

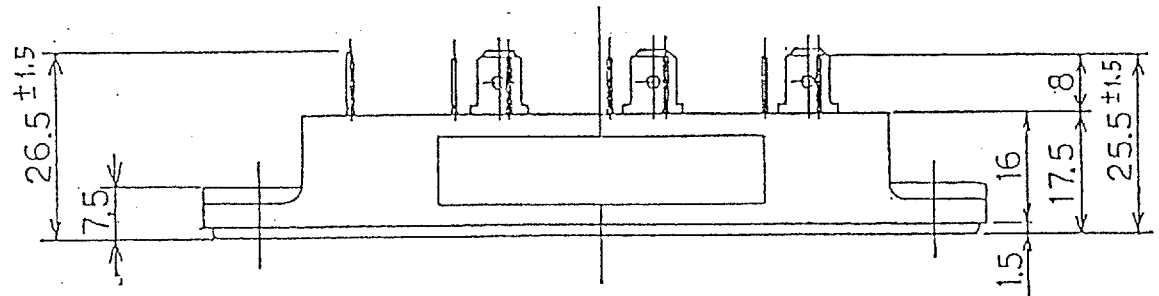
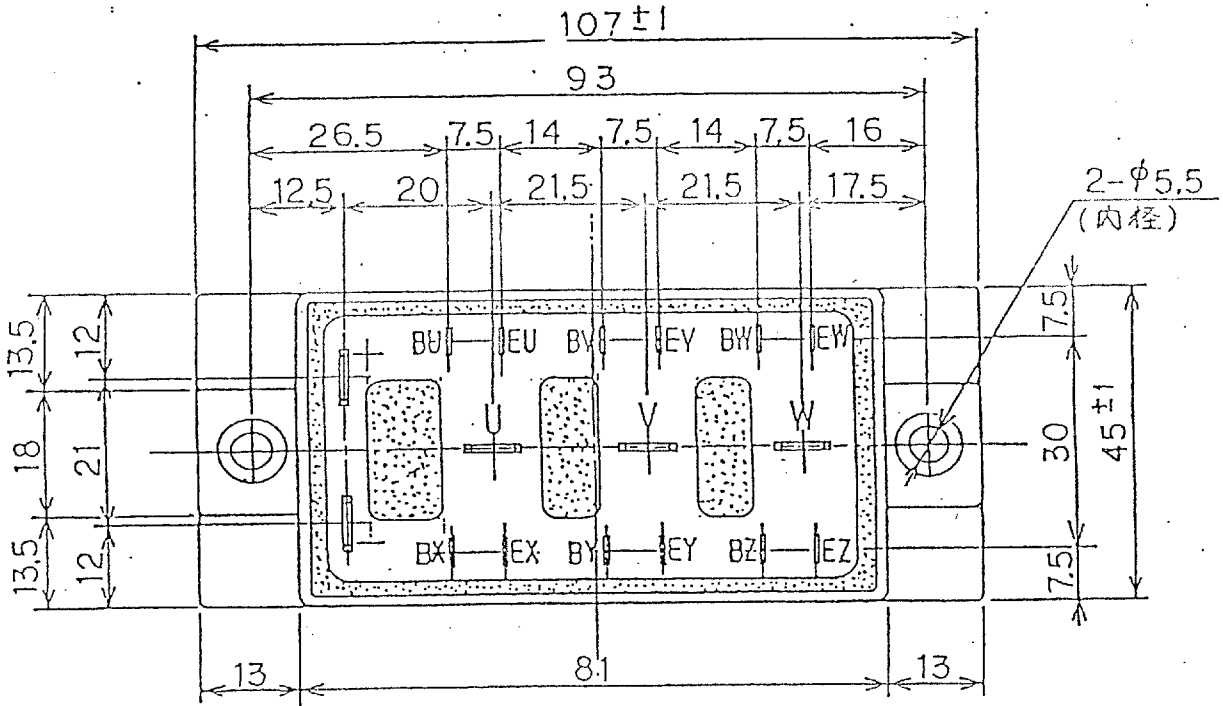
6MBI25J-120 (TENTATIVE)

1. Outline Drawing

Unit : mm

\* Isolation Voltage : AC 2500 V 1 minute

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			
-----------	--	--	--

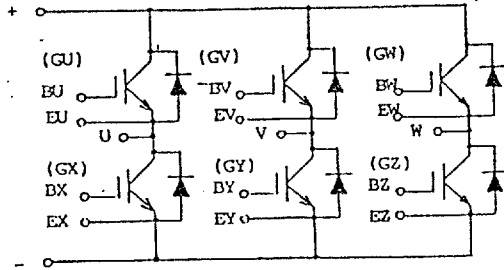
	DATE	NAME	APPROVED
DRAWN	Apr - 5 - '93	A. Yamaguchi	
CHECKED	Apr - 5 - '93	T. Miyasaka	<i>[Signature]</i>

Fuji Electric Co., Ltd.	
DWG. NO.	MT5 F 5157

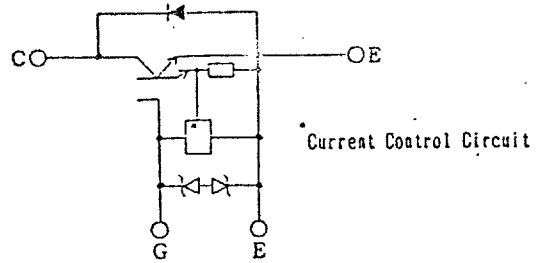
MA4LE

2238792 0002468 210 COL

## 2. Equivalent Circuit



## 3. Equivalent Circuit



## 4. Absolute Maximum Ratings (Tj=25 °C)

Items		Symbols	Ratings	Units
Collector-emitter voltage		$V_{CES}$	1 2 0 0	V
Gate -emitter voltage		$V_{GES}$	$\pm 2.0$	V
Collector current	Continuous	$I_c$	2 5	A
	1 ms	$I_c$ pulse	5 0	
		$-I_c$	2 5	
	1 ms	$-I_c$ pulse	5 0	
Max.power dissipation		PC	1 6 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

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	Fuji Electric Co., Ltd.	DWG. NO.	MT5F5157	2/11
	DRAWN	-					
	CHECKED	-					

MA4LE

2238792 0002469 157 COL

5. 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
					$T_j = 125^\circ\text{C}$	$V_{CE} = 1200\text{V}$	mA
Gate-emitter leakage current	$I_{GES}$			15	$V_{CE} = 0\text{V}$	$V_{GE} = \pm 20\text{V}$	$\mu\text{A}$
Gate-emitter threshold voltage	$V_{GE(th)}$		5.0		$V_{CE} = 20\text{V}$	$I_C = 25\text{mA}$	V
Collector-emitter saturation voltage	$V_{CE(sat)}$		2.2		$V_{GE} = 15\text{V}$	$I_C = 25\text{A}$	V

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

Items	Symbols	Characteristics			Conditions	Units
		min.	typ.	max.		
Input capacitance	$C_{ies}$		3000		$V_{GE} = 0\text{V}$	pF
Output capacitance	$C_{oes}$		—		$V_{CE} = 10\text{V}$	
Reverse transfer capacitance	$C_{res}$		—		$f = 1\text{MHz}$	
Turn-on time	$t_{on}$		0.65		$V_{CC} = 600\text{V}$ $I_C = 25\text{A}$ $V_{GE} = \pm 15\text{V}$ $R_G = 50\Omega$	$\mu\text{s}$
	$t_r$		0.30			
Turn-off time	$t_{off}$		0.90			
	$t_f$		0.20			

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.

		DATE	NAME	APPROVED	Fuji Electric Co., Ltd.	
DRAWN	- -					
CHECKED	- -				DWG. NO.	MT5F5157
REVISIONS						

MA4LE

2238792 0002470 979 COL

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

Items	Symbols	Characteristics			Conditions	Units
		min.	typ.	max.		
Diode forward on-voltage	V <sub>F</sub>		2.5		I <sub>F</sub> = 25A V <sub>GE</sub> = 0V	V
Reverse recovery time	t <sub>rr</sub>			350	I <sub>F</sub> = 25A -di/dt = 75A/μs	ns

8. Thermal resistance characteristics

Items	Symbols	Characteristics			Conditions	Units
		min.	typ.	max.		
Thermal resistance	R <sub>th(j-c)</sub>			0.781	IGBT	°C/W
	R <sub>th(j-c)</sub>			1.870	Diode	
	※ R <sub>th(c-f)</sub>		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	Fuji Electric Co., Ltd.	
DRAWN	- -			DWG. NO.	MT5F5157
CHECKED	- -				

MA4LE

■ 2238792 0002471 805 ■ COL