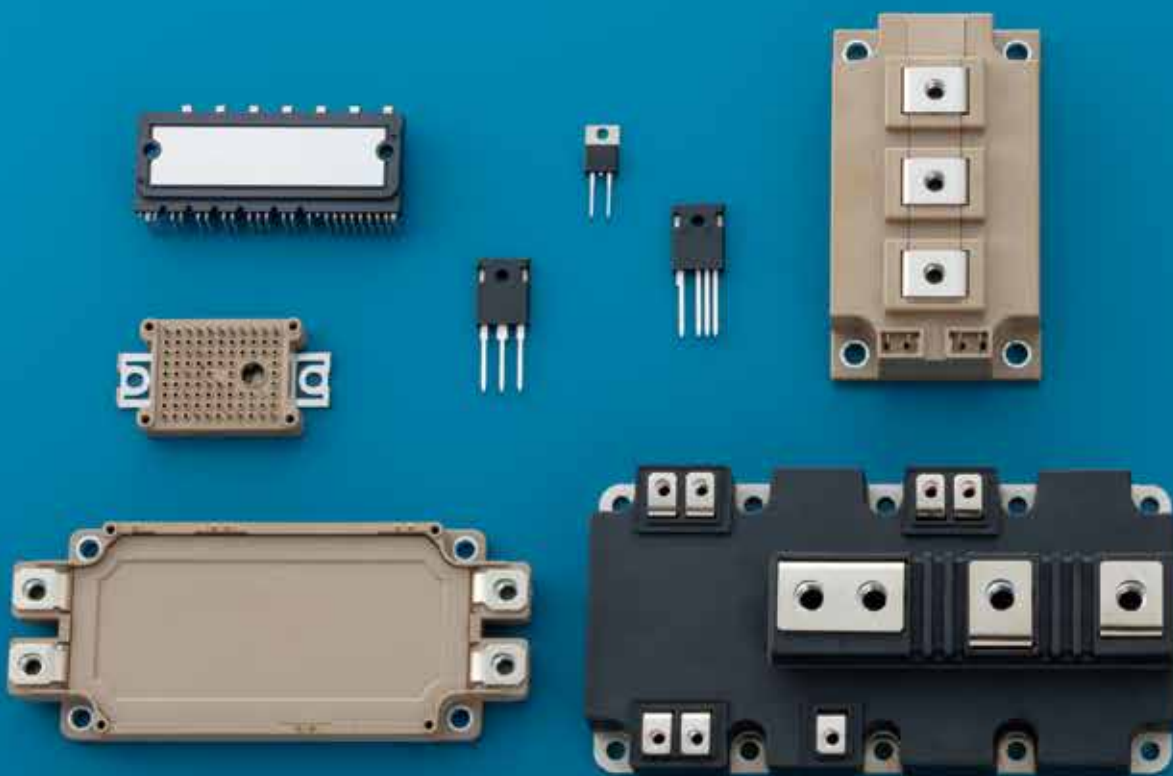


富士电机 功率半导体

IGBT/SiC 器件选型手册

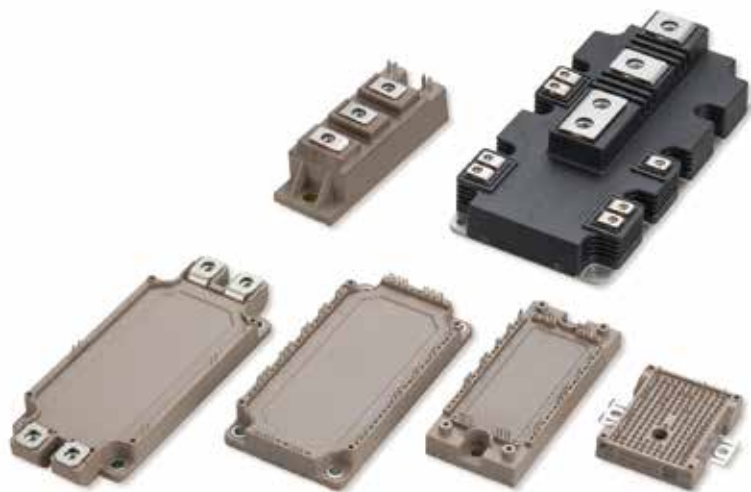


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PrimePACK™为 Infineon Technologies 公司的注册商标。

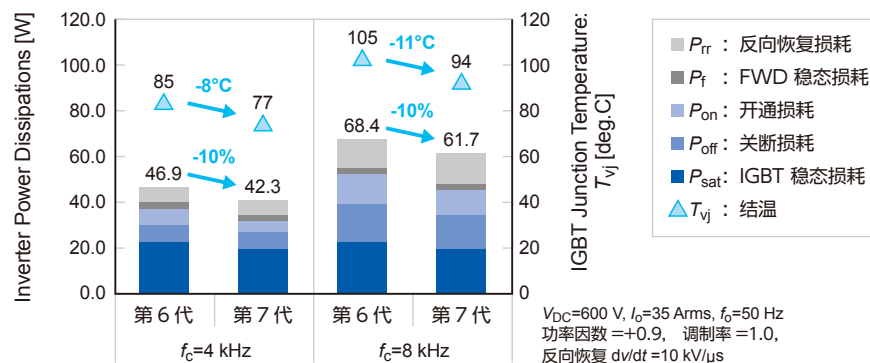
IGBT模块 X系列的优点



1. 低损耗

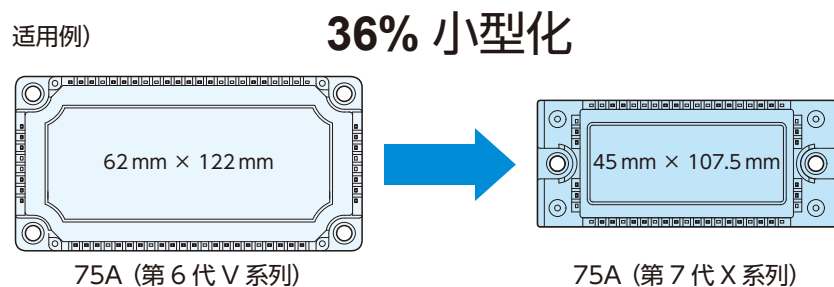
对构成模块的 IGBT 元件以及二极管元件的厚度进行了减薄以及精细化处理, 使得元件的结构得到优化。因此, 与以往产品相比 (本公司第 6 代“V 系列”), 降低变频器运行时的电力损耗。

变频器损耗降低 10%, 芯片温度降低 11°C
(与第 6 代 V 系列 75A, $f_c=8\text{kHz}$ 相比)



2. 小型化

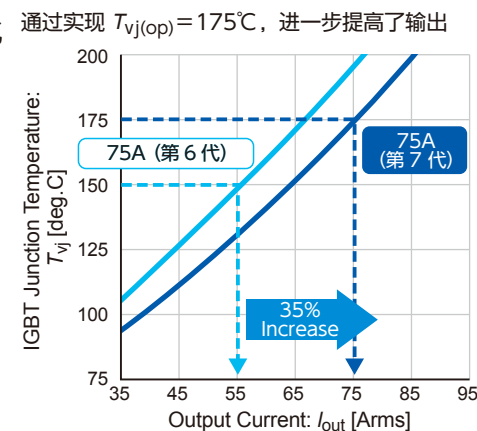
运用新开发的绝缘板, 提高模块的散热性能。结合降低电力损耗的特点, 可以抑制发热, 因此与以往产品相比, 尺寸减小 36%, 实现了小型化。



3. 高温动作

高可靠性高耐热的封装, 加上优化的芯片, 实现了 175°C 连续动作。

- 与以往产品相比可进一步提高 35% 的输出
- 提高 ΔT_{vj} 功率循环寿命 (过去的 2 倍)



IGBT 开关数		页次	内部结构						上限电压 Max V _{CE} (V _{RRM})					额定电流						
	产品种类		IGBT 模块				Discrete IGBT	Rectifier Diode	Discrete SiC-SBD	600V	650V	1200V	1700V	3300V	≤50A	>50A ≤150A	>150A ≤300A	>300A ≤600A	>600A ≤1200A	>1200A
			Standard Module	Power Integrated Module	Intelligent Power Module	3-level Module														
7	Small PIM	9		✓					✓	✓	✓			✓						
	PIM EconoPIM™	10		✓					✓	✓	✓			✓	✓					
		11								✓	✓	✓			✓	✓				
6	6-Pack EconoPACK™ EconoPACK™+	12	✓						✓		✓			✓	✓	✓				
		13							✓		✓	✓		✓	✓	✓	✓			
2	Standard 2-Pack	14	✓						✓	✓	✓	✓			✓	✓	✓	✓		
		15									✓	✓			✓	✓	✓	✓	✓	
1	Standard 1-Pack	16	✓								✓	✓					✓	✓	✓	
	Chopper	16	✓						✓		✓			✓	✓	✓	✓	✓		
1,2	High Speed Module	17	✓								✓				✓	✓	✓			
	HPnC	18	✓									✓	✓				✓	✓		
	PrimePACK™	19,20	✓								✓	✓					✓	✓	✓	
4,12	T/I-type NPC 3-level	21				✓			✓		✓	✓		✓	✓	✓	✓	✓		
6,7	IPM	22							✓	✓	✓			✓	✓					
		23,24							✓	✓	✓			✓	✓					
		25		✓					✓	✓	✓			✓	✓	✓				
		26						✓	✓	✓			✓	✓	✓					
1,2,6,7	Hybrid SiC Module	27	✓								✓	✓				✓	✓			
	All-SiC Module	28	✓								✓	✓				✓	✓			
1	Discrete IGBT	29					✓		✓	✓	✓			✓	✓					
—	Rectifier Diode	30						✓	✓	✓	✓			✓	✓					
—	SiC-SBD	31						✓		✓	✓			✓						

注 1：PrimePACK™ 为 Infineon Technologies 公司的注册商标。
 注 2：EconoPIM™ 为 Infineon Technologies 公司的注册商标。
 注 3：EconoPACK™, EconoPACK™+ 为 Infineon Technologies 公司的注册商标。

IGBT模块 产品型号

6 MB I 300 X **- 120 - 50**

Number of IGBT Switches: 6
 IGBT Module Type: MB = Si-IGBT+ Si-Diode
 Internal Configuration: I = Standard Module, R = Power Integrated Module, P = Intelligent Power Module
 Rated Current I_c [A]: 300
 IGBT Device Technology: X Series(7th Generation) / XR Series(7th Generation)
 V Series(6th Generation)
 U Series(5th Generation)
 Package Type:
 Max V_{CE} : 060 = 600V, 065 = 650V, 120 = 1200V, 170 = 1700V, 330 = 3300V
 Suffix 50 to 99 indicates RoHS compliance

分立IGBT 产品型号

F G W 50 N 65 W D

Company Code: Fuji
 Device Code: G = IGBT
 Package Type: W = TO-247 (Type:B), Z = TO-247-4
 Rated Current I_c [A]: 50
 Polarity: N = N-ch
 Series: W = High Speed W series, H = High Speed V series, V = V Series, RB = RB series
 Max V_{CE} : 60 = 600V, 65 = 650V, 120 = 1200V
 Diode Type: C or E = With Diode(Full rated), D = With Diode, Blank = Without Diode

F G W 40 XS 65 C

Company Code: Fuji
 Device Code: G = IGBT
 Package Type: W = TO-247 (Type:B), Z = TO-247-4
 Rated Current I_c [A]: 40
 Series: XS = XS series
 Max V_{CE} : 65 = 650V, 120 = 1200V
 Diode Type: C = With Diode(Full rated), D = With Diode, Blank = Without Diode

整流二极管 产品型号

F DR W 50 C 65 L

Company Code: Fuji
 Device Code: DR = FWD
 Package Type: P = TO-220, W = TO-247 (Type:B) or TO-247-2 (Type:B) or TO-247-2 (Type:A)
 Rated Current I_f [A]: 50
 Configuration: C = Dual (Cathode common), S or T = Single
 Max V_{RRM} : 60 = 600V, 65 = 650V, 120 = 1200V
 Series: L = Ultra Fast Recovery, J = Soft/Fast Recovery

SiC肖特基势垒二极管 产品型号

•SiC-SBD 1G

F DC P 10 S 65

Company Code: Fuji
 Device Code: DC = SiC-SBD
 Package Type: A = TO-220F/TO-220F-2, C = T-Pack(S), P = TO-220/TO-220-2 (Type: B), Y = TO-247 (Type: A), W = TO-247-2 (Type: A)
 Rated Current I_f [A]: 10
 Configuration: C = Dual (Cathode common), S or T = Single
 Max V_{RRM} : 65 = 650V, 120 = 1200V

•SiC-SBD 2G

F DC 2 PT 10 S 65

Company Code: Fuji
 Device Code: DC = SiC-SBD
 Generation: 2
 Package Type: A = TO-220F-2, PT = TO-220-2 (Type: A), WT = TO-247-2 (Type: A)
 Rated Current I_f [A]: 10
 Configuration: C = Dual (Cathode common), S or T = Single
 Max V_{RRM} : 65 = 650V, 120 = 1200V

搭载SiC-SBD的IGBT混合模块

2 MS I 300 V A H 120 C - 53

Number of IGBT Switches / Diode: 2
 SiC-SBD Type: MS = Si-IGBT + SiC-SBD
 Internal Configuration: I = Standard Module
 Rated Current I_c [A]: 300
 IGBT Device: V = 6th Generation, VW = 6th Gen High speed
 SBD Device: A=1st Generation
 Package Type: H
 Max V_{CE} : 120 = 1200V, 170 = 1700V
 SiC-SBD for converter: C = Large current
 Suffix 50 to 99 indicates RoHS compliance

All-SiC器件 产品型号

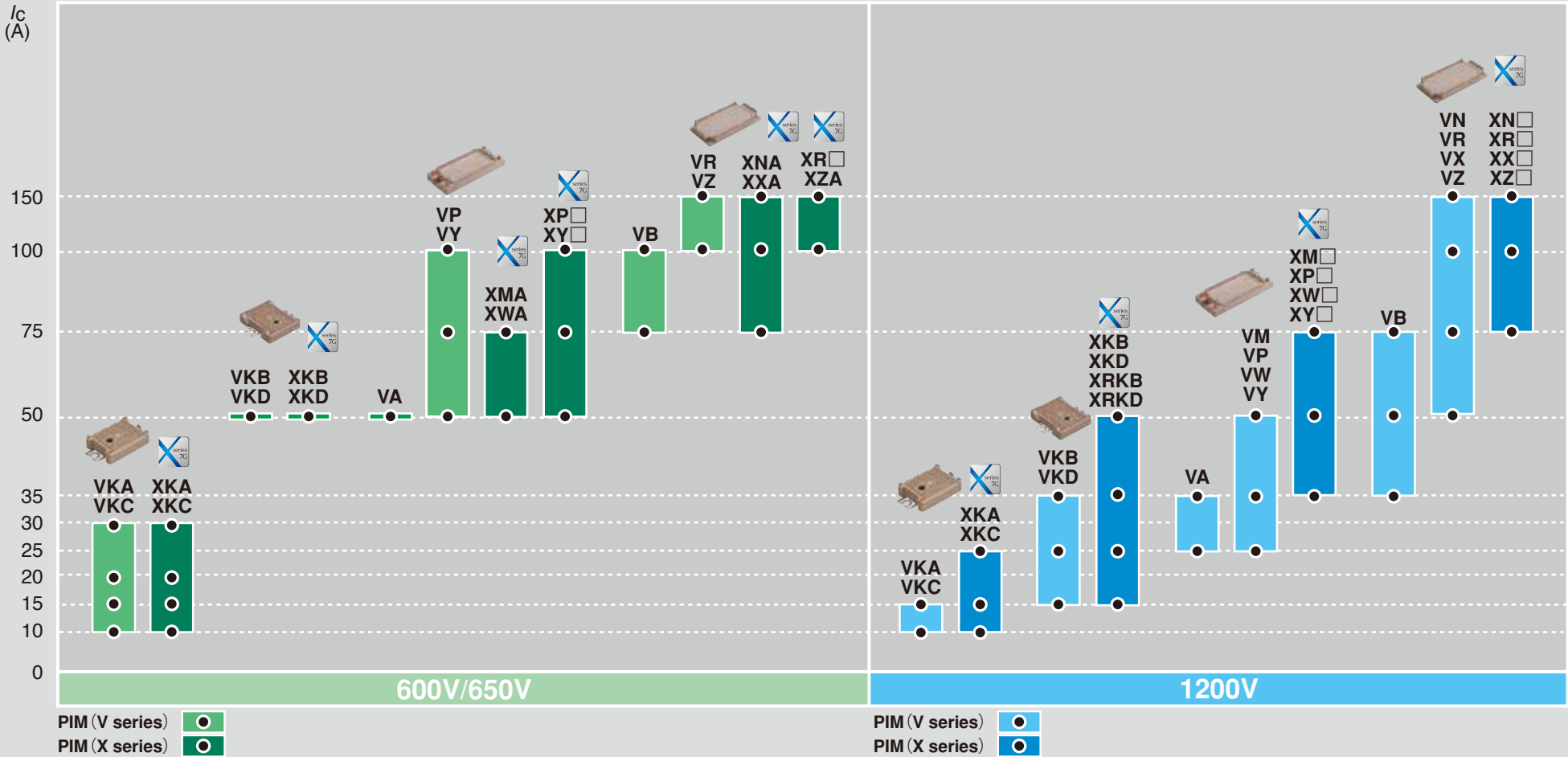
2 CS I 300 D A HE 120 - 50

Number of MOSFET Switches: 2
 SiC-MOSFET Module Type: CS = SiC-MOSFET + SiC-SBD, C = SiC-MOSFET, S = SiC-SBD
 Internal Configuration: I = Standard Module
 Rated Current I_c [A]: 300
 MOSFET Device: D=2nd Generation
 SBD Device: A=1st Generation
 Package Type: HE
 Max V_{CE} : 120 = 1200V, 170 = 1700V
 Suffix 50 to 99 indicates RoHS compliance

PIM (Power Integrated Modules) 产品系列图

7MBR	额定 电流 I _c	IGBT series & Package type				尺寸	页次	EconoPIM™
		V series		X series				
		Solder pins	Press fit pins	Solder pins	Press fit pins			
		VKC	VKA	XKC	XKA	33.8×62.8mm	9	
		VKD	VKB	XKD, XRKD	XKB, XRKB	56.7×62.8mm	9	
		VA, VM, VP	VW, VY	XM□, XP□	XW□, XY□	45×107.5mm	10,11	
		VB, VN, VR	VX, VZ	XN□, XR□	XX□, XZ□	62×122mm	10,11	

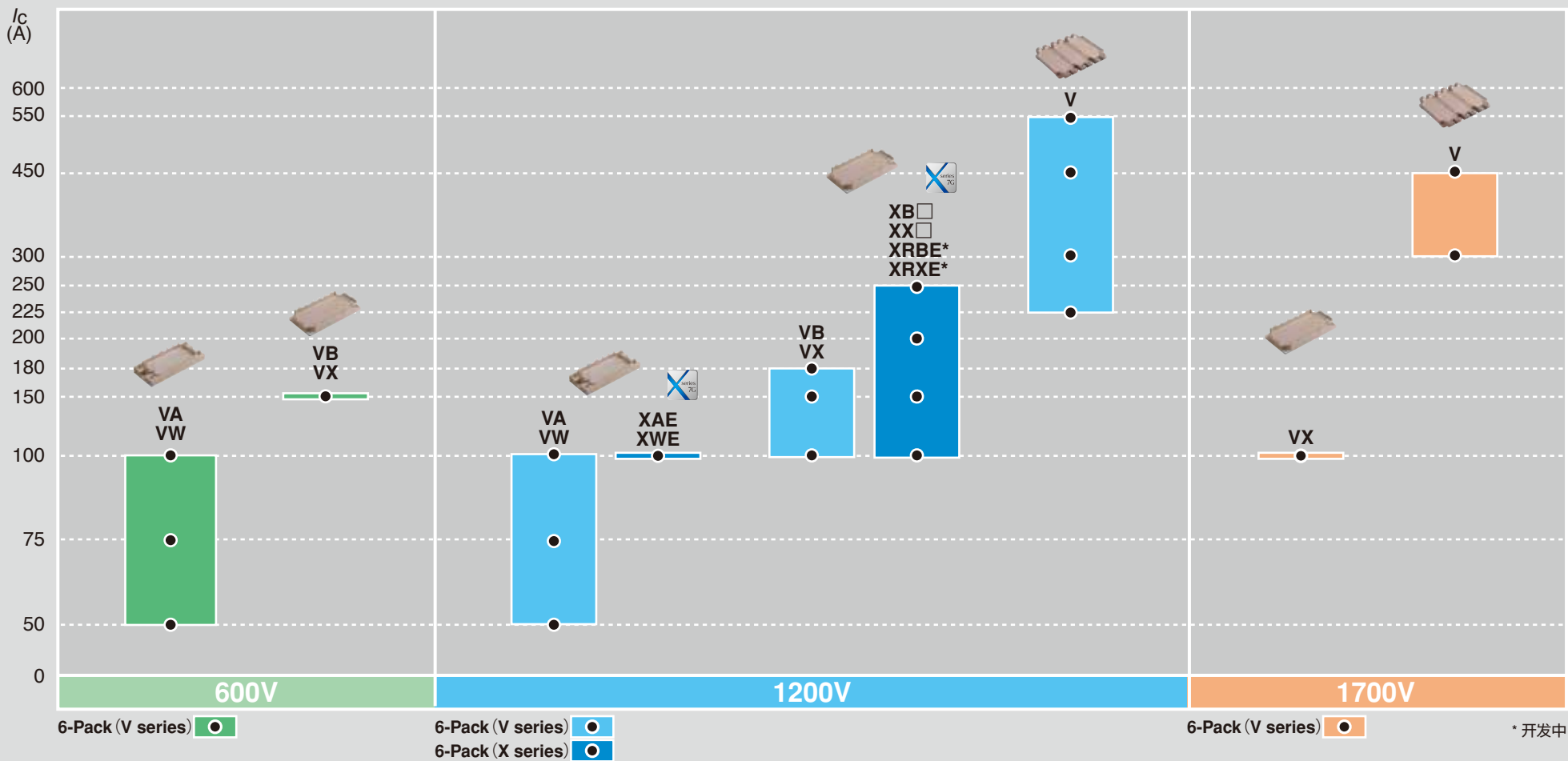
注：EconoPIM™ 为 Infineon Technologies 公司的注册商标。



6-Pack 产品系列图

6MBI	额定 电流 I _c	IGBT series & Package type				尺寸	页次	
		V series		X series				
		Solder pins	Press fit pins	Solder pins	Press fit pins			
		VA	VW	XAE	XWE	45×107.5mm	12,13	EconoPACK™
		VB	VX	XB□, XRBE	XX□, XRXE	62×122mm	12,13	
		V				150×162mm	13	EconoPACK™+

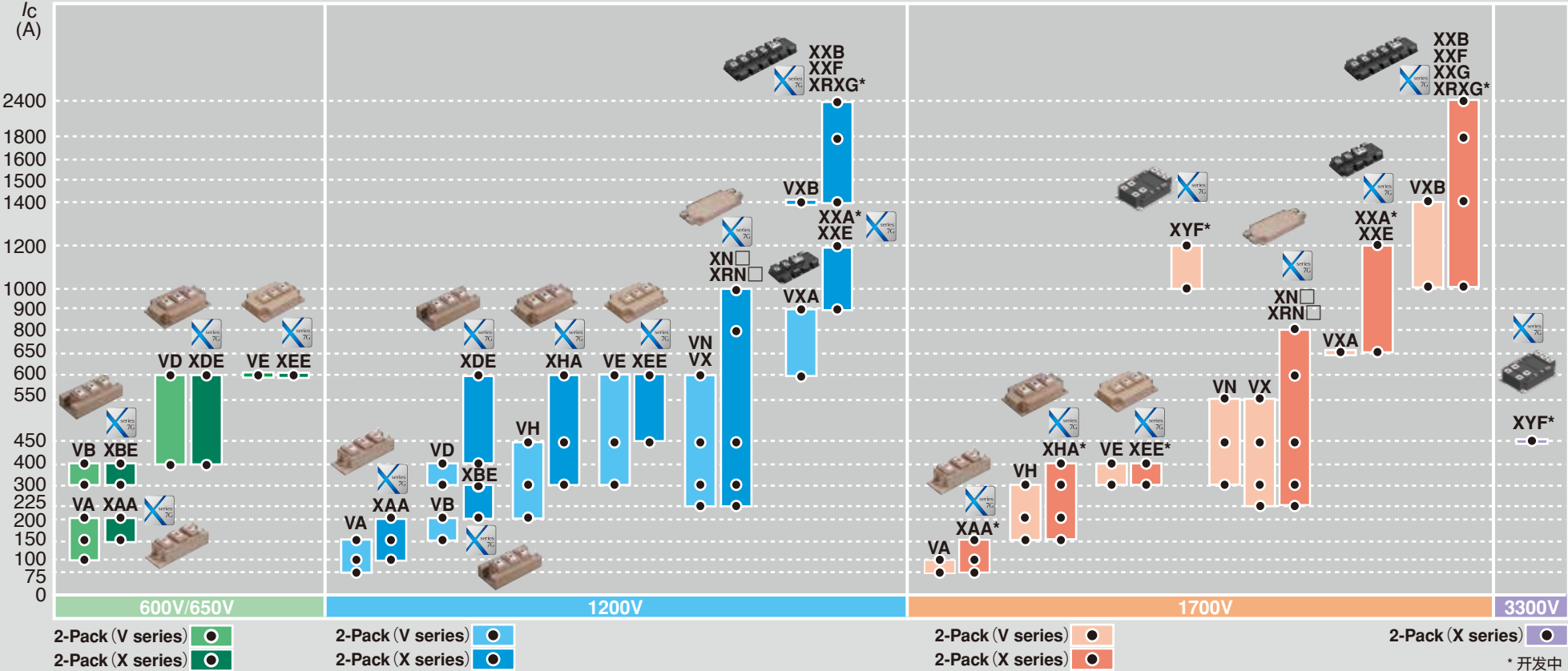
注：EconoPACK™ 和 EconoPACK™+ 为 Infineon Technologies 公司的注册商标。



2-Pack 产品系列图

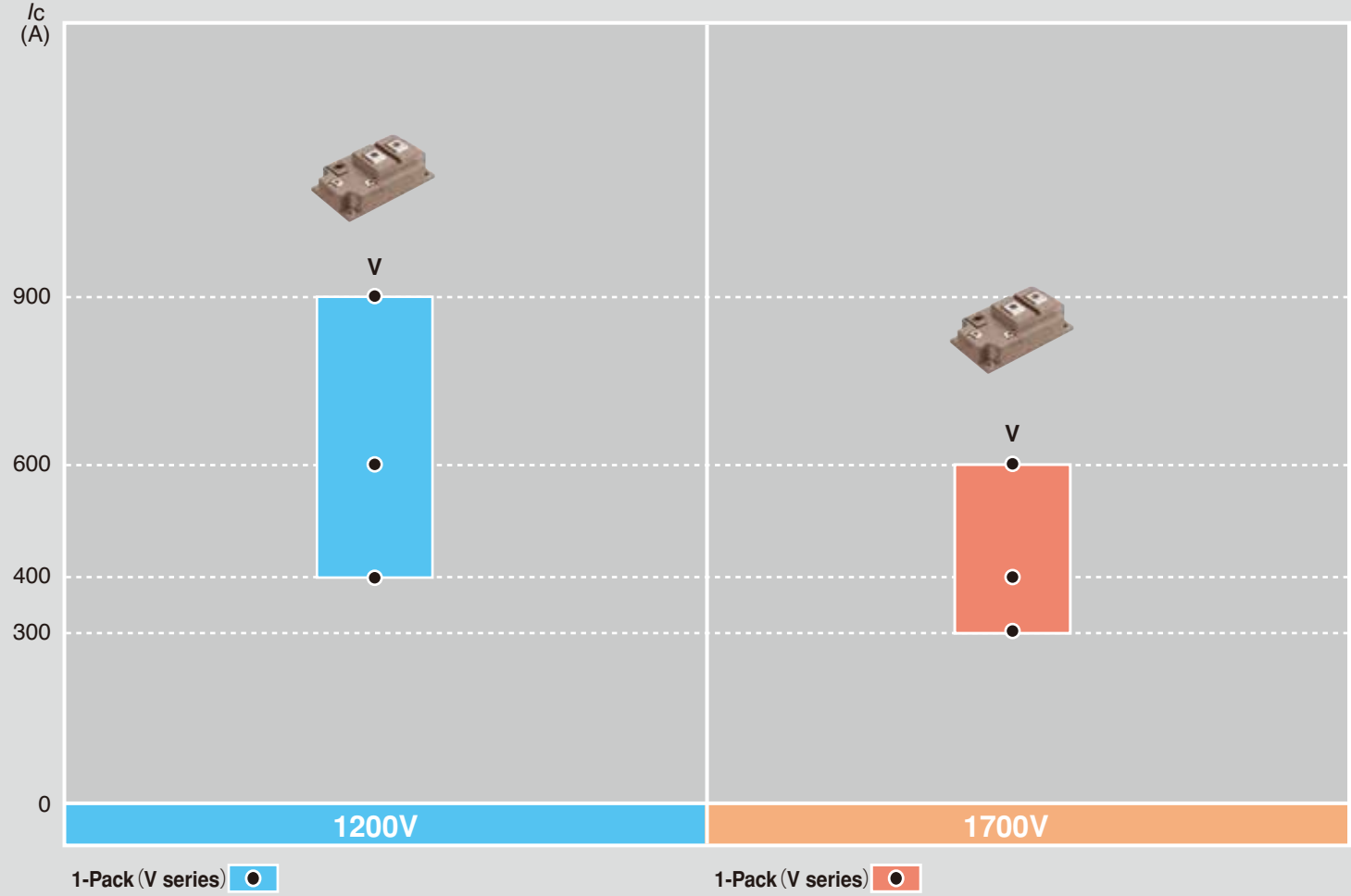
2MBI	额定 电流 I _c	IGBT series & Package type				
		V series	X series	尺寸	页次	
		VA	XAA	34×94mm	14	Standard Pack
		VB	XBE	45×92mm	14	
		VD, VH	XDE, XHA	62×108mm	14	
		VE	XEE	80×110mm	14	
		VN, VX	XN□, XRN□	62×150mm	15	Dual XT
		-	XYF	100×140mm	18	HPnC
		VXA	XXA, XXE	89×172mm	19	PrimePACK™
		VXB	XXB, XXF, XXG, XRXG	89×250mm	19	

注 1 : PrimePACK™ 为 Infineon Technologies 公司的注册商标。



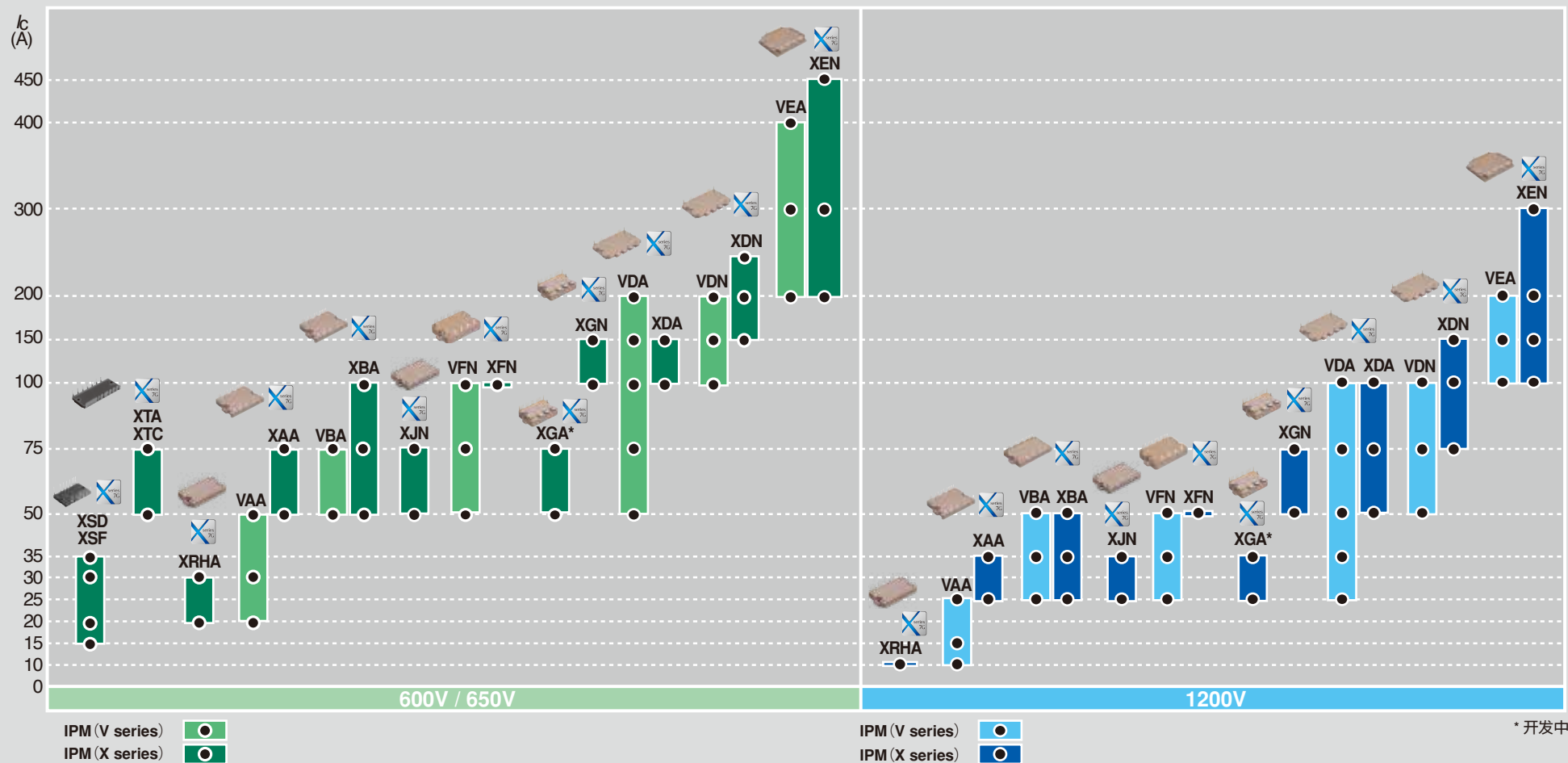
1-Pack 产品系列图

1MBI	额定 电流 I_c	IGBT series & Package type	尺寸	页次	Standard Pack
		V series			
		V	62×108mm	16	



IPM (Intelligent Power Modules) 产品系列图

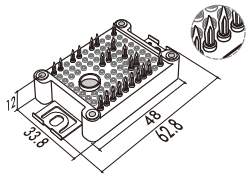
6/7MBP 额定 电流 I_c	IGBT series & Package type		尺寸	V series		X series		页次
	V series	X series		7 in 1	6 in 1	7 in 1	6 in 1	
6/7MBP	-	XSD, XSF	26×43mm	-	-	-	✓	22
	-	XTA, XTC	31×79mm	-	-	-	✓	22
	-	XRHA	36×70mm	-	-	-	✓	23
	VAA	XAA	49.5×70mm	-	✓	-	✓	23
	VBA	XBA	50.2×87mm	-	✓	-	✓	23
	-	XJN	50.2×87mm	-	-	✓	-	23
	VFN	XFN	55×90mm	✓	✓	✓	✓	24
	-	XGA, XGN	55×90mm	-	-	-	✓	24
	VDA, VDN	XDA, XDN	84×128.5mm	✓	✓	✓	✓	25
	VEA	XEN	110×142mm	✓	✓	✓	✓	26



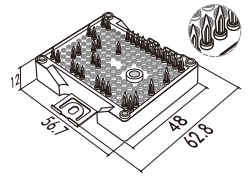
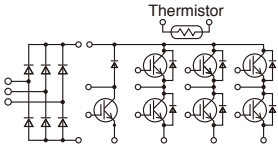
Small PIM (Power Integrated Modules)

外形尺寸 [mm]

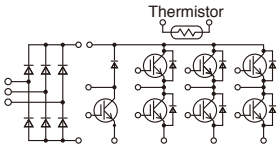
With NTC, Press fit pins



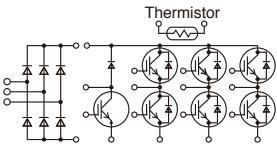
V: M726, X: M730



V: M727, X: M731

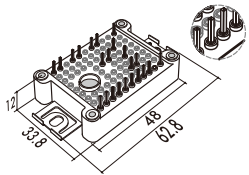


XKB, VKB

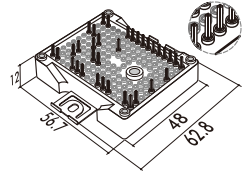
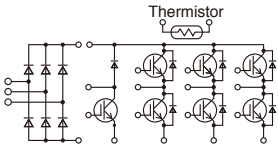


XRKB

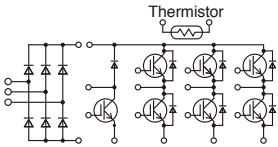
With NTC, Solder pins



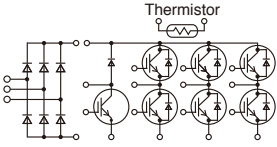
V: M728, X: M732



V: M729, X: M733



XKD, VKD

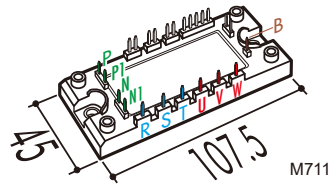


XRKD

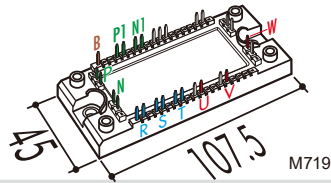
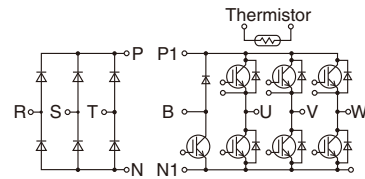
	650V		600V		1200V	
Ic	X series		V series	X series		V series
10A	7MBR10XKA065-50		7MBR10VKA060-50	7MBR10XKA120-50		7MBR10VKA120-50
15A	7MBR15XKA065-50		7MBR15VKA060-50	7MBR15XKA120-50		7MBR15VKA120-50
20A	7MBR20XKA065-50		7MBR20VKA060-50			
25A				7MBR25XKA120-50		
30A	7MBR30XKA065-50		7MBR30VKA060-50			
15A				7MBR15XKB120-50		7MBR15VKB120-50
25A				7MBR25XKB120-50		7MBR25VKB120-50
35A				7MBR35XKB120-50		7MBR35VKB120-50
50A	7MBR50XKB065-50		7MBR50VKB060-50	7MBR50XRKB120-50		
10A	7MBR10XKC065-50		7MBR10VKC060-50	7MBR10XKC120-50		7MBR10VKC120-50
15A	7MBR15XKC065-50		7MBR15VKC060-50	7MBR15XKC120-50		7MBR15VKC120-50
20A	7MBR20XKC065-50		7MBR20VKC060-50			
25A				7MBR25XKC120-50		
30A	7MBR30XKC065-50		7MBR30VKC060-50			
15A				7MBR15XKD120-50		7MBR15VKD120-50
25A				7MBR25XKD120-50		7MBR25VKD120-50
35A				7MBR35XKD120-50		7MBR35VKD120-50
50A	7MBR50XKD065-50		7MBR50VKD060-50	7MBR50XRKD120-50		

PIM (Power Integrated Modules) EconoPIM™

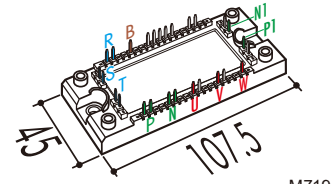
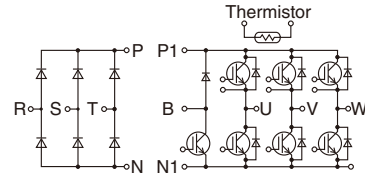
外形尺寸 [mm]



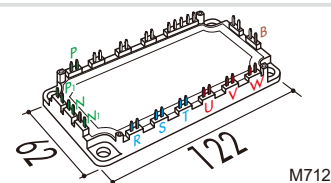
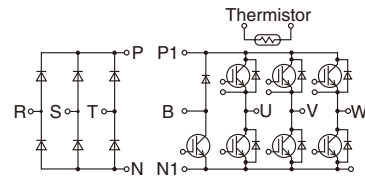
M711



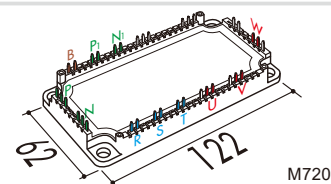
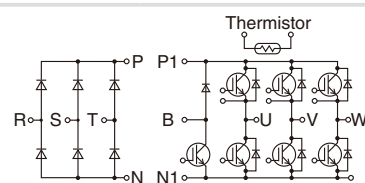
M719



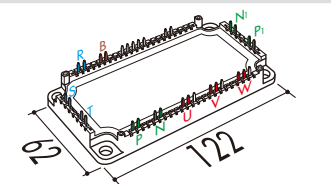
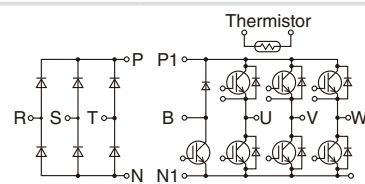
M719



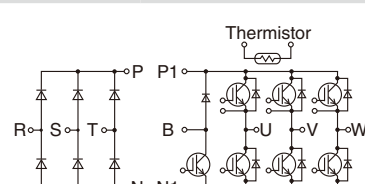
M712



M720



M720



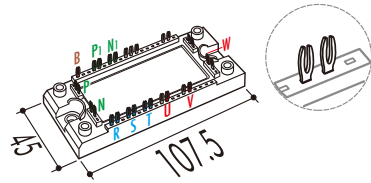
Ic	650V	600V	1200V	
	X series	V series	X series	V series
25A				7MBR25VA120-50
35A				7MBR35VA120-50
50A		7MBR50VA060-50		
25A				7MBR25VM120-50
35A			7MBR35XMA120-50	7MBR35VM120-50
50A	7MBR50XMA065-50		7MBR50XMA120-50	7MBR50VM120-50
75A	7MBR75XMA065-50		7MBR75XME120-50	
25A				7MBR25VP120-50
35A			7MBR35XPA120-50	7MBR35VP120-50
50A	7MBR50XPA065-50	7MBR50VP060-50	7MBR50XPA120-50	7MBR50VP120-50
			7MBR50XPE120-50	
75A	7MBR75XPA065-50	7MBR75VP060-50	7MBR75XPE120-50	
100A	7MBR100XPE065-50	7MBR100VP060-50		
35A				7MBR35VB120-50
50A				7MBR50VB120-50
75A		7MBR75VB060-50		7MBR75VB120-50
100A		7MBR100VB060-50		
50A				7MBR50VN120-50
75A	7MBR75XNA065-50		7MBR75XNA120-50	7MBR75VN120-50
100A	7MBR100XNA065-50		7MBR100XNA120-50	7MBR100VN120-50
150A	7MBR150XNA065-50		7MBR150XNE120-50	7MBR150VN120-50
50A				7MBR50VR120-50
75A			7MBR75XRA120-50	7MBR75VR120-50
			7MBR75XRE120-50	
100A	7MBR100XRA065-50	7MBR100VR060-50	7MBR100XRA120-50	7MBR100VR120-50
			7MBR100XRE120-50	
150A	7MBR150XRA065-50	7MBR150VR060-50	7MBR150XRE120-50	7MBR150VR120-50
	7MBR150XRE065-50			

注：EconoPIM™ 为 Infineon Technologies 公司的注册商标。

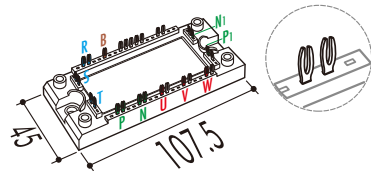
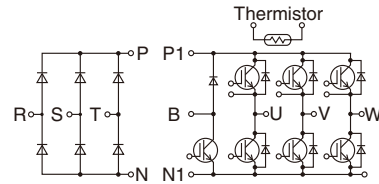
PIM (Power Integrated Modules) EconoPIM™

外形尺寸 [mm]

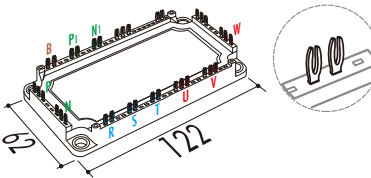
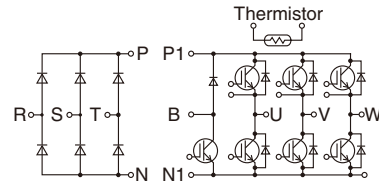
With NTC, Press fit pins, PIM



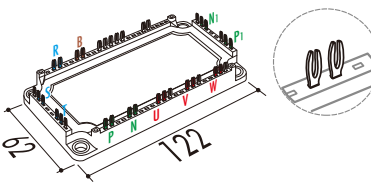
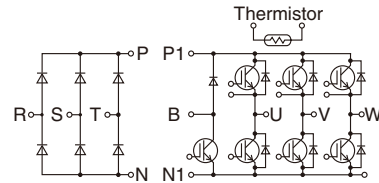
M721



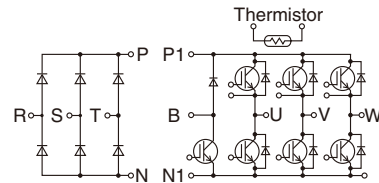
M721



M722



M722



Ic	650V	600V	1200V	
	X series	V series	X series	V series
25A				7MBR25VW120-50
35A			7MBR35XWA120-50	7MBR35VW120-50
50A	7MBR50XWA065-50		7MBR50XWA120-50	7MBR50VW120-50
75A	7MBR75XWA065-50		7MBR75XWE120-50	
25A				7MBR25VY120-50
35A			7MBR35XYA120-50	7MBR35VY120-50
50A	7MBR50XYA065-50	7MBR50VY060-50	7MBR50XYA120-50	7MBR50VY120-50
75A	7MBR75XYA065-50	7MBR75VY060-50	7MBR75XYE120-50	
100A	7MBR100XYE065-50	7MBR100VY060-50		
50A				7MBR50VX120-50
				7MBR50VX120-80
75A	7MBR75XXA065-50		7MBR75XXA120-50	7MBR75VX120-50
				7MBR75VX120-80
100A	7MBR100XXA065-50		7MBR100XXA120-50	7MBR100VX120-50
				7MBR100VX120-80
150A	7MBR150XXA065-50		7MBR150XXE120-50	7MBR150VX120-50
				7MBR150VX120-80
50A				7MBR50VZ120-50
				7MBR50VZ120-80
75A			7MBR75XZA120-50	7MBR75VZ120-50
				7MBR75VZ120-80
100A	7MBR100XZA065-50	7MBR100VZ060-50	7MBR100XZA120-50	7MBR100VZ120-50
		7MBR100VZ060-80		7MBR100VZ120-80
150A	7MBR150XZA065-50	7MBR150VZ060-50	7MBR150XZE120-50	7MBR150VZ120-50
		7MBR150VZ060-80		7MBR150VZ120-80

注 1 : EconoPIM™ 为 Infineon Technologies 公司的注册商标。

注 2 : “-80” : 相对于 “-50” 将作为高热导体的 TIM (Thermal-Interface-Material) 涂布至模块底面。

6-Pack EconoPACK™

外形尺寸 [mm]

Ic

600V

1200V

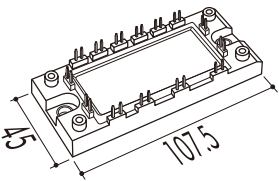
V series

X series

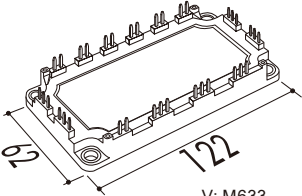
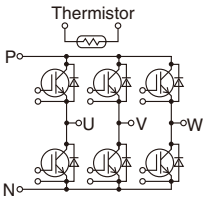


V series

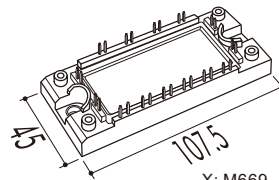
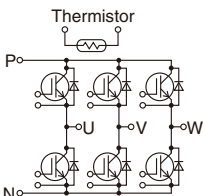
With NTC, Solder pins



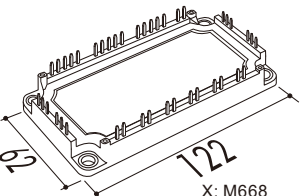
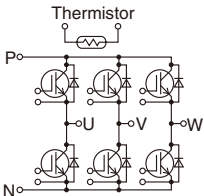
V: M636



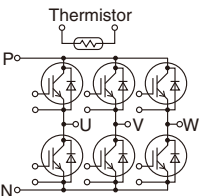
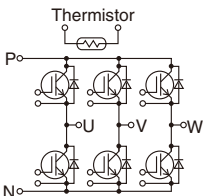
V: M633



X: M669



X: M668



	600V	1200V
	V series	X series
50A	6MBI50VA-060-50	
75A	6MBI75VA-060-50	
100A	6MBI100VA-060-50	
100A		6MBI100VB-120-50
150A	6MBI150VB-060-50	6MBI150VB-120-50
180A		6MBI180VB-120-50
		6MBI180VB-120-55
100A		6MBI100XAE120-50
100A		6MBI100XBA120-50
150A		6MBI150XBA120-50
200A		6MBI200XBA120-50
		6MBI200XBE120-50
250A		6MBI250XRBE120-50*

注 1 : 6MBI180VB-120-55 使用低热阻封装
注 2 : EconoPACK™ 为 Infineon Technologies 公司的注册商标。

*开发中

6-Pack EconoPACK™

外形尺寸 [mm]

With NTC, Press fit pins

M647

M648

Thermistor

Thermistor

XXA, XXE, VX

XRXE

注 1 : 6MBI180VX-120-55 使用低热阻封装
注 2 : “-80”、“-81” : 相对于“-50”、“-55” 将作为高热体的 TIM (Thermal Interface Material) 涂布至模块底面。
注 3 : EconoPACK™ 为 Infineon Technologies 公司的注册商标。

*开发中

6-Pack EconoPACK™+

外形尺寸 [mm]

With NTC, High power 6-Pack

M629

Thermistor

注 1 : EconoPACK™+ 为 Infineon Technologies 公司的注册商标。
注 2 : “-80” : 相对于“-50” 将作为高热体的 TIM (Thermal Interface Material) 涂布至模块底面。

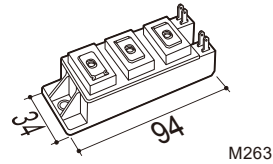
Ic	600V	X series	1200V	1700V
	V series		V series	V series
50A	6MBI50VW-060-50		6MBI50VW-120-50	
75A	6MBI75VW-060-50		6MBI75VW-120-50	
100A	6MBI100VW-060-50	6MBI100XWE120-50	6MBI100VW-120-50	
100A		6MBI100XXA120-50	6MBI100VX-120-50	6MBI100VX-170-50
			6MBI100VX-120-80	6MBI100VX-170-80
150A	6MBI150VX-060-50	6MBI150XXA120-50	6MBI150VX-120-50	
	6MBI150VX-060-80		6MBI150VX-120-80	
180A			6MBI180VX-120-50	
			6MBI180VX-120-80	
			6MBI180VX-120-55	
			6MBI180VX-120-81	
200A		6MBI200XXA120-50		
		6MBI200XXE120-50		
250A		6MBI250XRXE120-50*		

Ic	1200V	1700V
	V series	V series
225A	6MBI225V-120-50	
300A	6MBI300V-120-50	6MBI300V-170-50
	6MBI300V-120-80	
450A	6MBI450V-120-50	6MBI450V-170-50
		6MBI450V-170-80
550A	6MBI550V-120-50	

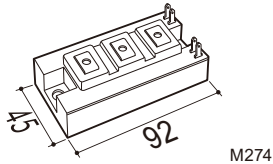
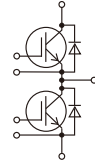
Standard 2-Pack

外形尺寸 [mm]

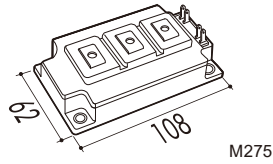
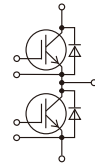
2-Pack



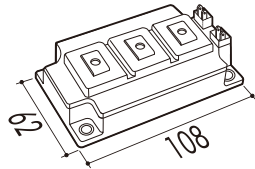
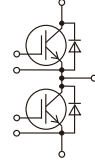
M263



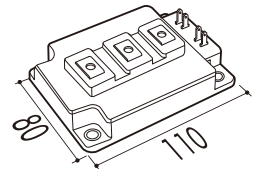
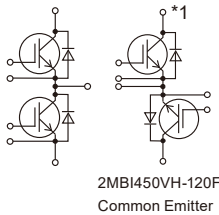
M274



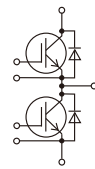
M275



M276



M277



Ic	650V	600V	1200V	1700V
	X series	V series	X series	V series
75A				
100A		2MBI100VA-060-50	2MBI100XAA120-50	2MBI75VA-170-50
150A	2MBI150XAA065-50	2MBI150VA-060-50	2MBI150XAA120-50	2MBI100VA-170-50
200A	2MBI200XAA065-50	2MBI200VA-060-50	2MBI200XAA120-50	2MBI150VA-170-50
150A				
200A				
300A	2MBI300XBE065-50	2MBI300VB-060-50	2MBI200XBE120-50	2MBI150VB-120-50
400A	2MBI400XBE065-50	2MBI400VB-060-50	2MBI300XBE120-50	2MBI200VB-120-50
300A				
400A	2MBI400XDE065-50	2MBI400VD-060-50	2MBI400XDE120-50	2MBI300VD-120-50
600A	2MBI600XDE065-50	2MBI600VD-060-50	2MBI600XDE120-50	2MBI400VD-120-50
		2MBI400VD-060-80		
		2MBI600VD-060-80		
150A				2MBI150XHA170-50
200A				2MBI150VH-170-80
300A			2MBI300XHA120-50	2MBI200VH-170-50
400A				2MBI200VH-170-80
450A			2MBI450XHA120-50	2MBI300VH-170-50
				2MBI300VH-170-80
				2MBI400XHA170-50
600A			2MBI600XHA120-50	
300A				2MBI300VE-170-50
400A				2MBI300VE-170-80*
450A			2MBI450XEE120-50	2MBI400VE-170-50
600A	2MBI600XEE065-50	2MBI600VE-060-50	2MBI600XEE120-50	2MBI400VE-170-80*
		2MBI600VE-060-80*		

注：“-80”：相对于“-50”将作为高导热体的 TIM (Thermal Interface Material) 涂布至模块底面。

* 开发中

Standard 2-Pack

外形尺寸 [mm]

Ic

1200V

1700V

X series



V series

V series With SiN substrate *1

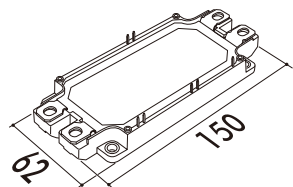
X series



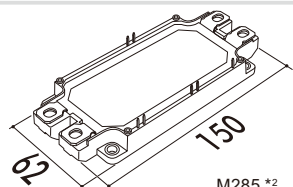
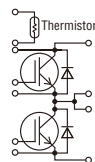
V series

V series With SiN substrate *1

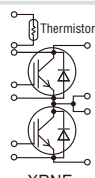
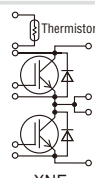
With NTC, Solder pins



M254



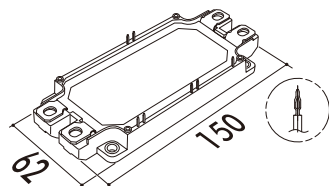
M285 *2



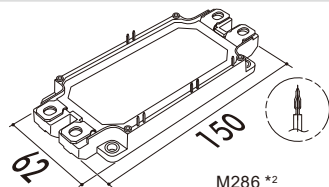
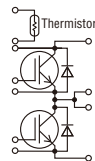
XNE

XRNE

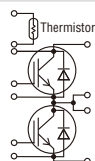
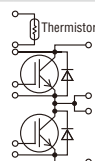
With NTC, Press fit pins



M282



M286 *2



XNF

XRNF

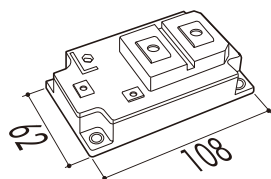
Ic	X series	V series	V series With SiN substrate *1	X series	V series	V series With SiN substrate *1
225A	2MBI225XNA120-50	2MBI225VN-120-50 2MBI225VN-120-80	2MBI225VN-120S-50 2MBI225VN-120S-80	2MBI225XNA170-50		
300A	2MBI300XNA120-50	2MBI300VN-120-50 2MBI300VN-120-80	2MBI300VN-120S-50 2MBI300VN-120S-80	2MBI300XNA170-50	2MBI300VN-170-50 2MBI300VN-170-80	
450A	2MBI450XNA120-50	2MBI450VN-120-50 2MBI450VN-120-80	2MBI450VN-120S-50 2MBI450VN-120S-80	2MBI450XNA170-50	2MBI450VN-170-50 2MBI450VN-170-80	
550A						2MBI550VN-170-50 2MBI550VN-170-80
600A	2MBI600XNG120-50		2MBI600VN-120-50 2MBI600VN-120-80	2MBI600XNG170-50		
600A	2MBI600XNE120-50			2MBI600XNE170-50		
800A	2MBI800XNE120-50			2MBI800XRNE170-50		
1000A	2MBI1000XRNE120-50					
225A	2MBI225XNB120-50	2MBI225VX-120-50 2MBI225VX-120-80		2MBI225XNB170-50	2MBI225VX-170-50 2MBI225VX-170-80	
300A	2MBI300XNB120-50	2MBI300VX-120-50 2MBI300VX-120-80		2MBI300XNB170-50	2MBI300VX-170-50 2MBI300VX-170-80	
450A	2MBI450XNB120-50	2MBI450VX-120-50 2MBI450VX-120-80		2MBI450XNB170-50	2MBI450VX-170-50 2MBI450VX-170-80	
550A						2MBI550VX-170-50 2MBI550VX-170-80
600A	2MBI600XNH120-50		2MBI600VX-120-50 2MBI600VX-120-80	2MBI600XNH170-50		
600A	2MBI600XNF120-50			2MBI600XNF170-50		
800A	2MBI800XNF120-50			2MBI800XRNF170-50		
1000A	2MBI1000XRNF120-50					

注：“-80”：相对于“-50”将作为高热导体的 TIM (Thermal Interface Material) 涂布至模块底面。

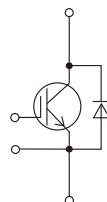
*1 低热阻封装

*2 高放热、高耐电蚀性封装

Standard 1-Pack



M153

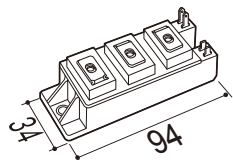


外形尺寸 [mm]

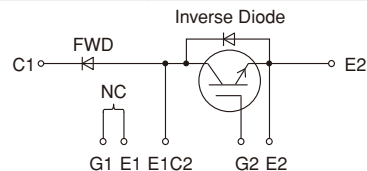
I_c

	1200V		1700V
	V series	V series with AlN substrate	V series
300A			1MBI300V-170-50
400A	1MBI400V-120-50	1MBI400VF-120-50	1MBI400V-170-50
600A	1MBI600V-120-50	1MBI600VF-120-50	1MBI600V-170-50
900A	1MBI900V-120-50		

Chopper



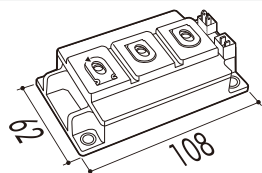
M262



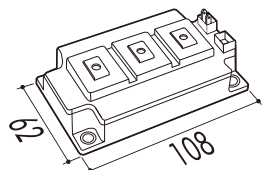
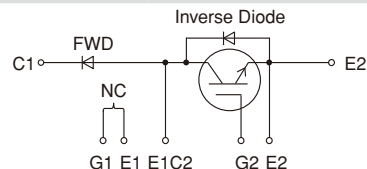
外形尺寸 [mm]

I_c

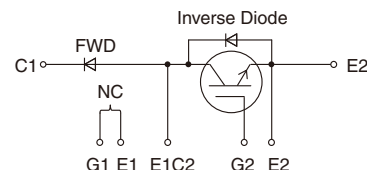
	600V		1200V	
	U series	V series	U series	V series
50A			1MBI50U4F-120L-50	
75A			1MBI75U4F-120L-50	
100A			1MBI100U4F-120L-50	
150A				1MBI150VA-120L-50
200A				1MBI200VA-120L-50
200A			1MBI200U4H-120L-50	
300A	1MBI300U2H-060L-50			
400A		1MBI400VH-060L-50		



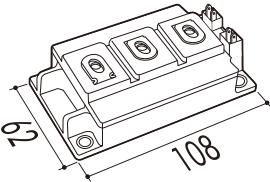
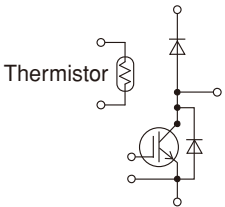
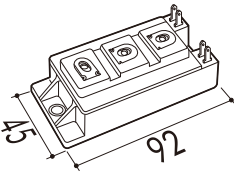
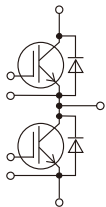
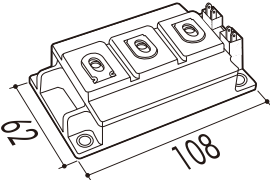
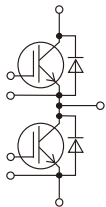
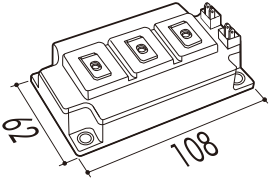
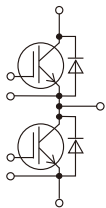
M259



M283



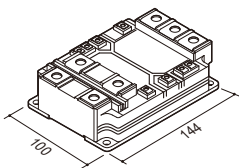
High Speed Modules

			1200V
			High Speed IGBT
Chopper	 M249	外形尺寸 [mm] 	200A 1MBI200HH-120L-50
			300A 1MBI300HH-120L-50
2-Pack	 M233		400A 1MBI400HH-120L-50
	 M249		100A 2MBI100HB-120-50
	 M276		150A 2MBI150HH-120-50
			200A 2MBI200HH-120-50
			100A 2MBI100HJ-120-50
			150A 2MBI150HJ-120-50
			200A 2MBI200HJ-120-50
			300A 2MBI300HJ-120-50

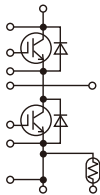
High Power Modules HPnC

外形尺寸 [mm]

2-Pack



M297



Ic	1700V		3300V	
	X series		X series	
450A			2MBI450XYF330-50*	
1000A	2MBI1000XYF170-50*			
1200A	2MBI1200XYF170-50*			

*开发中

PrimePACK™

外形尺寸 [mm]

Ic

X series 		1200V		X series 		1700V	
X series		V series		X series		V series	
		Low switching loss	Soft turn off	Low switching loss		Low switching loss	Soft turn off
A		2MBI600VXA-120E-50					
		2MBI600VXA-120E-54					
		2MBI600VXA-120E-80					
A				2MBI650XXA170-50		2MBI650VXA-170E-50	
						2MBI650VXA-170E-54	
						2MBI650VXA-170E-80	
						2MBI650VXA-170EA-50	
						2MBI650VXA-170EA-54	
						2MBI650VXA-170EA-80	
2MBI900XXA120P-50		2MBI900VXA-120E-50	2MBI900VXA-120P-50				
		2MBI900VXA-120E-54	2MBI900VXA-120P-54				
		2MBI900VXA-120E-80	2MBI900VXA-120P-80				
2MBI1200XXE120P-50				2MBI1200XXE170-50			
A				2MBI1000XXB170-50		2MBI1000VXB-170E-50	
						2MBI1000VXB-170E-54	
						2MBI1000VXB-170E-80	
						2MBI1000VXB-170EA-50	
						2MBI1000VXB-170EA-54	
						2MBI1000VXB-170EA-80	
2MBI1400XXB120P-50		2MBI1400VXB-120E-50	2MBI1400VXB-120P-50	2MBI1400XXB170-50		2MBI1400VXB-170E-50	2MBI1400VXB-170P-50
		2MBI1400VXB-120E-54	2MBI1400VXB-120P-54			2MBI1400VXB-170E-54	2MBI1400VXB-170P-54
		2MBI1400VXB-120E-80	2MBI1400VXB-120P-80			2MBI1400VXB-170E-80	2MBI1400VXB-170P-80
2MBI1800XXF120P-50				2MBI1800XXF170-50			
A				2MBI1800XXG170-50			
	2MBI2400XRXC120-50*			2MBI2400XRXC170-50*			
		</					

注 1: -54 :VCE(sat) 和 VF 的等级会显示在标签中
 注 2: "-80" : 相对于 "-54" 将作为高导热体的 TIM (Thermal Interface Material) 涂布至模块底面。
 注 3: 带有 EA 的型号对应二极管负荷大的应用, 通过优化 FWD 降低 VF 和热阻。
 注 4: PrimePACK™ 为 Infineon Technologies 公司的注册商标。
 注 5: 本页带 "P" 的产品为 "soft turn off" 类型

* 开发中

PrimePACK™

外形尺寸 [mm]

I_c

1200V

1700V

V series

V series

Low side configuration

High side configuration

Low side configuration

High side configuration

650A

1MBI650VXA-170EL-50	1MBI650VXA-170EH-50
1MBI650VXA-170EL-54	1MBI650VXA-170EH-54
1MBI650VXA-170EL-80	1MBI650VXA-170EH-80

900A

1MBI900VXA-120PD-50 *1	1MBI900VXA-120PC-50 *1
1MBI900VXA-120PD-54 *1	1MBI900VXA-120PC-54 *1
1MBI900VXA-120PD-80 *1	1MBI900VXA-120PC-80 *1

1000A

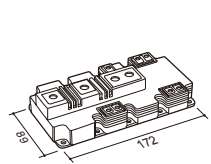
1MBI1000VXB-170EL-50	1MBI1000VXB-170EH-50
1MBI1000VXB-170EL-54	1MBI1000VXB-170EH-54
1MBI1000VXB-170EL-80	1MBI1000VXB-170EH-80

1400A

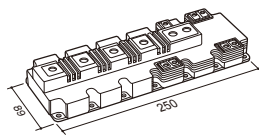
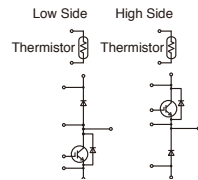
1MBI1400VXB-120PL-54	1MBI1400VXB-120PH-54
1MBI1400VXB-120PL-80	1MBI1400VXB-120PH-80

1MBI1400VXB-170PL-50	1MBI1400VXB-170PH-50
1MBI1400VXB-170PL-54	1MBI1400VXB-170PH-54

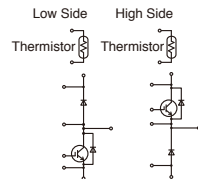
Chopper



M271



M272



注 1 : -54 : V_{CE(sat)} 和 V_F 的等级会显示在标签中

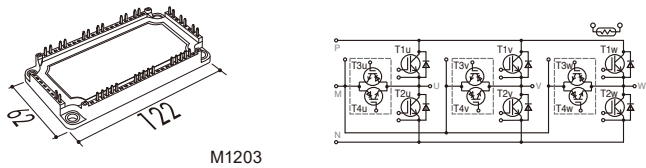
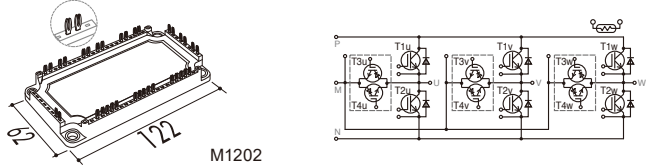
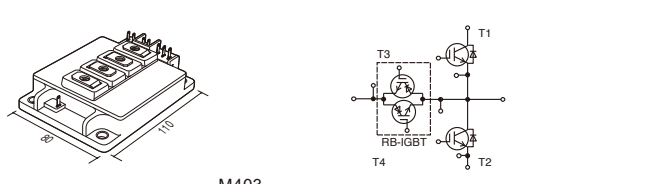
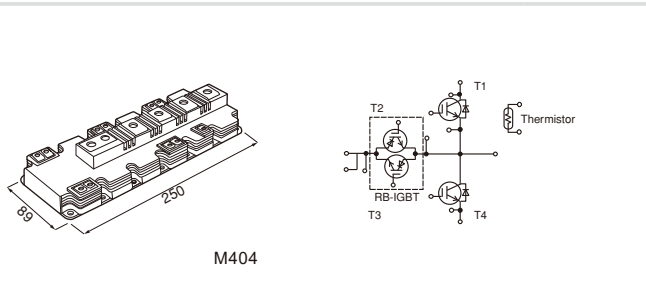
注 2 : "-80" : 相对于 "-54" 将作为高导热体的 TIM (Thermal Interface Material) 涂布至模块底面。

注 3 : PrimePACK™ 为 Infineon Technologies 公司的注册商标。

*1 反向并联二极管的额定电流为 120A。仅用于 Boost/Buck chopper 电路。

* 开发中

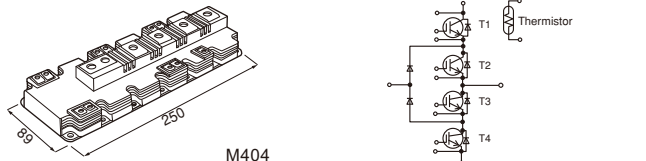
Advanced T-type NPC 3-level Modules 外形尺寸 [mm]

		Ic	600V		1200V		1700V	
			V series	RB-IGBT	V series	RB-IGBT	V series	RB-IGBT
3 Phase With NTC, Solder pins		50A			12MBI50VN-120-50	600V		
		75A			12MBI75VN-120-50	600V		
		100A			12MBI100VN-120-50	600V		
3 Phase With NTC, Press fit pins		50A			12MBI50VX-120-50	600V		
		75A			12MBI75VX-120-50	600V		
		100A			12MBI100VX-120-50	600V		
1 Phase		220A					4MBI220VG-170R2-50	1200V
		300A			4MBI300VG-120R-50	600V		
		340A			4MBI300VG-120R1-50	900V		
		340A			4MBI340VF-120R-50	600V		
		400A	4MBI400VG-060R-50	600V	4MBI400VF-120R-50*1	600V		
1 Phase		450A			4MBI450VB-120R1-50	900V	4MBI450VB-170R2-50	1200V
		600A			4MBI450VB-120R1-60	900V	4MBI450VB-170R2-60	1200V
		650A					4MBI600VB-170R2-50	1200V
		650A					4MBI600VB-170R2-60	1200V
		900A			4MBI650VB-120R1-50	900V		
					4MBI650VB-120R1-60	900V		
					4MBI900VB-120R1-50	900V		
					4MBI900VB-120RA-50	600V		
					4MBI900VB-120RA-60	600V		

注：RB-IGBT 为反向阻断 (Reverse-Blocking) IGBT 的缩写，是具备反向 (发射极与集电极间) 耐压的元件

*1 专用于 PCS 变频器

I-type NPC 3-level Module 外形尺寸 [mm]

		Ic	600V	1200V	1700V
			V series	V series	V series
1 Phase		600A		4MBI600VC-120-50	
				4MBI600VC-120-60	

Small IPM (Intelligent Power Modules)

Built-in protection functions

P-side fault status output (Alarm)
N-side fault status output (Alarm)
Under voltage protection (self shutdown)
Over current protection (self shutdown)
Overheating protection (self shutdown)
Temperature sensor output (Vtemp, out)

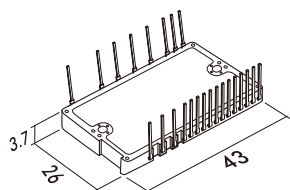
外形尺寸 [mm]

600 / 650V

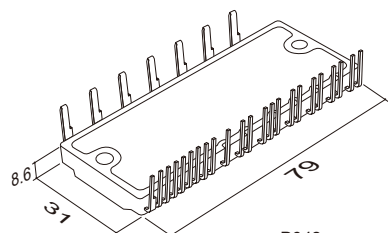
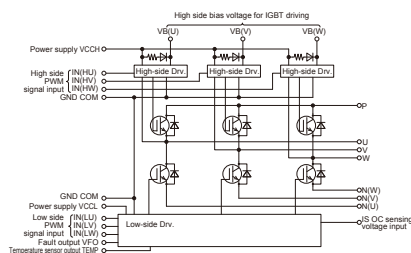


X series

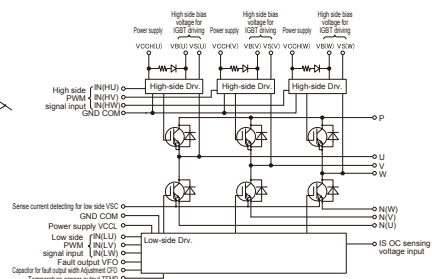
Small IPM with High Voltage
Driver-IC without
Brake-Chopper



P633A



P642

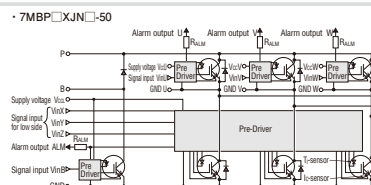
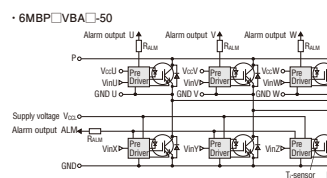
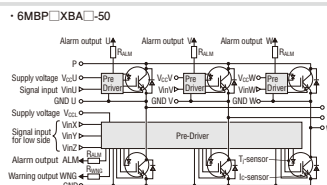
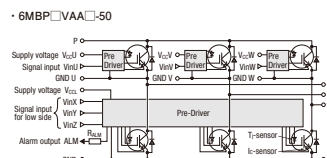
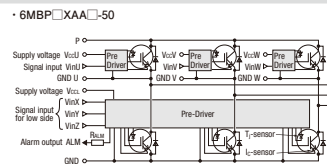
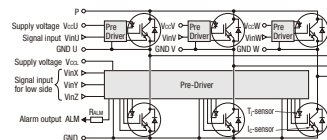


Ic							
15A	✓	—	✓	✓	✓	—	6MBP15XSD060-50
20A							6MBP20XSD060-50
30A							6MBP30XSD060-50
35A							6MBP35XSD060-50
15A							6MBP15XSF060-50
20A	✓	✓	✓	✓	✓	—	6MBP20XSF060-50
30A							6MBP30XSF060-50
35A							6MBP35XSF060-50
50A							6MBP50XTA065-50
75A	✓	—	✓	✓	✓	—	6MBP75XTA065-50
50A							6MBP50XTC065-50
75A	✓	✓	✓	✓	✓	—	6MBP75XTC065-50

Without Brake-Chopper

With Brake-Chopper

- P-side fault status output (Alarm)
- N-side fault status output (Alarm)
- Under voltage protection (self shutdown)
- Over current protection (self shutdown)
- Overheating protection (self shutdown)



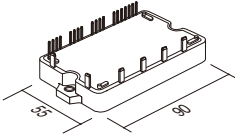
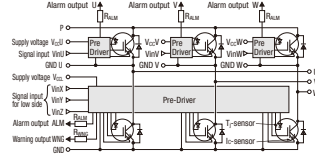
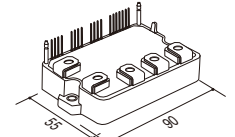
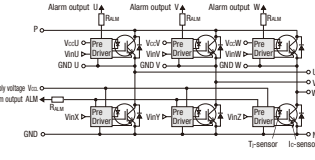
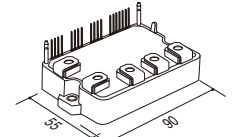
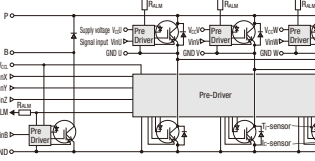
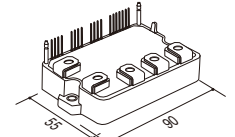
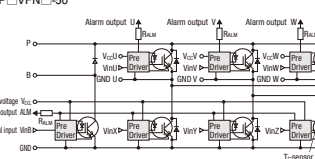
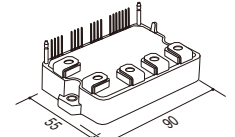
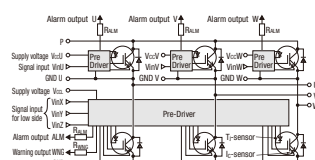
					650V		600V		1200V	
					Ic	X series	V series	X series	V series	
					10A			6MBP10XRHA120-50		
					20A	6MBP20XRHA065-50				
					30A	6MBP30XRHA065-50				
					10A				6MBP10VAA120-50	
					15A				6MBP15VAA120-50	
					20A		6MBP20VAA060-50			
					25A			6MBP25XAA120-50	6MBP25VAA120-50	
					30A		6MBP30VAA060-50			
					35A			6MBP35XAA120-50		
					50A	6MBP50XAA065-50	6MBP50VAA060-50			
					75A	6MBP75XAA065-50				
					25A			6MBP25XBA120-50	6MBP25VBA120-50	
					35A			6MBP35XBA120-50	6MBP35VBA120-50	
					50A	6MBP50XBA065-50	6MBP50VBA060-50	6MBP50XBA120-50	6MBP50VBA120-50	
					75A	6MBP75XBA065-50	6MBP75VBA060-50			
					100A	6MBP100XBA065-50				
					25A			7MBP25XJN120-50		
					35A			7MBP35XJN120-50		
					50A	7MBP50XJN065-50				
					75A	7MBP75XJN065-50				

Built-in protection functions

P-side fault status output (Alarm)
N-side fault status output (Alarm)
Under voltage protection (self shutdown)
Over current protection (self shutdown)
Overheating protection (self shutdown)

IPM (Intelligent Power Modules)

外形尺寸 [mm]

						Ic	650V		600V		1200V	
							X series	series 7G	V series	X series	series 7G	V series
Without Brake-Chopper		P636	• 6MBP□XFN□-50 	✓	✓	✓	✓	✓	25A	6MBP100XFN065-50	6MBP50XFN120-50	6MBP25VFN120-50
With Brake-Chopper		P638	• 6MBP□VFN□-50 	✓	✓	✓	✓	✓	25A	7MBP100XFN065-50	7MBP50XFN120-50	7MBP25VFN120-50
Without Brake-Chopper		P638	• 7MBP□XFN□-50 	✓	✓	✓	✓	✓	25A	6MBP50XGA065-50*	6MBP25XGA120-50*	6MBP25VFN120-50
Without Brake-Chopper		P638	• 7MBP□VFN□-50 	✓	✓	✓	✓	✓	25A	6MBP100XGN065-50	6MBP50XGN120-50	6MBP25VFN120-50
Without Brake-Chopper		P638	• 7MBP□XGN□-50 	✓	✓	✓	✓	✓	25A	6MBP150XGN065-50	6MBP75XGN120-50	6MBP25VFN120-50

* 开发中

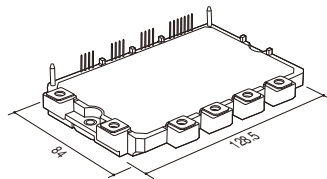
Built-in protection functions

P-side fault status output (Alarm)
N-side fault status output (Alarm)
Under voltage protection (self shutdown)
Over current protection (self shutdown)
Overheating protection (self shutdown)

IPM (Intelligent Power Modules)

外形尺寸 [mm]

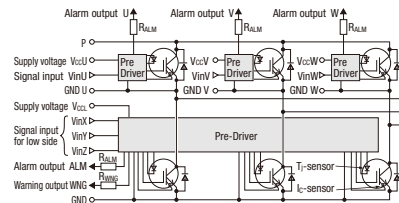
Without Brake-Chopper



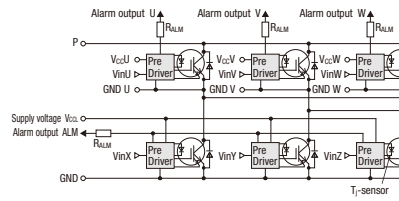
P630

With Brake-Chopper

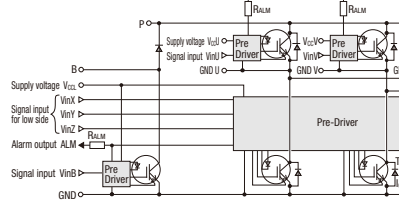
- 6MBP□XDA□-50
- 6MBP□XDN□-50



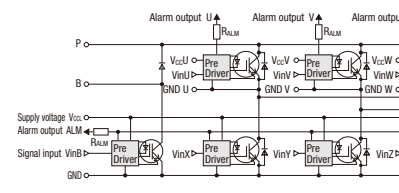
- 6MBP□VDA□-50
- 6MBP□VDN□-50



- 7MBP□XDA□-50
- 7MBP□XDN□-50



- 7MBP□VDA□-50
- 7MBP□VDN□-50



Ic	650V		600V		1200V	
	X series	V series	X series	V series	X series	V series
25A						6MBP25VDA120-50
35A						6MBP35VDA120-50
50A		6MBP50VDA060-50	6MBP50XDA120-50			6MBP50VDA120-50
						6MBP50VDN120-50
75A		6MBP75VDA060-50	6MBP75XDA120-50			6MBP75VDA120-50
			6MBP75XDN120-50			6MBP75VDN120-50
100A	6MBP100XDA065-50	6MBP100VDA060-50	6MBP100XDA120-50			6MBP100VDA120-50
		6MBP100VDN060-50	6MBP100XDN120-50			6MBP100VDN120-50
150A	6MBP150XDA065-50	6MBP150VDA060-50				
	6MBP150XDN065-50	6MBP150VDN060-50	6MBP150XDN120-50			
200A		6MBP200VDA060-50				
	6MBP200XDN065-50	6MBP200VDN060-50				
250A						
	6MBP250XDN065-50					
25A						7MBP25VDA120-50
35A						7MBP35VDA120-50
50A		7MBP50VDA060-50	7MBP50XDA120-50			7MBP50VDA120-50
						7MBP50VDN120-50
75A		7MBP75VDA060-50	7MBP75XDA120-50			7MBP75VDA120-50
			7MBP75XDN120-50			7MBP75VDN120-50
100A	7MBP100XDA065-50	7MBP100VDA060-50	7MBP100XDA120-50			7MBP100VDA120-50
		7MBP100VDN060-50	7MBP100XDN120-50			7MBP100VDN120-50
150A	7MBP150XDA065-50	7MBP150VDA060-50				
	7MBP150XDN065-50	7MBP150VDN060-50	7MBP150XDN120-50			
200A		7MBP200VDA060-50				
	7MBP200XDN065-50	7MBP200VDN060-50				
250A						
	7MBP250XDN065-50					

注：本页中带有 VDN,XDN 的型号使用低热阻封装。

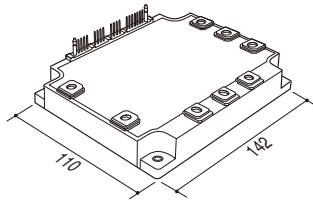
IPM (Intelligent Power Modules)

Built-in protection functions

P-side fault status output (Alarm)
N-side fault status output (Alarm)
Under voltage protection (self shutdown)
Over current protection (self shutdown)
Overheating protection (self shutdown)

外形尺寸 [mm]

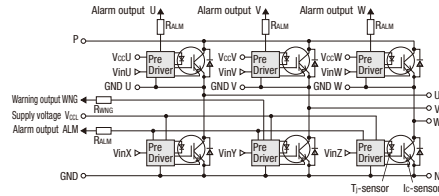
Without Brake-Chopper



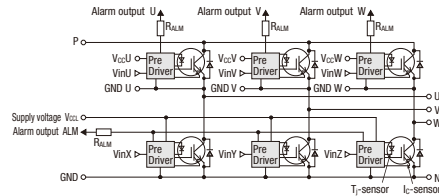
P631

With Brake-Chopper

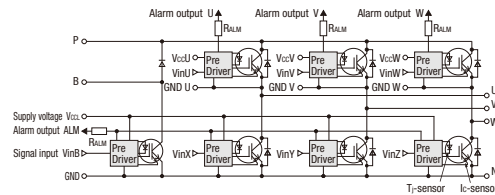
• 6MBP□XEN□-50



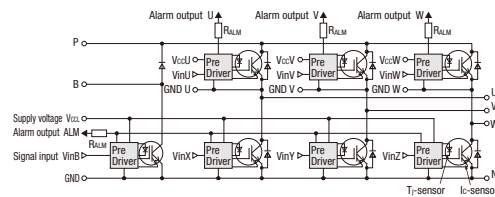
• 6MBP□VEA□-50



• 7MBP□XEN□-50



• 7MBP□VEA□-50



Ic

100A
150A
200A
300A
400A
450A

650V

X series

series 7G

600V

V series

1200V

X series

series 7G

V series

6MBP100XEN120-50
6MBP150XEN120-50
6MBP200XEN120-50
6MBP300XEN120-50

6MBP100VEA120-50
6MBP150VEA120-50
6MBP200VEA120-50
6MBP300VEA120-50

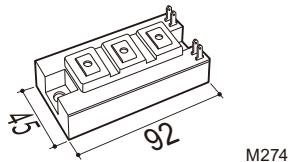
7MBP100XEN120-50
7MBP150XEN120-50
7MBP200XEN120-50
7MBP300XEN120-50

7MBP100VEA120-50
7MBP150VEA120-50
7MBP200VEA120-50
7MBP300VEA120-50

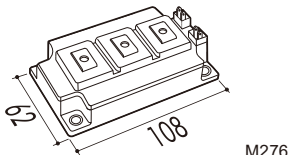
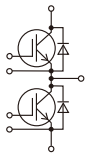
Hybrid SiC Modules

外形尺寸 [mm]

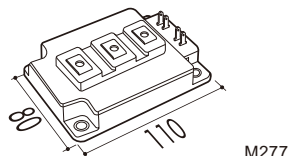
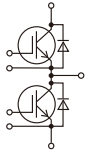
2-Pack



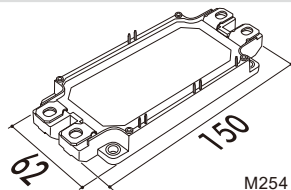
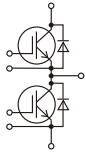
M274



M276



M277



M254

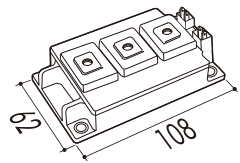


Ic

1200V		1700V
V series	VW series	V series
200A	2MSI200VAB-120-53	
200A	2MSI200VWAH-120-53	
300A	2MSI300VAH-120C-53	
	2MSI300VWAH-120-53	
400A		2MSI400VAE-170-53
300A	2MSI300VAN-120-53	
450A	2MSI450VAN-120-53	
600A	2MSI600VAN-120-53	

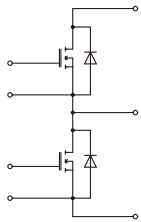
All-SiC Modules

2-Pack



M295

外形尺寸 [mm]

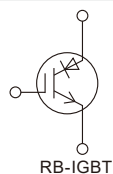
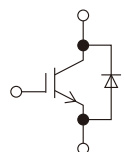
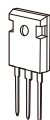
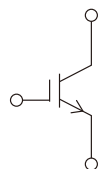


Ic

1200V 		1700V 
2G SiC-MOSFET Modules with 1G SiC-SBD		
200A		2CSI200DAHE170-50*
300A	2CSI300DAHE120-50*	2CSI300DAHE170-50*
400A		2CSI400DAHE170-50*
450A	2CSI450DAHE120-50*	
600A	2CSI600DAHE120-50*	

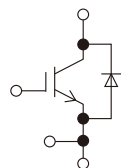
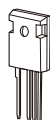
* 开发中

TO-247
(Type:B)



RB-IGBT

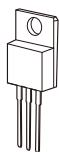
TO-247-4

[illegible]

	~10	~20	~30	~40	~50	~60	~70	~80	~90	~100	kHz
V/RB											
	High speed V										
		XS									
			High speed W								

Rectifier Diode

TO-220



I_F

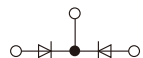
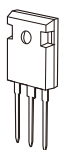
15A

FDRP15S60L

25A

FDRP25S60L

TO-247 (Type:B)



40A

50A

60A

70A

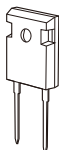
FDRW50C60L

FDRW70C60L

FDRW40C120J

FDRW60C120J

TO-247-2 (Type:A)



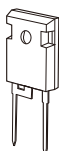
60A

75A

FDRW75T60L

FDRW60T65L

TO-247-2 (Type:B)



12A

15A

FDRW15S60L

20A

25A

FDRW25S60L

30A

35A

FDRW35S60L

FDRW12S120J

FDRW20S120J

FDRW30S120J

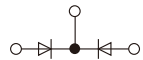
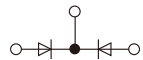
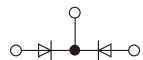
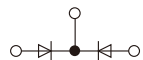
600V

650V

1200V

Ultra Fast Recovery Diodes

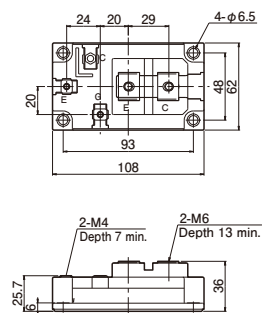
Soft Recovery
Fast Recovery Diodes



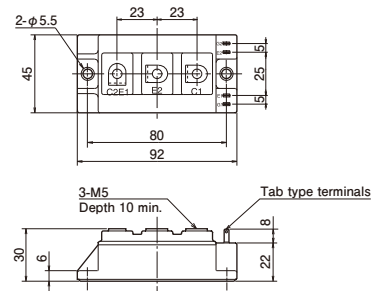
I/F	650V		1200V		
	SiC-SBD 2G	SiC-SBD 1G	SiC-SBD 2G	SiC-SBD 1G	
10A		FDCC10S65			
20A					
25A					
20A					
6A	FDC2PT06S65				
8A	FDC2PT08S65				
10A	FDC2PT10S65				
10A		FDCP10S65			
25A		FDCP25S65			
20A		FDCP20C65			
20A		FDCA20C65			
6A	FDC2AT06S65				
8A	FDC2AT08S65				
10A	FDC2AT10S65				FDCA10S65
18A					FDCA18S120
25A	FDCA25S65				
10A		FDCY10S65			
18A					FDCY18S120
25A		FDCY25S65			
20A		FDCY20C65			
36A					FDCY36C120
50A		FDCY50C65			
18A					FDCW18T120
20A					FDC2WT20S120
40A					FDC2WT40S120

外形图 mm

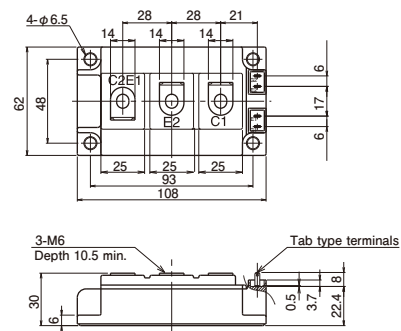
M153



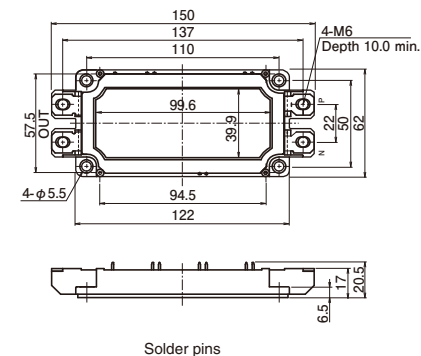
M233



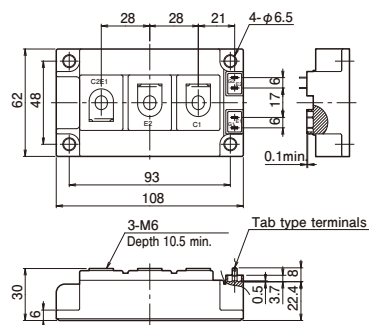
M249



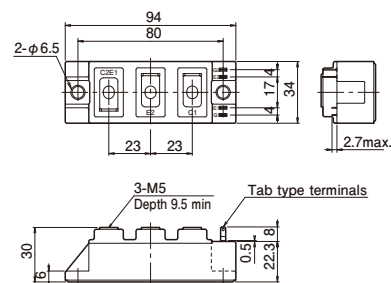
M254



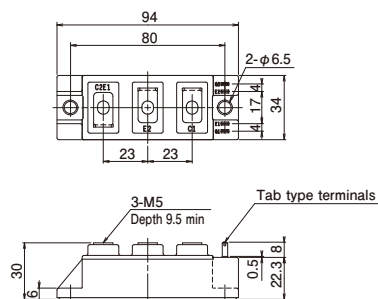
M259



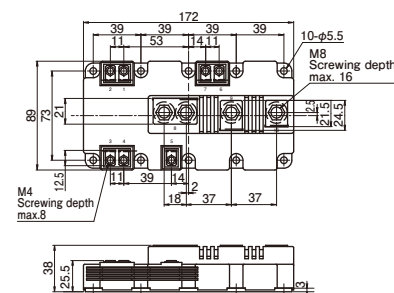
M262



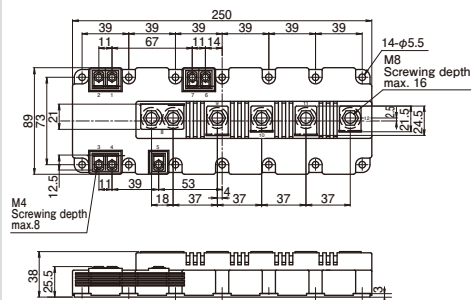
M263



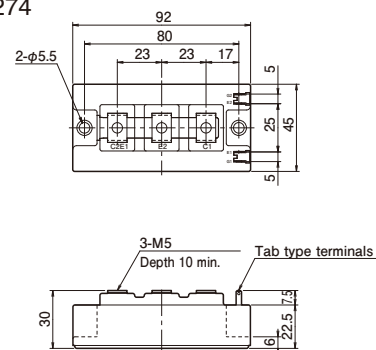
M271



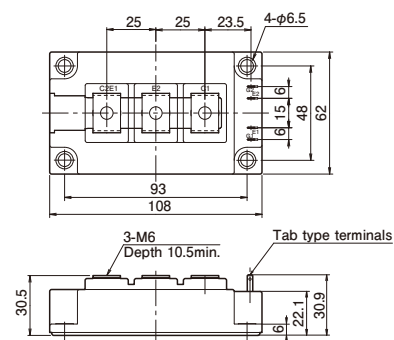
M272



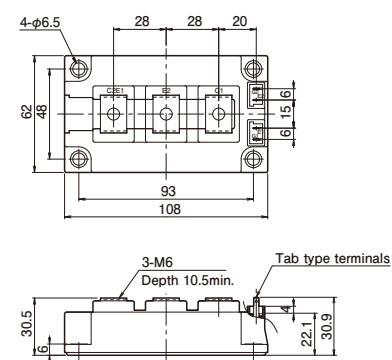
M274



M275

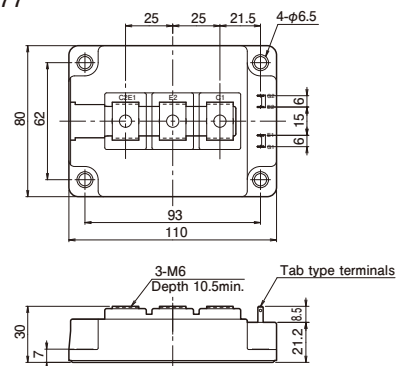


M276

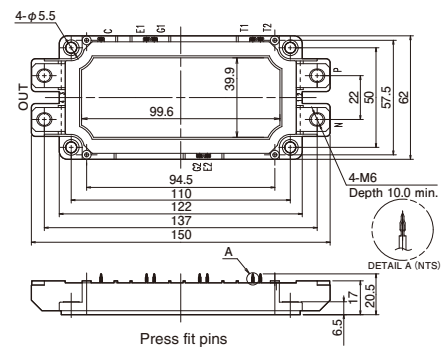


外形图 mm

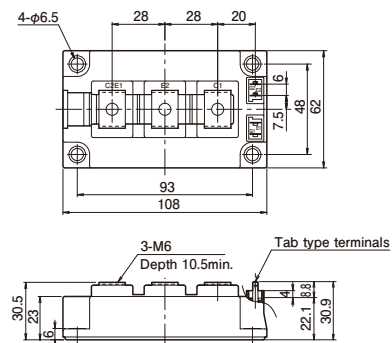
M277



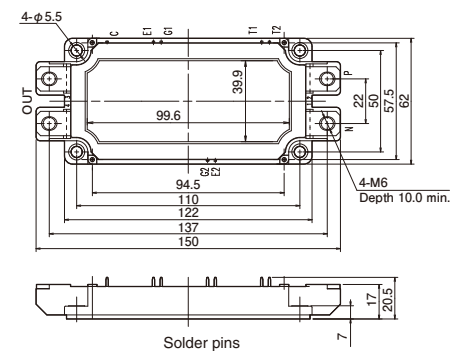
M282



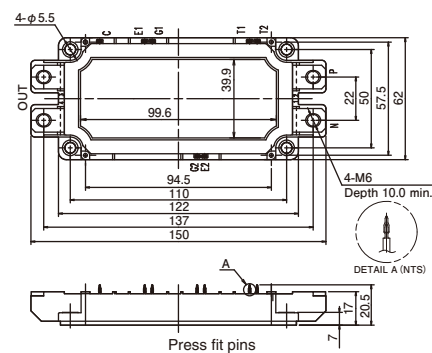
M283



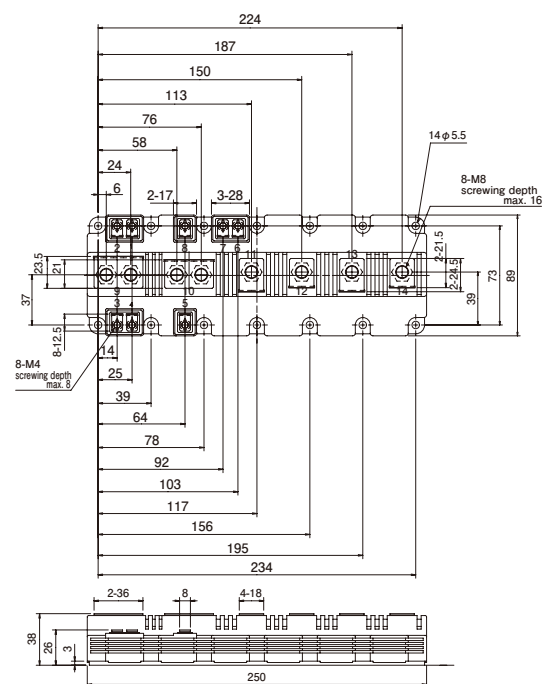
M285



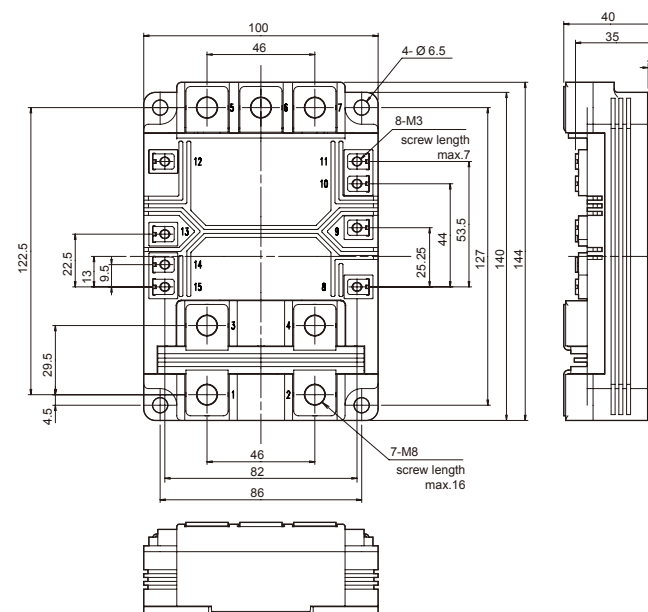
M286



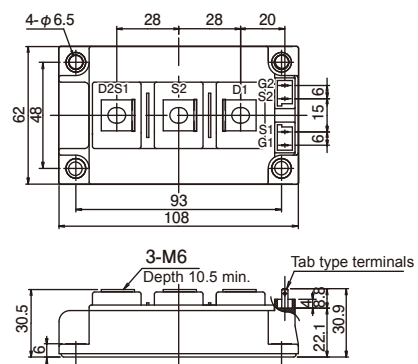
M291



M297

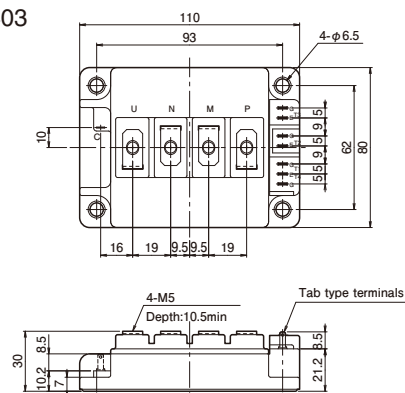


M295

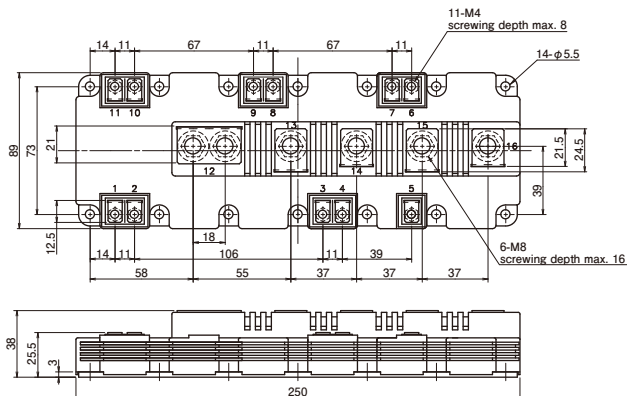


外形图 mm

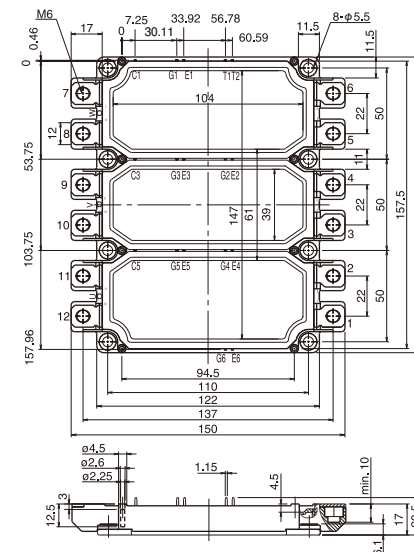
M403



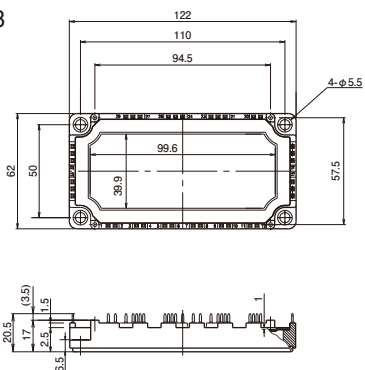
M404



M629

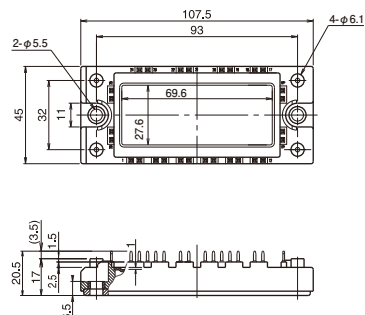


M633



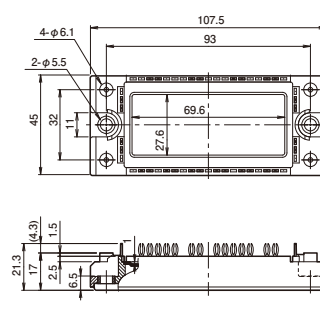
Solder pins

M636



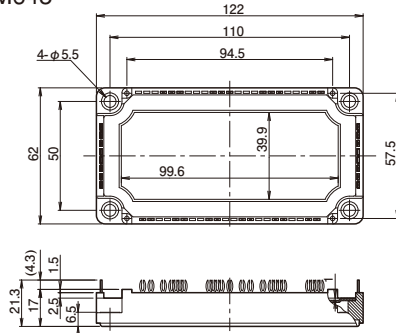
Solder pins

M647



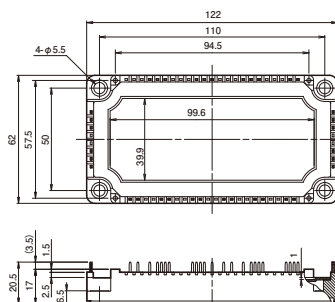
Press fit pins

M648



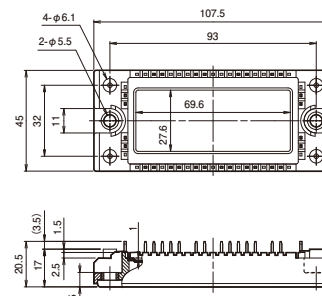
Press fit pins

M668



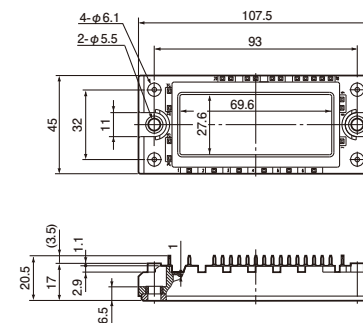
Solder pins

M669



Solder pins

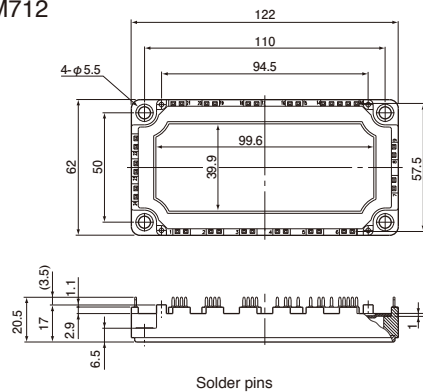
M711



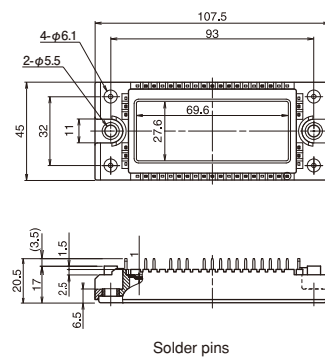
Solder pins

外形图 mm

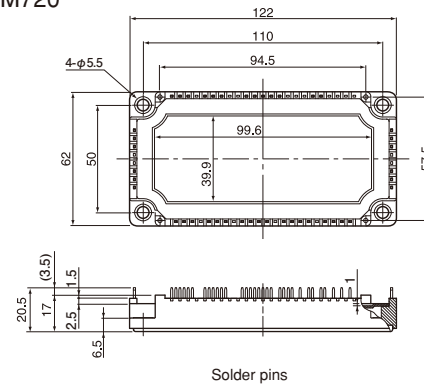
M712



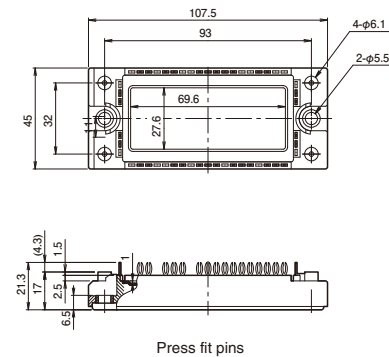
M719



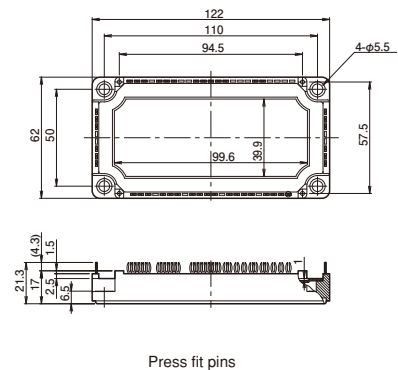
M720



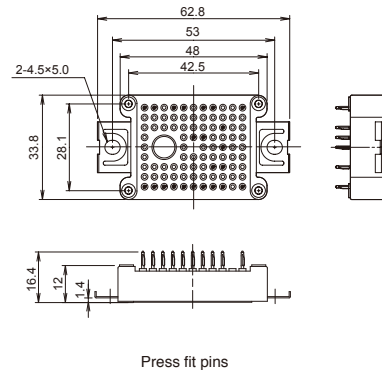
M721



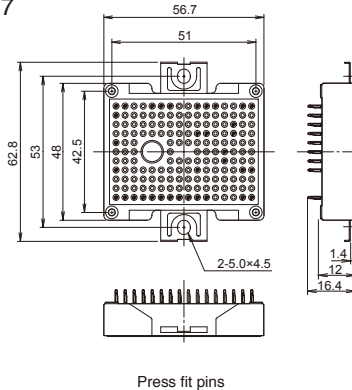
M722



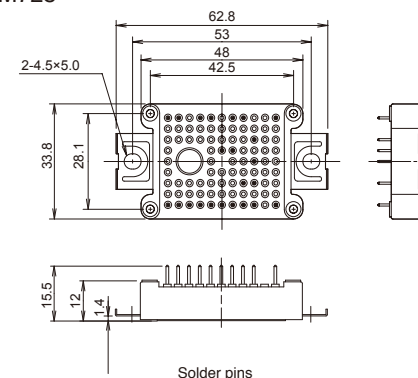
M726



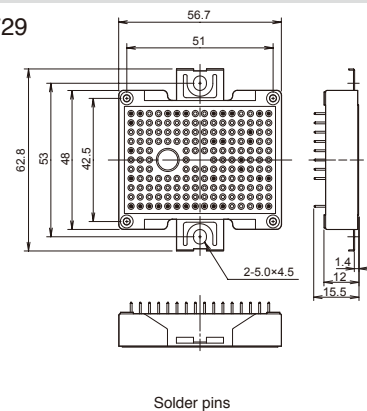
M727



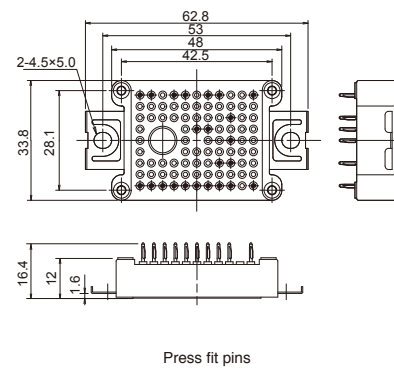
M728



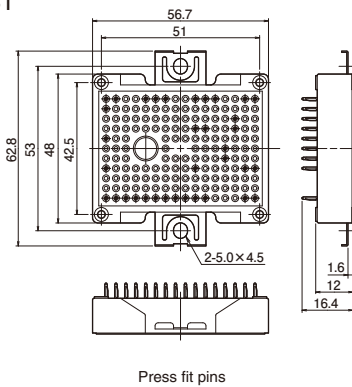
M729



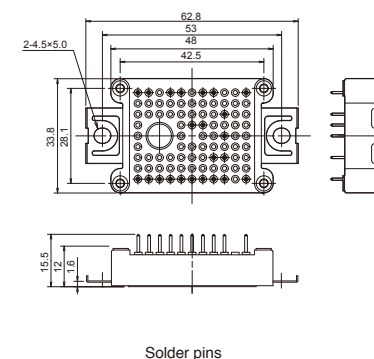
M730



M731



M732



M733

56.7
51
62.8
53
48
42.5
2-5.0 x 4.5
1.6
12
15.5

Solder pins

Technical drawing of the M1202 component, showing top and side views with dimensions.

Top View Dimensions:

- Overall width: 122
- Inner width: 110
- Inner width (excluding corner radii): 94.5
- Overall height: 62
- Inner height: 50
- Inner height (excluding corner radii): 49.6
- Corner radius: 4- ϕ 5.5
- Central slot width: 39.9
- Slot depth: 57.5

Side View Dimensions:

- Overall height: 21.3
- Top flange height: 1.7
- Top flange width: 4.3
- Top flange thickness: 1.5
- Top flange width (excluding corner radii): 2.5
- Top flange thickness (excluding corner radii): 6.5
- Bottom flange height: 1.1

Press fit pins

Technical drawing of the M1203 component, showing top and side views with dimensions.

Top View Dimensions:

- Overall width: 122
- Inner width: 110
- Width of the central rectangular area: 94.5
- Width of the central rectangular area (inner): 99.6
- Width of the central rectangular area (outer): 39.9
- Overall height: 57.5
- Height of the central rectangular area: 50
- Radius of the corner chamfers: 4- $\phi 5.5$

Side View Dimensions:

- Overall height: 20.5
- Height of the top flange: 1.5
- Height of the central body: 17
- Height of the bottom flange: 2.5
- Height of the bottom flange (inner): 9.5

Labels:

- Solder pins

[illegible][illegible]

P630

Technical drawing of the P630 power supply unit, showing top and side views with dimensions in millimeters.

Top View Dimensions:

- Overall width: 128.5
- Overall height: 84
- Internal width (excluding side rails): 119.5
- Internal height (excluding top/bottom rails): 38.65
- Distance between side rails: 107.4
- Distance between top/bottom rails: 36.4
- Mounting holes: 2- $\phi 2.5$ (top), 2- $\phi 4.5$ (right), 2 (bottom), 2 (left)
- Internal dimensions: 1, 5, 9, 13, 19, 22, 22, 22, 25, 116
- Labels: N, P, B, U, V, W

Side View Dimensions:

- Overall height: 14
- Mounting hole depth: 6-M4, Depth 8 min.
- Mounting hole diameter: $\phi 0.64$
- Internal height: 9
- Internal width: 125
- Internal height (excluding top/bottom rails): 10.9
- Internal height (excluding top/bottom rails): 3.0

P631

Technical drawing of the P631 component, showing top and side views with dimensions.

Top View Dimensions:

- Overall width: 142
- Overall height: 110
- Top edge dimensions: 1.5, 136, 121, 67.4, 1.5
- Right edge dimensions: 2- $\phi 2.5$, 4- $\phi 5.5$, 24.5, 23, 23
- Bottom edge dimensions: 1.5, 34.5, 26, 26
- Left edge dimensions: 4.5, 24.5, 96, 46, 0.5
- Internal dimensions: 1, 5, 9, 13, 19
- Internal features: P1, P2, P3, N1, N2, U, W

Side View Dimensions:

- Overall height: 38.5
- Top flange height: 27
- Mounting hole diameter: $\phi 0.64$
- Mounting hole depth: 8-M5, Depth 8.5 min.
- Base thickness: 9
- Internal features: I

Technical drawing of the P633A component, showing top and side views with dimensions.

Top View Dimensions:

- Overall width: 43
- Overall height: 26
- Pin pitch (top): $18 \times 1.778 (=32.004)$
- Pin pitch (bottom): $14 \times 2.54 (=35.56)$
- Pin height (right side): 3.2
- Internal width (right side): 1.6
- Internal height (right side): 4.2

Side View Dimensions:

- Pin height: 14

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P638

Technical drawing of the P638 component, showing top, side, and front views with dimensions.

Top View Dimensions:

- Overall width: 90
- Overall height: 55
- Internal width (excluding side tabs): 80
- Internal height (excluding bottom tabs): 33.66
- Side tab width: 2-04.5
- Bottom tab width: 2-04.5
- Distance from left edge to first side tab: 14.4
- Distance from left edge to first bottom tab: 24
- Distance between side tabs: 17.4
- Distance between bottom tabs: 25.55
- Distance from left edge to first bottom tab (internal): 8.15
- Distance between bottom tabs (internal): 28.15, 19, 19

Side View Dimensions:

- Overall height: 28.4
- Top flange width: 9
- Top flange thickness: 7
- Bottom flange width: 22

Front View Dimensions:

- Overall width: 64
- Overall height: 16
- Bottom flange width: 6
- Bottom flange thickness: 4

Other Features:

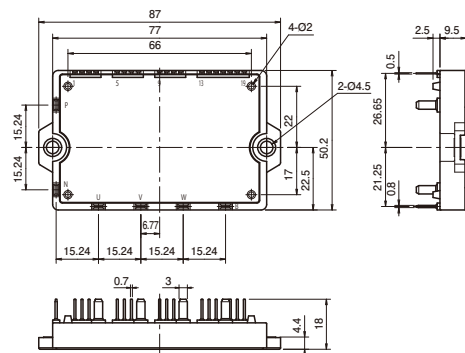
- Mounting holes labeled P, Q, R, S, T, U, V, W.
- Mounting holes labeled 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
- Mounting holes labeled S-M4.
- Depth 7.5 min.

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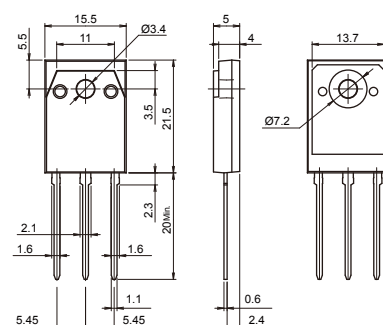
36

外形图 mm

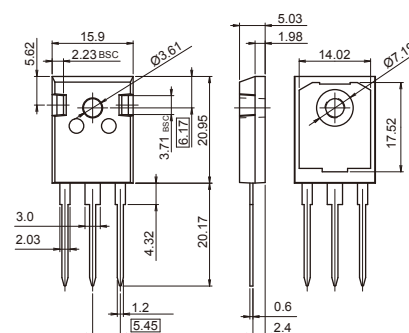
P644



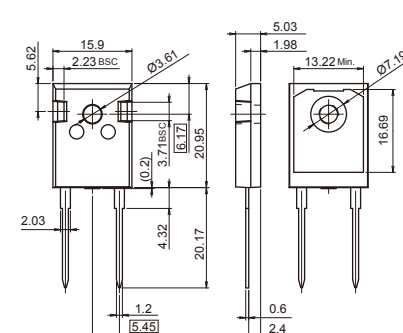
TO-247 (Type:A)



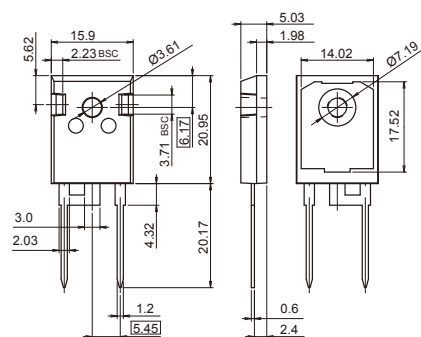
TO-247 (Type:B)



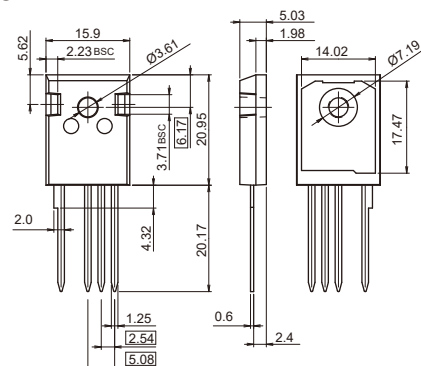
TO-247-2 (Type:A)



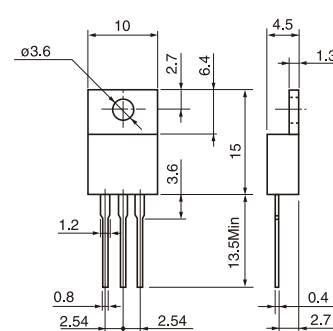
TO-247-2 (Type:B)



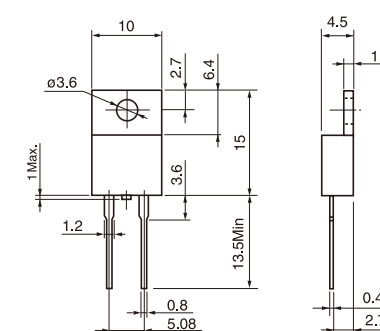
TO-247-4



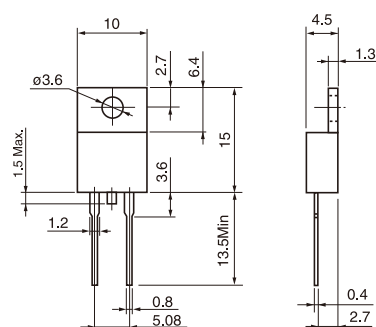
TO-220



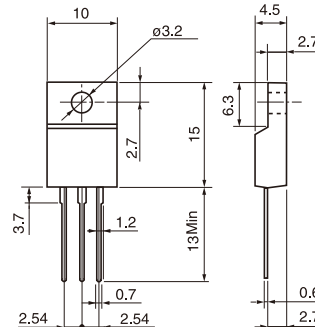
TO-220-2 (Type: A)



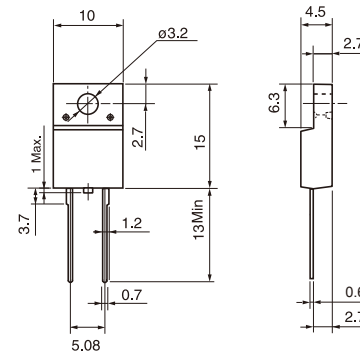
TO-220-2 (Type: B)



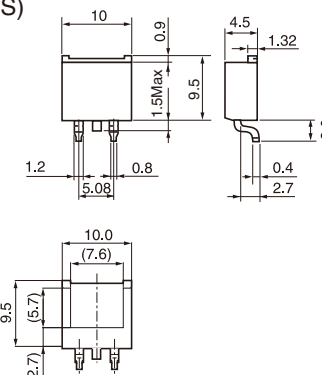
TO-220F



TO-220F-2



T-Pack(S)



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