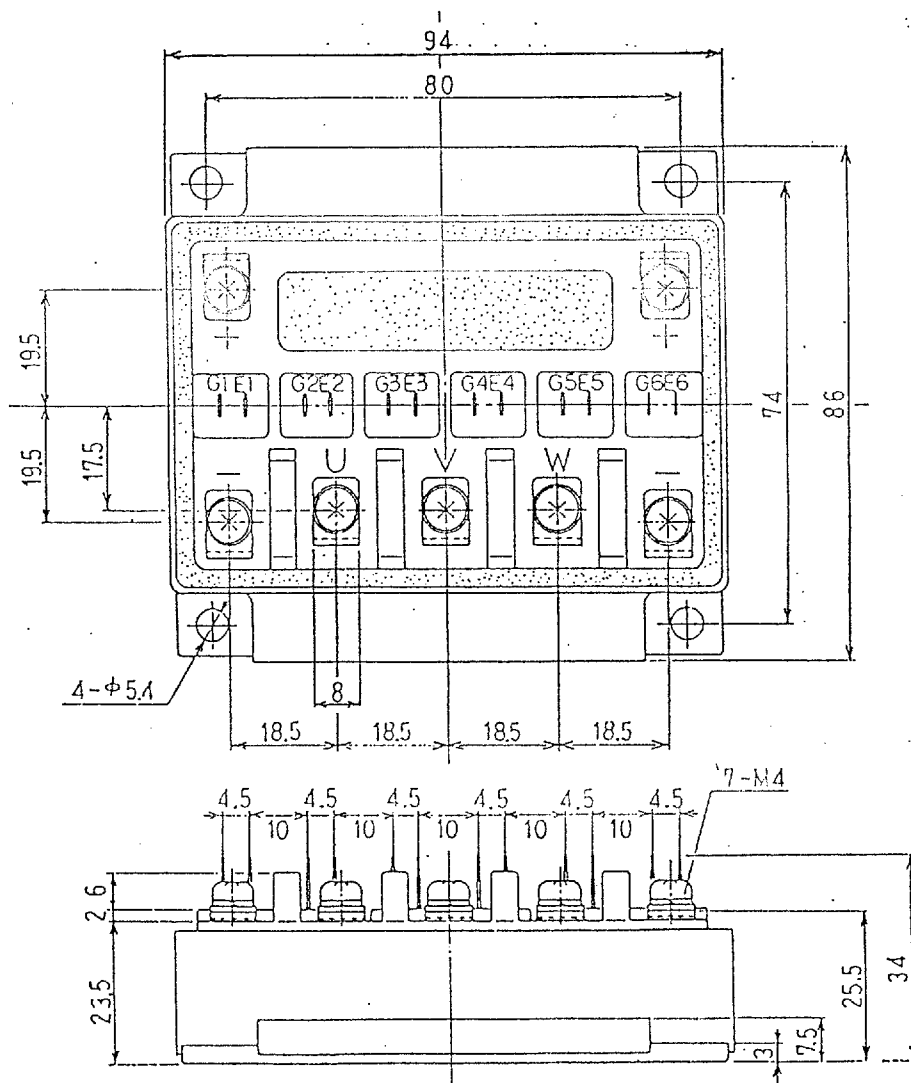


6 M B I 1 0 0 J - 0 6 0 (TENTATIVE)

* Isolation Voltage : AC 2500 V 1 minute



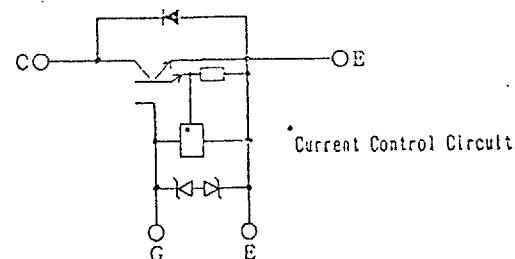
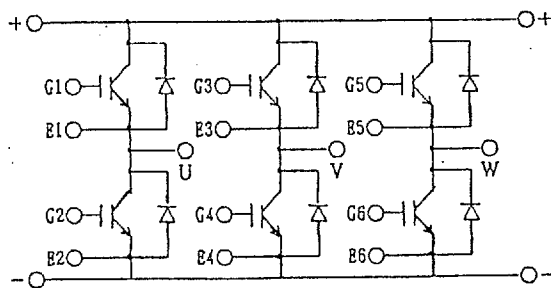
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3. Equivalent Circuit



Items		Symbols	Ratings	Units
Collector-emitter voltage		V_{CES}	6 0 0	V
Gate-emitter voltage		V_{GES}	$\pm 2 0$	V
Collector current	Continuous	I_c	1 0 0	A
	1 ms	I_c pulse	2 0 0	
		$-I_c$	1 0 0	
	1 ms	$-I_c$ pulse	2 0 0	
Max.power dissipation		PC	3 0 0	W
Operating temperature		T_j	+ 1 5 0	$^{\circ}\text{C}$
Storage temperature		T_{stg}	-40 ~ +125	$^{\circ}\text{C}$
Isolation voltage		V_{is}	AC 2500 (1 min)	V
Screw Torque		Mounting * 1	3. 5	N · m
		Terminals * 2	1. 7	

Note : #1 Recommendable Value : 2.5 ~ 3.5 N · m (M5)
 Note : #2 Recommendable Value : 1.3 ~ 1.7 N · m (M4)

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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
					$T_J = 125^{\circ}\text{C}$	$V_{CE} = 600\text{V}$	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	$V_{CE} = 20\text{V}$ $I_C = 100\text{mA}$		V
Collector-emitter saturation voltage	$V_{CE(sat)}$		1.7	2.5	$V_{GE} = 15\text{V}$ $I_C = 100\text{A}$		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}		6400		$V_{GE} = 0\text{V}$	pF
Output capacitance	C_{oes}				$V_{CE} = 10\text{V}$	
Reverse transfer capacitance	C_{res}				$f = 1\text{MHz}$	
Turn-on time	t_{on}		0.6	1.2	$V_{CC} = 300\text{V}$ $I_C = 100\text{A}$ $V_{GE} = \pm 15\text{V}$ $R_G = 24\Omega$	μs
	t_r		0.2	0.6		
Turn-off time	t_{off}		0.8	1.5		
	t_f		0.15	0.35		

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7. 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	$I_F=100\text{A}$ $V_{GE}=0\text{V}$	V
Reverse recovery time	t_{rr}			300	$I_F=100\text{A}$ $-di/dt=300\text{A}/\mu\text{s}$	ns

8. Thermal resistance characteristics

Items	Symbols	Characteristics			Conditions	Units
		min.	typ.	max.		
Thermal resistance	$R_{th(j-c)}$			0.417	IGBT	$^{\circ}\text{C}/\text{W}$
	$R_{th(j-c)}$			0.800	Diode	
	$\times$ $R_{th(c-f)}$		0.05		the base to cooling fin	

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

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