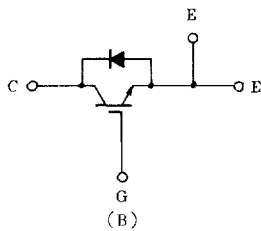


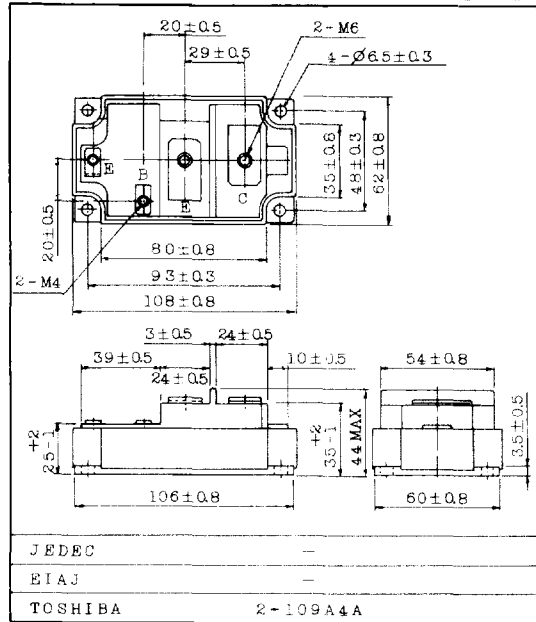
HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

- . High Input Impedance
- . High Speed : $t_f=1.0\mu s(\text{Max.})$
 $t_{rr}=0.5\mu s(\text{Max.})$
- . Low Saturation Voltage: $V_{CE}(\text{sat})=5.0V(\text{Max.})$
- . Enhancement-Mode
- . The Electrodes are Isolated from Case.

EQUIVALENT CIRCUIT



Unit in mm



Weight : 490g

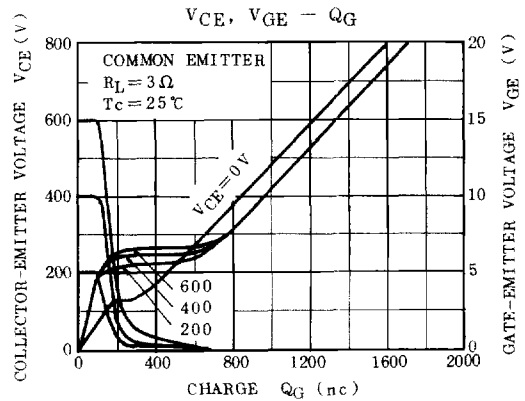
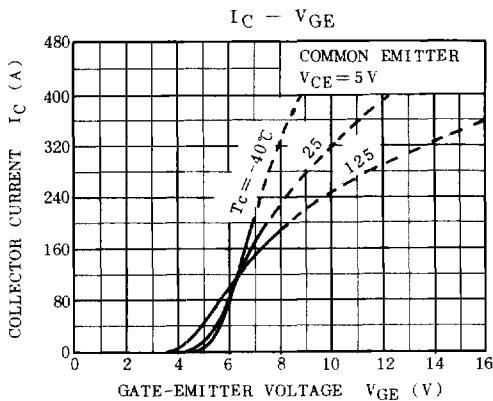
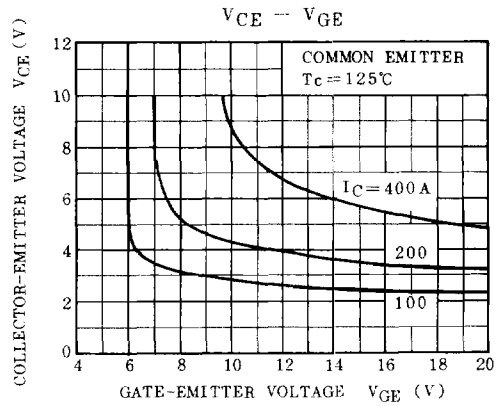
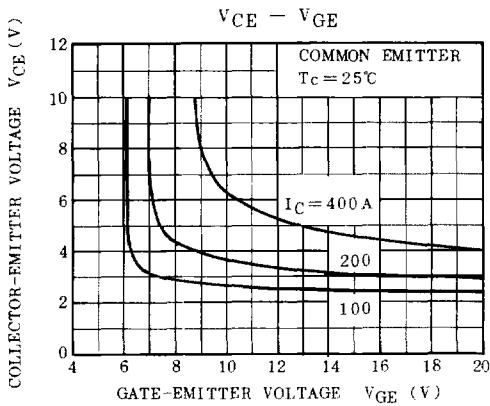
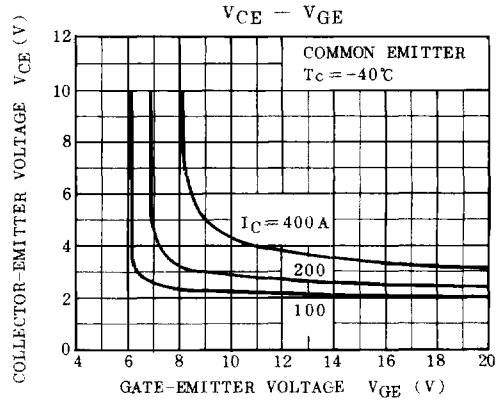
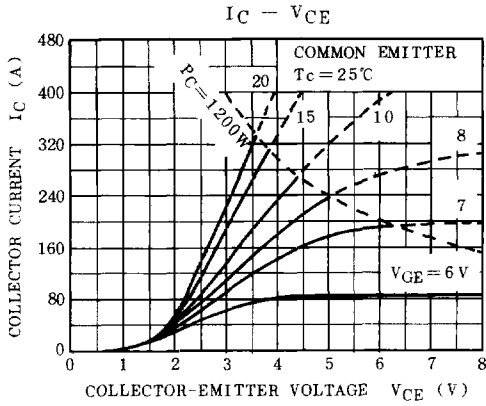
MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	V_{CES}	1000	V
Gate-Emitter Voltage	V_{GES}	± 20	V
Collector Current	DC	I_C	200
	1ms	I_{CP}	400
Forward Current	DC	I_F	200
	1ms	I_{FM}	400
Collector Power Dissipation ($T_c=25^\circ\text{C}$)	P_C	1200	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-40~125	$^\circ\text{C}$
Isolation Voltage	V_{isol}	2500 (AC 1 minute)	V
Screw Torque (Terminal/Mounting)	-	30/30	kg·cm

MG200N1US1

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		IGES	VGE=±20V, VCE=0	-	-	±500	nA
Collector Cut-off Current		ICES	VCE=1000V, VGE=0	-	-	4	mA
Collector-Emitter Breakdown Voltage		V(BR)CES	IC=4mA, VGE=0	1000	-	-	V
Gate-Emitter Cut-off Voltage		VGE(OFF)	IC=200mA, VCE=5V	3.0	-	6.0	V
Collector-Emitter Saturation Voltage		VCE(sat)	IC=200A, VGE=15V	-	3.0	5.0	V
Input Capacitance		Cies	VCE=10V, VGE=0, f=1MHz	-	30000	-	pF
Switching Time	Rise Time	tr		-	0.8	1.5	μs
	Turn-on Time	ton		-	0.9	2.0	
	Fall Time	tf		-	0.6	1.0	
	Turn-off Time	toff		-	1.2	2.0	
Forward Voltage		VF	IF=200A, VGE=0	-	2.0	3.0	V
Reverse Recovery Time		trr	IF=200A, VGE=-10V di/dt=300A/μs	-	0.25	0.5	μs
Thermal Resistance		Rth(j-c)	Transistor	-	-	0.104	°C/W
			Diode	-	-	0.25	



MG200N1US1

