

737-914

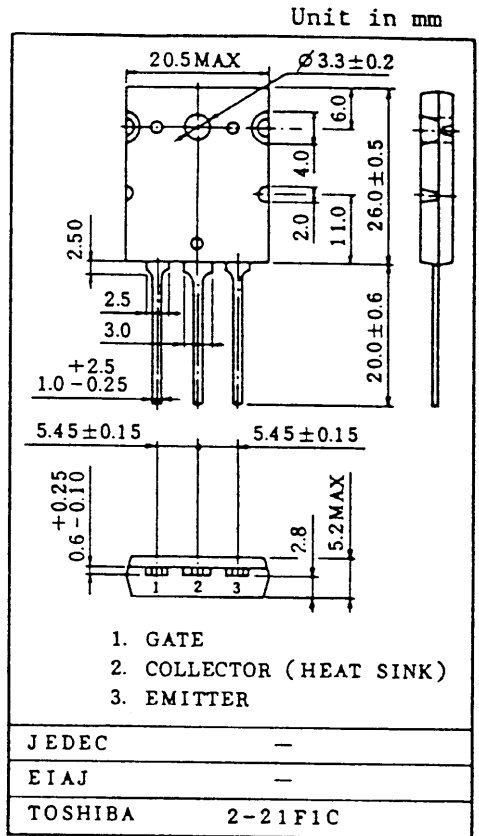
# GT50J101

HIGH POWER SWITCHING APPLICATIONS.

- . High Input Impedance
- . High Speed :  $t_f=0.35\mu s(\text{Max.})$
- . Low Saturation Voltage :  $V_{CE}(\text{sat})=4.0V(\text{Max.})$
- . Enhancement-Mode

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

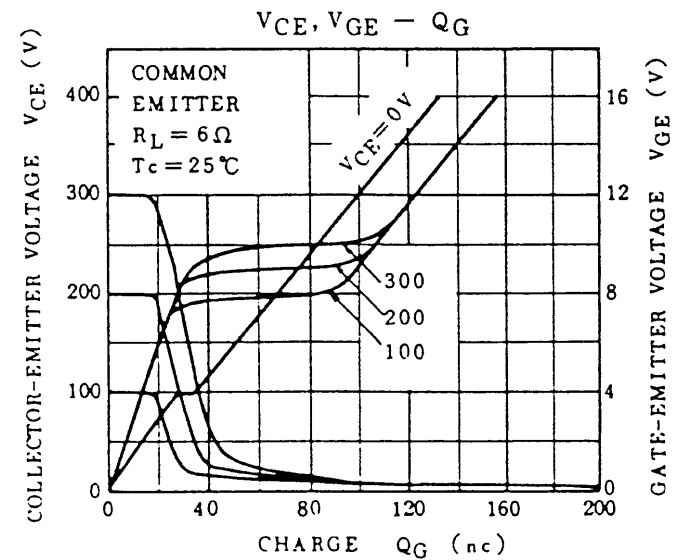
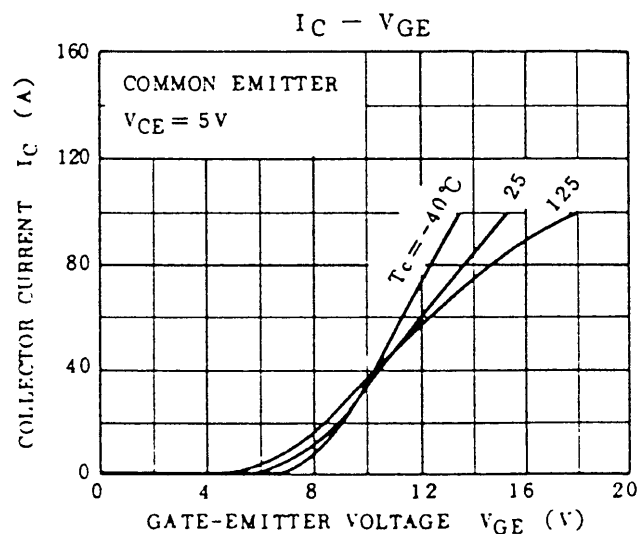
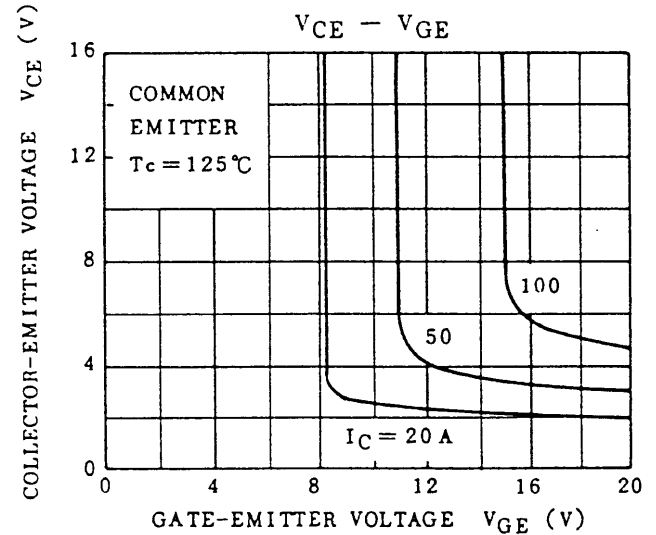
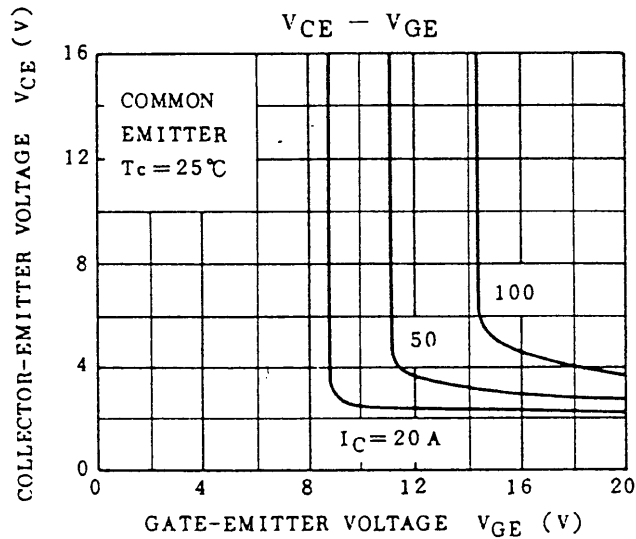
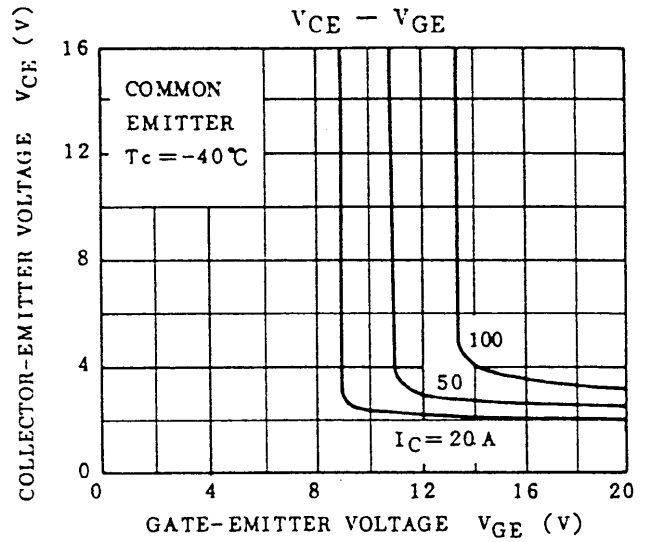
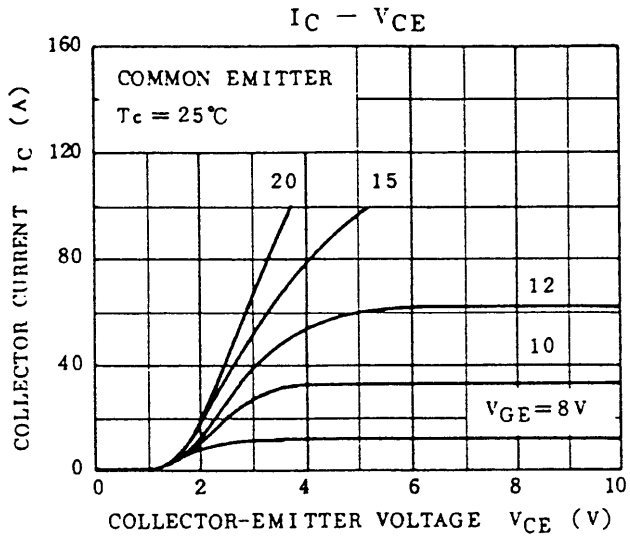
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		$V_{CES}$	600	V
Gate-Emitter Voltage		$V_{GES}$	$\pm 20$	V
Collector Current	DC	$I_C$	50	A
	lms	$I_{CP}$	100	
Collector Power Dissipation ( $T_c=25^\circ C$ )		$P_C$	200	W
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55~150	$^\circ C$
Screw Torque		-	0.8	Nm



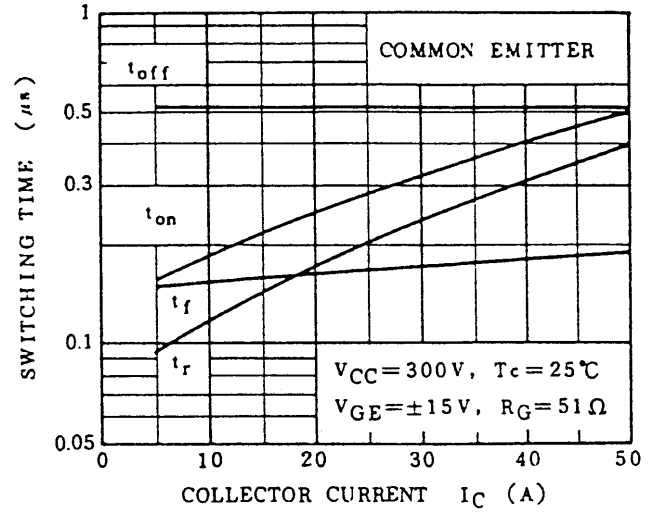
Weight : 9.75g

ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )

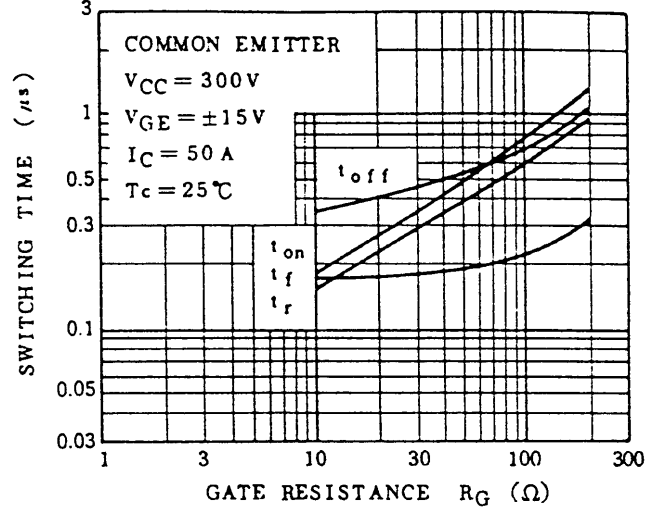
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		$I_{GES}$	$V_{GE}=\pm 20V, V_{CE}=0$	-	-	$\pm 500$	nA
Collector Cut-off Current		$I_{CFS}$	$V_{CE}=600V, V_{GE}=0$	-	-	1.0	mA
Collector-Emitter Breakdown Voltage		$V(BR)_{CES}$	$I_C=2mA, V_{GE}=0$	600	-	-	V
Gate-Emitter Cut-off Voltage		$V_{GE}(\text{off})$	$I_C=50mA, V_{CE}=5V$	3.0	-	6.0	V
Collector-Emitter Saturation Voltage		$V_{CE}(\text{sat})$	$I_C=50A, V_{GE}=15V$	-	3.0	4.0	V
Input Capacitance		$C_{ies}$	$V_{CE}=10V, V_{GE}=0, f=1MHz$	-	3500	-	pF
Switching Time	Rise Time	$t_r$		-	0.3	0.6	$\mu s$
	Turn-on Time	$t_{on}$		-	0.4	0.8	
	Fail Time	$t_f$		-	0.15	0.35	
	Turn-off Time	$t_{off}$		-	0.50	1.00	
Thermal Resistance		$R_{th(j-c)}$	-	-	-	0.625	$^\circ C/W$



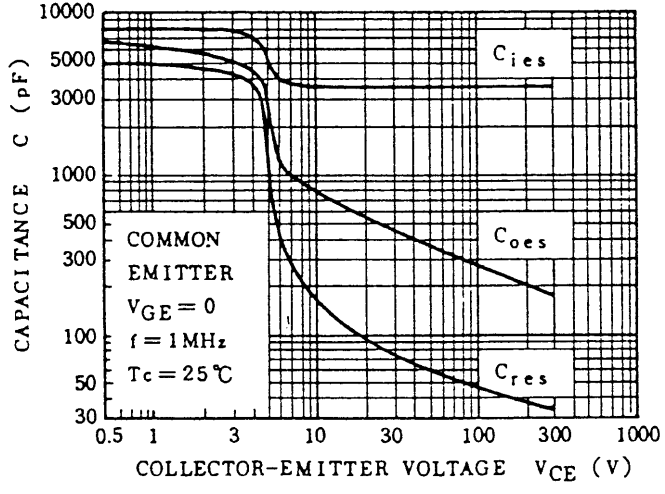
### SWITCHING TIME - $I_C$



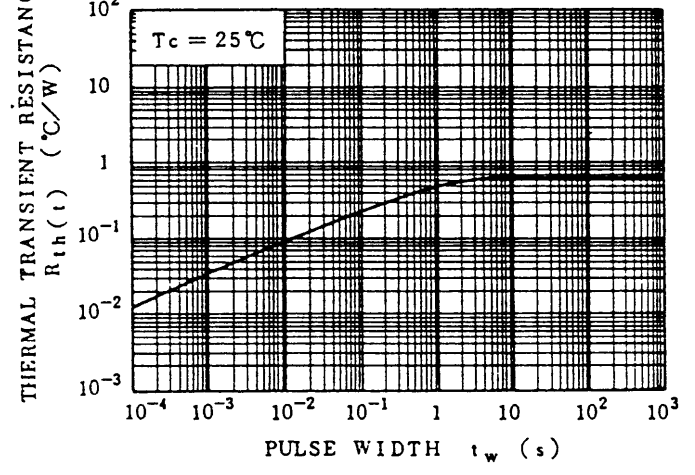
### SWITCHING TIME - $R_G$



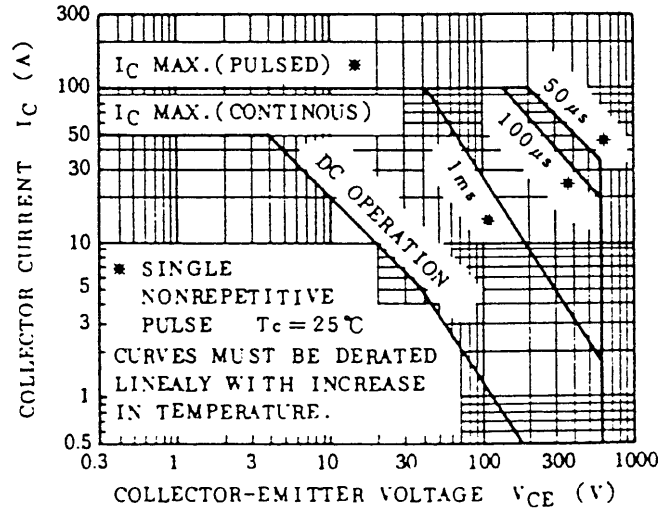
### C - $V_{CE}$



### $R_{th}(t) - t_w$



### SAFE OPERATING AREA



### REVERSE BIAS SOA

