

# Hitachi High-Power IGBT Modules

**Status List**

**Date: Jul. 2005**

**M: Mass production   W: Working sample   A: Abolition**

KS05013

## High-Voltage High-Power Series

Connection	Type	Absolute Maximum Ratings			Characteristics				Outline	Status
		V <sub>CES</sub> (V)	I <sub>C</sub> (A)	P <sub>C</sub> (W)	V <sub>CE(sat)</sub> (V)Typ.	t <sub>on</sub> (μs)Max.	t <sub>off</sub> (μs)Max.	t <sub>r</sub> (μs)Max.		
Single	MBN900D45A	4,500	900	-	5.5	2.2	3.6	1.6	N - 1	<b>M</b>
	MBN800E33D	3,300	800	-	4.2	2.4	3.0	1.9	N - 10	<b>M</b>
	MBN1200E33D	3,300	1,200	11,500	4.2	3.3	5.1	2.5	N - 9	<b>M</b>
	MBN1200D33C	3,300	1,200	12,000	4.8	3.8	5.6	3.2	N - 1	<b>M</b>
	MBN600C33A	3,300	600	5,800	4.5	4.0	6.0	3.2	N - 2	<b>M</b>
	MBN400C33A	3,300	400	4,000	4.5	3.2	5.3	2.8	N - 3	<b>M</b>
	MBN1200E25C	2,500	1,200	12,000	2.9	4.2	6.4	3.2	N - 9	<b>M</b>
	MBN600D20	2,000	600	4,000	4.4	2.5	5.9	2.7	N - 3	<b>M</b>
	MBN400D20	2,000	400	3,000	4.2	2.6	5.9	2.4	N - 4	<b>M</b>
	MBN1200E17D	1,700	1,200	-	2.7	0.9	1.4	0.6	N - 10	<b>M</b>
	MBN1600E17D	1,700	1,600	-	2.7	1.2	1.9	0.7	N - 10	<b>M</b>
	MBN1600EB17D	1,700	1,600	-	2.7	1.2	1.9	0.7	N - 11	<b>M</b>
	MBN1800E17D	1,700	1,800	-	2.7	1.2	1.5	0.7	N - 9	<b>M</b>
MBN2400E17D	1,700	2,400	-	2.7	1.6	2.0	1.1	N - 9	<b>W</b>	
Chopper	MBL800D33C	3,300	800	8,000	4.1	3.8	5.6	1.4	N - 1	<b>M</b>
	MBL800E33D	3,300	800	-	4.2	2.4	3.0	1.9	N - 9	<b>W</b>
	MBL1200E17D	1,700	1,200	-	2.7	1.6	1.7	0.9	N - 10	<b>M</b>

Connection	Type	V <sub>RRM</sub> (V)	I <sub>F</sub> (A)	-	V <sub>F</sub> (V)Typ.	-	-	t <sub>r</sub> (μs)Max.	Outline	Status
Diode	MDN1200D33	3,300	1,200	-	3.2	-	-	0.8	N - 3	<b>M</b>
	MDM800E33D	3,300	800	-	2.0	-	-	0.6	M - 10	<b>M</b>

# Status List

Continue

## GR - A Series (Advanced GR Series)

Connection	Type	Absolute Maximum Ratings			Characteristics				Outline	Status
		V <sub>CES</sub> (V)	I <sub>c</sub> (A)	P <sub>c</sub> (W)	V <sub>CE(sat)</sub> (V)Typ.	t <sub>on</sub> ( $\mu$ s)Max.	t <sub>off</sub> ( $\mu$ s)Max.	t <sub>r</sub> ( $\mu$ s)Max.		
Single	MBN1200GR12A	1,200	1,200	8,330	2.4	2.1	1.8	0.4	N - 7	<b>M</b>
	MBN600GR12A	1,200	600	3,790	2.2	0.8	1.2	0.35	N - 6	<b>M</b>
	MBN400GR12A	1,200	400	2,500	2.2	0.7	1.1	0.3	N - 5	<b>M</b>
Dual	MBM300GR12A	1,200	300	1,980	2.2	0.7	1.1	0.3	M - 9	<b>M</b>
	MBM200GR12A	1,200	200	1,250	2.2	0.6	1.0	0.3	M - 8	<b>M</b>
	MBM150GR12A	1,200	150	1,000	2.2	0.6	1.0	0.3	M - 8	<b>M</b>
	MBM100GR12A	1,200	100	690	2.2	0.6	1.0	0.3	M - 8	<b>M</b>

## GR Series

Connection	Type	Absolute Maximum Ratings			Characteristics				Outline	Status
		V <sub>CES</sub> (V)	I <sub>c</sub> (A)	P <sub>c</sub> (W)	V <sub>CE(sat)</sub> (V)Typ.	t <sub>on</sub> ( $\mu$ s)Max.	t <sub>off</sub> ( $\mu$ s)Max.	t <sub>r</sub> ( $\mu$ s)Max.		
Dual	MBM400GR6	600	400	1,170	2.1	0.7	1.1	0.32	M - 3	<b>M</b>
	MBM200GR6	600	200	690	2.1	0.7	0.8	0.3	M - 8	<b>M</b>

## GS Series

Connection	Type	Absolute Maximum Ratings			Characteristics				Outline	Status
		V <sub>CES</sub> (V)	I <sub>c</sub> (A)	P <sub>c</sub> (W)	V <sub>CE(sat)</sub> (V)Typ.	t <sub>on</sub> ( $\mu$ s)Max.	t <sub>off</sub> ( $\mu$ s)Max.	t <sub>r</sub> ( $\mu$ s)Max.		
Dual	MBM600GS6CW	600	600	1,700	1.9	0.8	1.1	0.4	M - 7	<b>M</b>
	MBM400GS6AW	600	400	1,000	1.9	0.7	1.1	0.35	M - 1	<b>M</b>
	MBM400JS6AW	600	400	1,470	1.9	0.7	1.1	0.35	M - 3	<b>M</b>
	MBM300GS6AW	600	300	800	1.9	0.7	1.1	0.35	M - 1	<b>M</b>
	MBM200GS6AW	600	200	600	1.9	0.6	0.9	0.35	M - 6	<b>M</b>
	MBM150GS6AW	600	150	450	1.9	0.6	0.9	0.35	M - 6	<b>M</b>

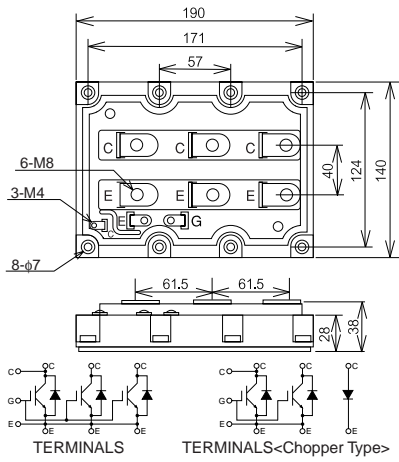
# Status List

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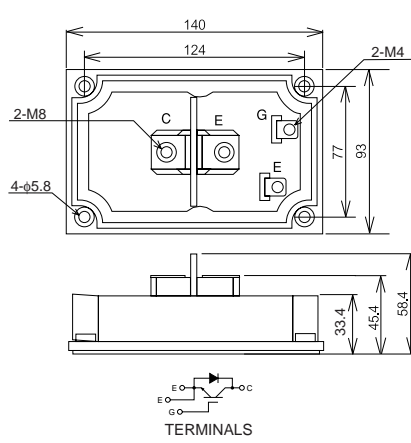
Abolition										
Connection	Type	Absolute Maximum Ratings			Characteristics				Outline	Status
		V <sub>CES</sub> (V)	I <sub>C</sub> (A)	P <sub>C</sub> (W)	V <sub>CE(sat)</sub> (V)Typ.	t <sub>on</sub> (μs)Max.	t <sub>off</sub> (μs)Max.	t <sub>r</sub> (μs)Max.		
Single	MBN1200D33A	3,300	1,200	12,000	4.1	3.2	5.6	3.2	N - 1	A
	MBN600C20	2,000	600	4,000	4.4	2.5	5.9	2.7	N - 3	A
	MBN400C20	2,000	400	3,000	4.2	2.6	5.9	2.4	N - 4	A
	MBN600GR12	1,200	600	3,570	2.2	1.0	1.2	0.4	N - 6	A
	MBN400GR12	1,200	400	2,080	2.2	0.9	1.1	0.35	N - 5	A
	MBN1200GS12AW	1,200	1,200	5,600	2.9	2.2	1.6	0.55	N - 7	A
	MBN600GS12AW	1,200	600	3,100	2.7	0.8	1.2	0.4	N - 6	A
	MBN400GS12AW	1,200	400	2,000	2.7	0.7	1.1	0.35	N - 5	A
	MBN400GS12BW	1,200	400	2,000	2.7	0.7	1.1	0.35	N - 5	A
MBN300GS12AW	1,200	300	1,700	2.7	0.7	1.1	0.35	N - 5	A	
Chopper	MBL800D33B	3,300	800	8,000	4.1	3.3	5.0	2.7	N - 1	A
Dual	MBM300GR12	1,200	300	1,710	2.2	0.9	1.1	0.35	M - 9	A
	MBM200GR12	1,200	200	1,130	2.2	0.8	1.0	0.35	M - 8	A
	MBM150GR12	1,200	150	830	2.2	0.8	1.0	0.35	M - 8	A
	MBM100GR12	1,200	100	590	2.2	0.8	0.9	0.35	M - 8	A
	MBM300GR6	600	300	930	2.1	0.7	1.0	0.32	M - 8	A
	MBM150GR6	600	150	520	2.1	0.7	0.8	0.3	M - 8	A
	MBM300GS12AW	1,200	300	1,700	2.7	0.7	1.1	0.35	M - 4	A
	MBM200GS12AW	1,200	200	1,000	2.7	0.55	1.0	0.35	M - 1	A
	MBM200JS12AW	1,200	200	1,470	2.7	0.55	1.0	0.35	M - 3	A
	MBM200JS12EW	1,200	200	1,470	2.7	0.55	1.0	0.35	M - 2	A
	MBM150GS12AW	1,200	150	800	2.7	0.55	1.0	0.35	M - 1	A
	MBM100GS12AW	1,200	100	600	2.7	0.55	0.9	0.35	M - 6	A
MBM75GS12AW	1,200	75	450	2.7	0.55	0.9	0.35	M - 6	A	
Six - Pack	MBB200GS6AW	600	200	600	1.9	0.6	0.9	0.35	B - 1	A
	MBB100GS12AW	1,200	100	600	2.7	0.55	0.9	0.35	B - 1	A
	MBB75GS12AW	1,200	75	450	2.7	0.55	0.9	0.35	B - 1	A

**Outline**

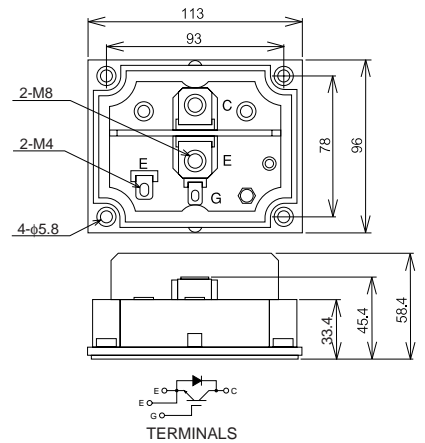
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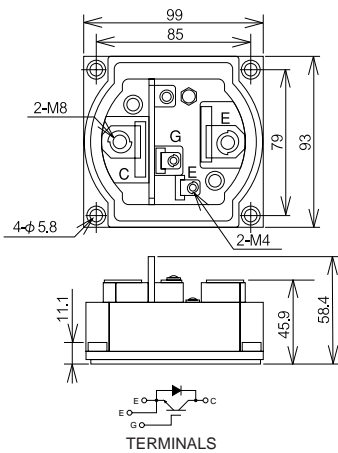
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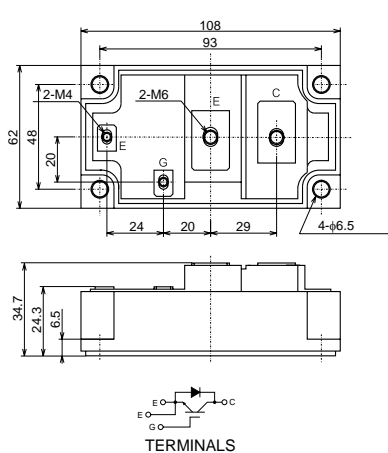
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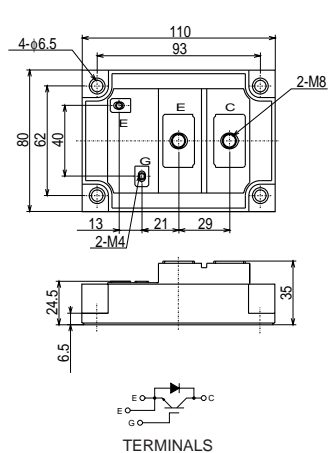
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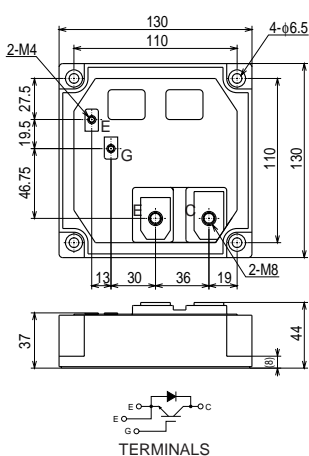
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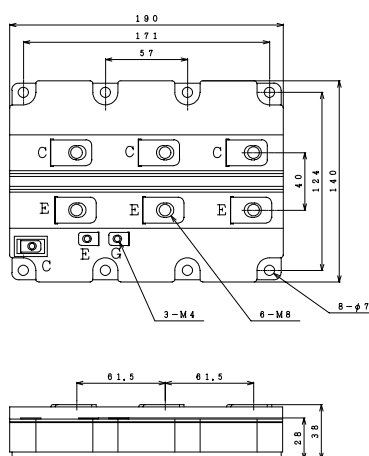
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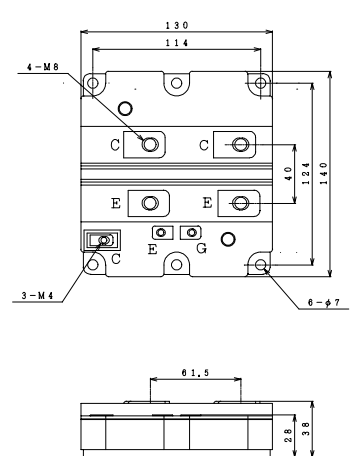
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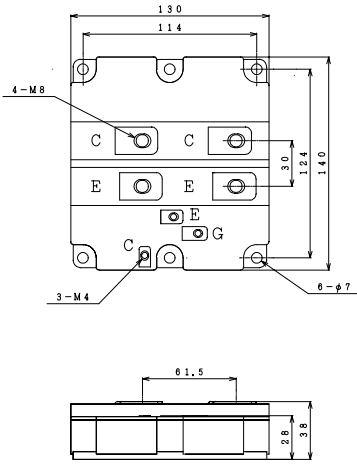
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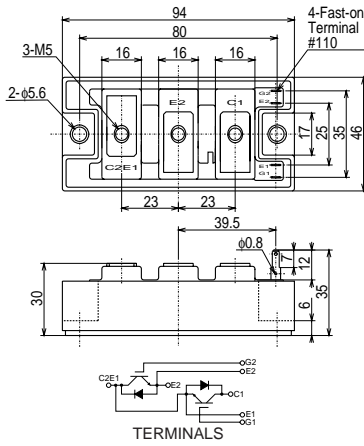
**Outline**

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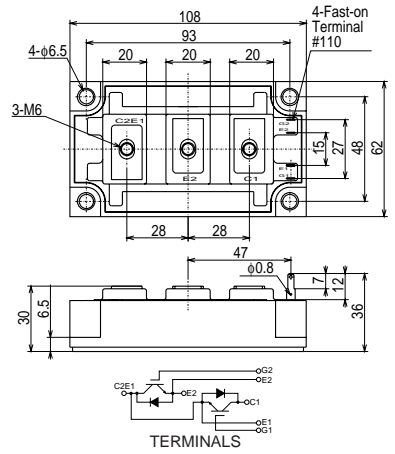
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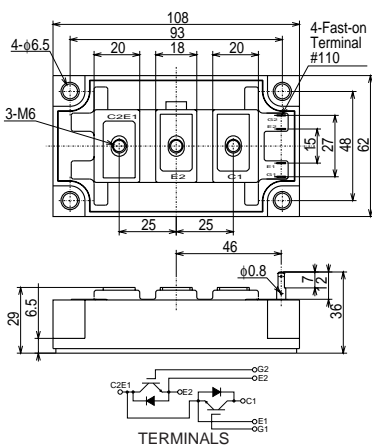
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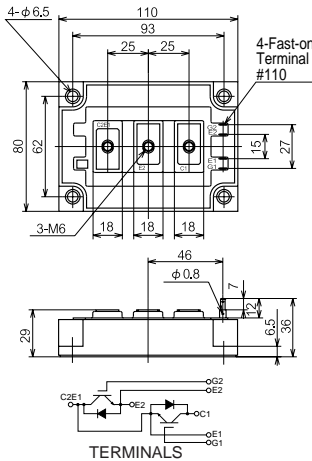
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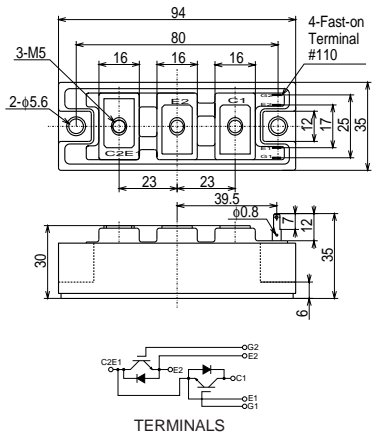
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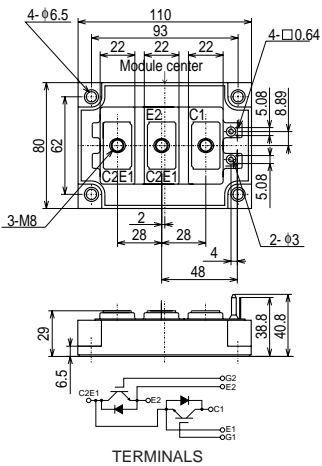
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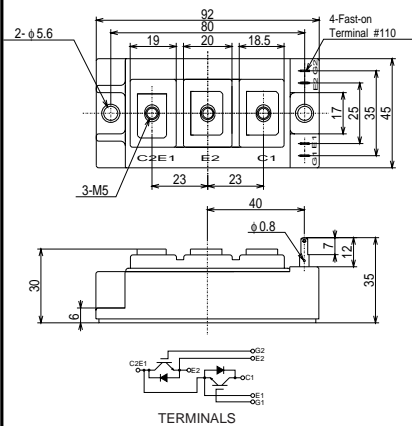
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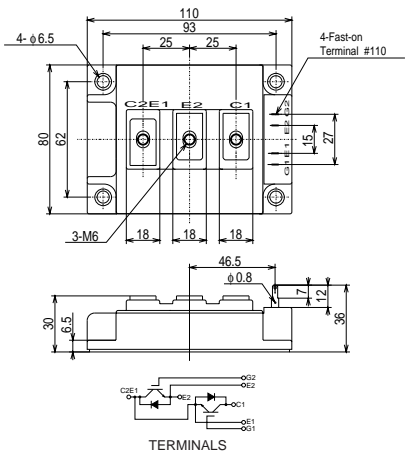
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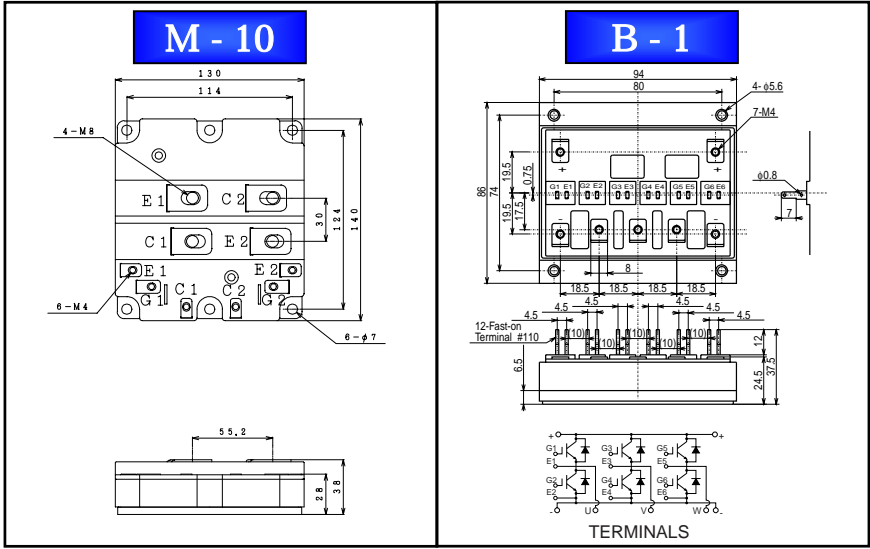


**M - 9**



**Outline**

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