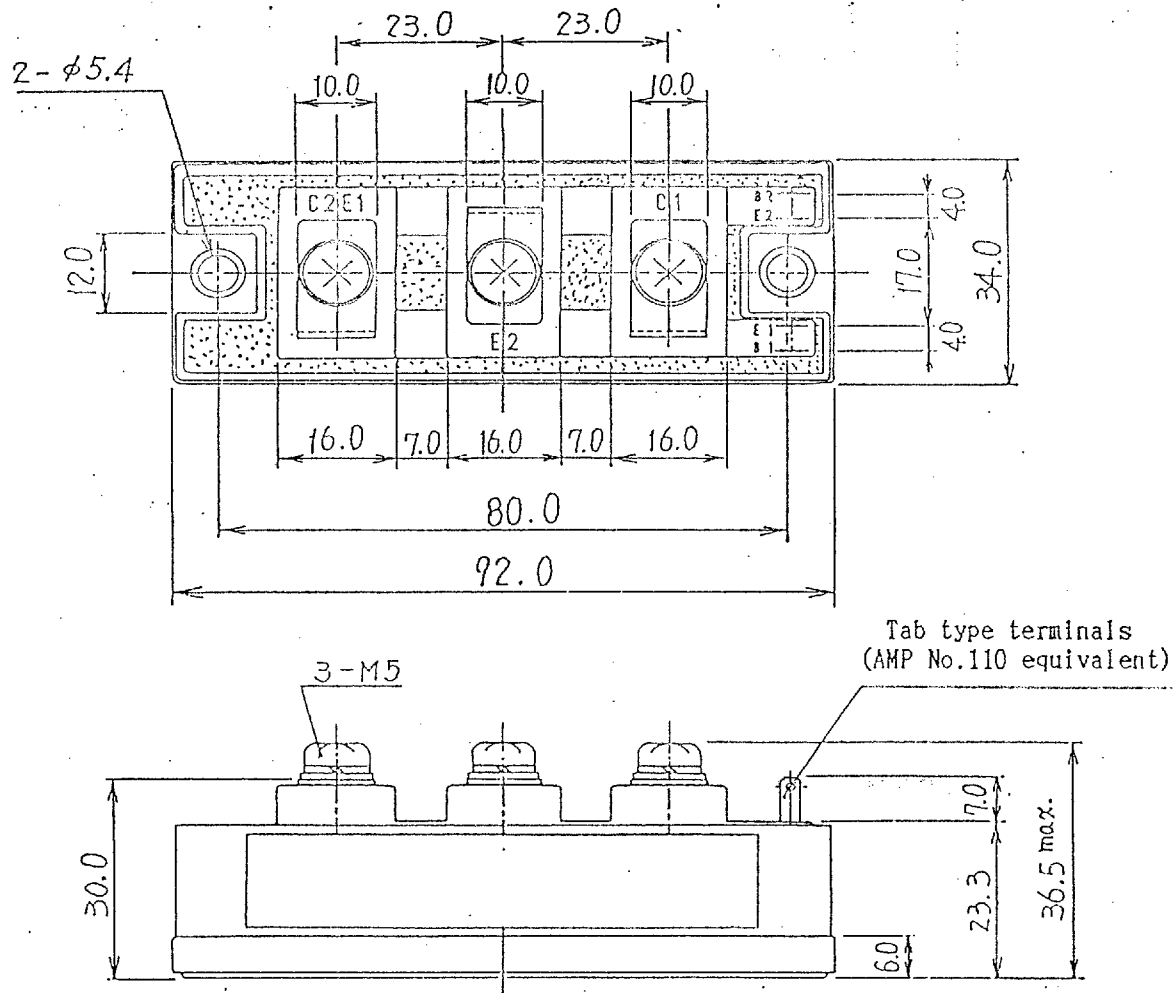


2 M B I 5 0 J - 0 6 0 (TENTATIVE)

* Isolation Voltage : AC 2500 V 1 minute



	DATE	NAME	APPROVED
DRAWN	Jan - 25 - '93	A. Yamaguchi	
CHECKED	Jan - 26 - '93	T. Miyasaka	

Fuji Electric Co.,Ltd.

DWG NO.

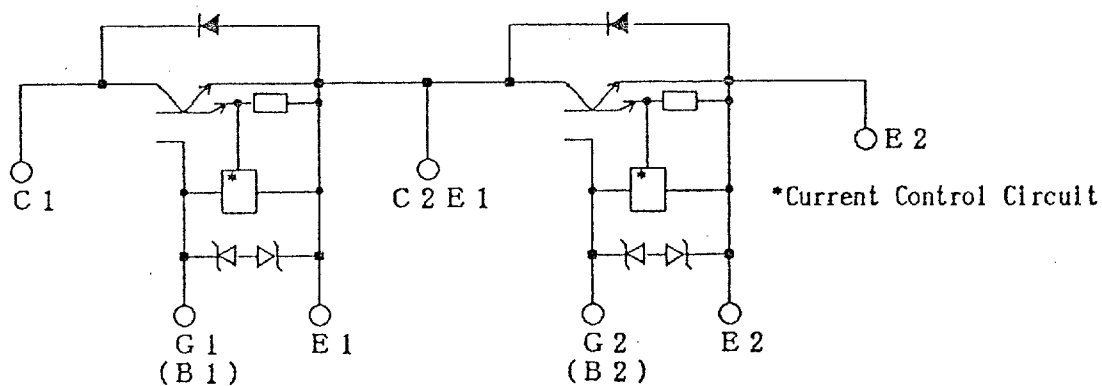
REF ID: A66549

REVISIONS

MA4LE

2238792 0002421 28T COL

2. Equivalent Circuit



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

Items		Symbols	Ratings	Units
Collector-emitter voltage		V_{CES}	600	V
Gate-emitter voltage		V_{GES}	± 20	V
Collector current	Continuous	I_c	50	A
	1 ms	I_c pulse	100	
		$-I_c$	50	
	1 ms	$-I_c$ pulse	100	
Max.power dissipation		P_C	150	W
Operating temperature		T_j	+150	°C
Storage temperature		T_{stg}	-40 ~ +125	°C
Isolation voltage		V_{is}	AC 2500 (1 min)	V
Screw Torque		Mounting * 1	3.5	N · m
		Terminals * 1	3.5	

Note : *1 Recommendable Value : 2.5 ~ 3.5 N · m (M5)

This material and the information herein is the property of Fuji Electric Co., Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.

REVISIONS	DATE	NAME	APPROVED	DWG. NO.	Fuji Electric Co., Ltd.	
	DRAWN	- -				MT5F4904 2/11
	CHECKED	- -				

MA4LE

2238792 0002422 116 C0L

4. Static electrical characteristics (at $T_j=25^{\circ}\text{C}$ unless otherwise specified)

Items	Symbols	Characteristics			Conditions		Units
		min.	typ.	max.			
Zero gate voltage collector current	I_{CES}			1.0	$T_j = 25^{\circ}\text{C}$	$V_{GE} = 0\text{V}$	mA
					$T_j = 125^{\circ}\text{C}$	$V_{CE} = 600\text{V}$	mA
Gate-emitter leakage current	I_{GES}			15	$V_{CE} = 0\text{V}$ $V_{GE} = \pm 20\text{V}$		μA
Gate-emitter threshold voltage	$V_{GE(th)}$	3.5	5.0	6.5	$V_{CE} = 20\text{V}$ $I_C = 50\text{mA}$		V
Collector-emitter saturation voltage	$V_{CE(sat)}$		1.7	2.5	$V_{GE} = 15\text{V}$ $I_C = 50\text{A}$		V

5. Dynamic ratings (at $T_j=25^{\circ}\text{C}$ unless otherwise specified)

Items	Symbols	Characteristics			Conditions	Units
		min.	typ.	max.		
Input capacitance	C_{ies}		3200		$V_{CE} = 0\text{V}$	pF
Output capacitance	C_{oes}				$V_{CE} = 10\text{V}$	
Reverse transfer capacitance	C_{res}				$f = 1\text{MHz}$	
Turn-on time	t_{on}		0.6	1.2	$V_{CC} = 300\text{V}$ $I_C = 50\text{A}$ $V_{GE} = \pm 15\text{V}$ $R_G = 51\Omega$	μs
	t_r		0.2	0.6		
Turn-off time	t_{off}		0.8	1.5		
	t_f		0.15	0.35		

This material and the information herein is the property of Fuji Electric Co., Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.

REVISIONS	DATE	NAME	APPROVED	Fuji Electric Co., Ltd.	DWG. NO.	MT5F4904	3/11
	DRAWN	-	-				
	CHECKED	-	-				

MA4LE

2238792 0002423 052 COL

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		2.3	3.0	$I_F=50\text{A}$ $V_{GE}=0\text{V}$	V
Reverse recovery time	t_{rr}			300	$I_F=50\text{A}$ $-di/dt=150\text{A}/\mu\text{s}$	ns

7. Thermal resistance characteristics

Items	Symbols	Characteristics			Conditions	Units
		min.	typ.	max.		
Thermal resistance	$R_{th(j-c)}$			0.833	IGBT	$^{\circ}\text{C}/\text{W}$
	$R_{th(j-c)}$			2.00	Diode	
	※ $R_{th(c-f)}$		0.05		the base to cooling fin	

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

This material and the information herein is the property of Fuji Electric Co., Ltd. They shall be neither reproduced, copied, lent, or disclosed in any way whatsoever for the use of any third party, nor used for the manufacturing purposes without the express written consent of Fuji Electric Co., Ltd.

REVISIONS	DATE	NAME	APPROVED	DWG. NO.	Fuji Electric Co., Ltd.	MT5F4904	4/11
	DRAWN	- -					
	CHECKED	- -					

MA4LE

2238792 0002424 T99 COL