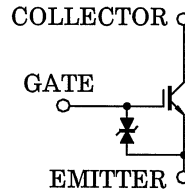


# GT8G103

## STROBE FLASH APPLICATIONS

- 3rd Generation
- Enhancement-Mode
- Low Saturation Voltage:  $V_{CE(sat)} = 8\text{ V (Max.) (@}I_C = 150\text{ A)}$
- 4.5 V Gate Drive



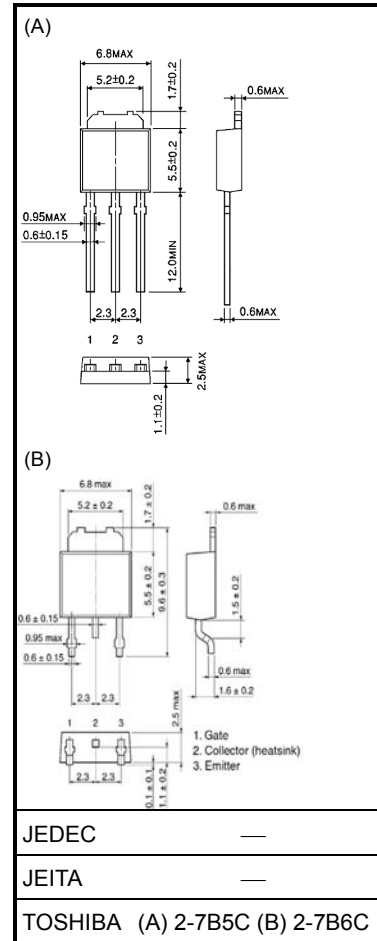
## ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	$V_{CES}$	400	V
Gate-Emitter Voltage	DC	$V_{GES}$	$\pm 6$ V
	Pulse	$V_{GES}$	$\pm 8$ V
Collector Current	DC	$I_C$	8 A
	1 ms	$I_{CP}$	150 A
Collector Power Dissipation	$T_a = 25^\circ\text{C}$	$P_C$	1.3 W
	$T_c = 25^\circ\text{C}$	$P_C$	20 W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ\text{C}$

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Unit: mm

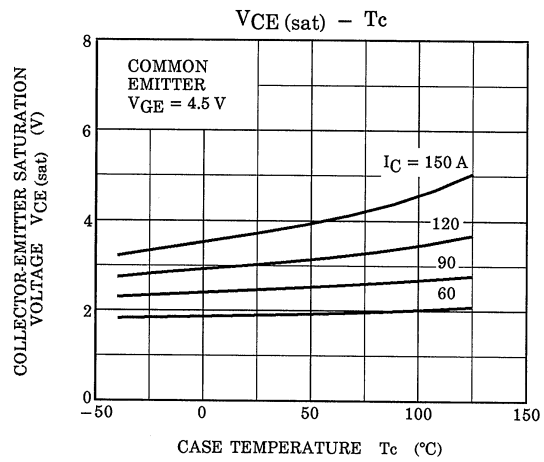
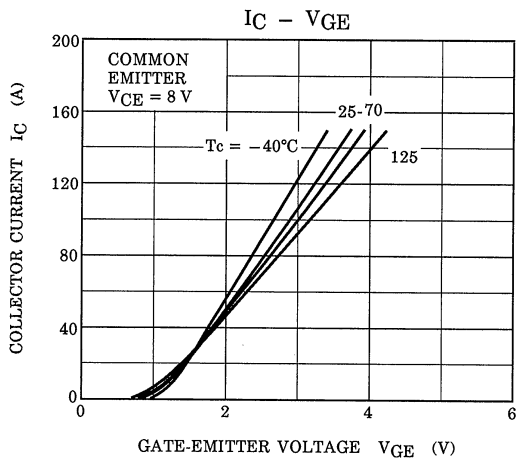
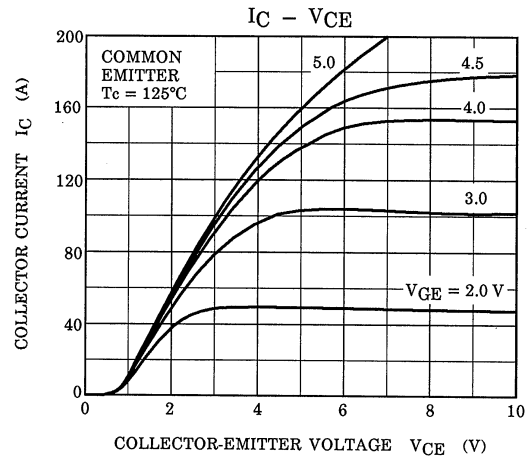
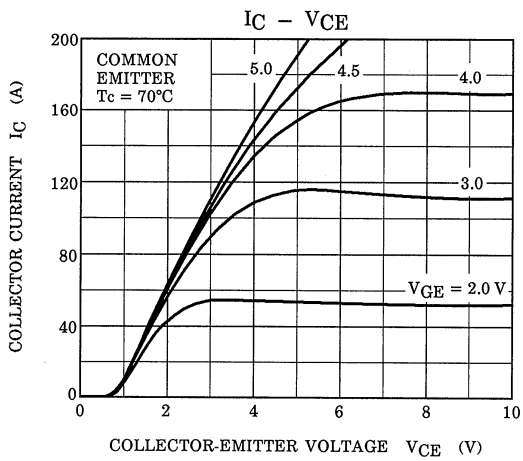
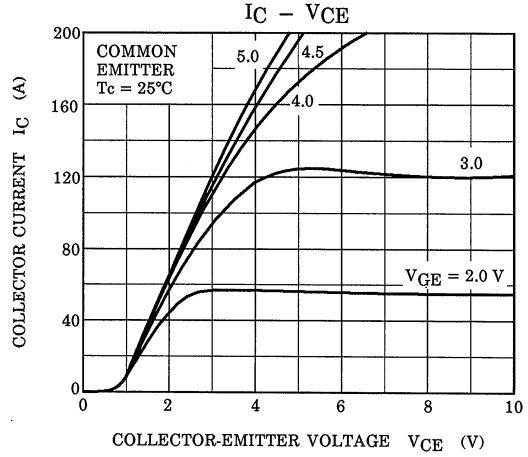
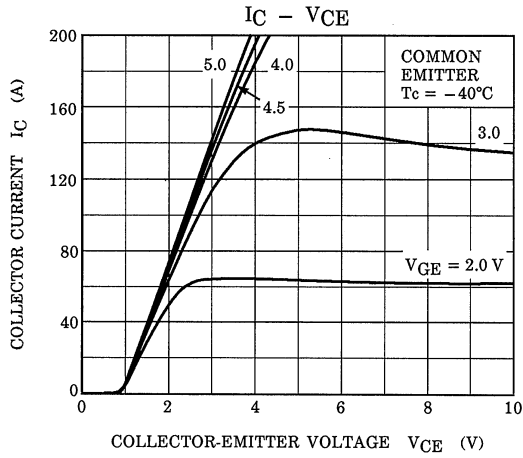


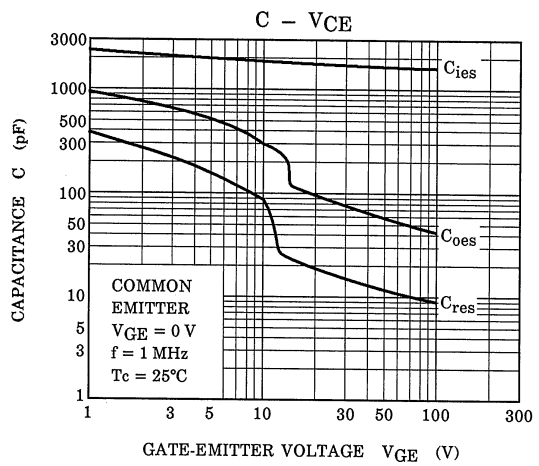
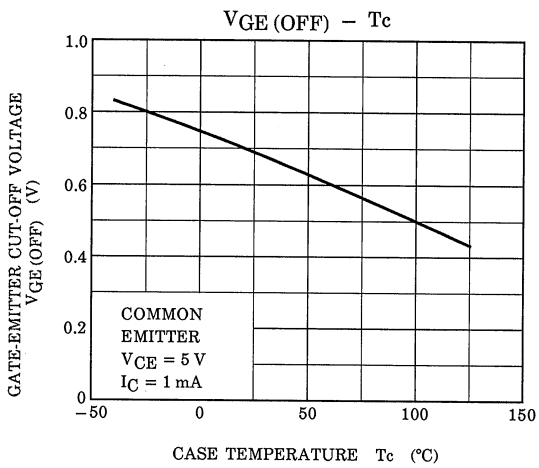
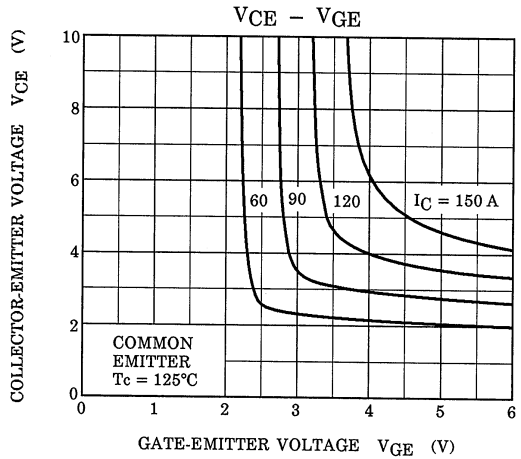
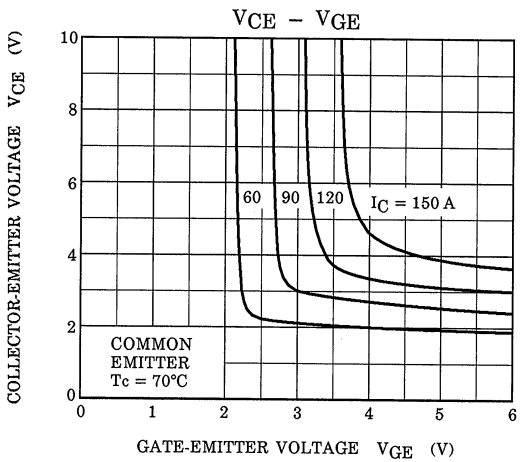
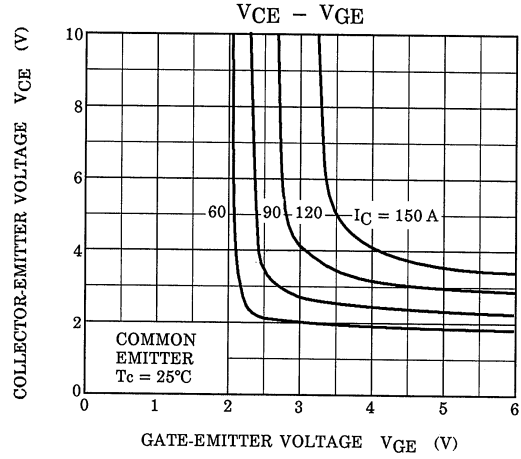
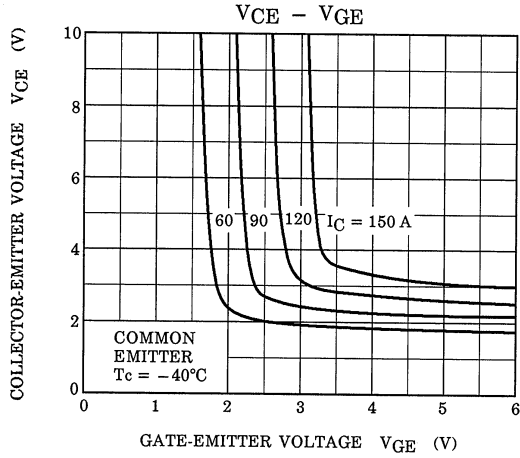
Weight: 0.36 g (typ.)

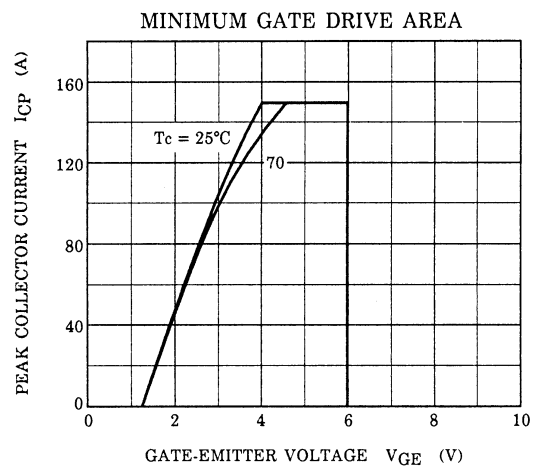
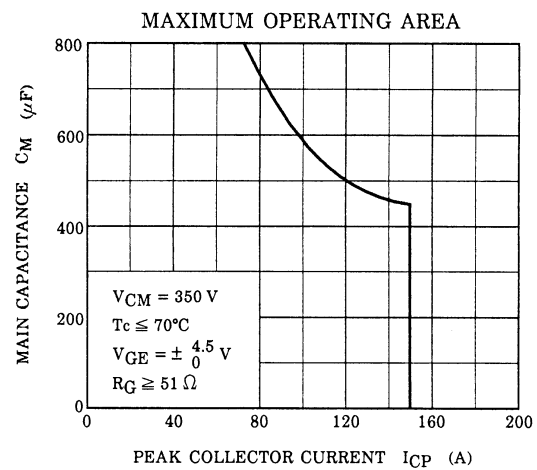
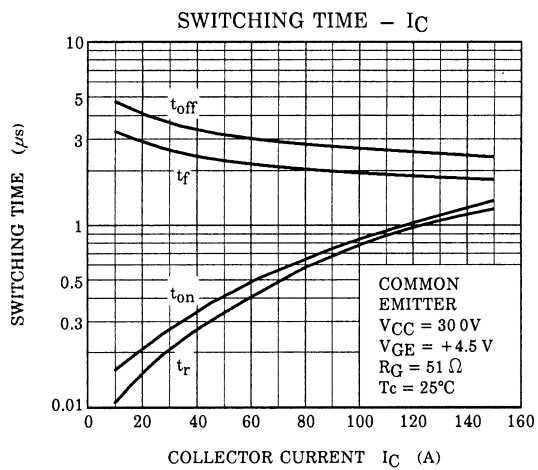
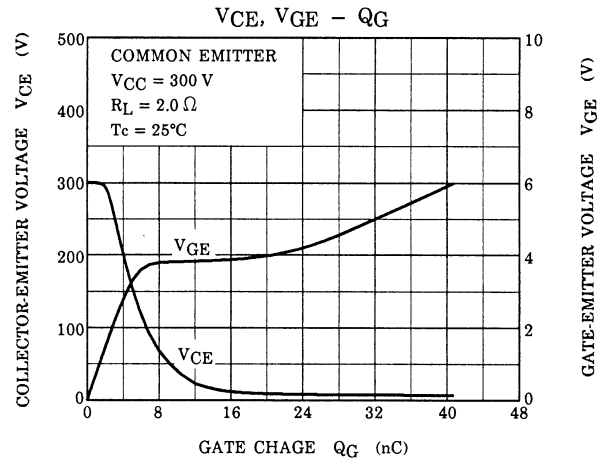
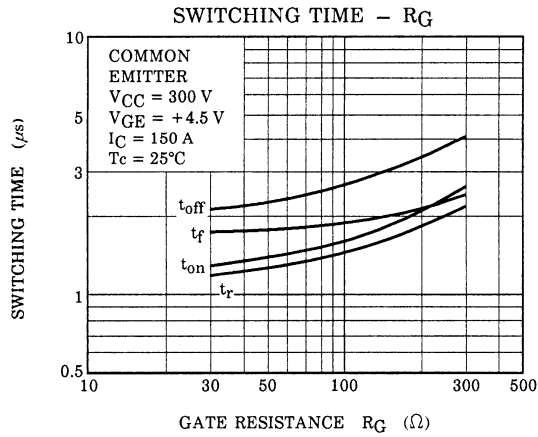
## ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Gate Leakage Current	$I_{GES}$	$V_{GE} = 6\text{ V}, V_{CE} = 0$	—	—	10	$\mu\text{A}$
Collector Cut-off Current	$I_{CES}$	$V_{CE} = 400\text{ V}, V_{GE} = 0$	—	—	10	$\mu\text{A}$
Gate-Emitter Cut-off Voltage	$V_{GE(OFF)}$	$I_C = 1\text{ mA}, V_{CE} = 5\text{ V}$	0.5	—	1.2	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 150\text{ A}, V_{GE} = 4.5\text{ V (Pulsed)}$	—	5	8	V
Input Capacitance	$C_{ies}$	$V_{CE} = 10\text{ V}, V_{GE} = 0, f = 1\text{ MHz}$	—	1900	—	pF
Switching Time	Rise Time	 $V_{IN} : t_r \leq 100\text{ ns}$ $t_f \leq 100\text{ ns}$ Duty cycle $\leq 1\%$	—	1.2	—	$\mu\text{s}$
	Turn-on Time		—	1.4	—	
	Fall Time		—	1.8	—	
	Turn-off Time		—	2.4	—	
Thermal Resistance	$R_{th(j-c)}$	—	—	—	6.25	$^\circ\text{C / W}$

These devices are MOS type. Users should follow proper ESD Handling Procedures.  
 Operating condition of turn-off  $dv / dt$  should be lower than  $400\text{ V} / \mu\text{s}$ .







**RESTRICTIONS ON PRODUCT USE**

000707EAA

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