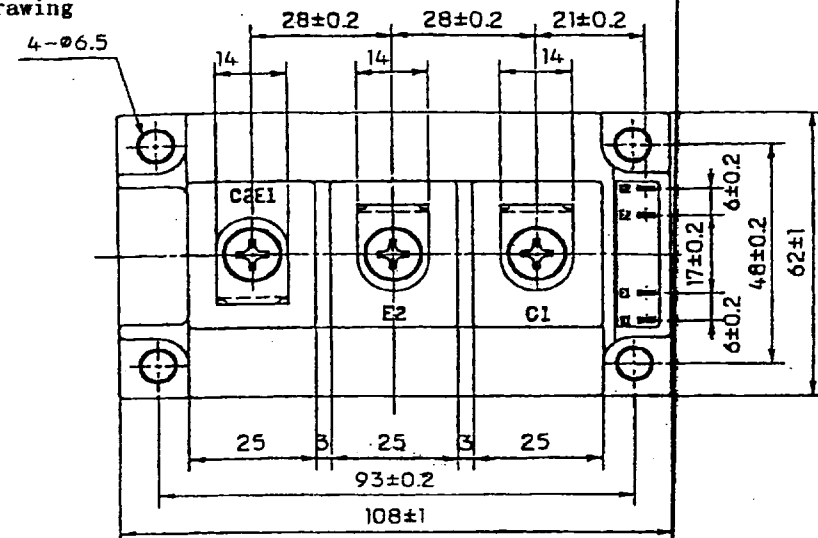


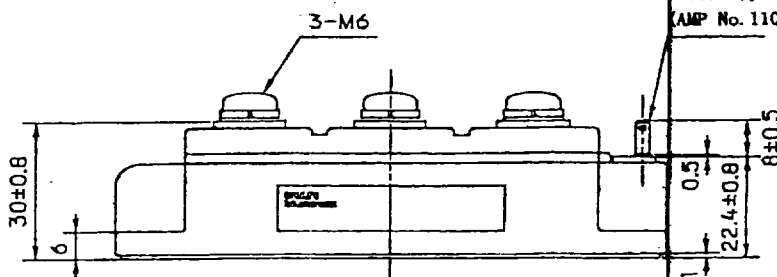
1MB I 150 SH-140 (Tentative target specification)

1. Outline Drawing

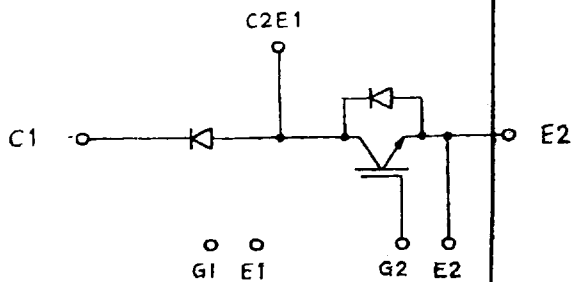
Unit : mm 4- ϕ 6.5



Tab type terminals
(AMP No. 110 equivalent)



2. Equivalent circuit



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3. Absolute Maximum Ratings (at Tc=25°C unless otherwise specified)

Items		Symbols	Ratings	Units
Collector-Emitter voltage		V _{CES}	1400	V
Gate-Emitter voltage		V _{GES}	±20	V
Collector current	Continuous	I _C (25°C/80°C)	273/185	A
	1ms	I _C pulse(25°C/80°C)	45/370	
		-I _C (25°C/80°C)	175/125	
	1ms	-I _C pulse(25°C/80°C)	45/370	
Max. power dissipation		PC	1050	W
Operating temperature		T _j	+150	°C
Storage temperature		T _{stg}	-40~+125	°C
Isolation voltage		Vis	AC 2500 (1min.)	V
Screw torque	Mounting #1		3.5	N · m
	Terminals #2		4.5	

Note : *1 Recommendable value : 2.5~3.5 N · m (M5) or (M6)
 *2 Recommendable value : 3.5~4.5 N · m (M6)

4. 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	V _{GE} =0V, V _{CE} =1400V	mA
Gate-Emitter leakage current	I _{GES}			0.4	V _{CE} =0V, V _{GE} =±20V	μA
Gate-Emitter threshold voltage	V _{GE(th)}	5.5		8.5	V _{CE} =20V, I _C =150mA	V
Collector-Emitter saturation voltage	V _{CE(sat)}		2.3	2.7	V _{GE} =15V, I _C =150A	V
Input capacitance	C _{ies}		18000		V _{GE} =0V	pF
Output capacitance	C _{oes}		3750		V _{CE} =10V	
Reverse transfer capacitance	C _{res}		3300		f=1MHz	
Turn-on time	t _{on}		0.35	1.2	V _{CC} =600V	μs
			0.25	0.6	I _C =150A	
Turn-off time	t _{off}		0.45	1.0	V _{GE} =±15V	μs
			0.08	0.3	R _G =5.6Ω	
Diode forward on voltage	V _F		2.5	3.4	I _F =150A, V _{GE} =0V	V
Reverse recovery time	t _{rr}			0.35	I _F =150A	μs

5. Thermal resistance characteristics

Items	Symbols	Characteristics			Conditions	Units
		min.	typ.	max.		
Thermal resistance	R _{th(j-c)}		0.1	0.12	IGBT	°C/W
	R _{th(j-c)}		0.25	0.3	Diode	
	※		0.025		the base to cooling fin	
	R _{th(c-f)}					

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

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