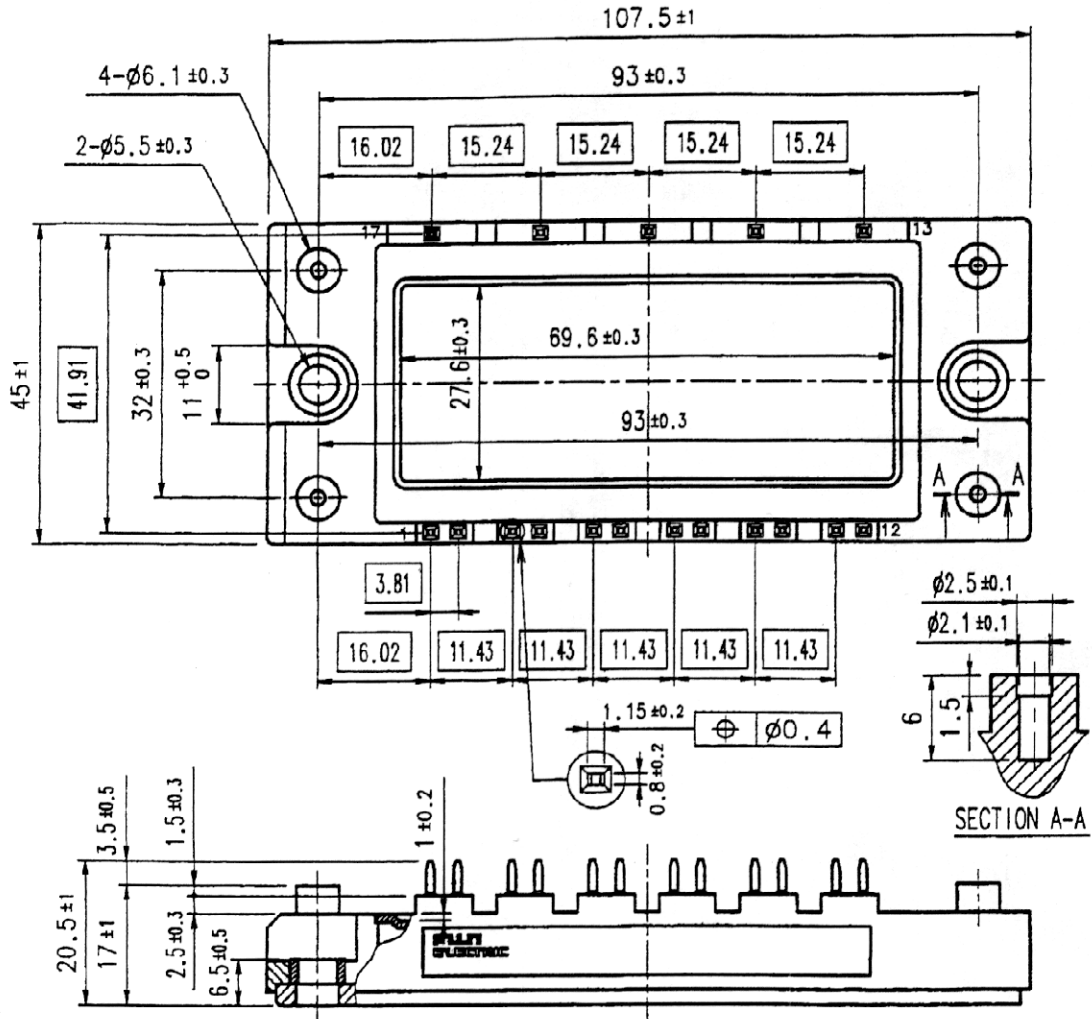


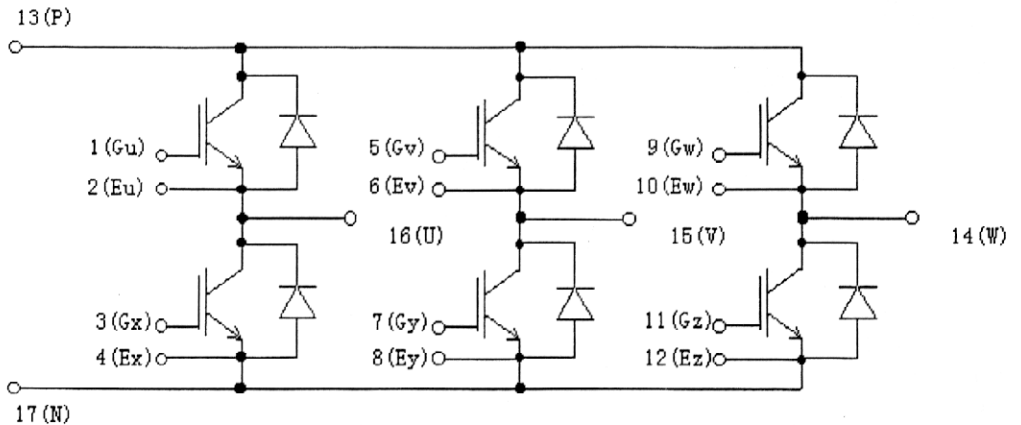
Target Specification of 6MBI50S-060

1. Output Drawing (Unit : mm)



□ shows theoretical dimension.

2. Equivalent circuit



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DRAWN	June 2 - '99	T. Mori		DWG. NO.	MT5F10058
CHECKED	June 4 - '99	S. Hyata			
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3. Absolute Maximum Ratings (at Tc= 25°C unless otherwise specified)

Items	Symbols	Conditions	Maximum Ratings	
			Maximum Ratings	Units
Collector-Emitter voltage	V _{CES}		600	V
Gate-Emitter voltage	V _{GES}		±20	V
Collector current	I _c	Continuous	50	A
	I _c pulse	1ms	100	
	-I _c		50	
	-I _c pulse	1ms	100	
Collector Power Dissipation	P _c	1 device	200	W
Junction temperature	T _j		150	°C
Storage temperature	T _{stg}		-40~ +125	°C
Isolation voltage ^(*)	Viso	AC : 1min.	2500	V
Mounting Screw Torque ^(*)			3.5	N · m

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

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

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

Items	Symbols	Conditions	Characteristics			Units
			min.	typ.	Max.	
Zero gate voltage Collector current	ICES	V _{GE} = 0 V, V _{CE} = 600 V			1.0	mA
Gate-Emitter leakage current	IGES	V _{CE} = 0 V, V _{GE} = ±20 V			200	nA
Gate-Emitter threshold voltage	V _{GE(th)}	V _{CE} = 20 V, I _c = 50 mA		7.8		V
Collector-Emitter saturation voltage	V _{CE(sat)}	V _{GE} = 15 V	T _j = 25 °C	1.95		V
		I _c = 50 A	T _j = 125 °C	2.10		
Input capacitance	C _{ies}	V _{GE} = 0 V		5000		pF
Output capacitance	C _{oes}	V _{CE} = 10 V		900		
Reverse transfer capacitance	C _{res}	f = 1 MHz		600		
Turn-on time	ton	V _{cc} = 300 V		0.45		μs
	tr	I _c = 50 A		0.25		
	tr _(i)	V _{GE} = ±15 V		0.08		
Turn-off time	toff	R _G = 51 Ω		0.40		μs
	tf			0.05		
Forward on voltage	V _F	I _F = 50 A	T _j = 25 °C	1.9		V
			T _j = 125 °C	1.8		
Reverse recovery time	trr	I _F = 50 A				ns

5. Thermal resistance characteristics

Items	Symbols	Conditions	Characteristics			Units
			min.	typ.	Max.	
Thermal resistance (1 device)	R _{th(j-c)}	IGBT			0.63	°C/W
		FWD			1.33	
Contact Thermal resistance	R _{th(c-f)}	with Thermal Compound ^(**)		0.05		

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

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