

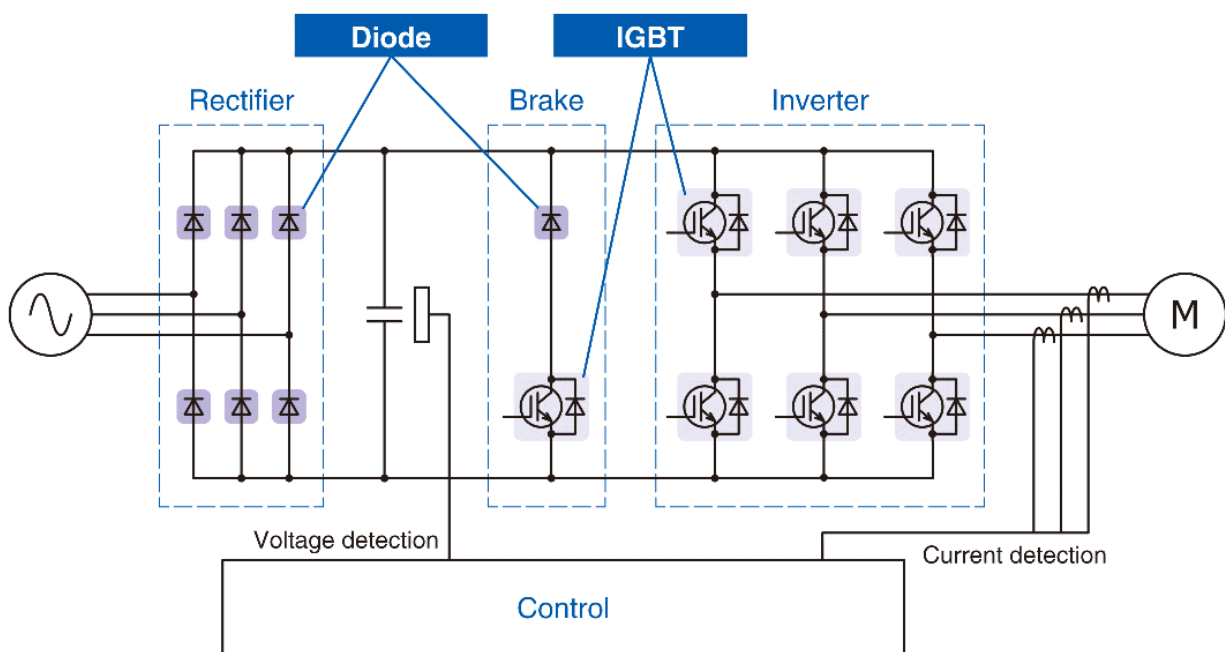
Reach the PINNACLE of Performance and Reliability

Inverters

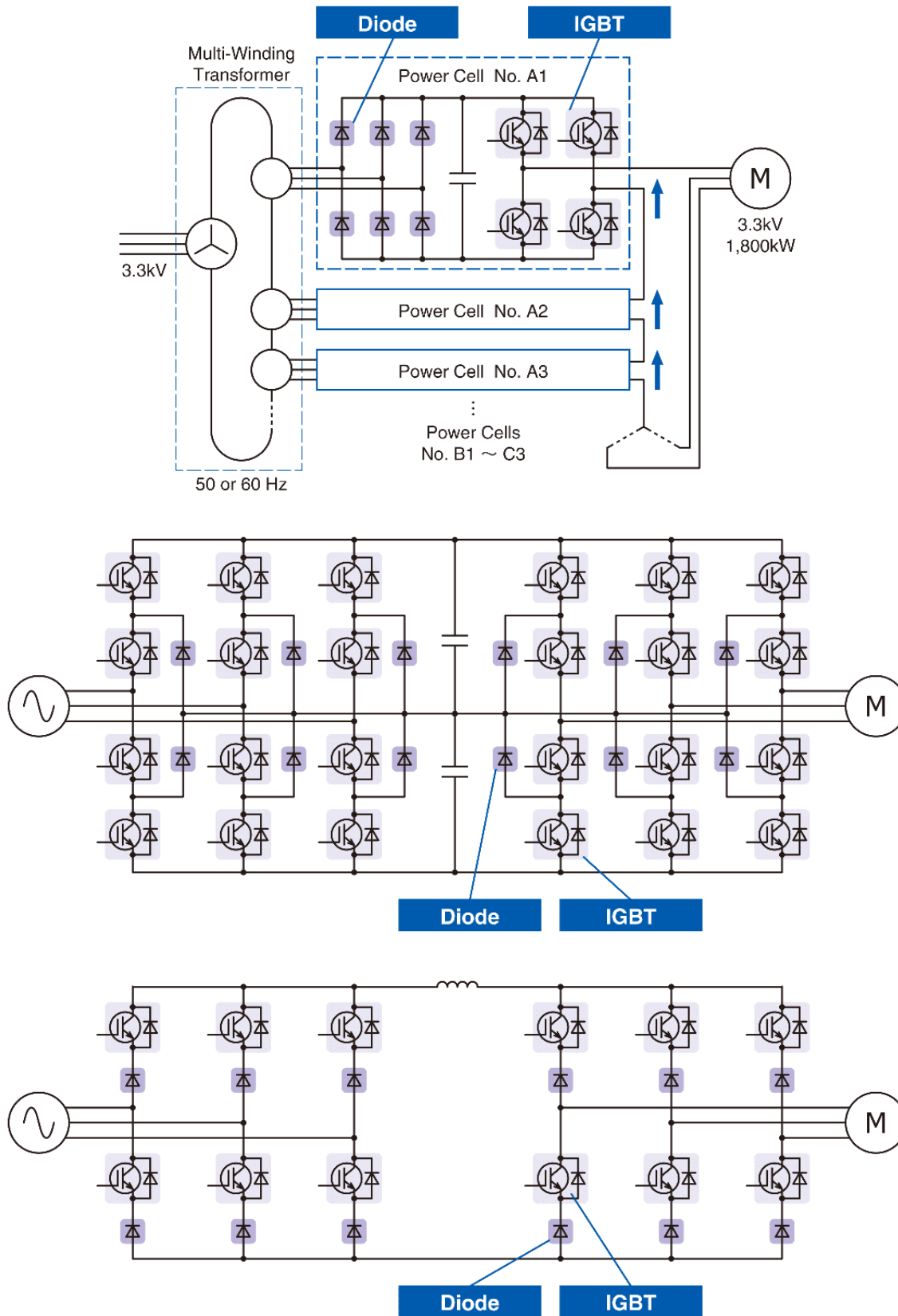
General-purpose inverters are power conversion systems used to support variable-speed operation of motors, conveyors, automation equipment, fans, pumps & etc. General-purpose inverters have made advancements that include higher precision, enhanced control functions & etc. through the use of vector control and other innovative control techniques. Innovations in power semiconductors and other improvements have enabled smaller equipment sizes and lower system costs. The following provides information on Fuji Electric semiconductors that are ideal for general-purpose inverters.

Medium-Voltage inverters are driving 3-phase AC .3kV, 6.5kV, & 10.2kV high-voltage motors in iron and steel plants, textile plants and paper mills. Fuji Electric has developed a series of 1.7 kV and 3.3 kV high voltage IGBT modules for use with medium-voltage inverters.

Circuit Configuration of General-Purpose Inverters



Circuit Configuration of Medium-Voltage Inverters



Inverters

IGBT Module 600V Device Suitable for General-Purpose Inverters

Inverters			IGBT Modules	IGBT Model Type	
Rated Power	Rated Capacity	Output Current	Device Rating	X Series	
HP	kVA	Arms		PIM	2-pack x 3p
1.7	1.7	5	600V/10A or 650V/10A	7MBR10XKC065-50 7MBR10XKA065-50	-
2.4	2.4	7	600V/15A or 650V/15A	7MBR15XKC065-50 7MBR15XKA065-50	-
3.5	3.5	10	600V/20A or 650V/20A	7MBR20XKC065-50 7MBR20XKA065-50	-
4.8	4.8	14	600V/30A or 650V/30A	7MBR30XKC065-50 7MBR30XKA065-50	-
7.8	7.8	23	600V/50A or 650V/50A	7MBR50XKB065-50 7MBR50XKD065-50 7MBR50XPA065-50 7MBR50XYA065-50 7MBR50XMA065-50 7MBR50XWA065-50	-
11	11	33	600V/75A or 650V/75A	7MBR75XMA065-50 7MBR75XNA065-50 7MBR75XPA065-50 7MBR75XWA065-50 7MBR75XXA065-50 7MBR75XYA065-50	-
14	14	41	600V/100A or 650V/100A	7MBR100XNA065-50 7MBR100XPE065-50 7MBR100XRA065-50 7MBR100XXA065-50 7MBR100XYE065-50 7MBR100XZA065-50	-
20	20	57	600V/150A or 650V/150A	7MBR150XRA065-50 7MBR150XRE065-50 7MBR150XXA065-50 7MBR150XZA065-50	2MBI150XAA065-50
26	26	76	600V/200A or 650V/200A	-	2MBI200XAA065-50
52	52	150	600V/300A or 650V/300A	-	2MBI300XBE065-50
73	73	212	600V/400A or 650V/400A	-	2MBI400XBE065-50 2MBI400XDE065-50
109	109	315	600V/600A or 650V/600A	-	2MBI600XDE065-50 2MBI600XEE065-50

IGBT Module 1200V Device Suitable for General-Purpose Inverters

Inverters			IGBT Modules	IGBT Model Type		
Rated Power	Rated Capacity	Output Current		Device Rating	X Series	
HP	kVA	Arms			PIM	6-pack
3.9	3.9	5.6	1200V/10A	7MBR10XKC120-50 7MBR10XKA120-50	-	-
5.0	5.0	7.2	1200V/15A	7MBR15XKC120-50 7MBR15XKD120-50 7MBR15XKA120-50 7MBR15XKB120-50	-	-
6.4	6.4	9.3	1200V/25A	7MBR25XKD120-50 7MBR25XKB120-50	-	-
9.0	9.0	13	1200V/35A	7MBR35XKD120-50 7MBR35XKB120-50 7MBR35XPA120-50 7MBR35XMA120-50 7MBR35XWA120-50 7MBR35XYA120-50	-	-
11	11	16.5	1200V/50A	7MBR50XMA120-50 7MBR50XPA120-50 7MBR50XPE120-50 7MBR50XRKB120-50 7MBR50XRKD120-50 7MBR50XWA120-50 7MBR50XYA120-50	-	-
22	22	32	1200V/75A	7MBR75XRA120-50 7MBR75XRE120-50 7MBR75XPE120-50 7MBR75XNA120-50 7MBR75XME120-50 7MBR75XXA120-50 7MBR75XYE120-50	-	-
32	32	46	1200V/100A	7MBR100XRA120-50 7MBR100XRE120-50 7MBR100XNA120-50 7MBR100XXA120-50 7MBR100XZA120-50	6MBI100XAE120-50 6MBI100XBA120-50 6MBI100XXA120-50	2MBI100XAA120-50
52	52	75	1200V/150A or 1200V/180A	7MBR150XRE120-50 7MBR150XNE120-50 7MBR150XXE120-50 7MBR150XZE120-50	6MBI150XBA120-50 6MBI150XXA120-50	2MBI150XAA120-50
61	61	88	1200V/200A	-	6MBI200XBA120-50 6MBI200XBE120-50 6MBI200XXA120-50 6MBI200XXE120-50	2MBI200XAA120-50
73	73	106	1200V/300A	-	-	2MBI300XBE120-50 2MBI300XHA120-50
100	100	145	1200V/400A or 1200V/450A	-	-	2MBI400XDE120-50 2MBI450XEE120-50 2MBI450XHA120-50 2MBI450XNA120-50 2MBI450XNB120-50
215	215	310	1200V/600A	-	-	2MBI600XDE120-50 2MBI600XHA120-50 2MBI600XEE120-50

IGBT Module 1700V Device Suitable for General-Purpose Inverters

Inverters			IGBT Modules	IGBT Model Type
Rated Power	Rated Capacity	Output Current	Device Rating	X Series
HP	kVA	Arms		2-pack x 3p
41	41	34	1700V/75A	2MBI75XAA170-50
51	51	43	1700V/100A	2MBI100XAA170-50
63	63	53	1700V/150A	2MBI150XHA170-50 2MBI150XAA170-50
79	79	66	1700V/200A	2MBI200XHA170-50
88	88	74	1700V/225A	-
125	125	105	1700V/300A	2MBI300XHA170-50
221	221	185	1700V/300A	2MBI300XEE170-50
269	269	225	1700V/400A	2MBI400XEE170-50 2MBI400XHA170-50

IGBT Module Suitable for Medium-Voltage Inverters

Inverters			IGBT Modules		IGBT Model Type
AC Output Voltage	Rated Power	Rated Capacity	Serial	Device Rating	X Series
kV	HP	kVA			
3.3	350	350	4	1700V/100A	2MBI100XAA170-50
	500	500	4	1700V/150A	2MBI150XAA170-50 2MBI150XHA170-50
	700	700	1700V/200A	1700V/200A	2MBI200XHA170-50
	1050	1050	4	1700V/300A	2MBI300XNA170-50 2MBI300XNB170-50
	1350	1350	4	1700V/225A	2MBI450XNA170-50 2MBI450XNB170-50
	1600	1600	4	1700V/300A×2p	2MBI300XNA170-50 2MBI300XNB170-50
6.6	720	720	8	1700V/100A	2MBI100XAA170-50
	1090	1090	8	1700V/150A	2MBI150XAA170-50 2MBI150XHA170-50
	1450	1450	8	1700V/200A	2MBI200XHA170-50
	2180	2180	8	1700V/300A	2MBI300XNA170-50 2MBI300XNB170-50
	2900	2900	8	1700V/450A	2MBI450XNA170-50 2MBI450XNB170-50
	3490	3490	8	1700V/300A×2p	2MBI300XNA170-50 2MBI300XNB170-50
10	1200	1200	12	1700V/100A	2MBI100XAA170-50
	1800	1800	12	1700V/150A	2MBI150XHA170-50 2MBI150XAA170-50
	2400	2400	12	1700V/200A	2MBI200XHA170-50
	3600	3600	12	1700V/300A	2MBI300XNA170-50 2MBI300XNB170-50
	4800	4800	12	1700V/450A	2MBI450XNA170-50 2MBI450XNB170-50
	5800	5800	12	1700V/300A×2p	2MBI300XNA170-50 2MBI300XNB170-50