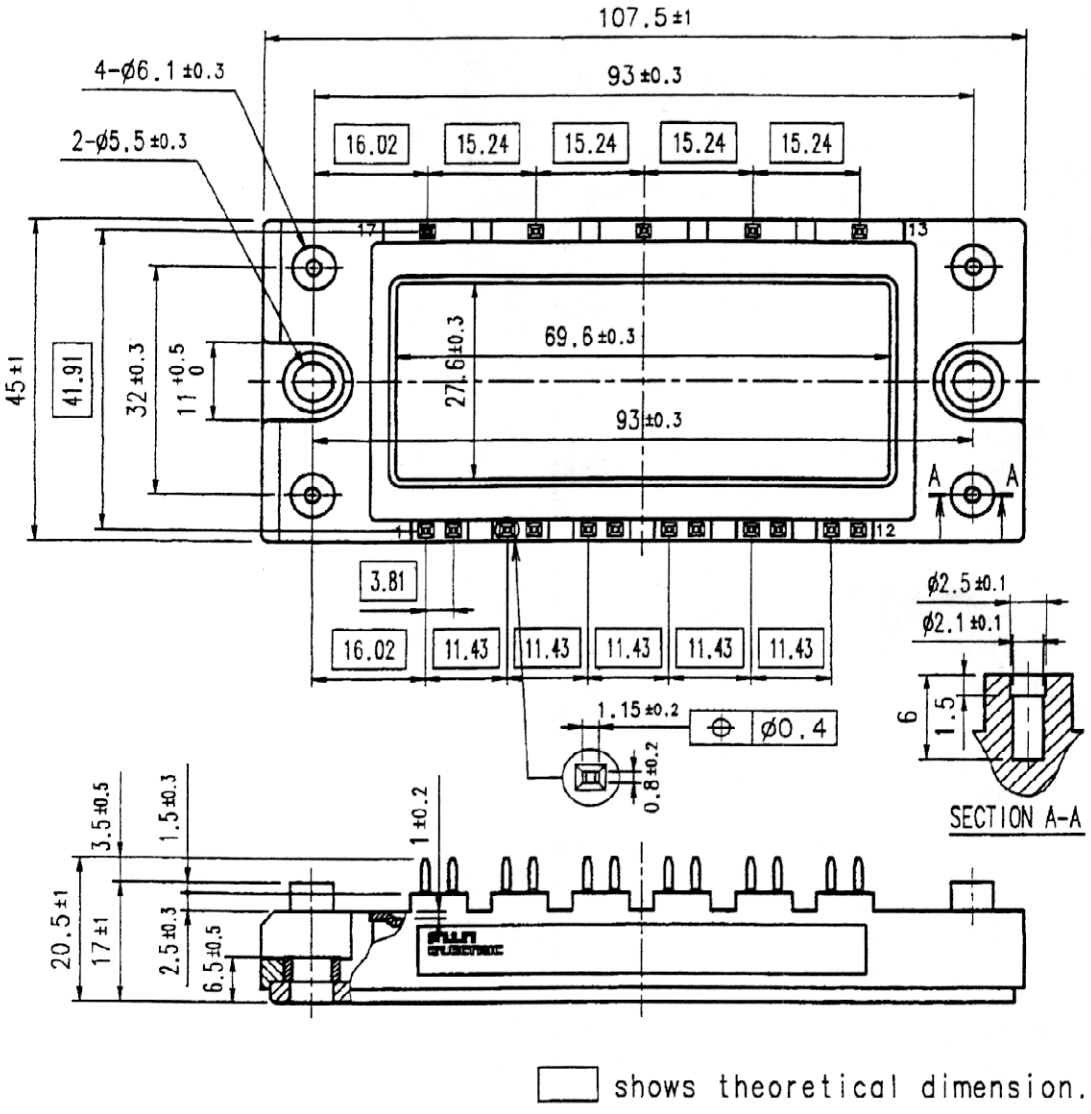
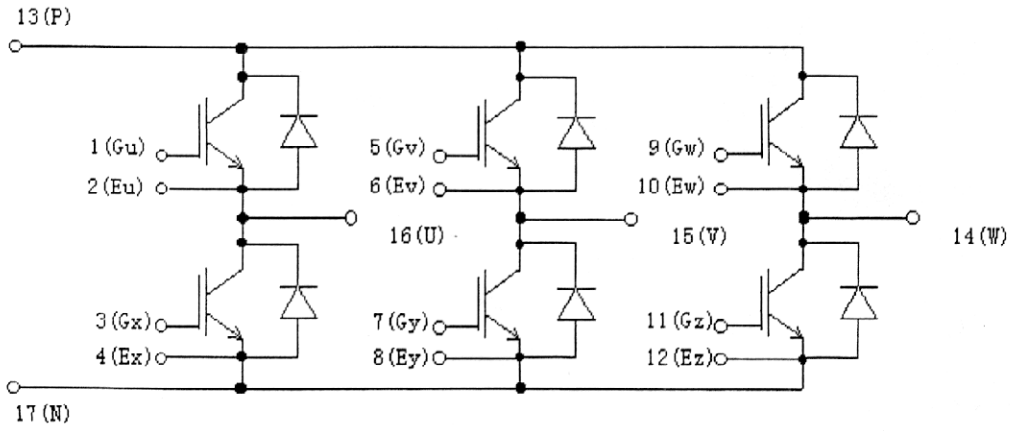
Target Specification of 6MBI30S-060

1. Output Drawing (Unit : mm)



shows theoretical dimension.

2. Equivalent circuit



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

Items	Symbols	Conditions	Maximum Ratings	Units
Collector-Emitter voltage	VCES		600	V
Gate-Emitter voltage	VGES		±20	V
Collector current	Ic	Continuous	30	A
	Ic pulse	1ms	60	
	-Ic		30	
	-Ic pulse	1ms	60	
Collector Power Dissipation	Pc	1 device	120	W
Junction temperature	Tj		150	℃
Storage temperature	Tstg		-40～ +125	℃
Isolation voltage (*1)	Viso	AC : 1min.	2500	V
Mounting Screw Torque (*2)			3.5	N・m

(*1) 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℃ unless otherwise specified)

Items	Symbols	Conditions		Characteristics min.	Characteristics typ.	Characteristics Max.	Units
Zero gate voltage Collector current	ICES	VGE = 0 V, VCE = 600 V				1.0	mA
Gate-Emitter leakage current	IGES	VCE = 0 V, VGE = ±20 V				200	nA
Gate-Emitter threshold voltage	VGE(th)	VCE = 20 V, Ic = 30 mA			7.8		V
Collector-Emitter saturation voltage	VCE(sat)	VGE = 15 V	Tj = 25 ℃		1.95		V
		Ic = 30 A	Tj = 125 ℃		2.1		
Input capacitance	Cies	VGE = 0 V			3000		pF
Output capacitance	Coes	VCE = 10 V			540		
Reverse transfer capacitance	Cres	f = 1 MHz			360		
Turn-on time	ton	Vcc = 300 V			0.45		μs
	tr	Ic = 30 A			0.25		
	$tr_{(i)}$	VGE = ±15 V			0.08		
Turn-off time	toff	RG = 82 Ω			0.40		
	tf				0.05		
Forward on voltage	VF	IF = 30 A	Tj = 25 ℃		1.95		V
			Tj = 125 ℃		1.8		
Reverse recovery time	trr	IF = 30 A					ns

5. Thermal resistance characteristics

Items	Symbols	Conditions	Characteristics min.	Characteristics typ.	Characteristics Max.	Units
Thermal resistance (1 device)	Rth(j-c)	IGBT			1.04	℃/W
		FWD			2.00	
Contact Thermal resistance	Rth(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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