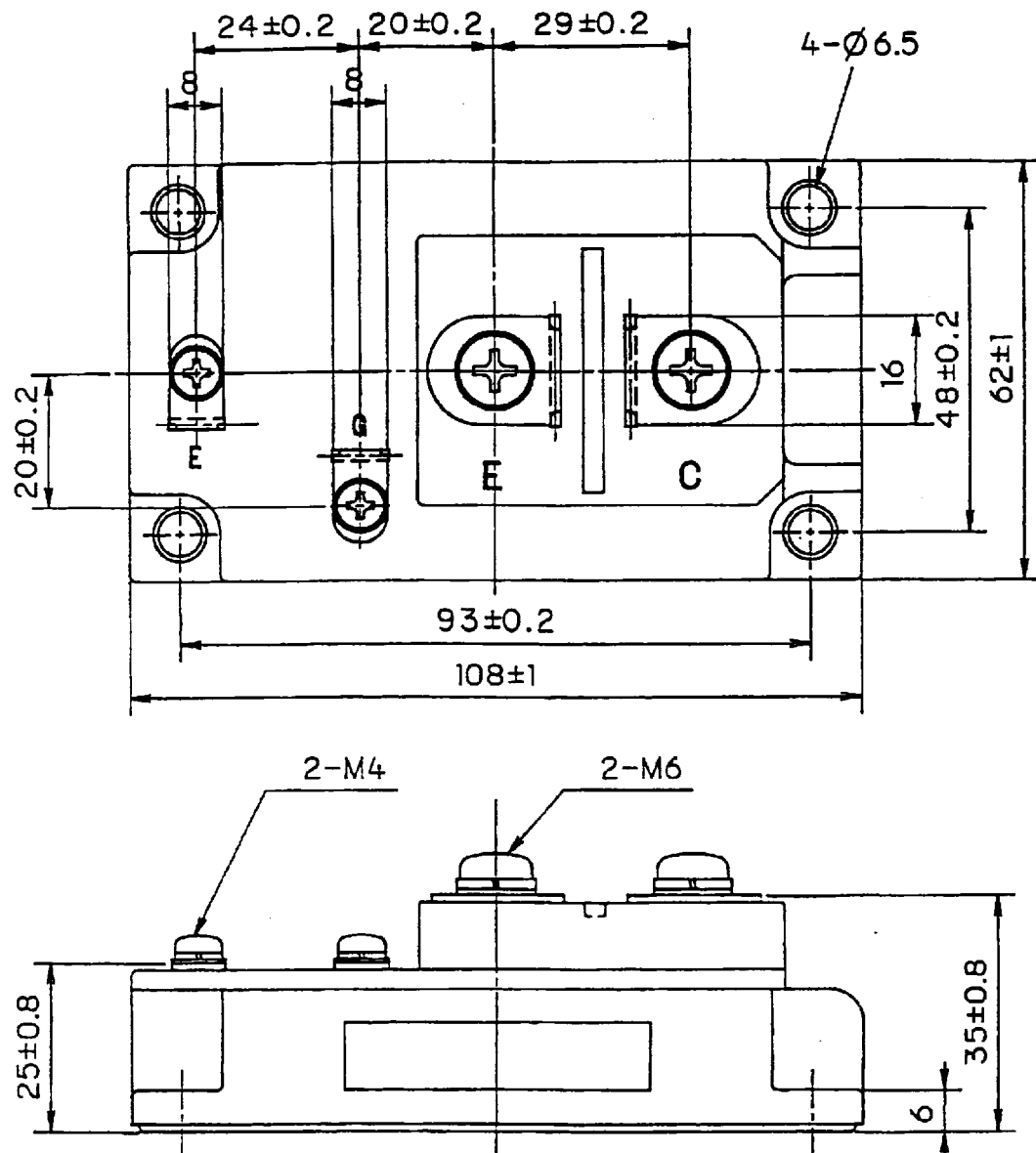
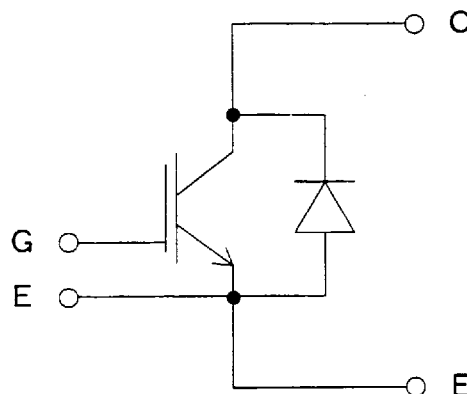


Target Specification of 1MBI200S-120

1. Outline Drawing (Unit : mm)



2. Equivalent circuit



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CHECKED Feb -11 -99	S. Kishida	T. Hiyasaka

Fuji Electric Co., Ltd.

DWG. NO.

MT5F 9781

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REVISIONS

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

Items	Symbols	Conditions		Maximum Ratings	Units
Collector-Emitter voltage	VCES			1200	V
Gate-Emitter voltage	VGES			± 20	V
Collector current	Ic	Continuous	Tc=25℃	300	A
			Tc=80℃	200	
	Ic pulse	1ms	Tc=25℃	600	
			Tc=80℃	400	
	-Ic			200	
	-Ic pulse	1ms		400	
Collector Power Dissipation	Pc	1 device		1300	W
Junction temperature	Tj			150	℃
Storage temperature	Tsig			-40～ +125	℃
Isolation voltage ^(※1)	Viso	AC : 1min.		2500	V
Screw Torque	Mounting ^(※2)			3. 5	N・m
	Terminals ^(※3)			4. 5	
	Terminals ^(※4)			1. 7	

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

(*2) Recommendable Value : 2.5 ~ 3.5 N · m (M5) or (M6)

(*3) Recommendable Value : 3.5 ~ 4.5 N · m (M6)

(*4) Recommendable Value : 1.3 ~ 1.7 N · m (M4)

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

Items	Symbols	Conditions	Characteristics			Units
			min.	typ.	Max.	
Zero gate voltage Collector current	ICES	VGE = 0 V, VCE = 1200 V			4.0	mA
Gate-Emitter leakage current	IGES	VCE = 0 V, VGE = ±20 V			0.8	μA
Gate-Emitter threshold voltage	VGE(th)	VCE = 20 V, Ic = 200 mA	5.5	7.2	8.5	V
Collector-Emitter saturation voltage	VCE(sat)	VGE = 15 V, Tj = 25℃		2.3	2.6	V
		Ic = 200 A, Tj = 125℃		2.8		
Input capacitance	Cies	VGE = 0 V		24000		pF
Output capacitance	Coes	VCE = 10 V		5000		
Reverse transfer capacitance	Cres	f = 1 MHz		4400		
Turn-on time	ton	Vcc = 600 V			1.2	μs
	tr	Ic = 200 A			0.6	
	tr ₍₁₎	VGE = ±15 V		0.1		
Turn-off time	toff	RG = 4.7 Ω			1.0	
	tf			0.08	0.3	
Forward on voltage	VF	IF = 200 A, Tj = 25℃		2.4	3.3	V
		Tj = 125℃		2.0		
Reverse recovery time	trr	IF = 200 A			0.35	μs

5. Thermal resistance characteristics

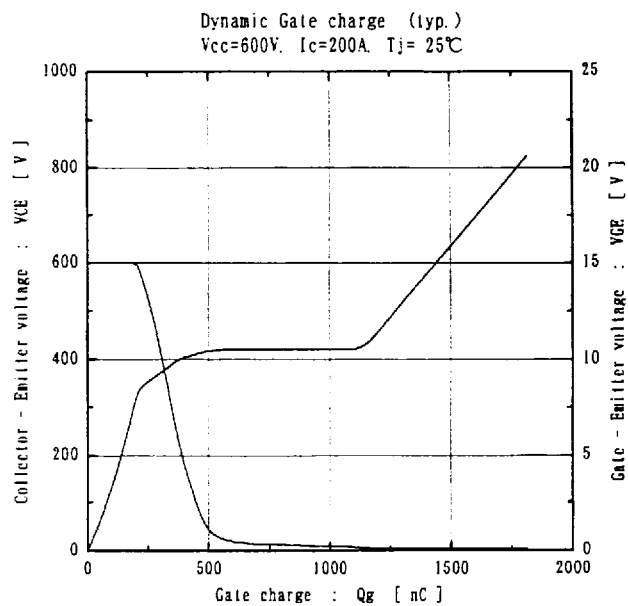
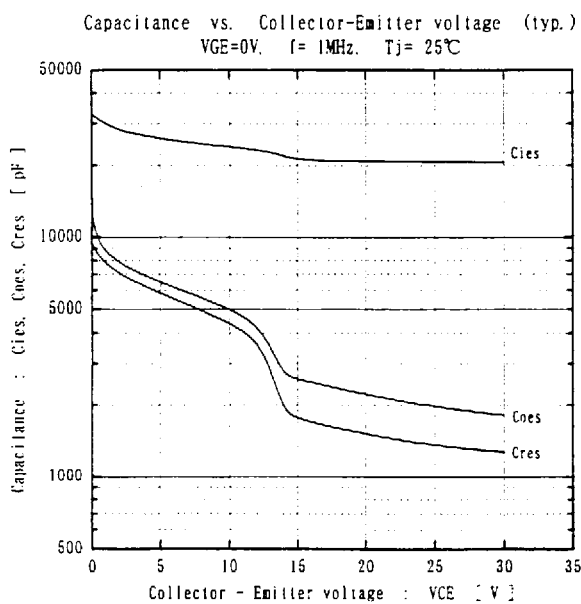
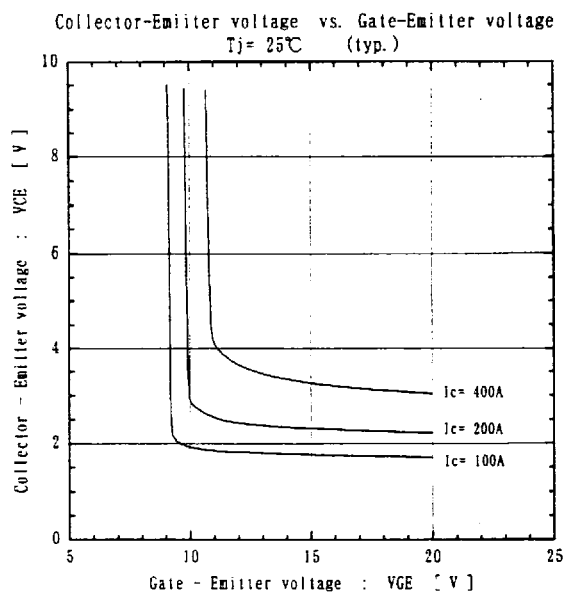
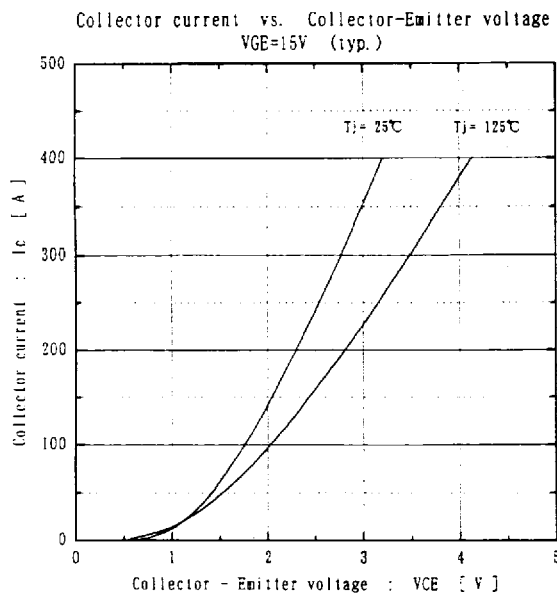
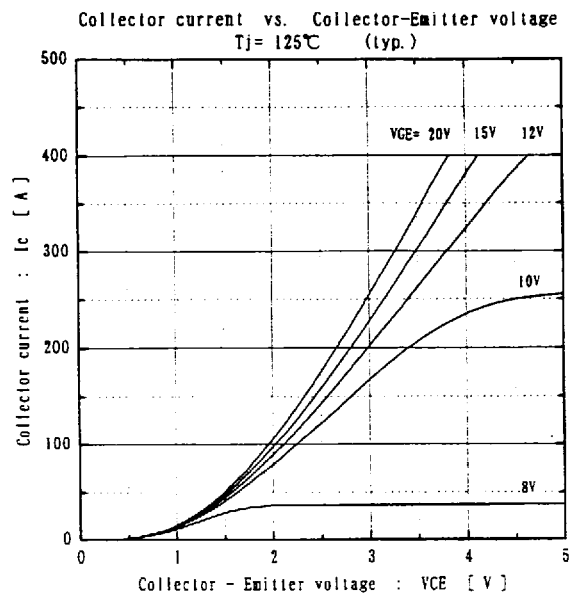
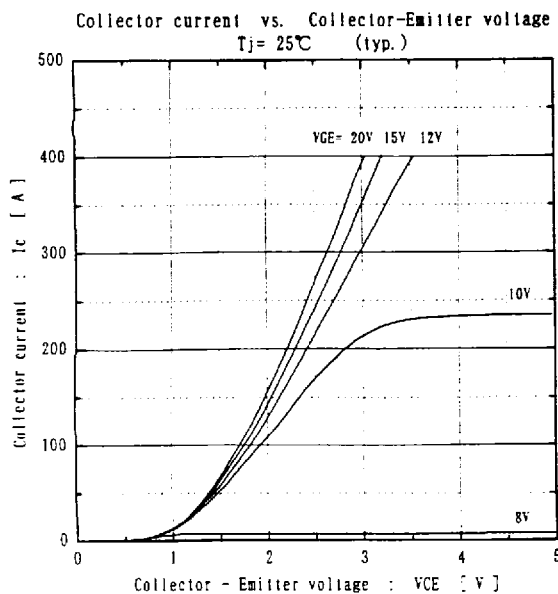
Items	Symbols	Conditions	Characteristics			Units
			min.	typ.	Max.	
Thermal resistance (1 device)	Rth(j-c)	IGBT			0.096	℃/W
		FWD			0.260	
Contact Thermal resistance	Rth(c-f)	with Thermal Compound ^(*)		0.0125		

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

Note :

- This specification is only for technical considerations, and not for contract.
- This specification is subject to be changed without notices.

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