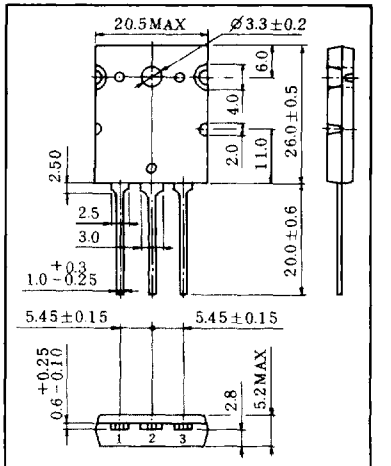
INSULATED GATE BIPOLAR TRANSISTOR
SILICON N-CHANNEL MOS TYPE

GT60M101

HIGH POWER SWITCHING APPLICATIONS.

- High Input Impedance
- High Speed : t_f=0.7μs(Max.)
- Low Saturation Voltage : $V_{CE(sat)}$=4.0V(Max.)
- Enhancement-Mode

Unit in mm



1. GATE
2. COLLECTOR (HEAT SINK)
3. EMITTER

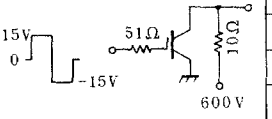
JEDEC	—
EIAJ	—
TOSHIBA	2-21F1C

Weight : 9.75g

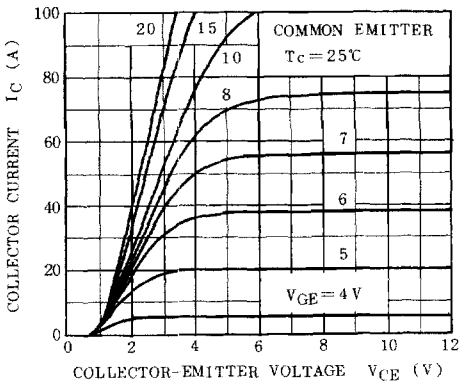
MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		V_{CES}	900	V
Gate-Emitter Voltage		V_{GES}	±25	V
Collector Current	DC	I_C	60	A
	1ms	I_{CP}	120	
Collector Power Dissipation (Tc=25°C)		P_C	200	W
Junction Temperature		Tj	150	°C
Storage Temperature Range		Tstg	-55~150	°C
Screw Torque		-	8	kg·cm

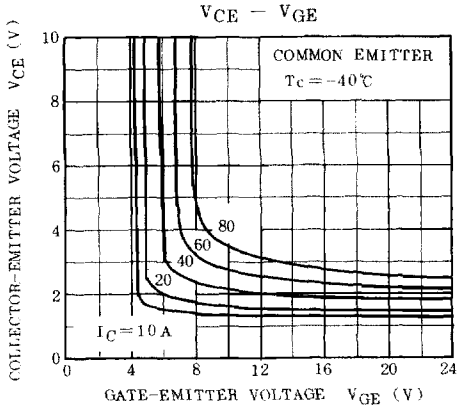
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		I_{GES}	V_{GE}=±25V, V_{CE}=0	-	-	±500	nA
Collector Cut-off Current		I_{CES}	V_{CE}=900V, V_{GE}=0	-	-	1.0	mA
Collector-Emitter Breakdown Voltage		$V_{(BR)CES}$	I_C=2mA, V_{GE}=0	900	-	-	V
Gate-Emitter Cut-off Voltage		$V_{GE(off)}$	I_C=60mA, V_{CE}=5V	2.0	3.5	5.0	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)(1)}$	I_C=10A, V_{GE}=15V	-	-	2.0	V
		$V_{CE(sat)(2)}$	I_C=60A, V_{GE}=15V	-	2.7	4.0	
Input Capacitance		Cies	V_{CE}=10V, V_{GE}=0, f=1MHz	-	2300	-	pF
Switching Time	Rise Time	t_r		-	0.3	1.0	μs
	Turn-on Time	t_{on}		-	0.4	1.0	
	Fall Time	t_f		-	0.4	0.7	
	Turn-off Time	t_{off}		-	1.0	1.5	
Thermal Resistance		$R_{th(j-c)}$	-	-	-	0.625	°C/W

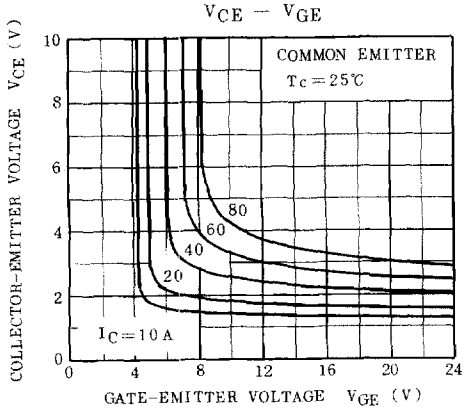
I_C – V_{CE}



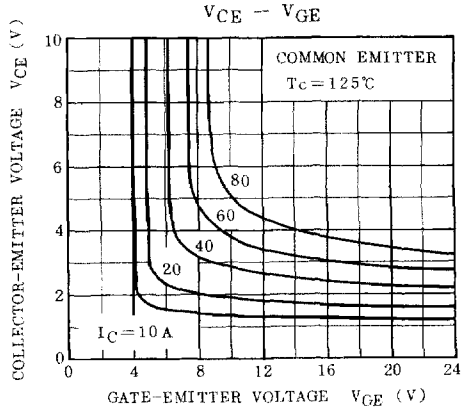
V_{CE} – V_{GE}



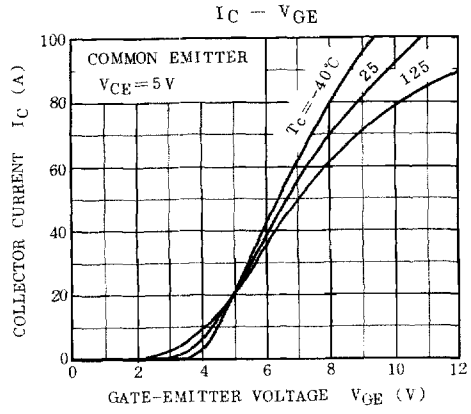
V_{CE} – V_{GE}



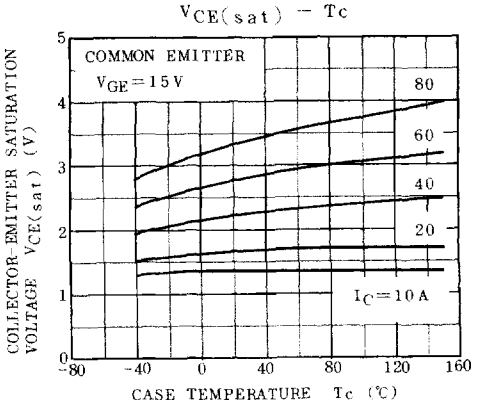
V_{CE} – V_{GE}



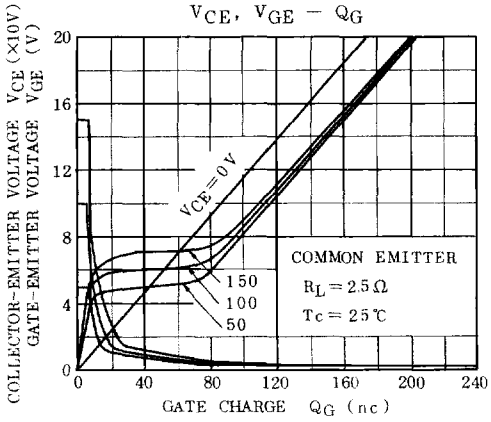
I_C – V_{GE}



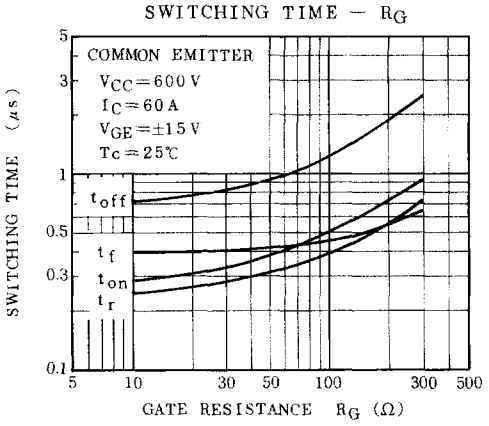
$V_{CE(sat)}$ – Tc



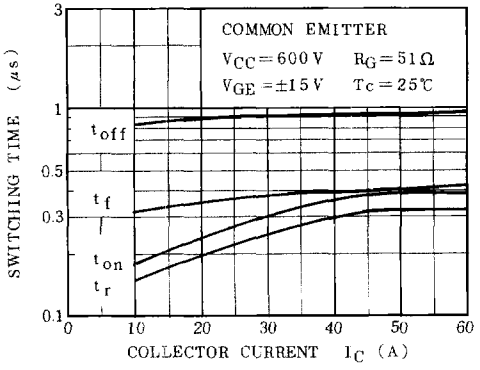
V_{CE}, V_{GE} – Q_G



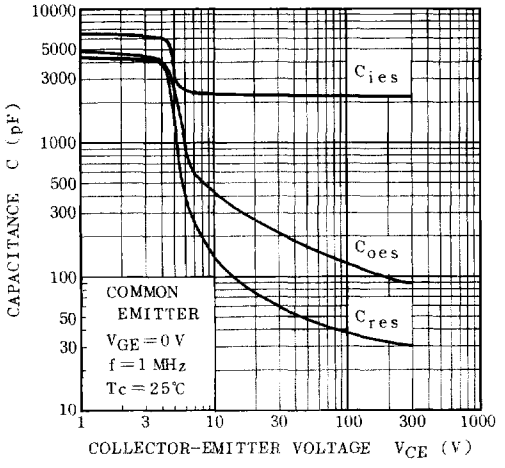
SWITCHING TIME – R_G



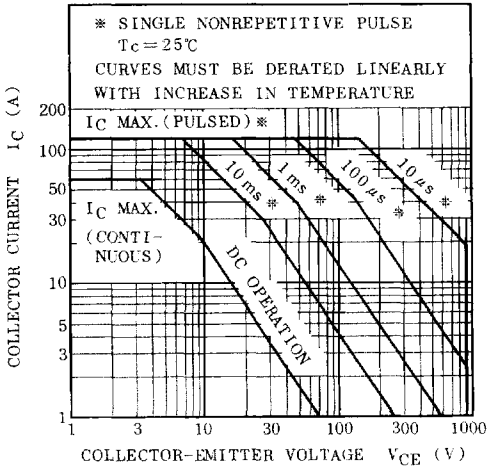
SWITCHING TIME – I_C



C – V_{CE}



SAFE OPERATING AREA



$R_{th(t)}$ – t_w