

SPECIFICATION

Device Name : IGBT Module

Type Name : 2MBI200TA-060

Spec. No. : MS5F 5291

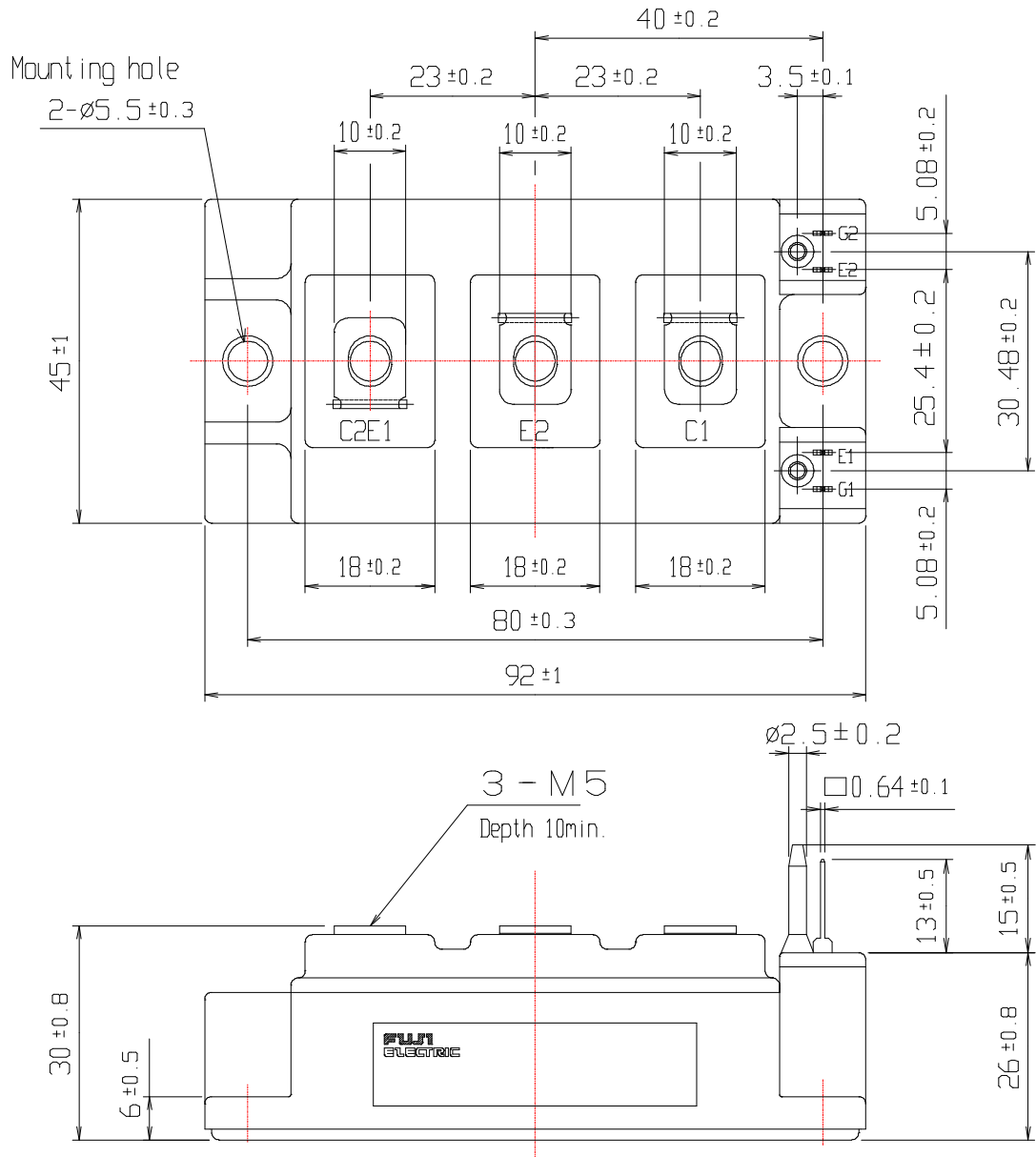
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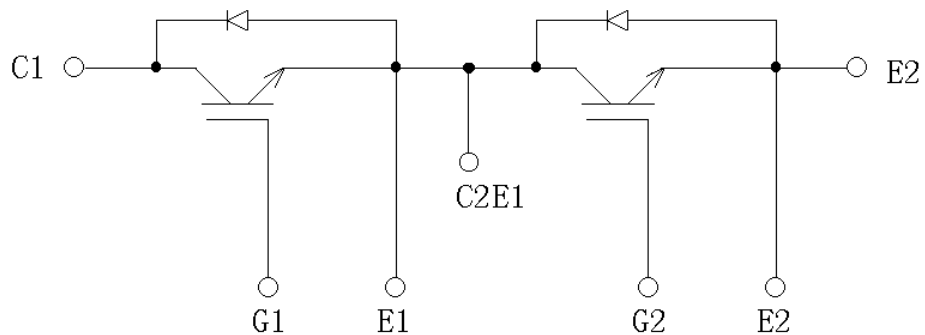
	DATE	NAME	APPROVED	Fuji Electric Co., Ltd.			
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2MBI200TA-060

1. Outline Drawing (Unit : mm)



2. Equivalent circuit



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

Items	Symbols	Conditions	Maximum Ratings	Units
Collector-Emitter voltage	V _{CE} S	I _c =1mA	600	V
Gate-Emitter voltage	V _{GE} S		±20	V
Collector current	I _c	Duty=100 %	200	A
	I _c pulse	1ms	400	
	I _F	Duty=50 %	200	
	I _F pulse	1ms	400	
Collector Power Dissipation	P _c	1 device	780	W
Junction temperature	T _j		150	°C
Storage temperature	T _{stg}		-40~ +125	°C
Isolation voltage ^(*1)	Viso	AC : 1min.	2500	V
Screw Torque	Mounting ^(*2)		3.5	N.m
	Terminals ^(*2)		3.5	

(*1) All terminals should be connected together when isolation test will be done.

(*2) Recommendable Value : Mounting 2.5~3.5 N.m (M5)

Terminal 2.5~3.5Nm (M5)

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

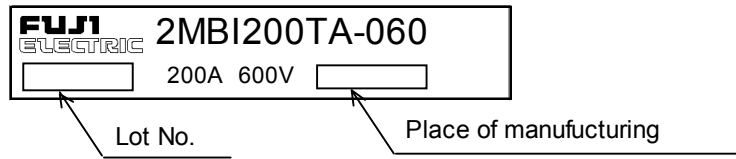
Items	Symbols	Conditions	Characteristics			Units
			min.	typ.	Max.	
Zero gate voltage Collector current	I _{CE} S	V _{GE} = 0 V, V _{CE} = 600 V	-	-	2.0	mA
Gate-Emitter leakage current	I _{GES}	V _{CE} = 0 V, V _{GE} = ±20 V	-	-	400	nA
Gate-Emitter threshold voltage	V _{GE(th)}	V _{CE} = 20 V, I _c = 200 mA	6.2	6.7	7.7	V
Collector-Emitter saturation voltage	V _{CE(sat)}	V _{GE} = 15 V	-	1.6	-	V
		I _c = 200 A				
Input capacitance	C _{ies}	V _{GE} = 0 V	-	20000	-	pF
Output capacitance	C _{oes}	V _{CE} = 10 V	-	3600	-	
Reverse transfer capacitance	C _{res}	f = 1 MHz	-	3100	-	
Turn-on time	ton	V _{cc} = 300 V	-	0.6	1.2	μs
	tr	I _c = 200 A	-	0.3	0.6	
	tr(i)	V _{GE} = ±15 V	-	0.1	-	
Turn-off time	toff	R _G = 16 Ω	-	0.6	1.2	μs
	tf		-	0.05	0.45	
Forward on voltage	V _F	I _F = 200 A	-	1.75	-	V
			Chip	Terminal	2.5	
Reverse recovery time	trr	I _F = 200 A	-	-	0.3	μs
Allowable avalanche energy during short circuit cutting off (Non-repetitive)	PAV	I _c > 400A, T _j = 125°C	140	-	-	mJ

5. Thermal resistance characteristics

Items	Symbols	Conditions	Characteristics			Units
			min.	typ.	Max.	
Thermal resistance (1 device)	R _{th(j-c)}	IGBT	-	-	0.160	°C/W
		FWD	-	-	0.51	
Contact Thermal resistance	R _{th(c-f)}	With thermal compound *	-	0.025	-	

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

6. Indication on module



7. Applicable category

This specification is applied to IGBT Module named 2MBI200TA-060

8. Storage and transportation notes

- The module should be stored at a standard temperature of 5 to 35C and humidity of 45 to 75% .
- Store modules in a place with few temperature changes in order to avoid condensation on the module surface.
- Avoid exposure to corrosive gases and dust.
- Avoid excessive external force on the module.
- Store modules with unprocessed terminals.
- Do not drop or otherwise shock the modules when tranporting.

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9. Definitions of switching time

