

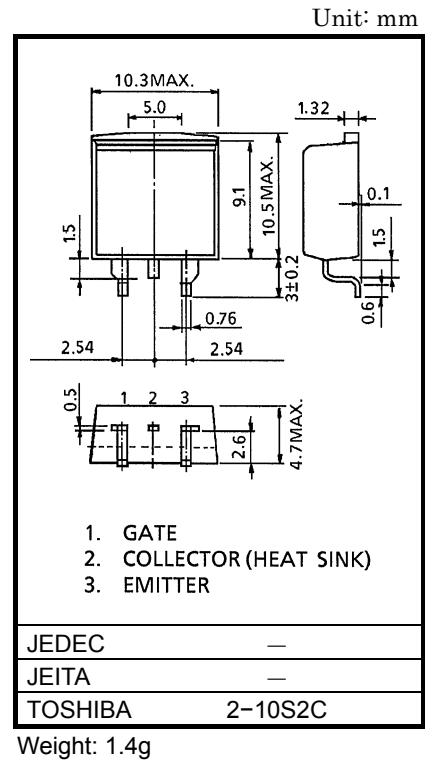
# GT25G101(SM)

## STROBE FLASH APPLICATIONS

- High Input Impedance
- Low Saturation Voltage :  $V_{CE(sat)} = 8V$  (Max.) ( $I_C = 170A$ )
- Enhancement-Mode
- 12V Gate Drive

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		$V_{CES}$	400	V
Gate-Emitter Voltage		$V_{GES}$	±25	V
Collector Current	DC	$I_C$	25	A
	1ms	$I_{CP}$	170	
Collector Power Dissipation	Ta = 25°C	$P_C$	1.3	W
	Tc = 25°C	$P_C$	75	
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_{stg}$	-55~150	°C

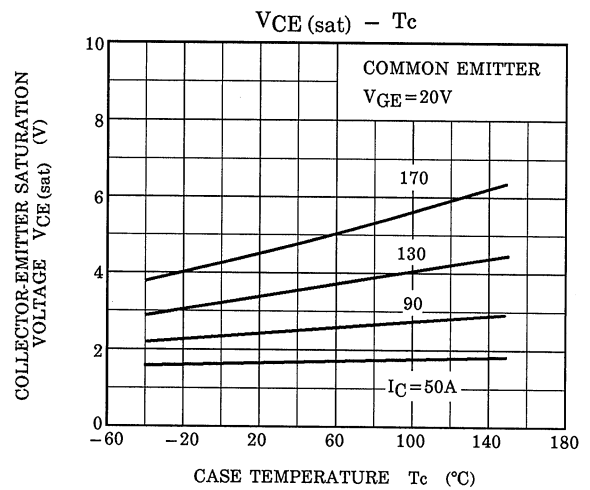
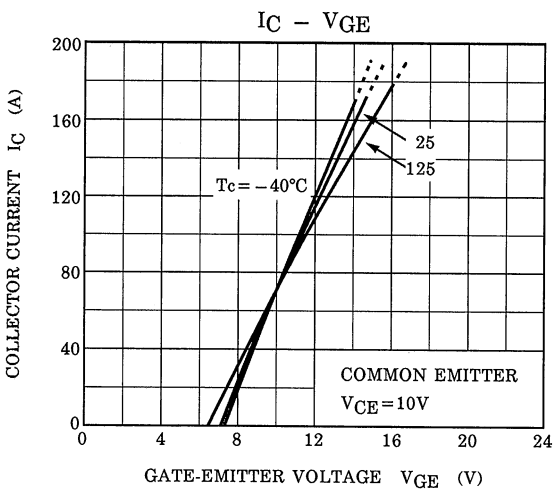
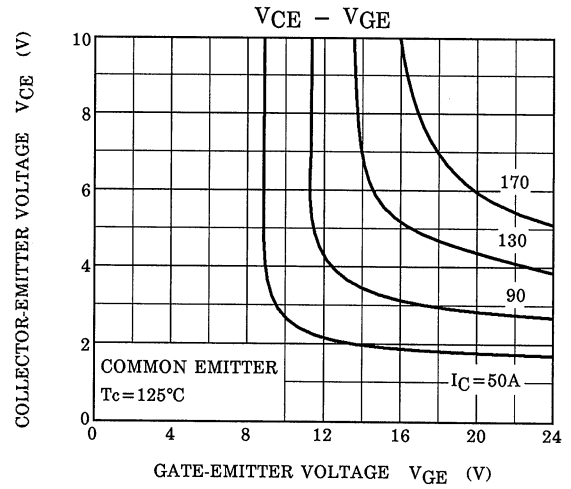
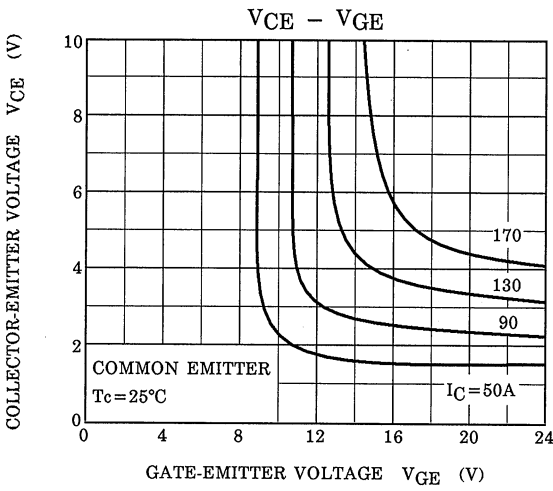
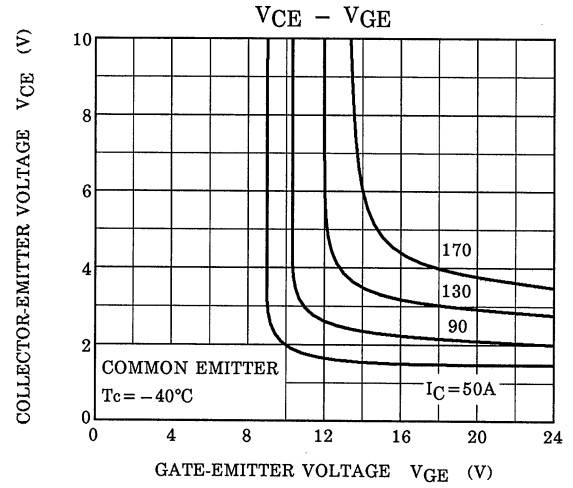
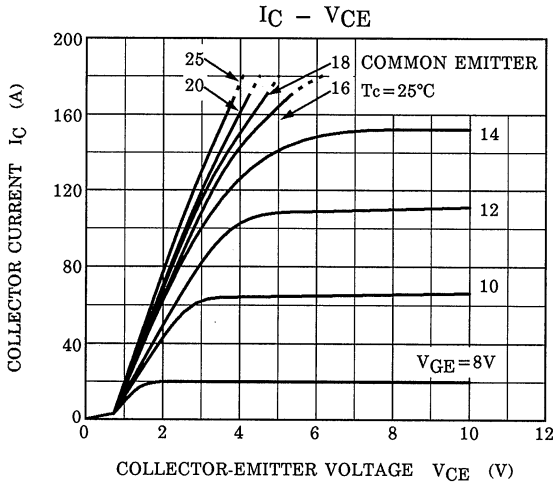


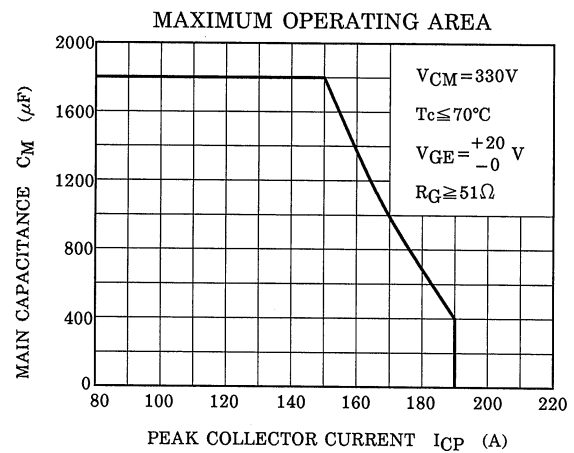
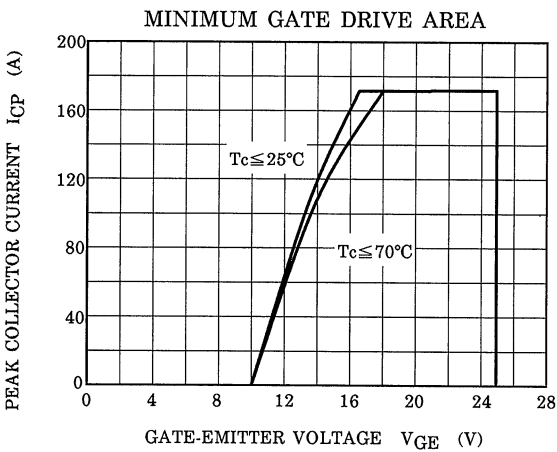
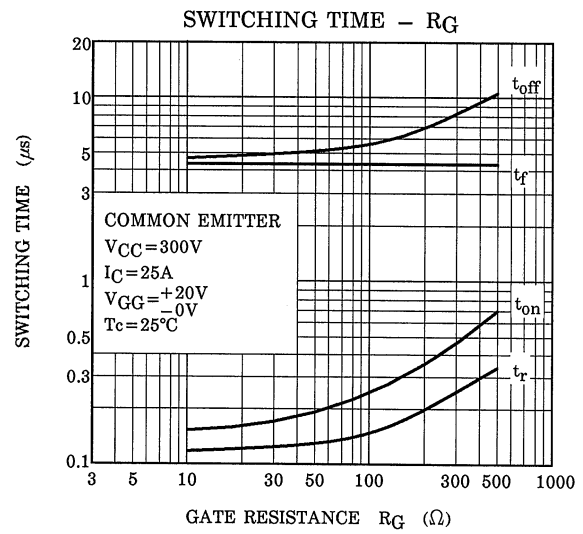
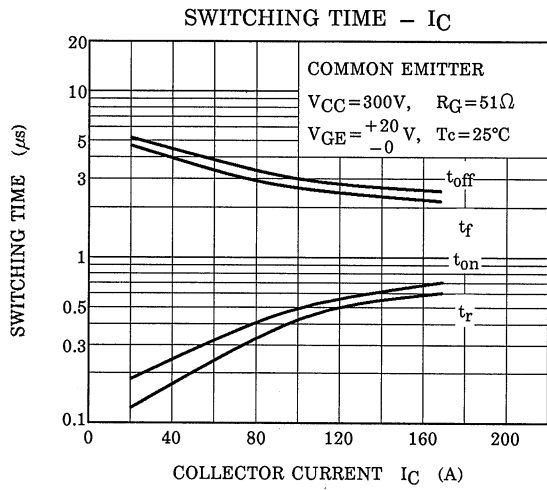
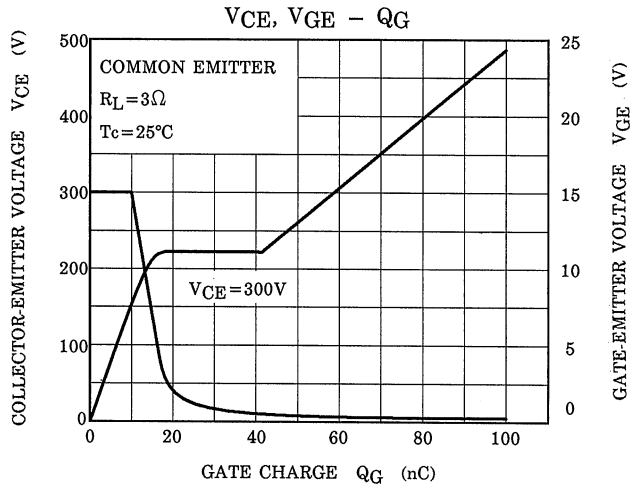
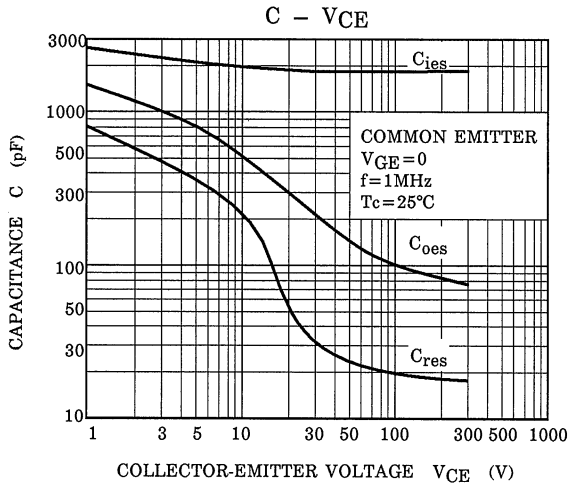
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Gate Leakage Current		$I_{GES}$	$V_{GE} = \pm 25V, V_{CE} = 0$	—	—	±100	nA
Collector Cut-off Current		$I_{CES}$	$V_{CE} = 400V, V_{GE} = 0$	—	—	10	µA
Gate-Emitter Cut-off Voltage		$V_{GE(OFF)}$	$I_C = 1mA, V_{CE} = 5V$	4	5	7	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 170A, V_{GE} = 20V$ (Pulsed)	—	5	8	V
Input Capacitance		$C_{ies}$	$V_{CE} = 10V, V_{GE} = 0, f = 1MHz$	—	2000	—	pF
Switching Time	Rise Time	$t_r$	<p><math>V_{IN} : t_r \leq 100ns</math> <math>t_f \leq 100ns</math> Duty cycle <math>\leq 1\%</math></p>	—	0.1	0.5	µs
	Turn-on Time	$t_{on}$		—	0.15	0.5	
	Fall Time	$t_f$		—	4.0	6.0	
	Turn-off Time	$t_{off}$		—	4.5	7.0	
Thermal Resistance		$R_{th(j-c)}$	—	—	—	1.66	°C / W





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