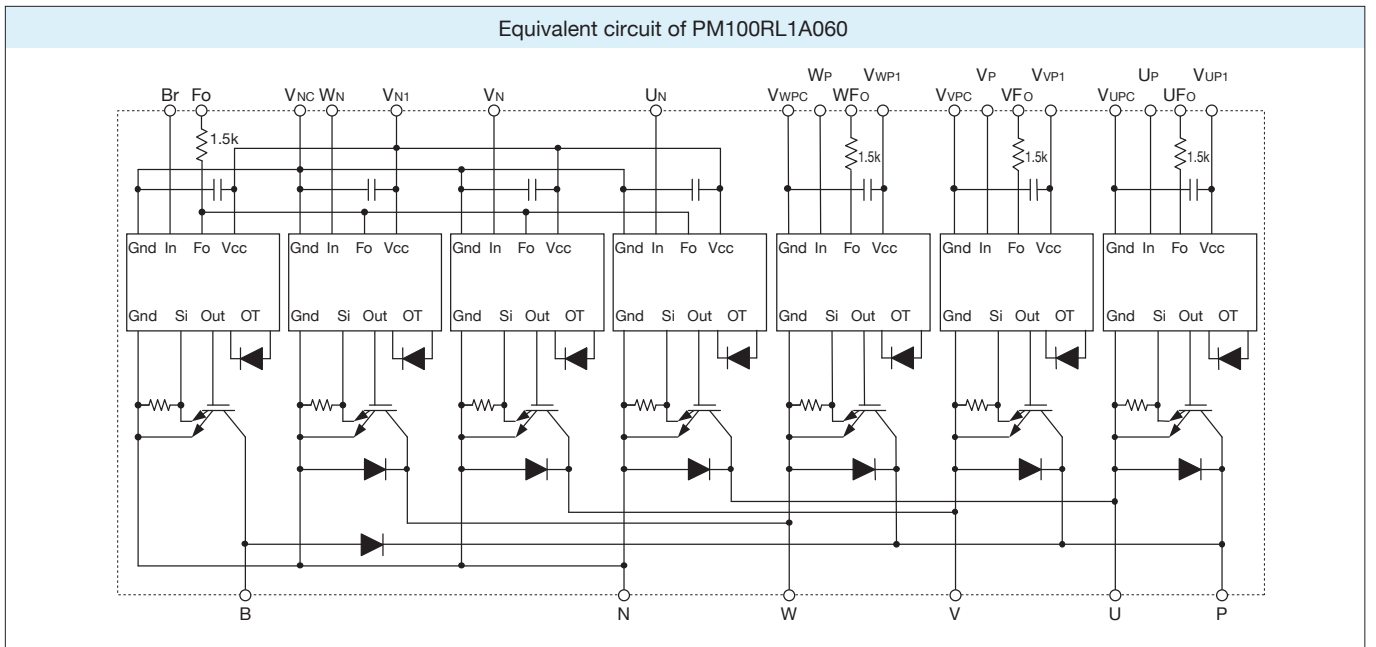
## Evolution of IPM Series



Series Matrix of 1200V IPM (No.: Number of Outline Drawing, see page 7)

V <sub>CE</sub> (V)		1200V													
Series	L1 Series	Connection		S1 Series		V1 Series		L Series		S-DASH Series		Connection			
		No.	No.	No.	No.	No.	No.	No.	No.						
I <sub>C</sub> (A)															
25	PM25CL1A120	C	01	PM25CS1D120	C	05			PM25CLA120	C					
	PM25CL1B120	C	02						PM25CLB120	C					
	PM25RL1A120	R	01						PM25RLA120	R					
	PM25RL1B120	R	02						PM25RLB120	R					
	PM25RL1C120	R	03												
50	PM50CL1A120	C	01	PM50CS1D120	C	05			PM50CLA120	C		PM50CSD120	C		
	PM50CL1B120	C	02						PM50CLB120	C		PM50CSE120	C		
	PM50RL1A120	R	01						PM50RLA120	R		PM50RSD120	R		
	PM50RL1B120	R	02						PM50RLB120	R		PM50RSE120	R		
75	PM75CL1A120	C	01	PM75CS1D120	C	05			PM75CLA120	C		PM75CSD120	C		
	PM75CL1B120	C	02						PM75CLB120	C		PM75CSE120	C		
	PM75RL1A120	R	01						PM75RLA120	R		PM75RSD120	R		
	PM75RL1B120	R	02						PM75RLB120	R		PM75RSE120	R		
100	PM100CL1A120	C	04	PM100CS1D120	C	05			PM100CLA120	C		PM100CSD120	C		
	PM100RL1A120	R	04						PM100RLA120	R		PM100RSD120	R		
150	PM150CL1A120	C	04						PM150CLA120	C		PM150CSD120	C		
	PM150RL1A120	R	04						PM150RLA120	R		PM150RSD120	R		
200							PM200DV1A120	D	06	PM200CLA120	C	08			
300							PM300DV1A120	D	06	PM300CLA120	C	08			
450							PM450DV1A120	D	06	PM450CLA120	C	08			
IGBT Chip	CSTBT*1 Built-in Current Sensor Built-in Temperature Sensor			CSTBT*1 Built-in Current Sensor Built-in Temperature Sensor			CSTBT*1 Built-in Current Sensor Built-in Temperature Sensor			CSTBT*2 Built-in Current Sensor Built-in Temperature Sensor			Planar Built-in Current Sensor		
Fault Output	UV	P-side/N-side			N-side			P-side/N-side			P-side/N-side			N-side*3	
	OT	P-side/N-side			N-side			P-side/N-side			P-side/N-side			N-side	
	SC	P-side/N-side			N-side			P-side/N-side			P-side/N-side			N-side*3	
	OC	-			-			-			-			N-side*3	
RoHS Directive	Compliant			Compliant			Compliant			Compliant			Compliant		
Compatibility	L Series			S-DASH SERVO			V Series			-			-		
Connection	D			C			R								

[Term] UV: Supply Under Voltage-lock protection, SC: Short-Circuit Protection, OT: Over-temperature protection, OC: Over-current protection, CSTBT™: Carrier Stored Trench-Gate Bipolar Transistor. Non-Recommended : Please refrain from adopting newly.  
 RoHS: Restriction of hazardous substances in electrical and electronic equipment  
 [Notes] \*1: Full-gate CSTBT™ \*2: PCM (Plugged Cell Merged) CSTBT™ \*3: CSD/RSD have P-side





# Power Modules for Vehicles

## Features

### IPMs

- Drive circuit and protection circuits for short-circuiting, power supply undervoltage and overheating
- Redundancy function for failsafe design and high system performance, chip temperature analog output function and DC-link voltage analog output function (optional specifications)
- Equipped with built-in photocoupler facilitating insulated design, and a built-in easy-to-assemble connector for automobiles
- High noise tolerance as the result of a built-in mass lamination board and circuit pattern optimization

### Transfer-molded Power Modules (T-PMs)

- Structure incorporates transfer molding and original direct lead bonding (DLB) technique
- DLB structure reduces internal wiring resistance and inductance
- Completely Pb-free (including the pins)

### Common

- High power/temperature cycle life
- High-precision chip temperature sensor
- High traceability in managing materials/components throughout the entire production process for each product
- Package structure compliant with the End-of-Life-Vehicles Directive, regulations relating to substances of environmental concern

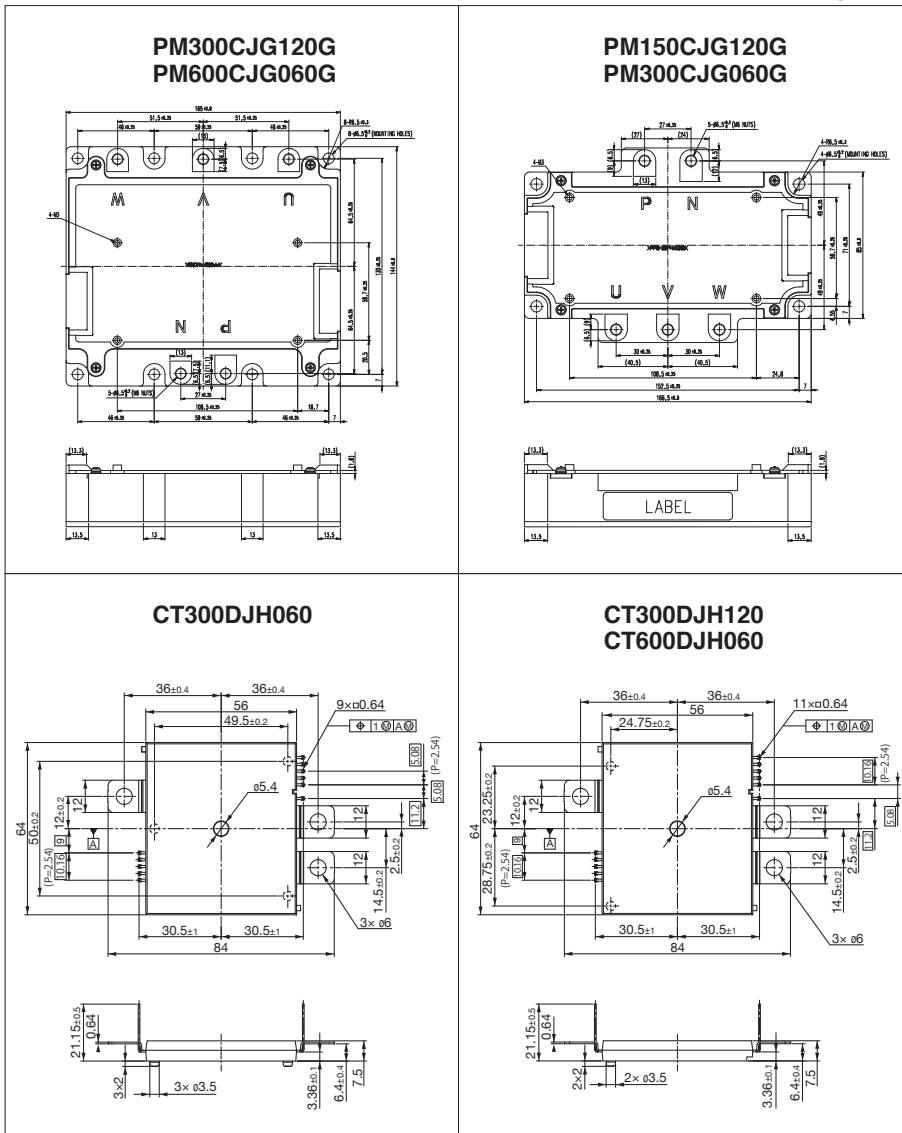
## J Series Power Modules for Vehicles

V <sub>ces</sub> (V)	600V		1200V	
	IPM	T-PM	IPM	T-PM
150	—	—	PM150CJG120G★★	—
300	PM300CJG060G★★	CT300DJH060	PM300CJG120G★★	CT300DJH120★★
500	—	—	PM500CJG120G★★	—
600	PM600CJG060G★★	CT600DJH060★★	—	—
800	PM800CJG060G★★	—	—	—

★★: Under Development

## Outline Drawing of IPM and T-PM

Unit: mm



# Line-up of MOSFET Modules

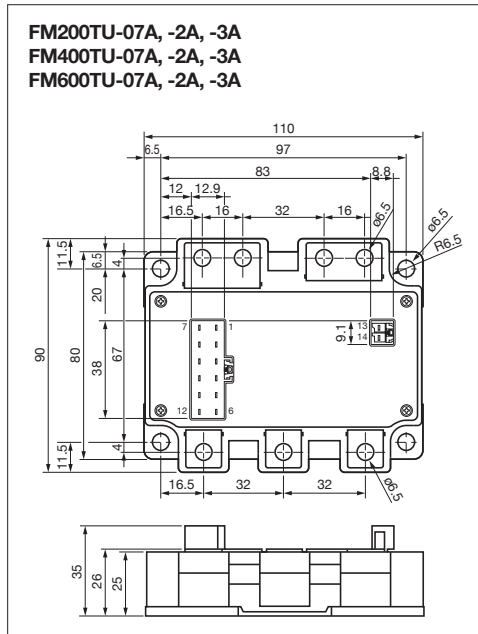
## Series Matrix of MOSFET Modules

RoHS Directive Compliant

V <sub>DS</sub> I <sub>D</sub> (A)	75V		100V		150V	
		Connection		Connection		Connection
100	FM200TU-07A	T	FM200TU-2A	T	FM200TU-3A	T
200	FM400TU-07A	T	FM400TU-2A	T	FM400TU-3A	T
300	FM600TU-07A	T	FM600TU-2A	T	FM600TU-3A	T
Connection						

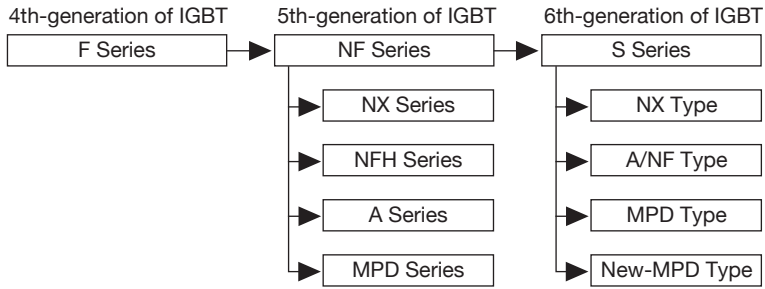
## Outline Drawing of MOSFET Modules

Unit:mm

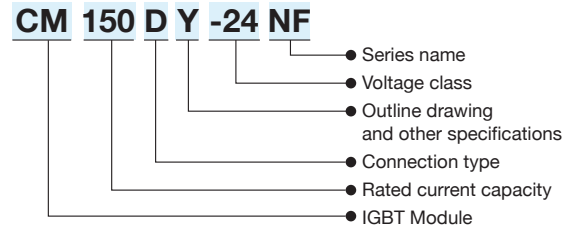


# Line-up of IGBT Modules

## Evolution of IGBT Module Series



## Type Name Definition of IGBT Modules



## Features of IGBT Module Series

### S Series

- Lineup includes various package types.
- 6th-generation CSTBT delivers low-loss performance.
- Thinner package. (Height: 17mm) (NX type)
- Suited to large-capacity applications (2500A/1200V, 1800A/1700V) (New-MPD type)

MPD: Mega Power Dual

### NFH Series

- High-speed CSTBT™ delivers low-loss performance.
- Soft switching (resonant) turn-off function (ZVS)
- Enhanced inner wiring (skin effect)

CSTBT™: Carrier Stored Trench-Gate Bipolar Transistor.  
Our unique IGBT that makes use of the carrier cumulative effect.

## Series Matrix of 600V IGBT Modules (No.: Number of Outline Drawing, see page 12 to 14)

RoHS Directive Compliant

V <sub>CEs</sub> (V) Series I <sub>c</sub> (A)	600V												
	5th-generation NX Series			NF Series			NFH Series			F Series			
	Connection	No.	Connection	No.	Connection	No.	Connection	No.	Connection	No.			
75	CM75MX-12A	M	01	CM75TL-12NF CM75RL-12NF	T R	08 08					CM75DU-12F CM75TU-12F	D T	14 17
100	CM100MX-12A CM100RX-12A	M R	01 02	CM100TL-12NF CM100RL-12NF	T R	08 08	CM100DUS-12F	D	14		CM100DU-12F CM100TU-12F	D T	14 17
150	CM150RX-12A	R	02	CM150DY-12NF CM150TL-12NF CM150RL-12NF	D T R	09 08 08	CM150DUS-12F	D	14		CM150DU-12F CM150TU-12F	D T	14 18
200	CM200RX-12A	R	02	CM200DY-12NF CM200TL-12NF CM200RL-12NF	D T R	09 10 10	CM200DU-12NFH	D	14		CM200DU-12F CM200TU-12F	D T	14 18
300	CM300DX-12A	D	03	CM300DY-12NF	D	09	CM300DU-12NFH	D	15		CM300DU-12F	D	15
400	CM400DX-12A	D	03	CM400DY-12NF	D	11	CM400DU-12NFH	D	15		CM400DU-12F	D	15
600	CM600HX-12A	H	04	CM600DY-12NF	D	12	CM600DU-12NFH	D	16		CM600HU-12F	H	20
Connection	H	D	T	R	M								

# Line-up of IGBT Modules

■ Series Matrix of 6th-generation of IGBT Modules <S Series> 1200V/1700V (No.: Number of Outline Drawing, see page 12 to 14)  
RoHS Directive Compliant

V <sub>CEs</sub> (V)	Series	1200V												1700V									
		NX Type			A/NF Type			MPD Type			New-MPD Type			NX Type			MPD Type			New-MPD Type			
		Connection	No.		Connection	No.		Connection	No.		Connection	No.		Connection	No.		Connection	No.		Connection	No.		
35	CM35MXA-24S	M	05																				
50	CM50MXA-24S	M	05																				
75	CM75MXA-24S	M	05																				
	CM75TX-24S	T	06																				
	CM75RX-24S	R	02																				
100	CM100MXA-24S	M	05																				
	CM100TX-24S1★★	T	-																				
	CM100TX-24S	T	06																				
	CM100RX-24S1★★	R	-																				
	CM100RX-24S	R	02																				
150	CM150DX-24S	D	03																				
	CM150TX-24S1★★	T	-																				
	CM150TX-24S	T	06																				
	CM150RX-24S1★★	R	-																				
	CM150RX-24S	R	02																				
	CM150RXLA-24S	R	-																				
200	CM200DX-24S	D	03																				
	CM200DX-24S★	R	-																				
225	CM225DX-24S1★★	D	-																				
300	CM300DX-24S1★★	D	-	CM300DY-24S★	D	11																	
	CM300DX-24S	D	03																				
400				CM400C1Y-24S	C	12																	
450	CM450DX-24S1★★	D	-																				
	CM450DX-24S	D	03	CM450DY-24S	D	12																	
600	CM600DX-24S1★★	D	-	CM600DY-24S★	D	12																	
	CM600DXL-24S	D	07																				
800				CM800DY-24S	D	13																	
900																							
1000	CM1000DXL-24S	D	07																				
1400																							
1800																							
2500																							
Connection		C1		D		T					R											M	

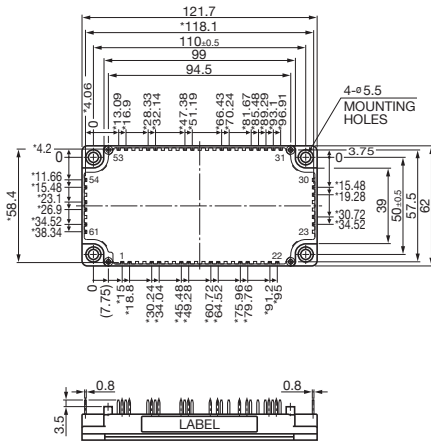
★★: Under Development ★: New Products ★▼: UL unauthenticated

■ Series Matrix of 5th-generation of IGBT Modules 1200V/1700V (No.: Number of Outline Drawing, see page 12 to 14)

V <sub>CEs</sub> (V)	Series	1200V												1700V											
		NF Series			A Series			MPD Series			NFH Series			F Series			MPD Series			A Series					
		Connection	No.		Connection	No.		Connection	No.		Connection	No.		Connection	No.		Connection	No.		Connection	No.		Connection	No.	
50	CM50TL-24NF	T	08											CM50DU-24F	D	14									
	CM50RL-24NF	R	08											CM50TU-24F	T	17									
75	CM75TL-24NF	T	08											CM75DU-24F	D	14							CM75DY-34A	D	09
	CM75RL-24NF	R	08											CM75TU-24F	T	18									
100	CM100DY-24NF	D	09																						
	CM100TL-24NF	T	08	CM100DY-24A	D	09							CM100DU-24NFH	D	14	CM100DU-24F	D	14					CM100DY-34A	D	09
	CM100RL-24NF	R	08											CM100TU-24F	T	18									
150	CM150DY-24NF	D	09																						
	CM150TL-24NF	T	08	CM150DY-24A	D	09							CM150DU-24NFH	D	14	CM150DU-24F	D	15					CM150DY-34A	D	11
	CM150RL-24NF	R	08																						
200	CM200DY-24NF	D	11																						
	CM200TL-24NF	T	10	CM200DY-24A	D	09							CM200DU-24NFH	D	15	CM200DU-24F	D	15					CM200DY-34A	D	11
	CM200RL-24NF	R	10																						
300	CM300DY-24NF	D	12	CM300DY-24A	D	11							CM300DU-24NFH	D	15	CM300DU-24F	D	19					CM300DY-34A	D	12
400	CM400DY-24NF	D	12	CM400HA-24A	H	21							CM400DU-24NFH	D	16	CM400HU-24F	H	20					CM400DY-34A	D	25
				CM400DY-24A	D	12								CM400DU-24F	D	22									
500																									
600	CM600DU-24NF	D	13	CM600HA-24A	H	21							CM600DU-24NFH	D	16	CM600HU-24F	H	23							
900																									
1000																									
1400																									
Connection				H		D							T											R	

01

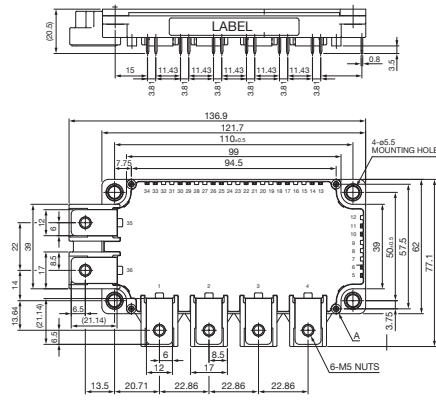
CM75, 100MX-12A



\* All dimensions with a tolerance of  $\pm 0.5$

02

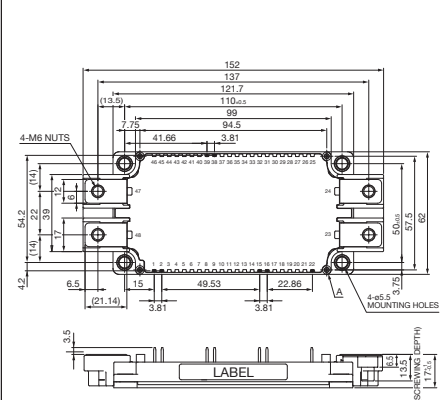
CM100, 150, 200RX-12A  
CM75, 100, 150RX-24S



\* All dimensions with a tolerance of  $\pm 0.5$

03

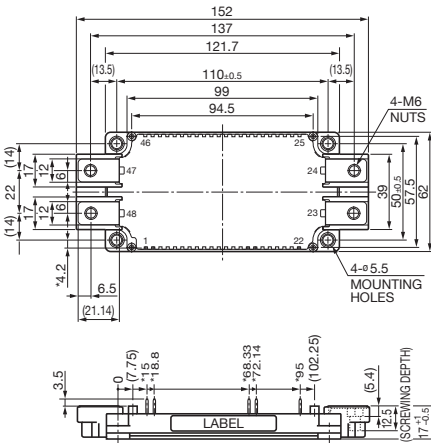
CM300, 400DX-12A  
CM150, 200, 300, 450DX-24S



\* All dimensions with a tolerance of  $\pm 0.5$

04

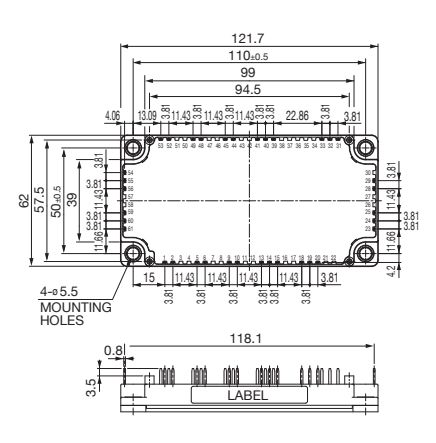
CM600HX-12A



\* All dimensions with a tolerance of  $\pm 0.5$

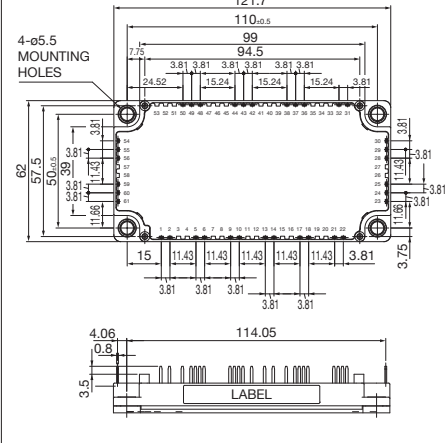
05

CM35, 50, 75, 100MXA-24S



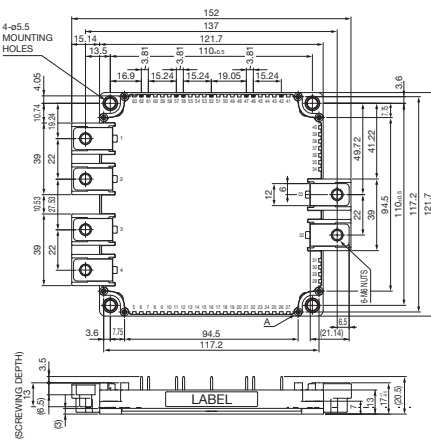
06

CM75, 100, 150TX-24S



07

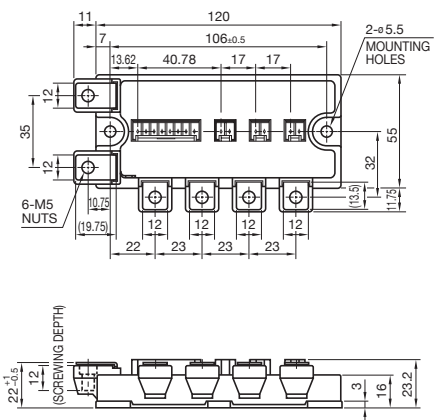
CM600, 1000DXL-24S



\* All dimensions with a tolerance of  $\pm 0.5$

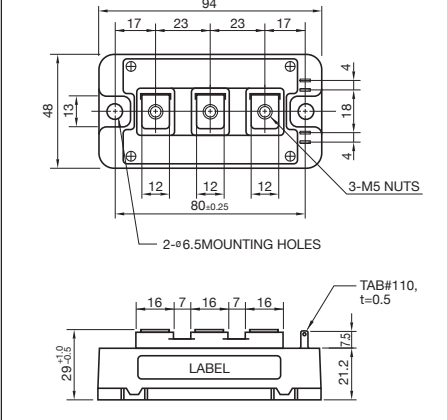
08

CM75, 100, 150TL/RL-12NF  
CM50, 75, 100TL/RL-24NF



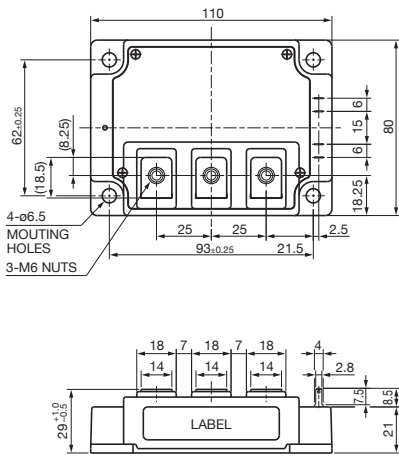
09

CM150, 200, 300DY-12NF  
CM100, 150DY-24NF  
CM100, 150, 200DY-24A  
CM75, 100DY-34A

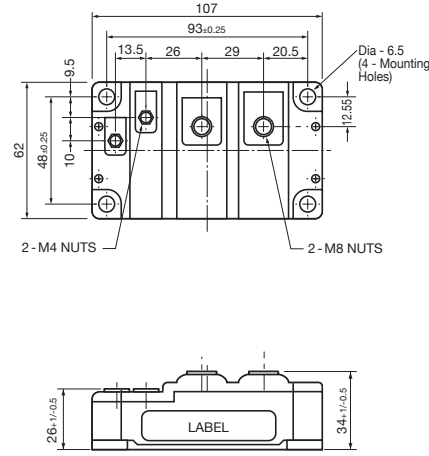




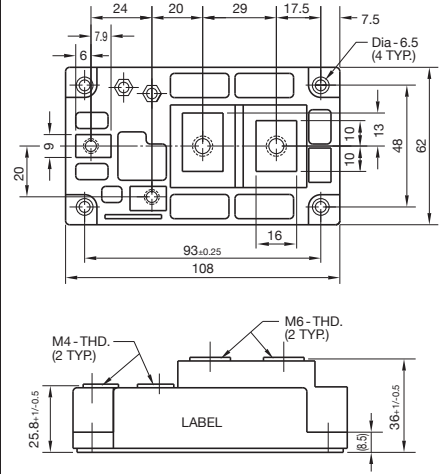
**19** CM300DU-24F



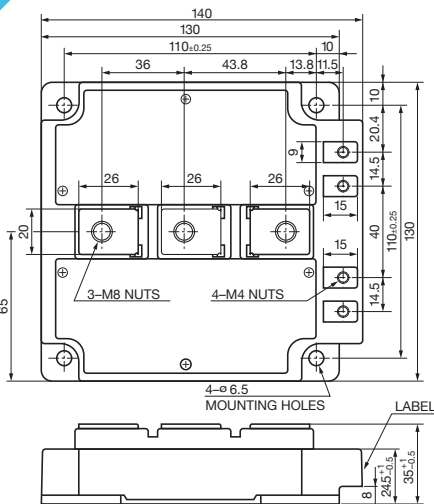
**20** CM600HU-12F  
CM400HU-24F



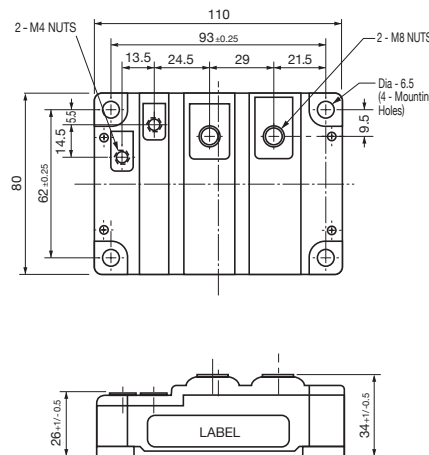
**21** CM400, 600HA-24A  
CM500HA-34A



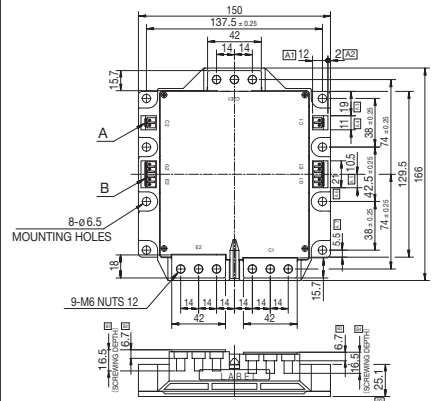
**22** CM400DU-24F



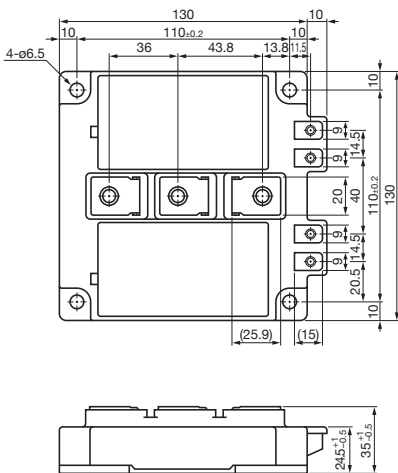
**23** CM600HU-24F



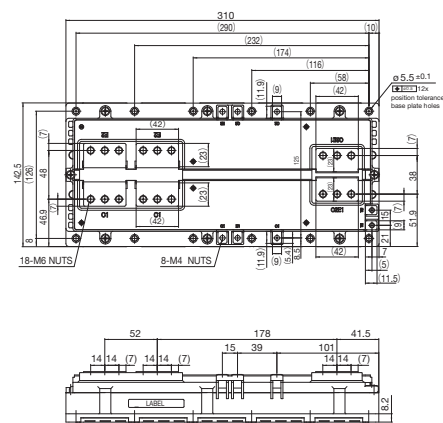
**24** CM900, 1400DUC-24NF  
CM1000DUC-34NF  
CM900, 1400DUC-24S  
CM1000DUC-34SA



**25** CM400DY-34A







**26** CM1800DY-34S  
CM2500DY-24S



# Line-up of HV Modules



Series Matrix of HVIGBT/HVIPM (No.: Number of Outline Drawing, see page 16 and 17)

V <sub>ces</sub> I <sub>c</sub> (A)	1700V				2500V				3300V				4500V				6500V									
	Connection	Type	No.		Connection	Type	No.		Connection	Type	No.		Connection	Type	No.		Connection	Type	No.							
200																				CM200HG-130H	H	HG	07			
400					CM400DY-50H	D	HA	-												CM400HG-130H	H	HG	12			
													CM400HG-66H	H	HG	07	CM400HB-90H	H	HB	03	CM400E2G-130H	E2	HG	09		
600	CM600DY-34H	D	HA	-																CM600HG-90H	H	HG	12			
	CM600E2Y-34H	E2	HA	-																CM600HB-90H	H	HB	03			
750																							CM750HG-130R★	H	HG	11
800	CM800DZB-34N	D	NB	01	CM800HB-50H	H	HB	03	CM800HC-66H	H	HC	03	CM800HC-90R★	H	R	08										
	CM800DZ-34H	D	HC	01					CM800E4C-66H	E4	HC	06					CM800HG-90R★	H	RG	13						
	CM800HA-34H	H	HA	-	CM800HA-50H	H	HA	-	CM800HB-66H	H	HB	03														
					CM800HA-66H	H	HA	-	CM800HC-90H	H	HG	09														
900																				CM900HC-90H	H	HC	06			
																				CM900HB-90H	H	HB	06			
1000																				CM1000HC-66R★	H	R	08			
																				CM1000E4C-66R★	E4	R	10			
1200	CM1200HCB-34N	H	NB	03	CM1200HC-50H	H	HC	06	CM1200HG-66H	H	HG	09	CM1200HC-90R★	H	R	10										
	CM1200DB-34N	D	N	04					CM1200HC-66H	H	HC	06					CM1200HB-90RA	H	R	10						
	CM1200DC-34N	D	N	04					CM1200HB-50H	H	HB	06					CM1200HC-90RA	H	R	10						
	CM1200E4C-34N	E4	N	05					CM1200HA-50H	H	HA	-					CM1200HG-90R★	H	RG	11						
	CM1200HC-34H	H	HC	02					CM1200HA-66H	H	HA	-														
	CM1200DC-34S★	D	S	04					PM1200HCE330-1	H	HC	14														
1500																				CM1500HC-66R	H	R	10			
																				CM1500HG-66R★	H	RG	11			
1600	CM1600HC-34H	H	HC	02																						
1800	CM1800HCB-34N	H	NB	06																						
	CM1800HC-34N	H	N	05																						
	CM1800HC-34H	H	HC	06																						
2400	CM2400HCB-34N	H	NB	06																						
	CM2400HC-34N	H	N	05																						
	CM2400HC-34H	H	HC	06																						
Connection	H		E2/E6		E4		D																			

[Type Description] (H Series: standard) HA: Cu Base plate, HB: Cu Base plate, HC: AISiC Base plate, HG\*: AISiC Base plate  
 (N Series: CSTBT™) N: AISiC Base plate (CM1200DB-34N: Cu Base plate), HB: AISiC Base plate (Outline of H Series)  
 (R Series: Low Loss) R: AISiC Base plate, RG\*: AISiC Base plate (S Series: CSTBT™ (III)) S: AISiC Base plate  
 \*: High-Insulation Package (10.2kV, AC 1min.)

**Non-Recommended** : Please refrain from adopting newly. ★★: Under Development ★: New Products

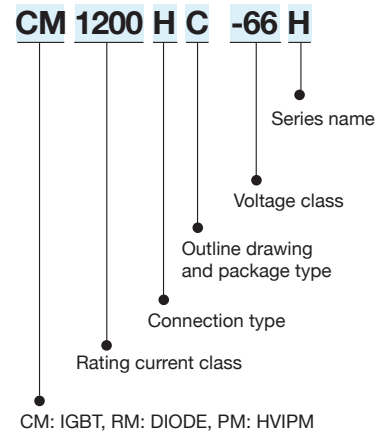
Series Matrix of HVDIODE Modules (No.: Number of Outline Drawing, see page 18)

V <sub>PRM</sub> I <sub>F</sub> (A)	1700V				3300V				4500V				6500V									
	Connection	Type	No.		Connection	Type	No.		Connection	Type	No.		Connection	Type	No.							
200																RM200DG-130S	D	SG	17			
250																RM250DG-130F★	D	FG	17			
300																RM300DG-90S	D	SG	17			
400					RM400DG-66S	D	SG	17	RM400DG-90F★	D	FG	17										
					RM400DY-66S	D	SD	18														
600					RM600DY-66S	D	SD	18	RM600HE-90S	H	SH	16	RM600DG-130S	D	SG	17						
800									RM800DG-90F★	D	FG	17										
900									RM900HC-90S	H	SH	20										
									RM900DB-90S	D	SD	20										
1000					RM1000DC-66F★	D	F	19														
1200					RM1200DG-66S	D	SG	17														
	RM1200DB-34S	D	SD	15	RM1200HE-66S	H	SH	16	RM1200DG-90F★	D	FG	17										
					RM1200DB-66S	D	SD	20														
1500					RM1500DC-66F★	D	F	19														
1800	RM1800HE-34S	H	SH	16																		
Connection	H		D																			

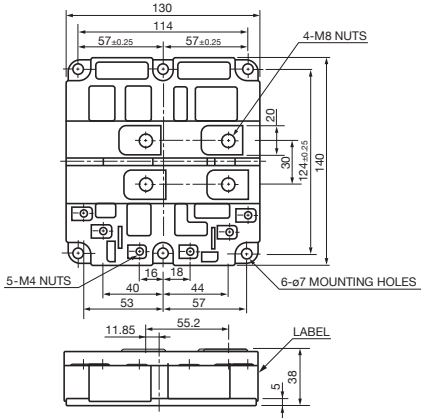
[Type Description] (F Series: Low Loss) F: AISiC Base plate, FG\*: AISiC Base plate  
 (S Series: standard) SH: AISiC Base plate, SD: Cu Base plate, SG\*: AISiC Base plate  
 \*: High-Insulation Package (10.2kV, AC 1min.)

★★: Under Development ★: New Products

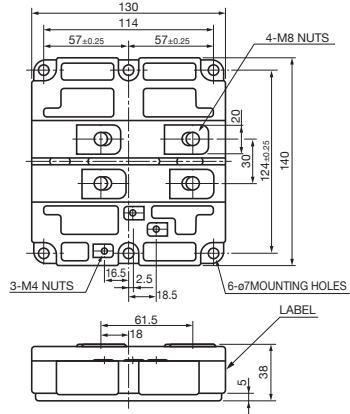
Type Name Definition of IGBT Modules



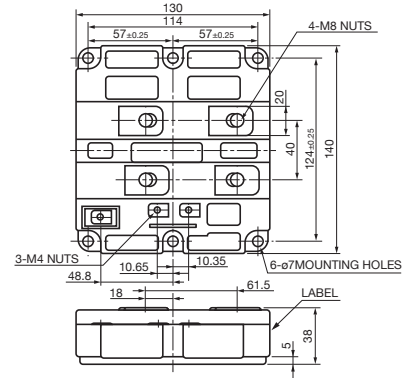
**01**  
CM800DZ-34H  
CM800DZB-34N



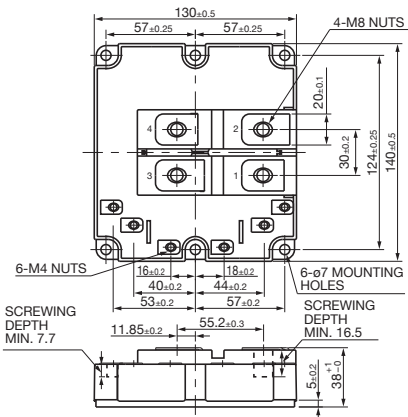
**02**  
CM1200, 1600HC-34H



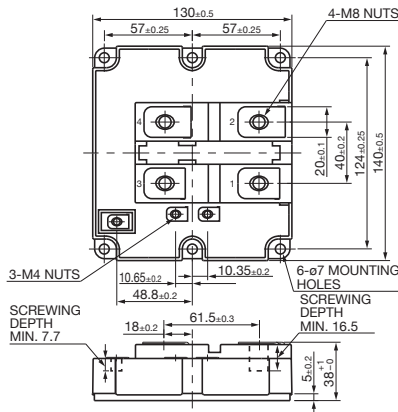
**03**  
CM1200HCB-34N  
CM800HB-50H, -66H  
CM800HC-66H  
CM400, 600HB-90H



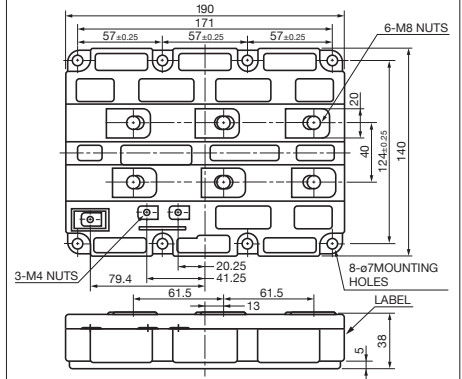
**04**  
CM1200DB/DC-34N  
CM1200DC-34S



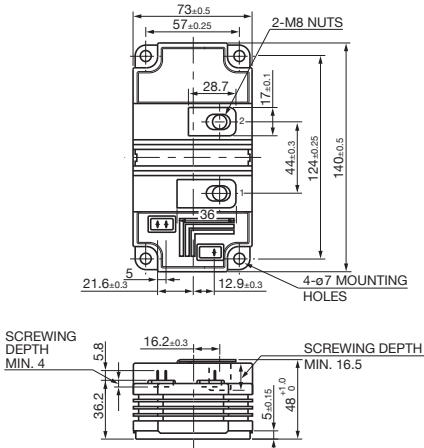
**05**  
CM1200E4C-34N  
CM1800, 2400HC-34N



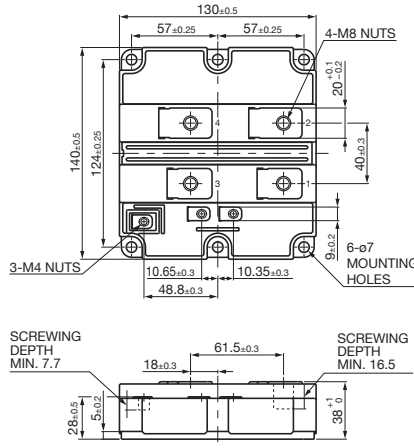
**06**  
CM1800, 2400HCB-34N  
CM1800, 2400HC-34H  
CM1200HB/HC-50H, -66H  
CM800E4C/E6C-66H  
CM900HB/HC-90H



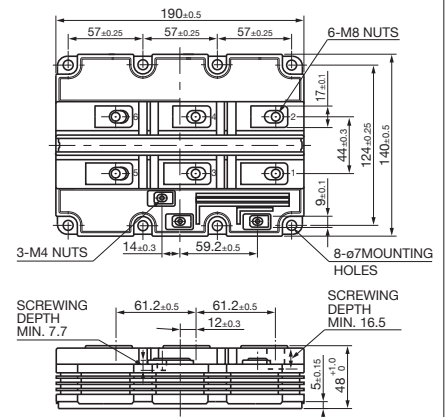
**07**  
CM400HG-66H  
CM200HG-130H



**08**  
CM800HC-90R  
CM1000HC-66R



**09**  
CM1200HG-66H  
CM900HG-90H  
CM400E2G/E4G-130H  
CM600HG-130H

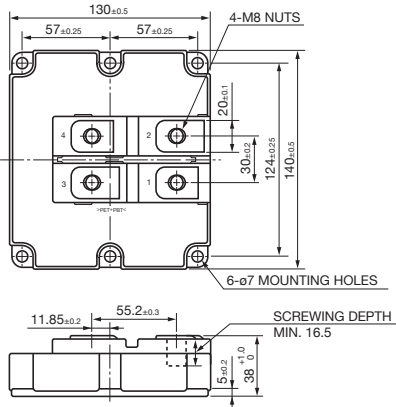




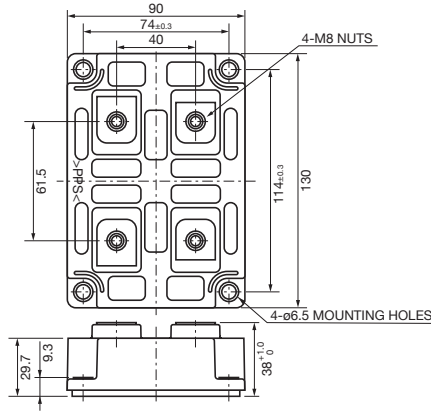
Outline Drawing of High Voltage Diode Modules

Unit: mm

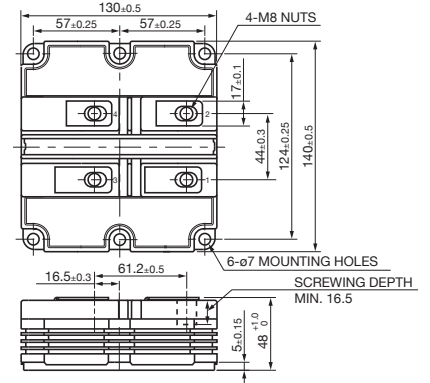
**15** RM1200DB-34S



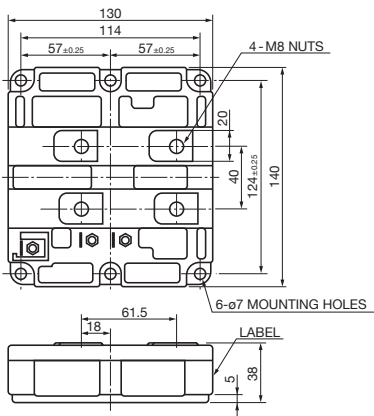
**16** RM1800HE-34S  
RM1200HE-66S  
RM600HE-90S



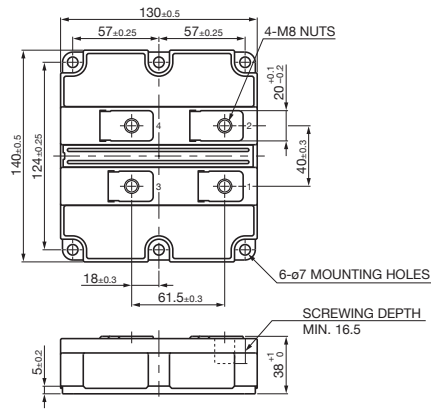
**17** RM400, 1200DG-66S  
RM300DG-90S  
RM400, 800, 1200DG-90F  
RM200, 600DG-130S  
RM250DG-130F



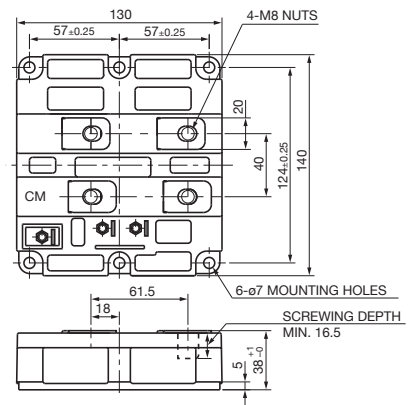
**18** RM400, 600DY-66S



**19** RM1000, 1500DC-66F



**20** RM1200DB-66S  
RM900DB/HC-90S



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