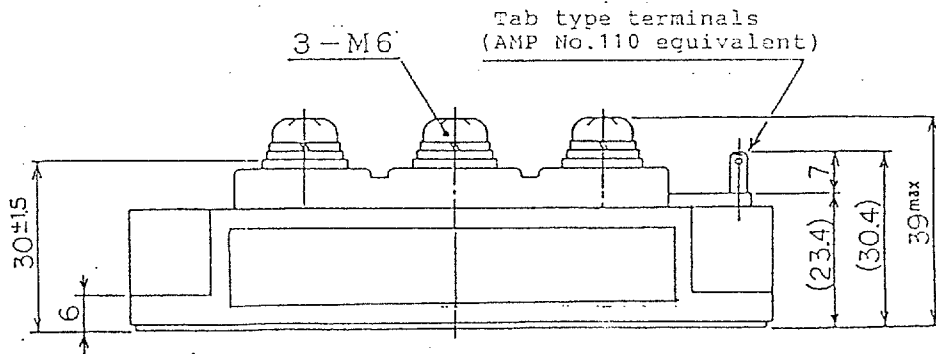
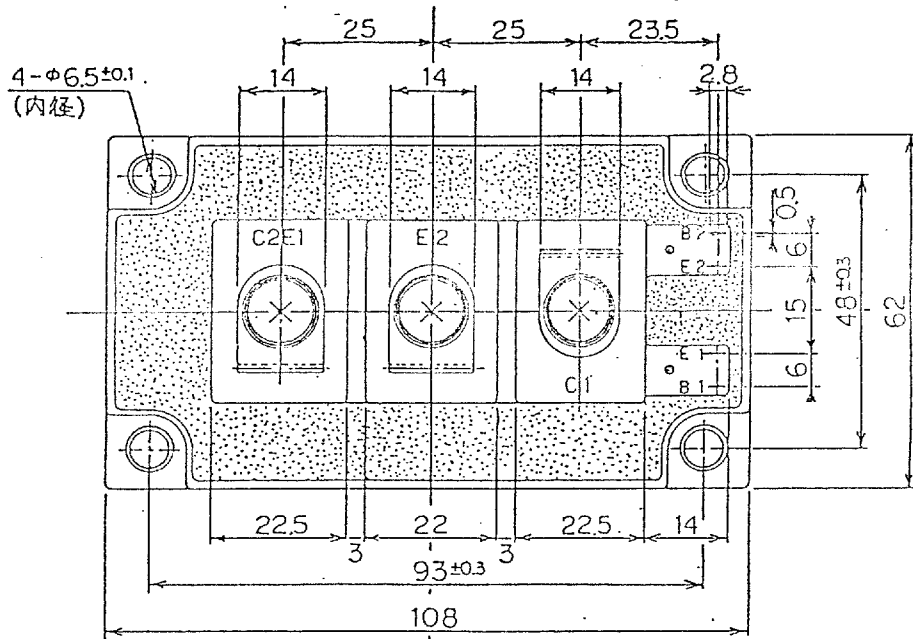


2MB1200J-120 (TENTATIVE)

1. Outline Drawing

Unit : mm

* Isolation Voltage : AC 2500 V 1 minute

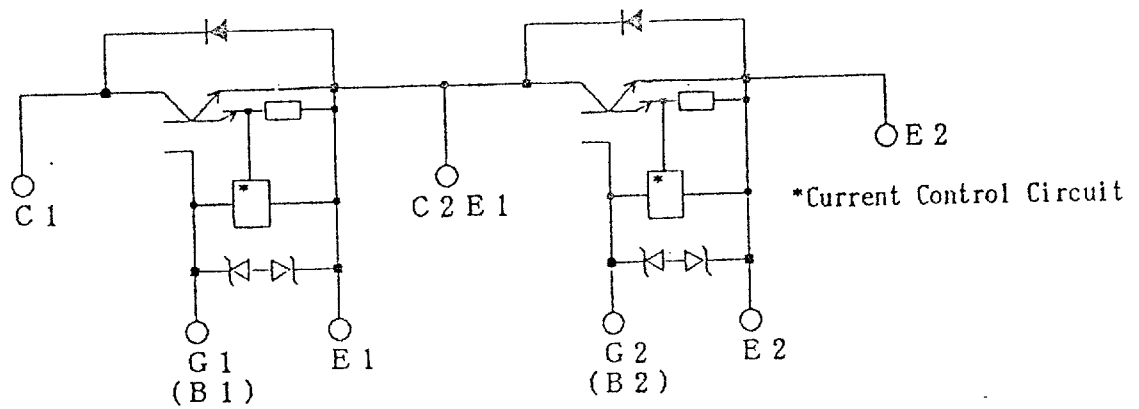


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	DRAWN	Apr - 5 - '83	A. Yamaguchi				
	CHECKED	Apr - 5 - '83	T. Miyasaka				

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2. Equivalent Circuit



3. Absolute Maximum Ratings (Tj=25 °C)

Items		Symbols	Ratings	Units
Collector-emitter voltage		V_{CES}	1 2 0 0	V
Gate-emitter voltage		V_{GES}	± 2 0	V
Collector current	Continuous	I_c	2 0 0	A
	1 ms	I_c pulse	4 0 0	
		$-I_c$	2 0 0	
	1 ms	$-I_c$ pulse	4 0 0	
Max.power dissipation		PC	1 2 8 0	W
Operating temperature		Tj	+ 1 5 0	°C
Storage temperature		Tstg	40 ~ +125	°C
Isolation voltage		Vis	AC 2500 (1 min)	V
Screw Torque		Mounting * 1	3. 5	N · m
		Terminals * 2	4. 5	

Note : *1 Recommendable Value : 2.5 ~ 3.5 N · m (H5)
 *2 Recommendable Value : 3.5 ~ 4.5 N · m (H6)

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4. Static electrical characteristics (at Tj=25°C unless otherwise specified)

Items	Symbols	Characteristics			Conditions		Units
		min.	typ.	max.			
Zero gate voltage collector current	I _{ces}			2.0	Tj= 25°C	V _{GE} = 0V	mA
					Tj=125°C	V _{CE} = 1200V	mA
Gate-emitter leakage current	I _{GES}			30	V _{CE} = 0 V V _{GE} = ± 2 0 V		μ A
Gate-emitter threshold voltage	V _{GE (th)}		5.0		V _{CE} = 2 0 V I _C = 2 0 0 mA		V
Collector-emitter saturation voltage	V _{CE (sat)}		2.2		V _{GE} = 1 5 V I _C = 2 0 0 A		V

5. Dynamic ratings (at Tj=25°C unless otherwise specified)

Items	Symbols	Characteristics			Conditions	Units
		min.	typ.	max.		
Input capacitance	C _{ies}		24000		V _{GE} = 0 V	
Output capacitance	C _{oes}		—		V _{CE} = 1 0 V	p F
Reverse transfer capacitance	C _{res}		—		f = 1 kHz	
Turn on time	t _{on}		0.90		V _{CC} = 600V I _C = 200A V _{GE} = ± 15V R _G = 4.7Ω	μ s
	t _r		0.30			
Turn-off time	t _{off}		1.10			
	t _f		0.20			

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6. Characteristics of reverse diode (at $T_j=25^\circ\text{C}$ unless otherwise specified)

Items	Symbols	Characteristics			Conditions	Units
		min.	typ.	max.		
Diode forward on-voltage	V_F		2.5		$I_F=200\text{A}$ $V_{GE}=0\text{V}$	V
Reverse recovery time	t_{rr}			350	$I_F=200\text{A}$ $-di/dt=600\text{A}/\mu\text{s}$	ns

7. Thermal resistance characteristics

Items	Symbols	Characteristics			Conditions	Units
		min.	typ.	max.		
Thermal resistance	$R_{th(j-c)}$			0.098	IGBT	$^\circ\text{C}/\text{W}$
	$R_{th(j-c)}$			0.187	Diode	
	※ $R_{th(c-f)}$		0.025		the base to cooling fin	

※ This is the value which is defined mounting on the additional cooling fin with thermal compound.

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