TOSHIBA

New Product Guide

Compact IGBT Modules & Compact IPM

NEW PRODUCT GUIDE

Compact IGBT Modules

Features

- The new package technology achieved small and compact size.
- The new generation IGBT and FRD chips achieved low loss and low emission noise.
- Fault-signal output circuit (short circuit and overtemperature) is included.
- UL recognized: File No. E87989 (Package A, B', C, D type)

Applications

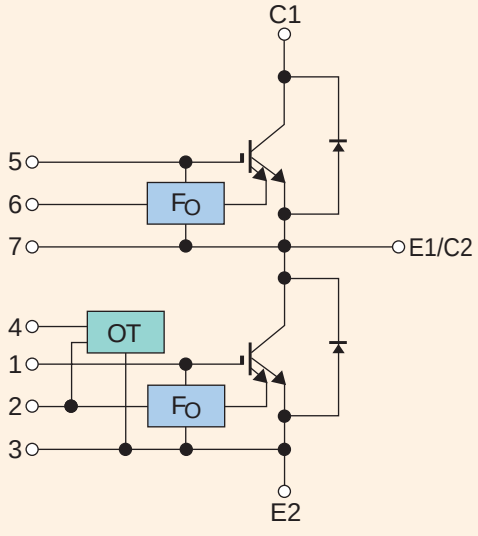
- Inverters
- Servo
- UPS
- Elevators, etc.

■Compact IGBT Series

Item	Rating		Circuit	Package	Product No.	Function						
	Voltage	Current				OC	SC	UV	OT	Tc-M	H-Fo	L-Fo
IGBT	600 V	150 A	7 in 1	A	MG150J7KS60	–	–	–	–	●	–	–
		200 A	6 in 1	B'	MG200J6ES60	–	–	–	–	●	–	–
		400 A	2 in 1	D	MG400J2YS60A	–	–	–	(#)	–	●	●
		600 A			MG600J2YS60A	–	–	–	(#)	–	●	●
		800 A		E	*MG800J2YS50A	–	–	–	–	●	–	–
	1200 V	200 A	2 in 1	D	MG200Q2YS60A	–	–	–	(#)	–	●	●
		300 A			MG300Q2YS60A	–	–	–	(#)	–	●	●
		400 A			MG400Q2YS60A	–	–	–	(#)	–	●	●
		600 A		E	*MG600Q2YS60A	–	–	–	–	●	–	–
	1700 V	400 A	2 in 1	E	*MG400V2YS60A	–	–	–	–	●	–	–

OC : Overcurrent protection
OT : Overtemperature protection
L-Fo : Low-side error output
SC : Short-circuit protection
Tc-M: Cu-base temperature detector
(#):Low-side error output without protection
UV : Low supply voltage protection
H-Fo : High-side error output
*: Under approval for UL recognition

■Equivalent Circuit (2 in 1 & Package D type)



Signal terminal

1. G (L) 2. F_O (L) 3. E (L) 4. V_D
5. G (H) 6. F_O (H) 7. E (H) 8. Open

Compact IPM

Features

- The new package technology achieved small and compact size.
- The new generation IGBT and FRD chips achieved low loss and low emission noise.
- 50 A to 600 A for 600 V rating , 50 A to 400 A for 1200 V rating.
- UL recognized: File No. E87989

Applications

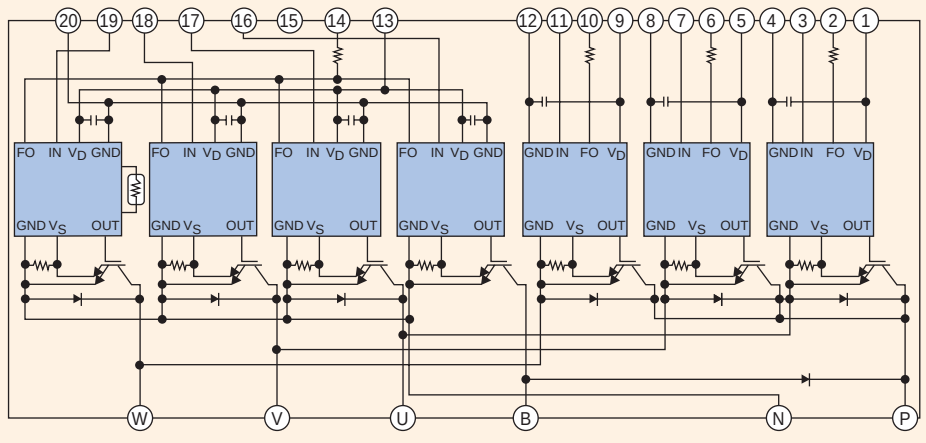
- Inverters
- Servo
- UPS
- Elevators, etc.

■Compact IPM Series

Item	Rating		Circuit	Package	Product No.	Function						
	Voltage	Current				OC	SC	UV	OT	Tc-M	H-Fo	L-Fo
IPM	600 V	50 A	7 in 1	A	MIG50J7CSB1W	●	●	●	●	–	●	●
		75 A			MIG75J7CSB1W	●	●	●	●	–	●	●
		100 A			MIG100J7CSB1W	●	●	●	●	–	●	●
		150 A			MIG150J7CSB1W	●	●	●	●	–	●	●
		200 A	6 in 1	B	MIG200J6CMB1W	●	●	●	●	–	●	●
		300 A	2 in 1	C	MIG300J2CSB1W	●	●	●	●	–	●	●
		400 A			MIG400J2CSB1W	●	●	●	●	–	●	●
		600 A		D	MIG600J2CMB1W	●	●	●	●	–	●	●
	1200 V	50 A	7 in 1	A	MIG50Q7CSB1X	●	●	●	●	–	●	●
		75 A			MIG75Q7CSB1X	●	●	●	●	–	●	●
		100 A	6 in 1	B	MIG100Q6CMB1X	●	●	●	●	–	●	●
		150 A			MIG150Q6CMB1X	●	●	●	●	–	●	●
		200 A	2 in 1	C	MIG200Q2CSB1X	●	●	●	●	–	●	●
		300 A		D	MIG300Q2CMB1X	●	●	●	●	–	●	●
		400 A			MIG400Q2CMB1X	●	●	●	●	–	●	●

OC : Overcurrent protection
OT : Overtemperature protection
L-Fo : Low-side error output
SC : Short-circuit protection
Tc-M: Cu-Base temperature detector
UV : Low supply voltage protection
H-Fo : High-side error output

■Equivalent Circuit (7 in 1 type)

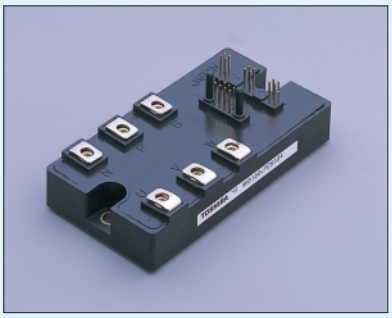


Signal terminal

1. V_D (U)	2. FO (U)	3. IN (U)
4. GND (U)	5. V_D (V)	6. FO (V)
7. IN (V)	8. GND (V)	9. V_D (W)
10. FO (W)	11. IN (W)	12. GND (W)
13. V_D (L)	14. FO (L)	15. Open
16. IN (B)	17. IN (X)	18. IN (Y)
19. IN (Z)	20.GND (L)	

Package Dimensions

Package type A



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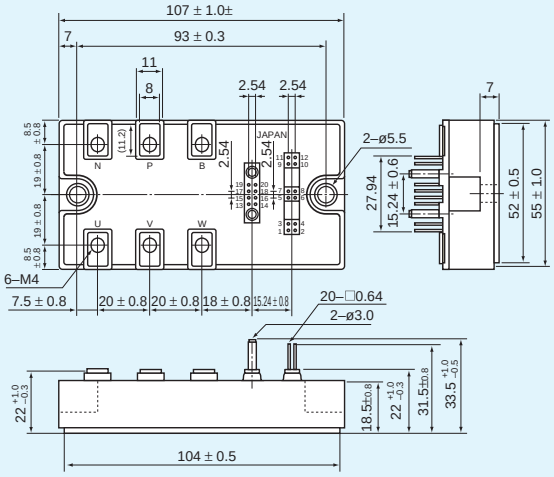

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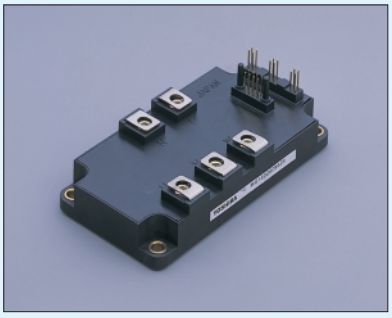

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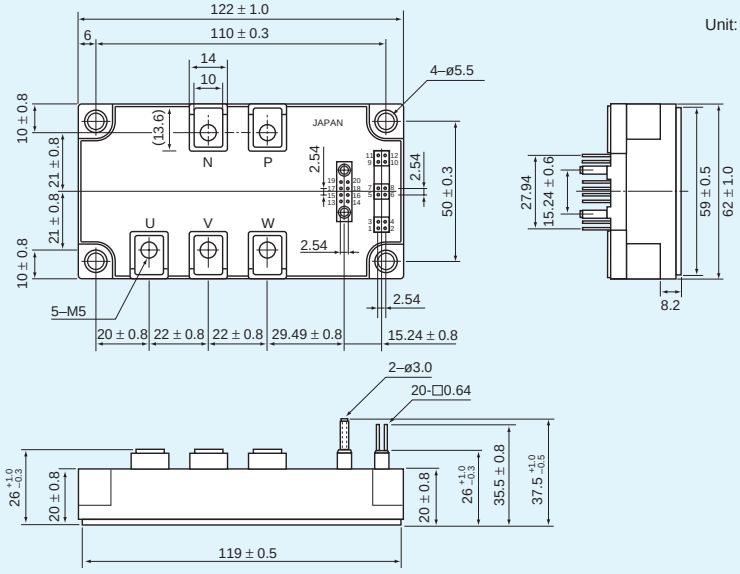
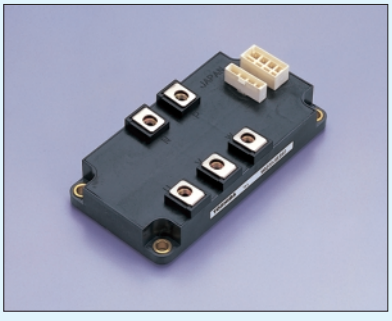


Package type B'



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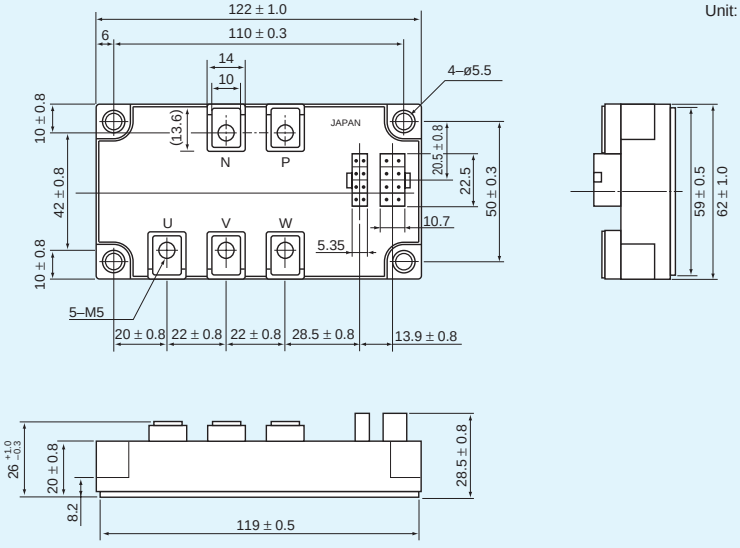
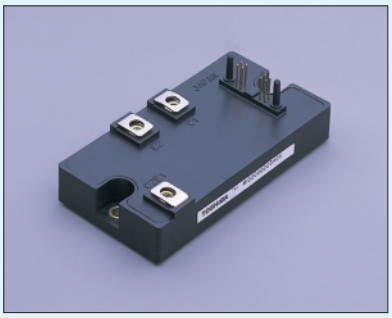


Package Dimensions

Package type C



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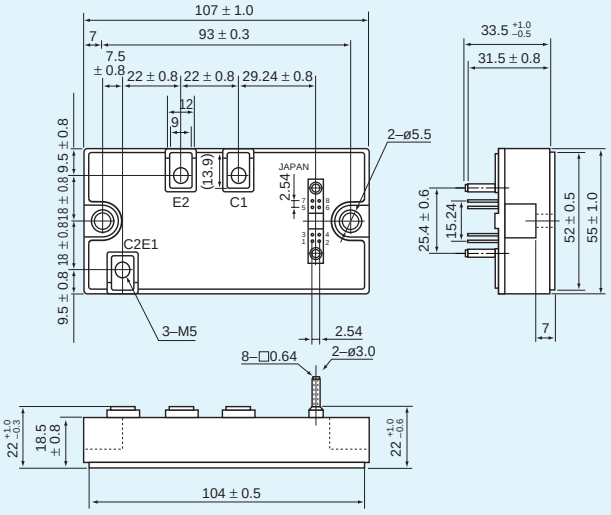
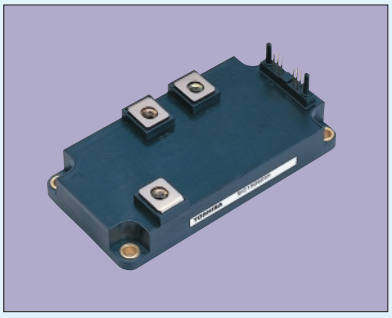


Package type D



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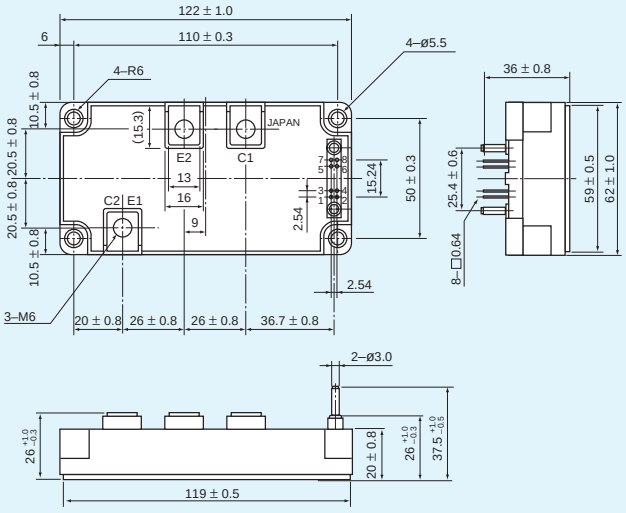
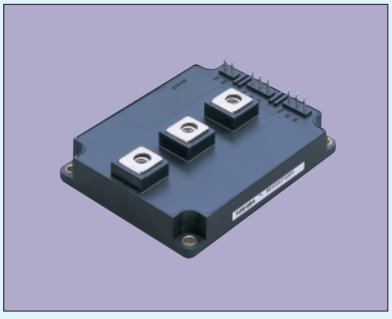


Package type E



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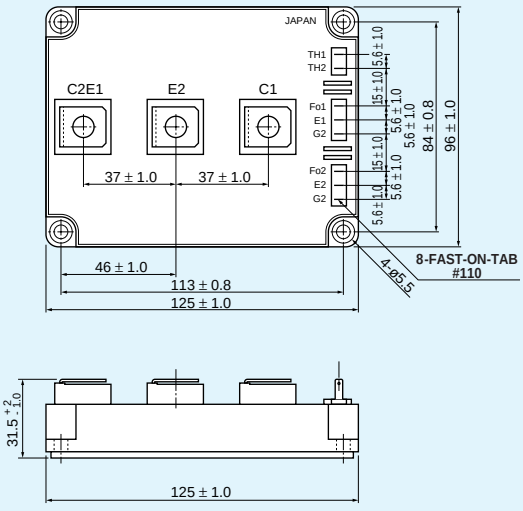

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(As of August, 2001)

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TOSHIBA

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