

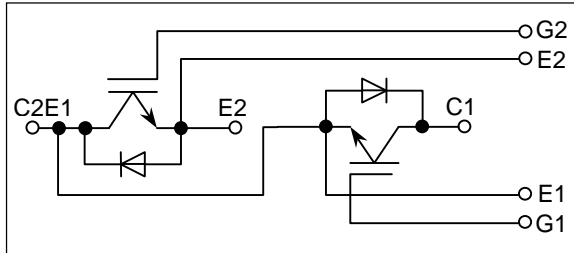
MBM200GR6

[Rated 200A/600V, Dual-pack type]

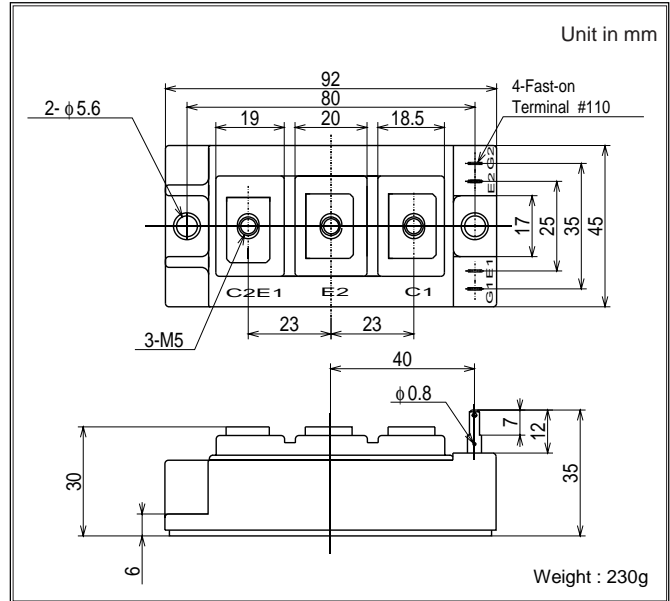
FEATURES

- Low saturation voltage and high speed.
- Low turn-OFF switching loss.
- Low noise due to build-in free-wheeling diode. (Ultra Soft and Fast recovery Diode (USFD))
- High reliability structure.
- Isolated heat sink (terminals to base).

CIRCUIT DIAGRAM



OUTLINE DRAWING



ABSOLUTE MAXIMUM RATINGS(T_c=25°C)

Item	Symbol	Unit	Value	
Collector-Emitter Voltage	V _{CES}	V	600	
Gate-Emitter Voltage	V _{GES}	V	±20	
Collector Current	DC	I _C	200	
	1ms	I _{CP}	400	
Forward Current	DC	I _F	200 ^{*1}	
	1ms	I _{FM}	400	
Collector Power Dissipation	P _C	W	690	
Junction Temperature	T _j	°C	-40 ~ +150	
Storage Temperature	T _{stg}	°C	-40 ~ +125	
Isolation Voltage	V _{iso}	V _{RMS}	2500(AC 1 minute)	
Screw Torque	Terminals	-	N-m (kgf·cm)	1.96(20) ^{*2}
	Mounting			1.96(20) ^{*3}

Notes; *1: RMS current of Diode ≤ 60 Arms

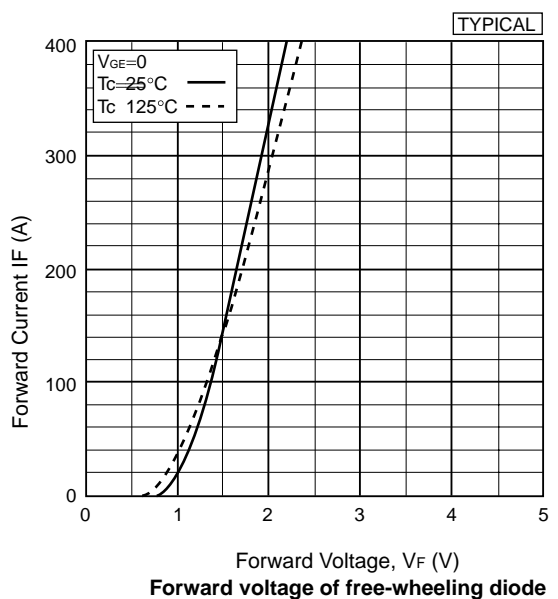
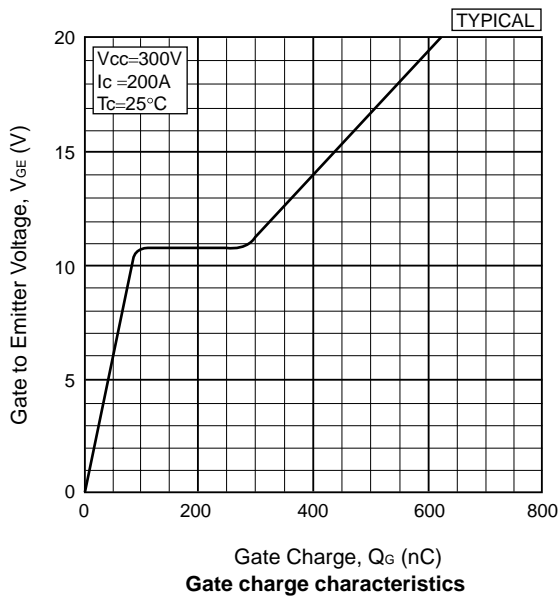
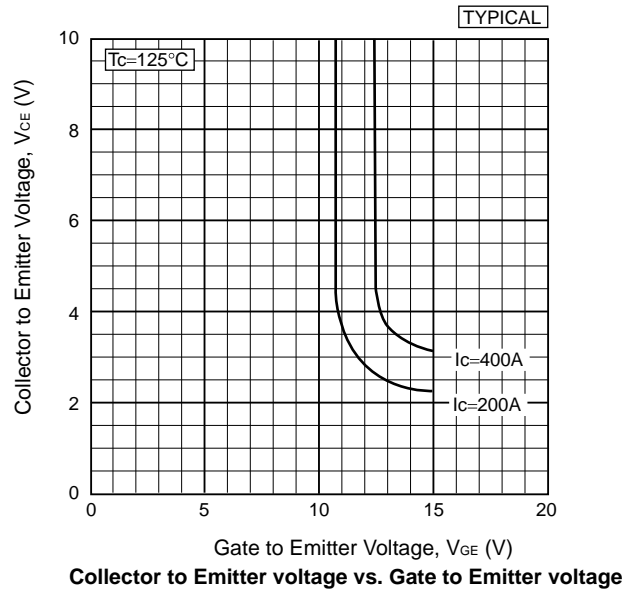
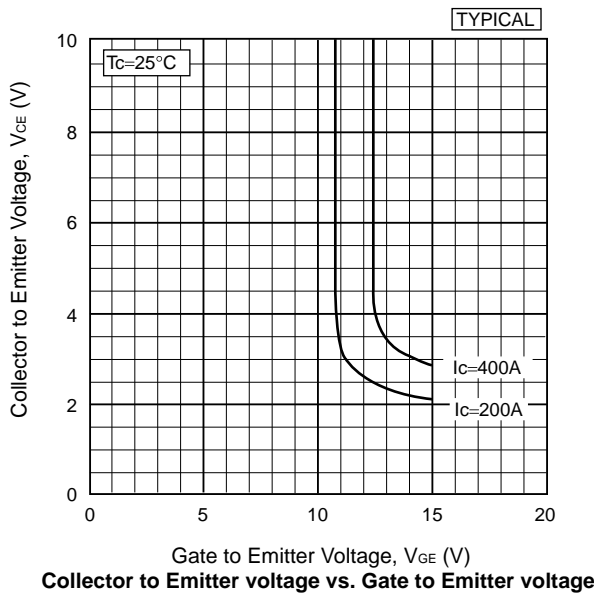
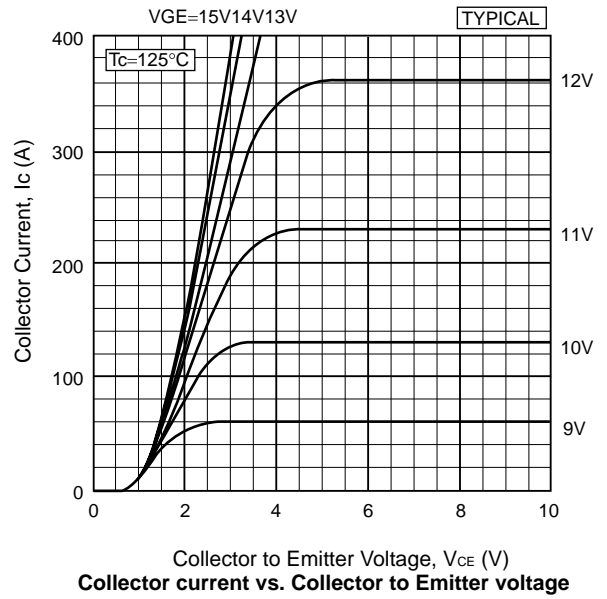
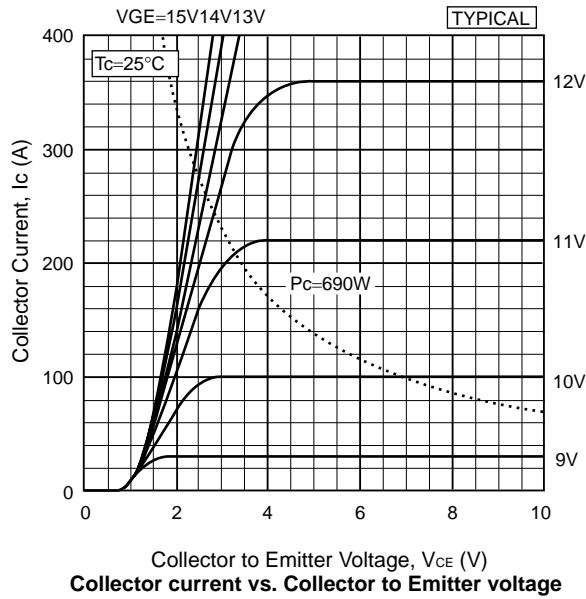
*2, *3 : Recommended value 1.67 N·m (17 kgf·cm)

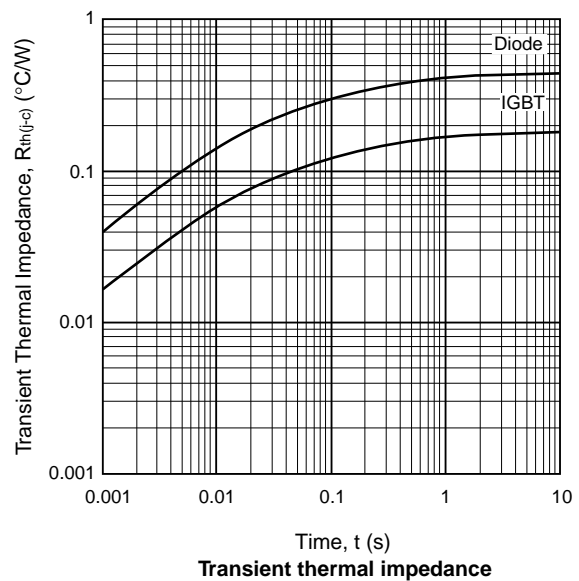
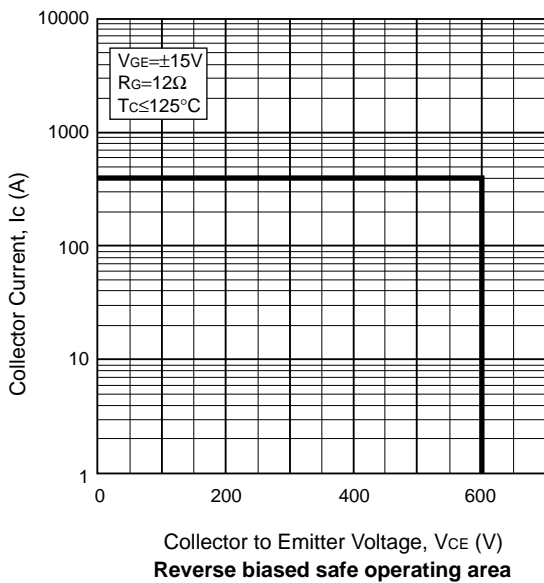
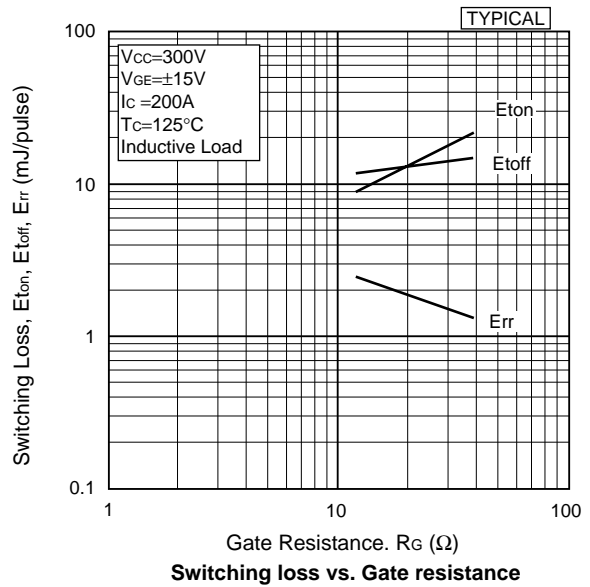
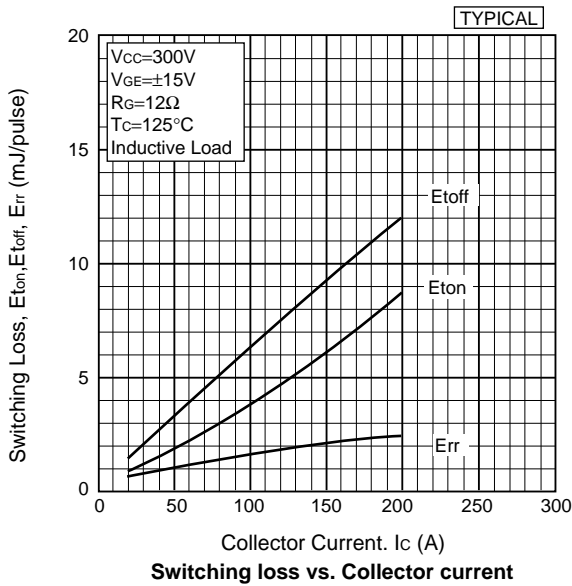
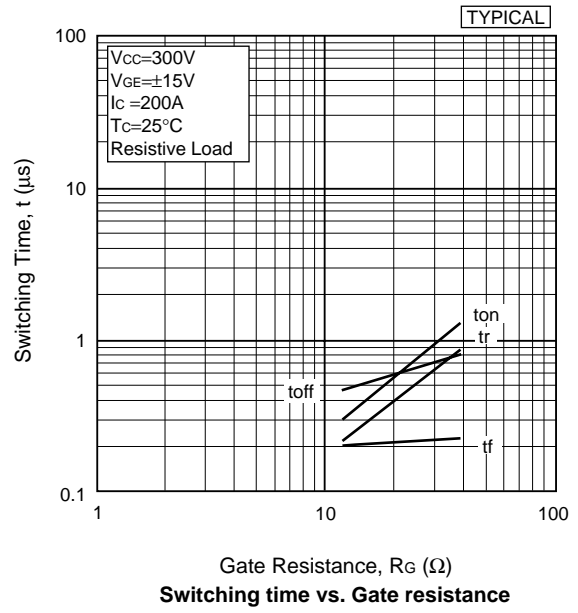
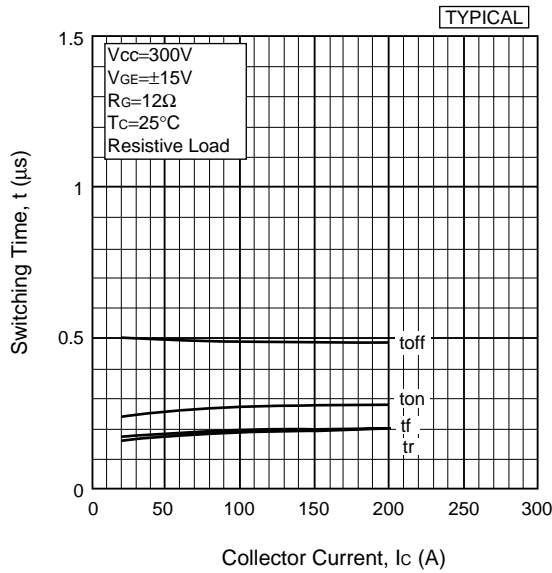
CHARACTERISTICS (T_c=25°C)

Item	Symbol	Unit	Min.	Typ.	Max.	Test Conditions	
Collector-Emitter Cut-Off Current	I _{CES}	mA	-	-	1.0	V _{CE} =600V, V _{GE} =0V	
Gate-Emitter Leakage Current	I _{GES}	nA	-	-	±500	V _{GE} =±20V, V _{CE} =0V	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	V	-	2.1	2.6	I _C =200A, V _{GE} =15V	
Gate-Emitter Threshold Voltage	V _{GE(TO)}	V	-	-	10	V _{CE} =5V, I _C =200mA	
Input Capacitance	C _{ies}	pF	-	9700	-	V _{CE} =10V, V _{GE} =0V, f=1MHz	
Switching Times	Rise Time	t _r	-	0.2	0.5	V _{CC} =300V R _L =1.5Ω R _G =12Ω ^{*4} V _{GE} =±15V	
	Turn-ON Time	t _{on}	-	0.3	0.7		
	Fall Time	t _f	-	0.2	0.3		
	Turn-Off Time	t _{off}	-	0.55	0.8		
Peak Forward Voltage Drop	V _{FM}	V	-	1.6	2.2	I _F =200A, V _{GE} =0V	
Reverse Recovery Time	t _{rr}	μs	-	-	0.3	I _F =200A, V _{GE} =-10V, di/dt=200A/μs	
Thermal Impedance	IGBT	R _{th(j-c)}	°C/W	-	-	Junction to case	
	FWD	R _{th(j-c)}					0.179
							0.44

Notes; *4: R_G value is the test condition's value for decision of the switching times, not recommended value, please determine the suitable R_G value after the measurement of switching waveforms (overshoot voltage, etc.) with appliance mounted.

Remark; The specification given herein, is subject to change without prior notice to improve product characteristics.





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