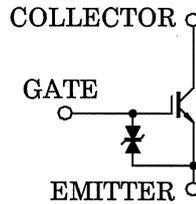


# GT8G121

Unit: mm

## STROBE FLASH APPLICATIONS

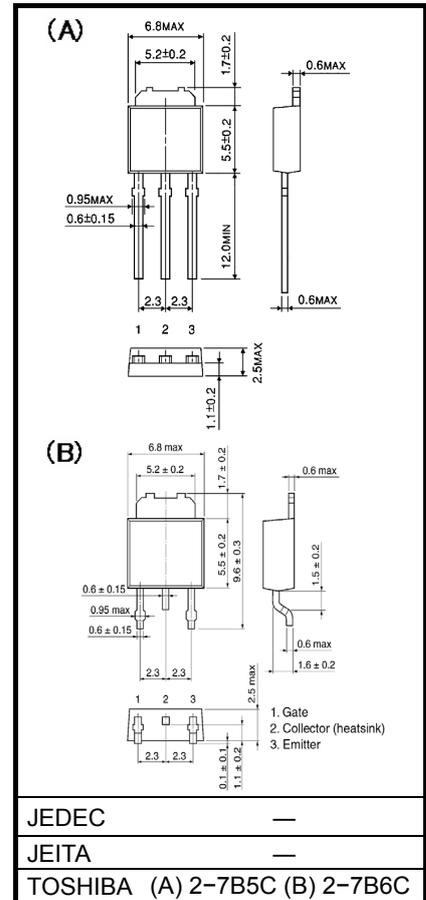
- 4th Generation (Trench Gate Structure)
- Enhancement-Mode
- Low Saturation Voltage  
:  $V_{CE(sat)} = 7\text{ V (Max.) (@}I_C = 150\text{ A)}$
- 4 V Gate Drive



## ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT	
Collector-Emitter Voltage	$V_{CES}$	400	V	
Gate-Emitter Voltage	DC	$V_{GES}$	±6	V
	Pulse	$V_{GES}$	±8	V
Collector Current	DC	$I_C$	8	A
	1 ms	$I_{CP}$	150	A
Collector Power Dissipation	Ta = 25°C	$P_C$	1.1	W
	Tc = 25°C	$P_C$	20	W
Junction Temperature	$T_j$	150	°C	
Storage Temperature Range	$T_{stg}$	-55~150	°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).

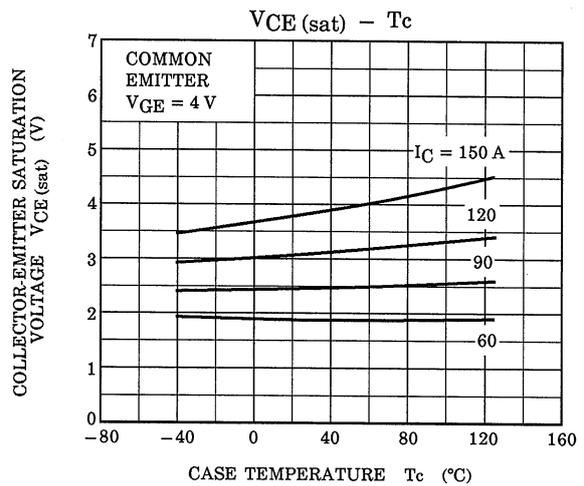
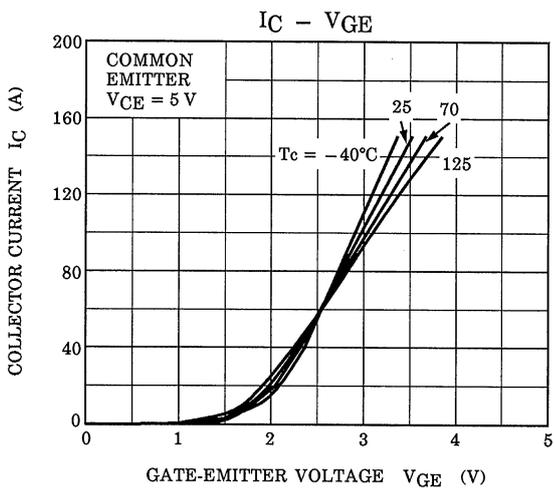
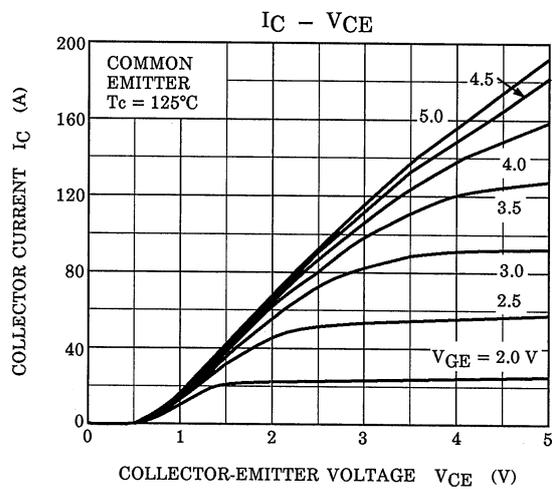
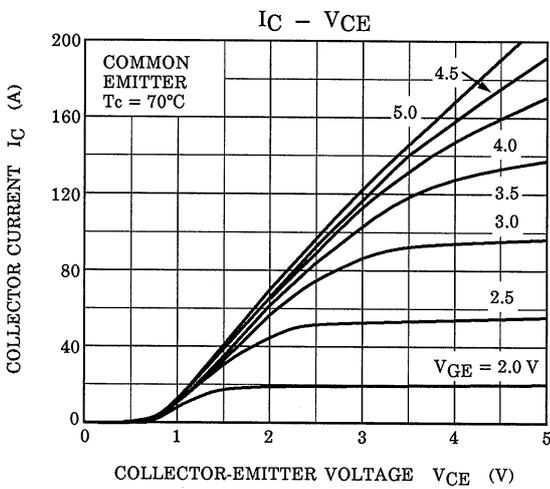
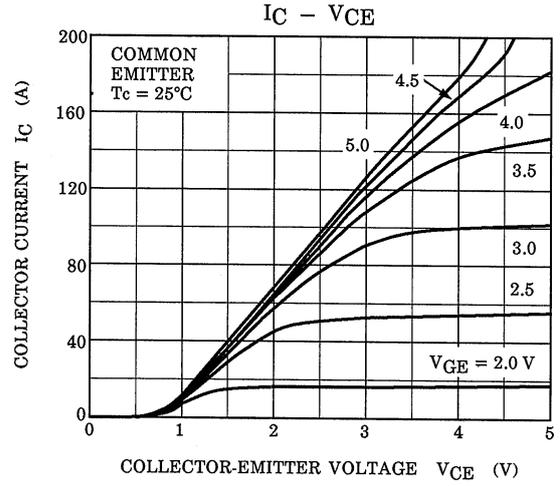
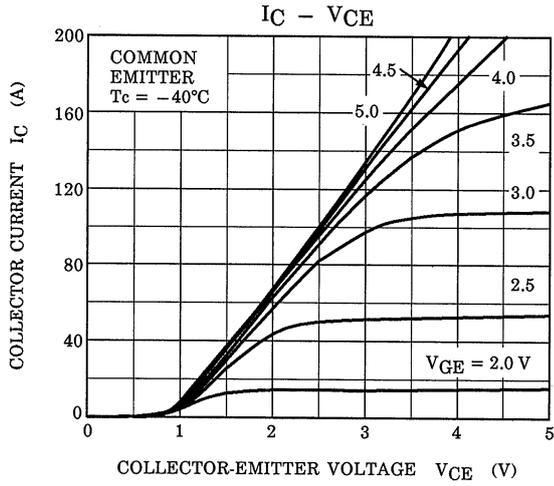


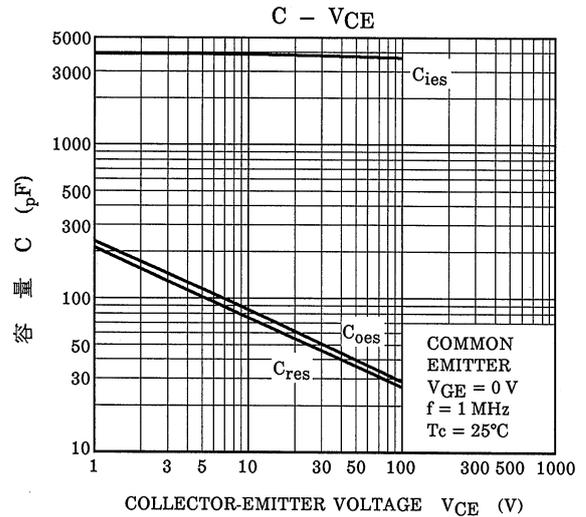
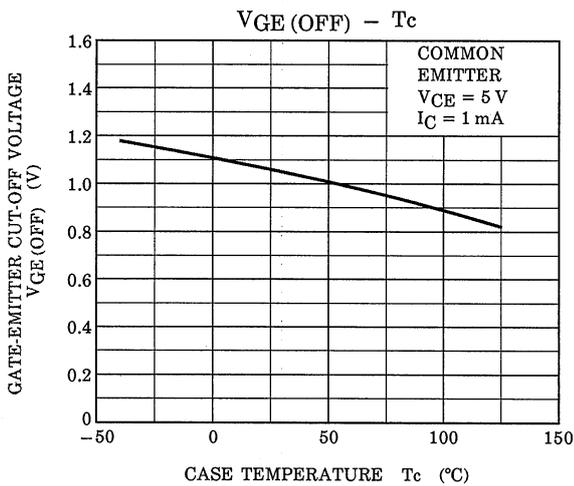
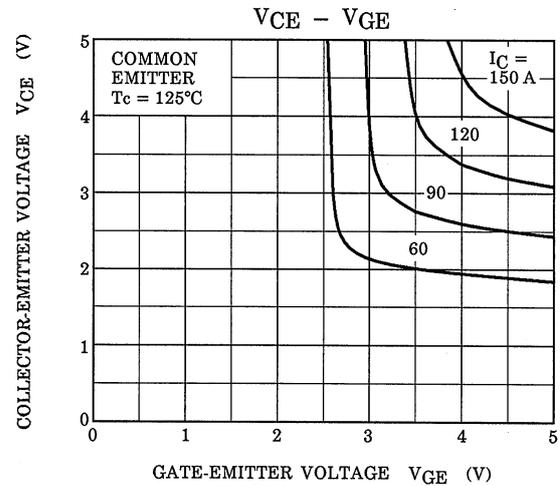
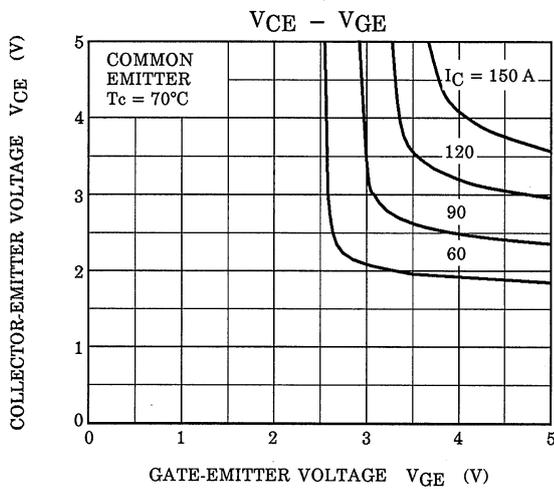
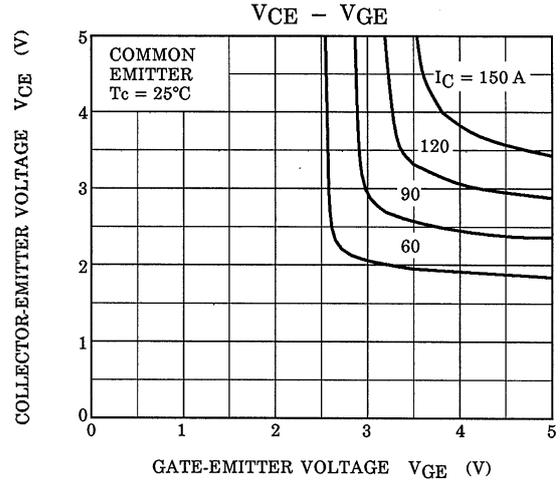
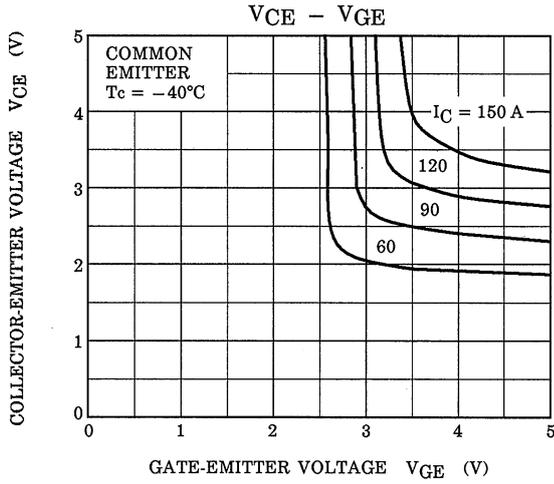
Weight: 0.36 g

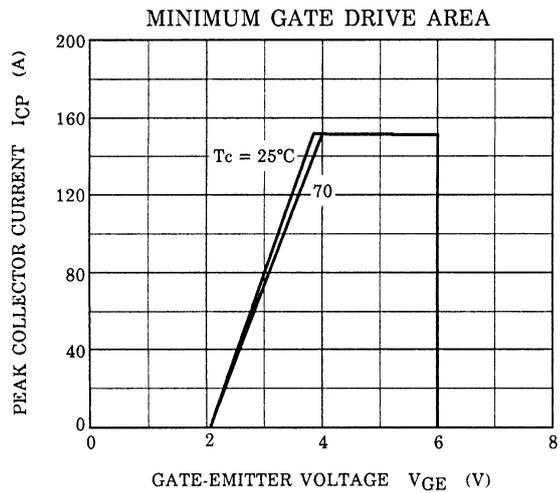
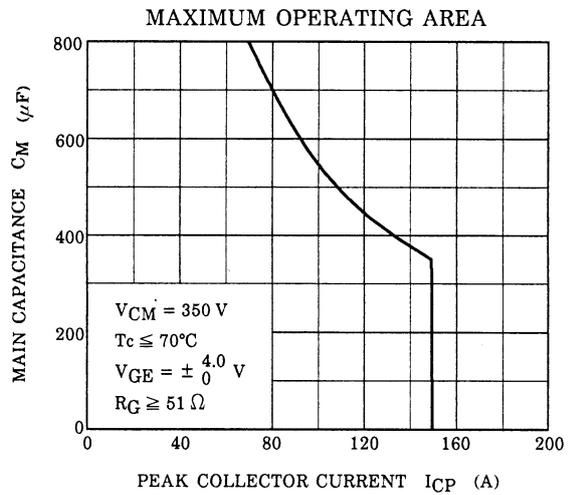
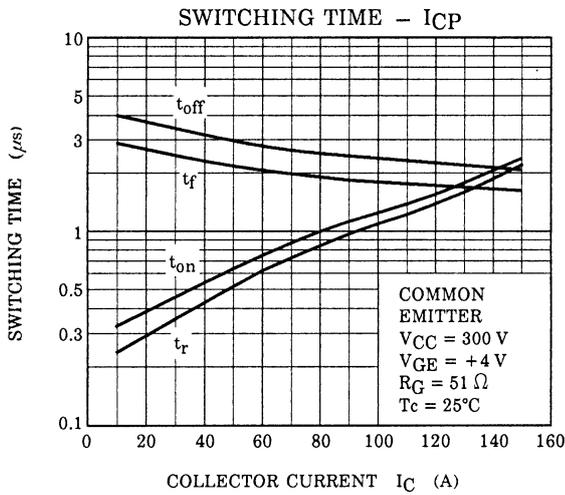
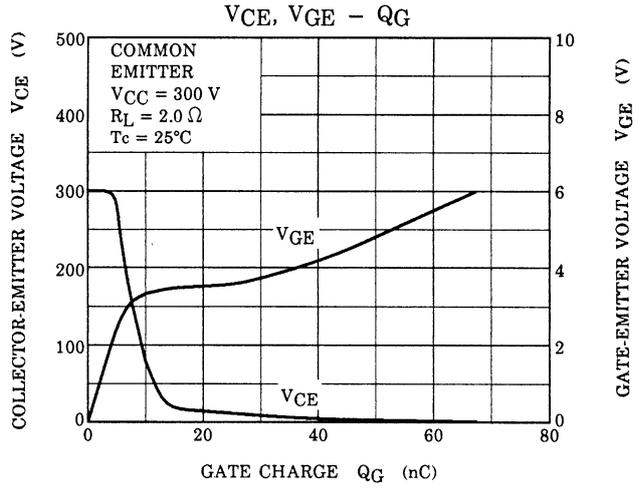
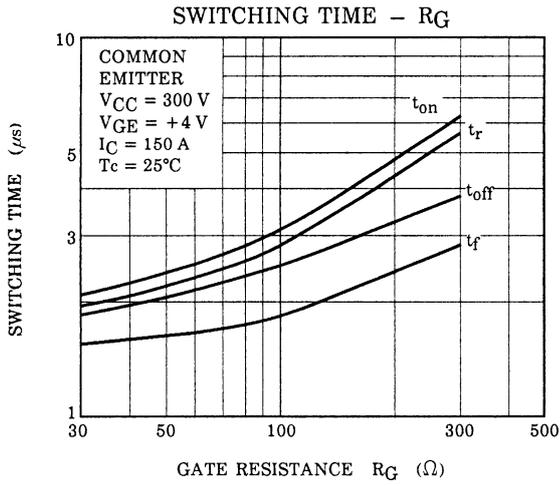
## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Gate Leakage Current	$I_{GES}$	$V_{GE} = 6\text{ V}, V_{CE} = 0$	—	—	10	μA
Collector Cut-off Current	$I_{CES}$	$V_{CE} = 400\text{ V}, V_{GE} = 0$	—	—	10	μA
Gate-Emitter Cut-off Voltage	$V_{GE(OFF)}$	$I_C = 1\text{ mA}, V_{CE} = 5\text{ V}$	0.8	—	1.5	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 150\text{ A}, V_{GE} = 4\text{ V (Pulsed)}$	—	3.5	7	V
Input Capacitance	$C_{ies}$	$V_{CE} = 10\text{ V}, V_{GE} = 0, f = 1\text{ MHz}$	—	3800	—	pF
Switching Time	Rise Time	$t_r$	—	2.3	—	μs
	Turn-on Time	$t_{on}$	—	2.5	—	
	Fall Time	$t_f$	—	1.7	—	
	Turn-off Time	$t_{off}$	—	2.1	—	
Thermal Resistance	$R_{th(j-c)}$	—	—	—	6.25	°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 V / μs.







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20070701-EN

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