

1MBI50L-060(50A)

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捷多邦, 专业PCB打样工厂, 24小时加急出货

Fuji Power Module

IGBT MODULE (L series)

■ Features

- High Speed Switching
- Low Saturation Voltage
- Voltage Drive
- Isolated Package

■ Applications

- Ideal for Chopper Application
- AC and DC Servo Drive Supply
- Uninterruptible Power Supply
- Industrial Machines, such as Welding Machines

■ Maximum Ratings and Characteristics

● Absolute Maximum Ratings

Items	Symbols	Ratings	Units
Collector-Emitter Voltage	V _{CEs}	600	V
Gate-Emitter Voltage	V _{GES}	±20	V
Collector Current	Continuous	I _c	50
	1ms	I _{c,pulse}	100
			A
Max. Power Dissipation	P _c	200	W
Operating Temperature	T _j	+150	°C
Storage Temperature	T _{stg}	-40 to +125	°C
Isolation Voltage	AC, 1min.	V _{is}	2500
Screw Torque	Mounting *1	1.7	N•m
	Terminals *1	1.7	

● Electrical Characteristics (T_j=25°C unless otherwise specified)

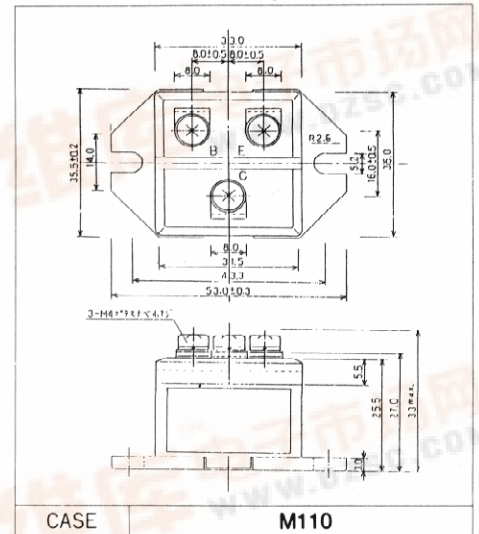
Items	Symbols	Test Conditions	Min.	Typ.	Max.	Units
Zero Gate Voltage Collector Current	I _{CEs}	V _{GE} =0V V _{CE} =600V T _c =25°C			1.0	mA
Gate-Emitter Leakage Current	I _{GES}	V _{CE} =0V V _{GE} =±20V			100	nA
Gate-Emitter Threshold Voltage	V _{GE(th)}	V _{CE} =20V I _c =50mA	3.0		6.0	V
Collector-Emitter Saturation Voltage	V _{CE(sat)}	V _{GE} =15V I _c =50A		2.7	3.5	V
Input Capacitance	C _{ies}	V _{GE} =0V		4750		pF
Output Capacitance	C _{oes}	V _{CE} =10V				
Reverse Transfer Capacitance	C _{res}	f=1MHz				
Turn-on Time	t _{on}	V _{CE} =300V		0.4	0.8	μs
	t _r	I _c =50A		0.3	0.6	
Turn-off Time	t _{off}	V _{GE} =±15V		0.6	1.0	
	t _f	R _G =51Ω		0.2	0.35	

t_{on}, t_r: Resistive Load t_{off}, t_f: Inductive Load

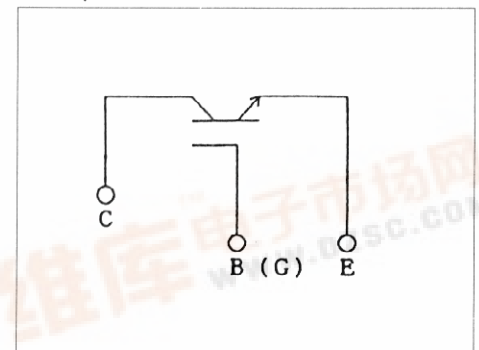
● Thermal Characteristics

Symbols	Test Conditions	Min.	Typ.	Max.	Units
R _{th(j-c)}	IGBT			0.625	°C/W
R _{th(c-f)}	With Thermal compound		0.03		

■ Outline Drawings



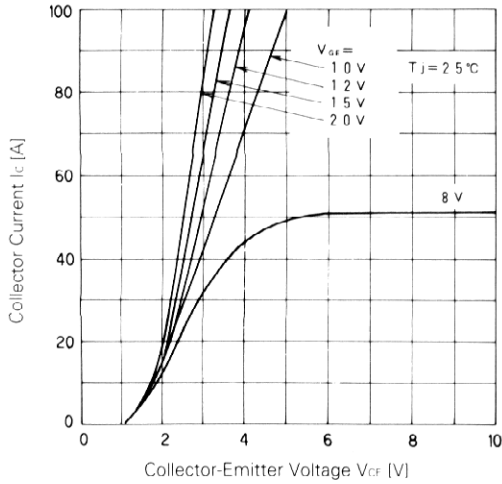
■ Equivalent Circuit Schematic



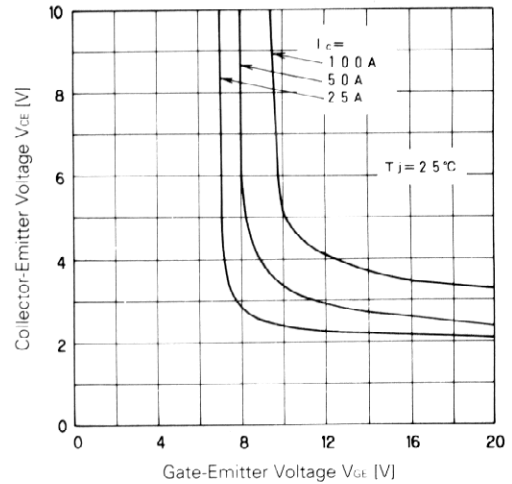
*1 Recommendable Value 1.3 ~ 1.7 N•m (M4)



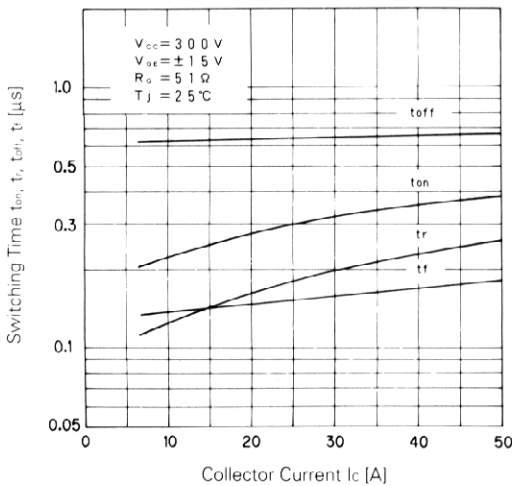
Characteristics



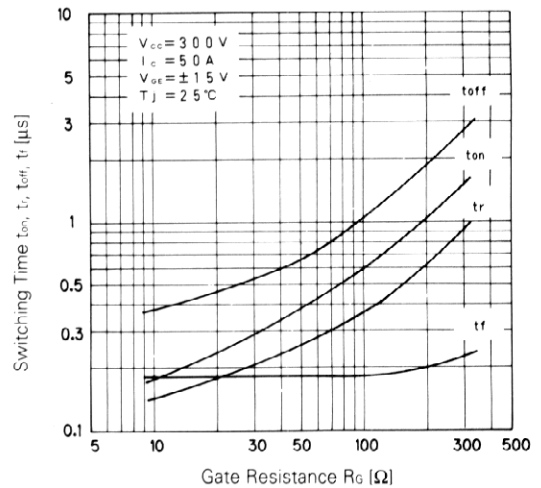
Collector Current vs. Collector-Emitter Voltage



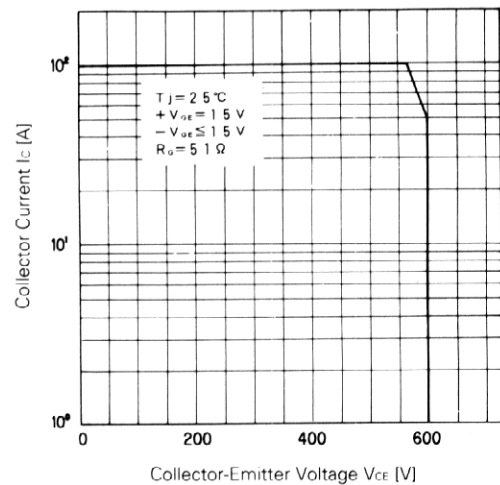
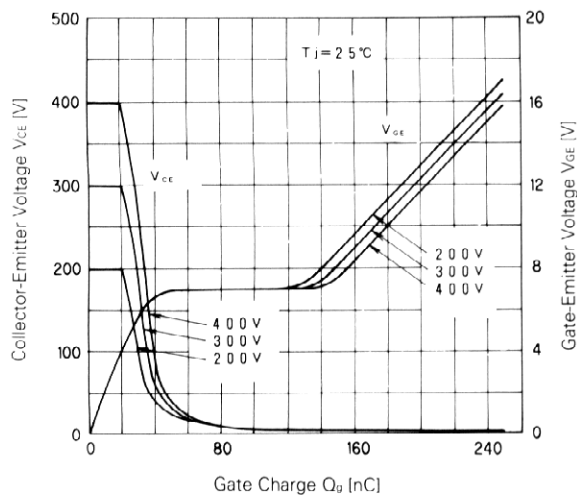
Collector-Emitter Voltage vs. Gate-Emitter Voltage

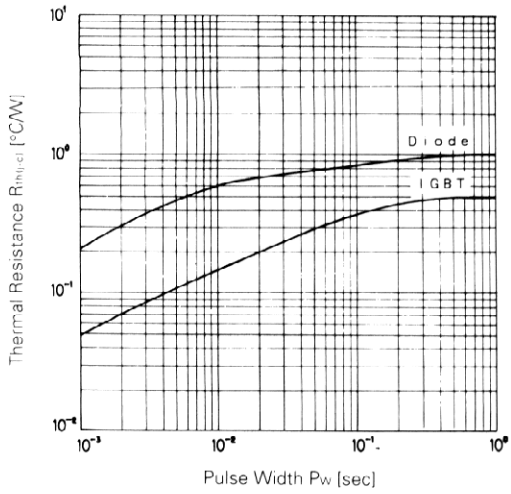


Switching Time

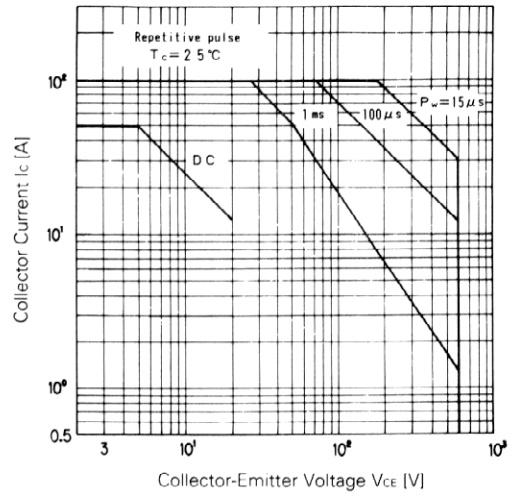


Switching Time-Gate Resistance





Transient Thermal Resistance



Safe Operating Area