

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

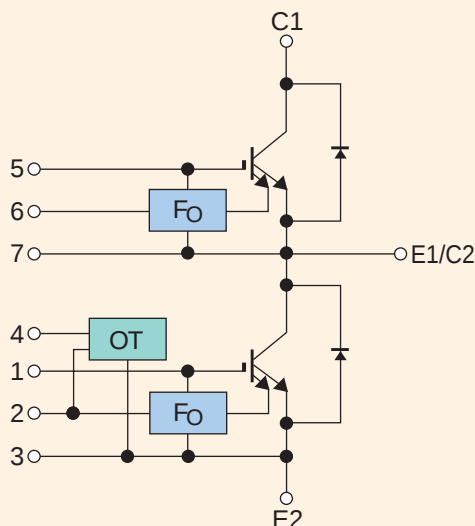
(#):Low-side error output without protection

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. FO (L) | 3. E (L) | 4. VD |
| 5. G (H) | 6. FO (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			MIG300J2CSB1W	●	●	●	●	—	●	●
		400 A	2 in 1	C	MIG400J2CSB1W	●	●	●	●	—	●	●
		600 A			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			MIG300Q2CMB1X	●	●	●	●	—	●	●
		400 A		D	MIG400Q2CMB1X	●	●	●	●	—	●	●

OC : Overcurrent protection

SC : Short-circuit protection

UV : Low supply voltage protection

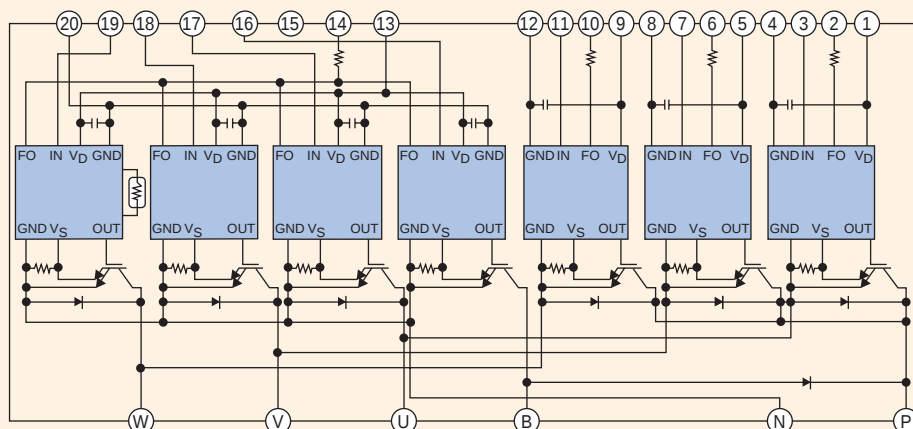
OT : Overtemperature protection

Tc-M: Cu-Base temperature detector

H-Fo : High-side error output

L-Fo : Low-side error output

■ Equivalent Circuit (7 in 1 type)

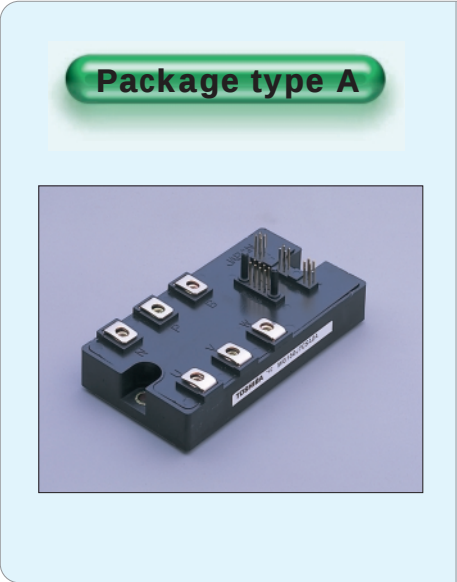
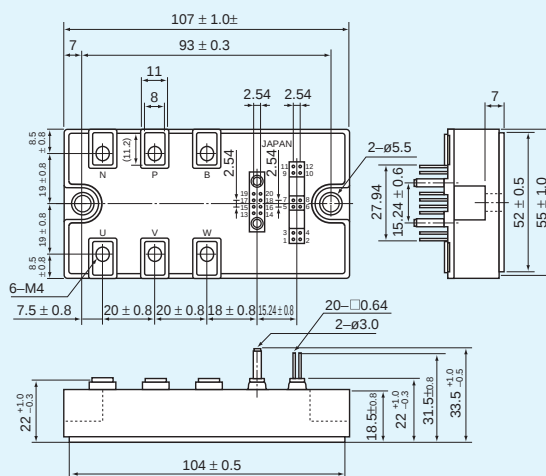


Signal terminal

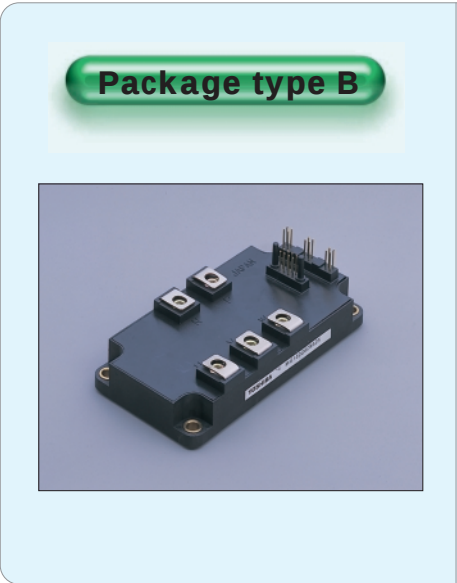
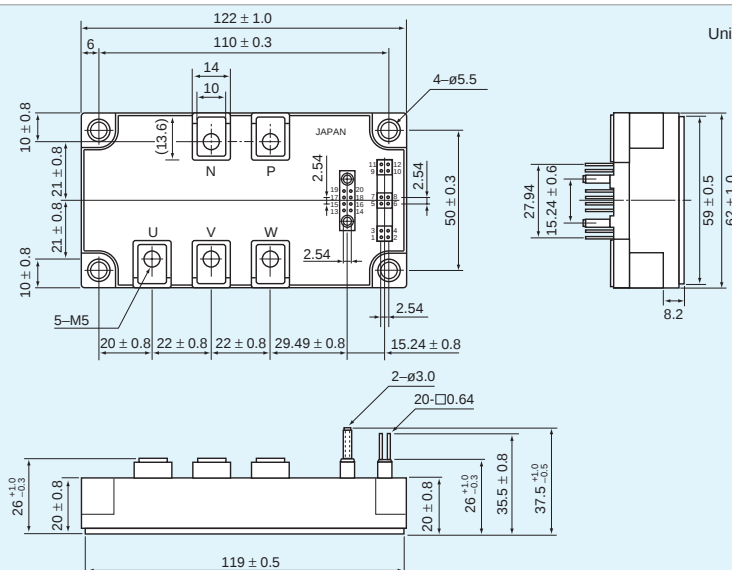
- | | | |
|---------------|--------------|--------------|
| 1. V_D (U) | 2. FO (U) | 3. IN (U) |
| 4. GND (U) | 5. V_D (V) | 6. FO (V) |
| 7. IN (V) | 8. GND (V) | 9. V_D (W) |
| 10. FO (W) | 11. IN (W) | 12. GND (W) |
| 13. V_D (L) | 14. FO (L) | 15. Open |
| 16. IN (B) | 17. IN (X) | 18. IN (Y) |
|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

Package Dimensions

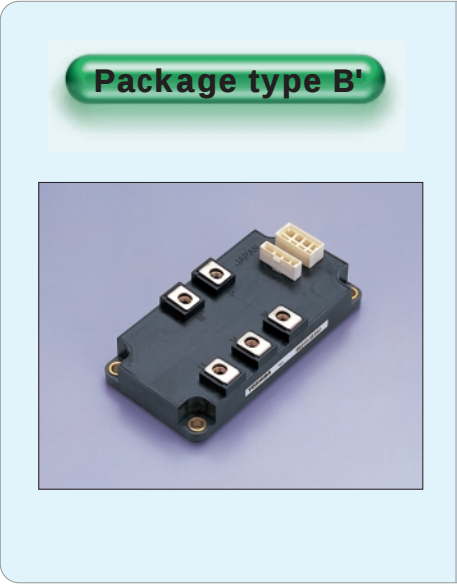
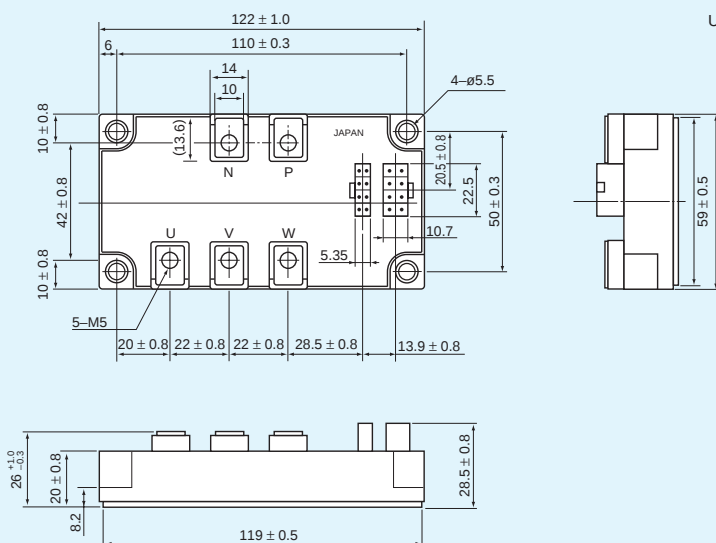
Package type A

[illegible]

Package type B

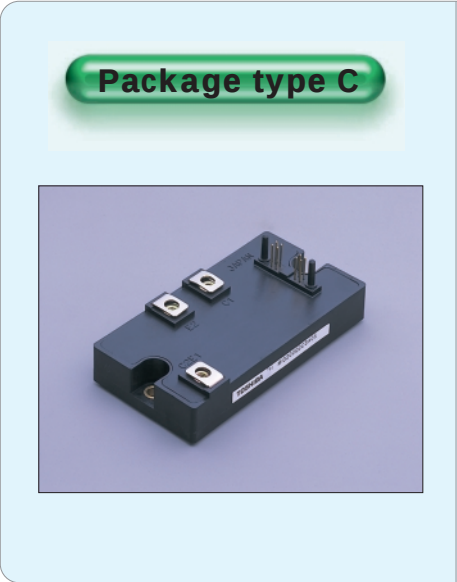
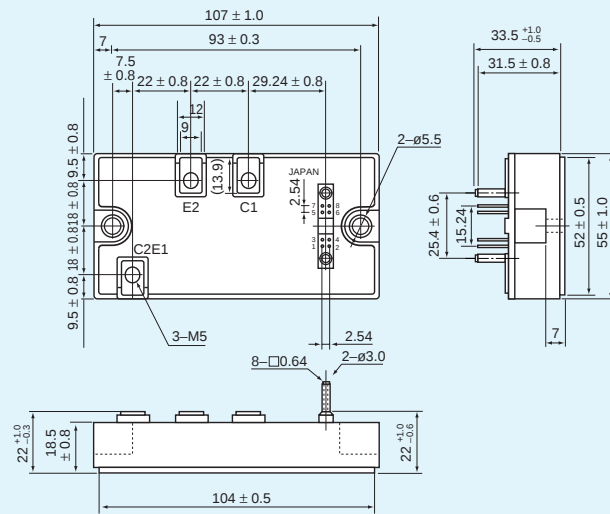
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Package type B'

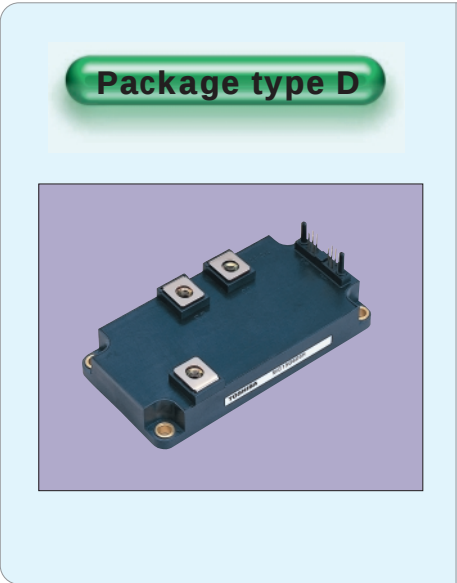
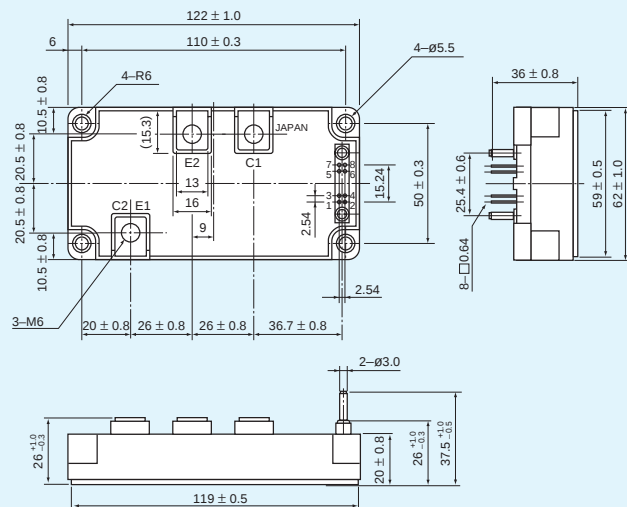
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Package Dimensions

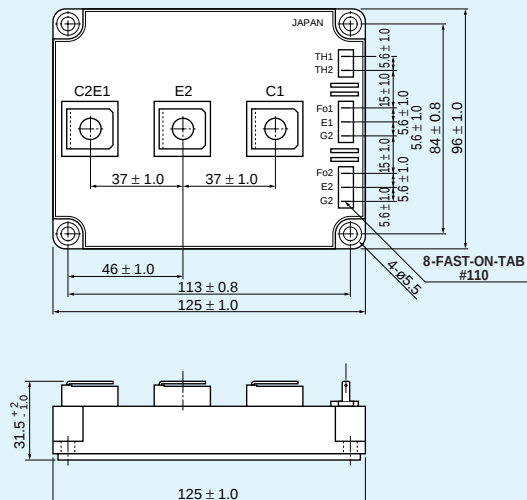
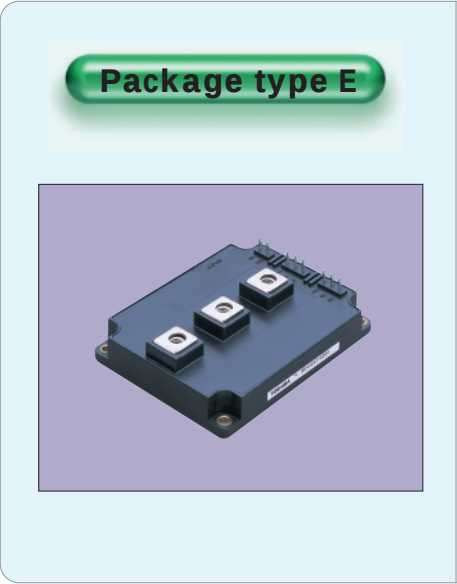
Package type C

[illegible]

Package type D

[illegible]

Package type E



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