

# IGBT Transistor

## **GT8J101**

600V / 8A

# DATASHEET

OEM – Toshiba

Source: Toshiba Databook 1995/96

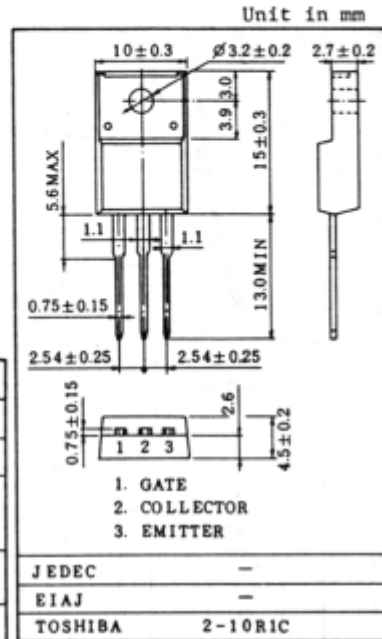
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HIGH POWER SWITCHING APPLICATIONS.  
MOTOR CONTROL APPLICATIONS.

- . 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 ( $T_a=25^\circ\text{C}$ )

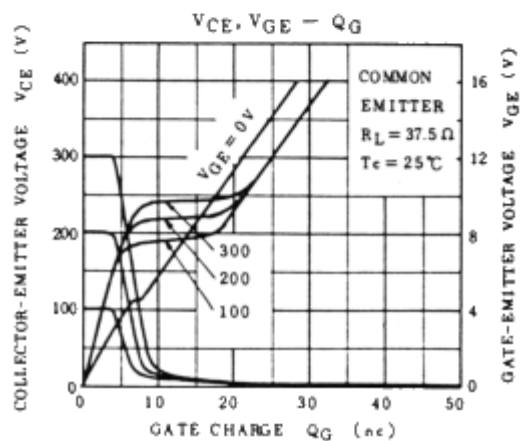
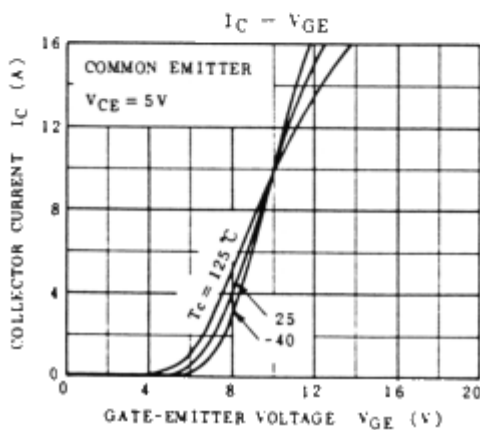
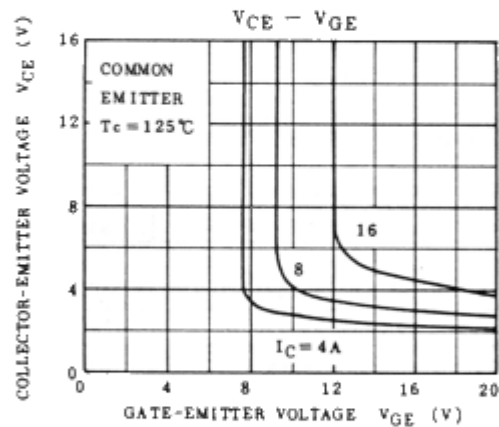
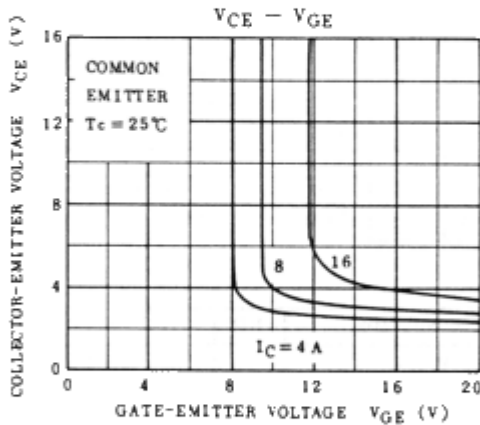
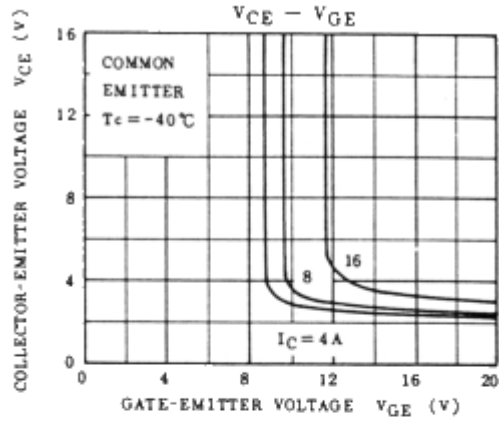
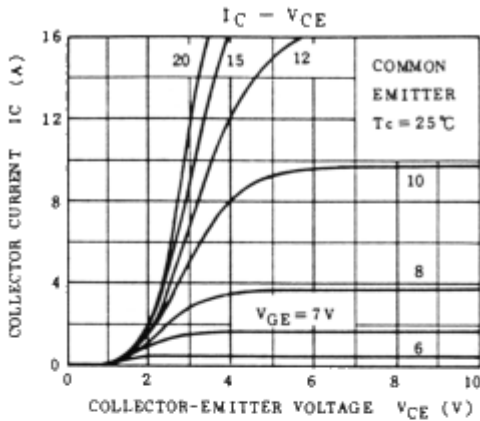
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		$V_{CES}$	600	V
Gate-Emitter Voltage		$V_{GES}$	$\pm 20$	V
Collector Current	DC	$I_C$	8	A
	lms	$I_{CP}$	16	
Collector Power Dissipation ( $T_c=25^\circ\text{C}$ )		$P_C$	30	W
Junction Temperature		$T_j$	150	$^\circ\text{C}$
Storage Temperature Range		$T_{stg}$	-55-150	$^\circ\text{C}$



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

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		$I_{CES}$	$V_{CE}=600V, V_{GE}=0$	-	-	1.0	mA
Collector-Emitter Breakdown Voltage		$V_{(BR)CES}$	$I_C=2mA, V_{GE}=0$	600	-	-	V
Gate-Emitter Cut-off Voltage		$V_{GE(OFF)}$	$I_C=8mA, V_{CE}=5V$	3.0	-	6.0	V
Collector-Emitter Saturation Voltage		$V_{CE(\text{sat})}$	$I_C=8A, V_{GE}=15V$	-	3.0	4.0	V
Input Capacitance		$C_{ies}$	$V_{CE}=10V, V_{GE}=0, f=1MHz$	-	650	-	pF
Switching Time	Rise Time	$t_r$		-	0.30	0.60	$\mu s$
	Turn-on Time	$t_{on}$		-	0.40	0.80	
	Fall Time	$t_f$		-	0.15	0.35	
	Turn-off Time	$t_{off}$		-	0.50	1.00	

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