

GT8G132

Strobe Flash Applications

- Supplied in compact and thin package requires only a small mounting area
- 5th generation (trench gate structure) IGBT
- Enhancement-mode
- 4-V gate drive voltage: $V_{GE} = 4.0 \text{ V (min)}$ (@ $I_C = 150 \text{ A}$)
- Peak collector current: $I_C = 150 \text{ A (max)}$

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

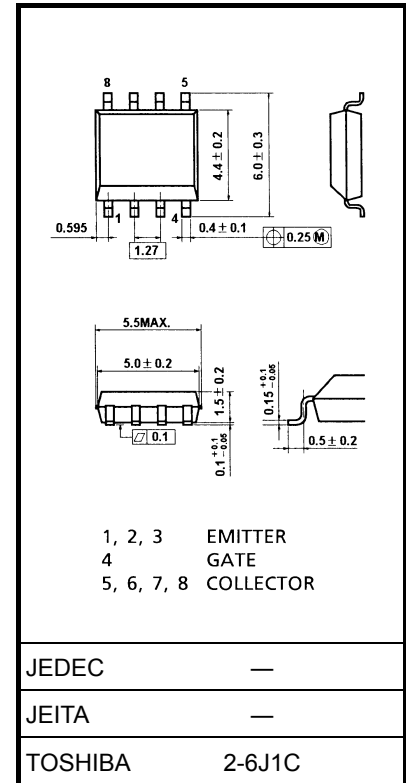
Characteristics	Symbol	Rating	Unit
Collector-emitter voltage	V_{CES}	400	V
Gate-emitter voltage	DC	V_{GES}	± 6
	Pulse	V_{GES}	± 8
Collector current	DC	I_C	8
	1 ms	I_{CP}	150
Collector power dissipation (Note 1)	P_C	1.1	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55~150	$^\circ\text{C}$

Note 1: Drive operation: Mount on glass epoxy board [1 inch² × 1.5 t]

Note 2: 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.

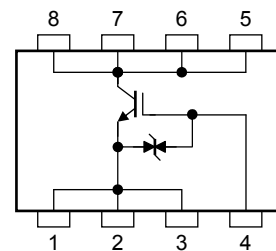
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Unit: mm



Weight: 0.080 g (typ.)

Equivalent Circuit



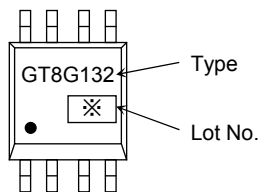
These devices are MOS type. Users should follow proper ESD handling procedures. Operating condition of turn-off dv/dt should be lower than 400 V/ μs .

Electrical Characteristics (Ta = 25°C)

Characteristics		Symbol	Test Condition	Min	Typ.	Max	Unit
Gate leakage current		I_{GES}	$V_{GE} = \pm 6\text{ V}, V_{CE} = 0$	—	—	± 10	μA
Collector cut-off current		I_{CES}	$V_{CE} = 400\text{ V}, V_{GE} = 0$	—	—	10	μA
Gate-emitter cut-off voltage		$V_{GE(\text{OFF})}$	$I_C = 1\text{ mA}, V_{CE} = 5\text{ V}$	0.6	—	1.2	V
Collector-emitter saturation voltage		$V_{CE(\text{sat})}$	$I_C = 150\text{ A}, V_{GE} = 4\text{ V}$	—	2.3	7.0	V
Input capacitance		C_{ies}	$V_{CE} = 10\text{ V}, V_{GE} = 0, f = 1\text{ MHz}$	—	2800	—	pF
Switching time	Rise time	t_r		—	1.0	—	μs
	Turn-on time	t_{on}		—	1.1	—	
	Fall time	t_f		—	1.6	—	
	Turn-off time	t_{off}		—	2.2	—	
Thermal resistance (Note 2)		$R_{th(j-a)}$	—	—	—	114	$^{\circ}\text{C/W}$

Note 2: Drive operation: Mount on glass epoxy board [1 inch² × 1.5 t]

Marking



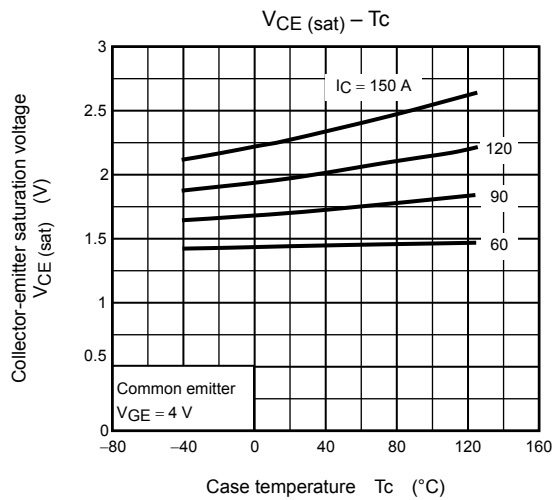
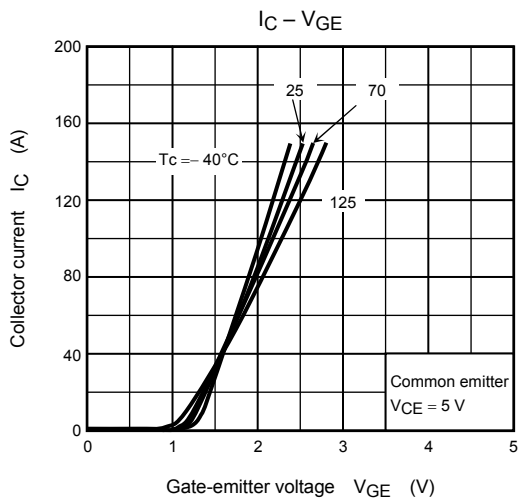
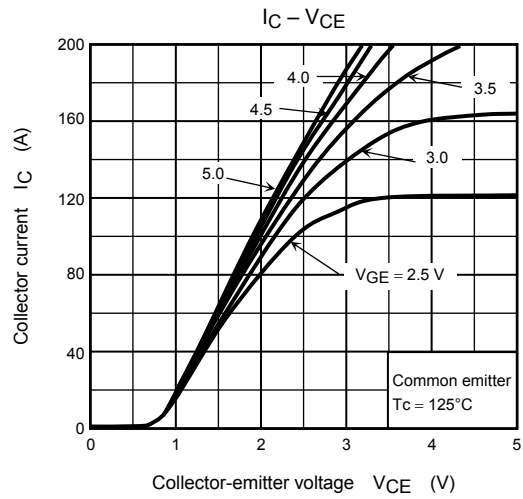
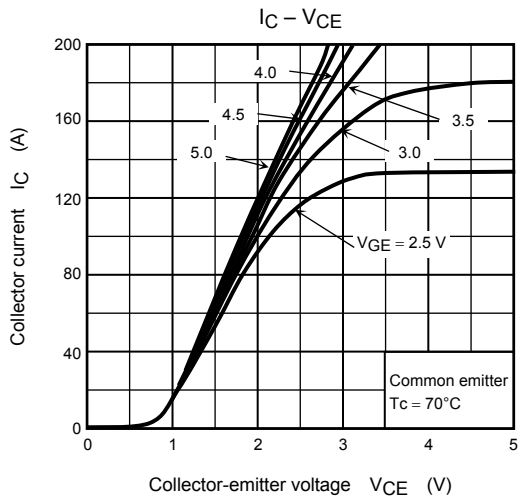
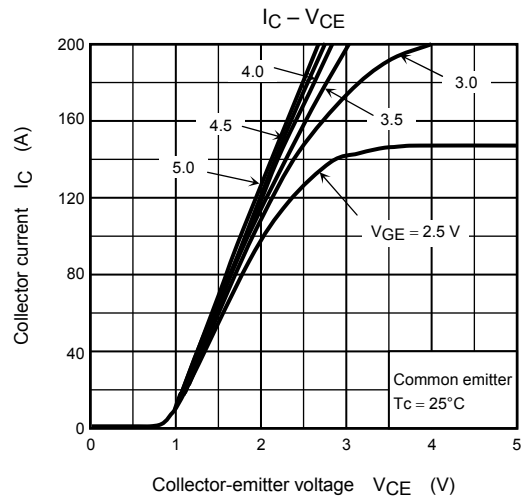
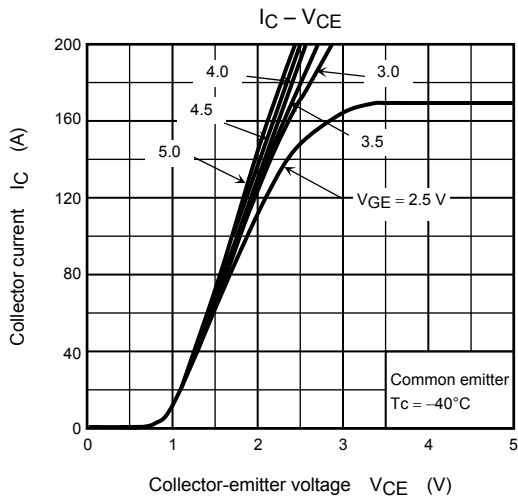
● on lower left of the marking indicates Pin 1.

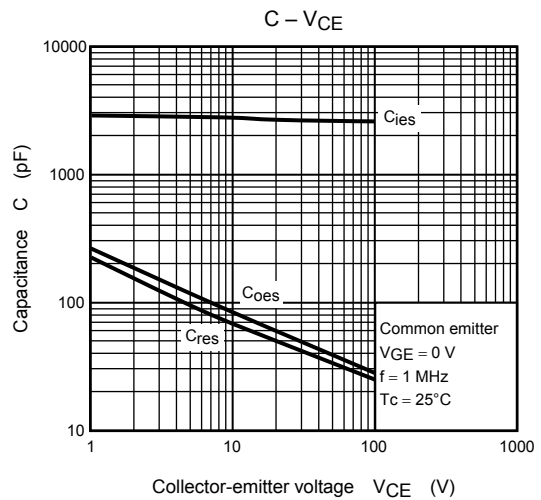
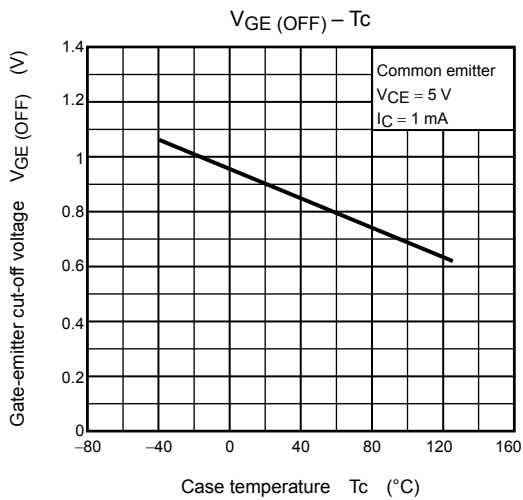
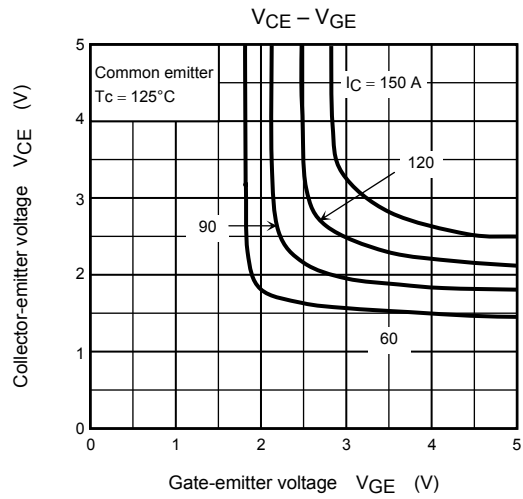
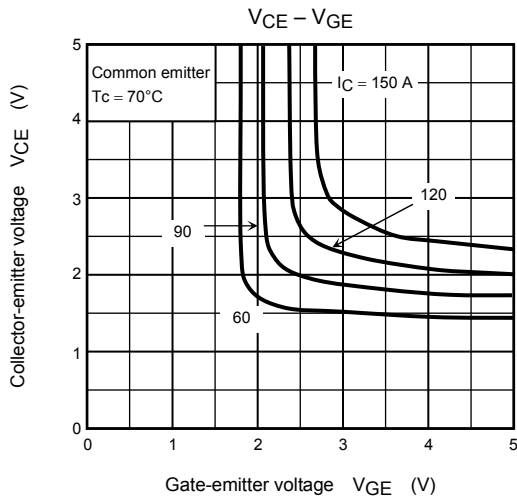
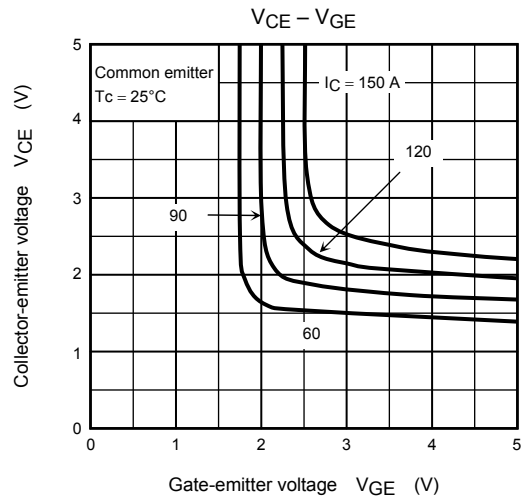
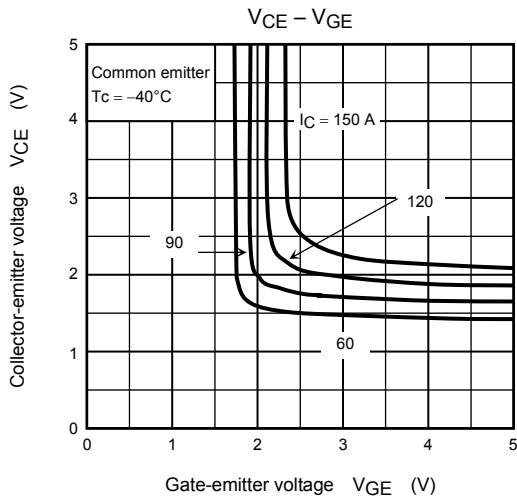
※ Weekly code: (Three digits)

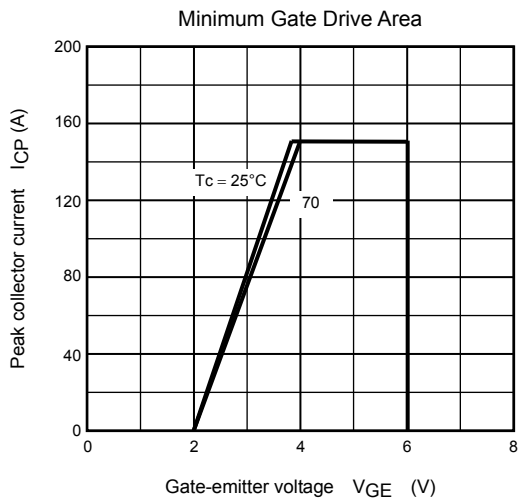
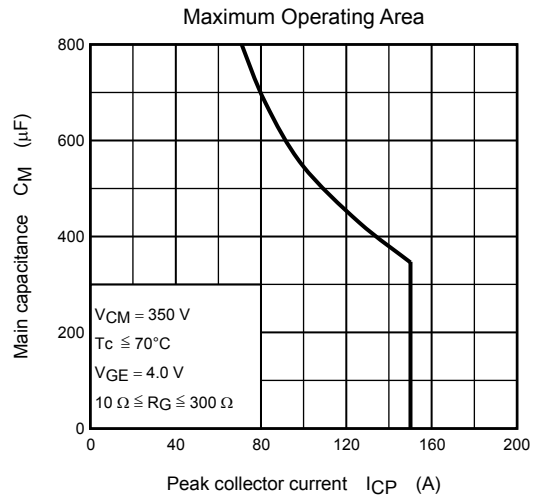
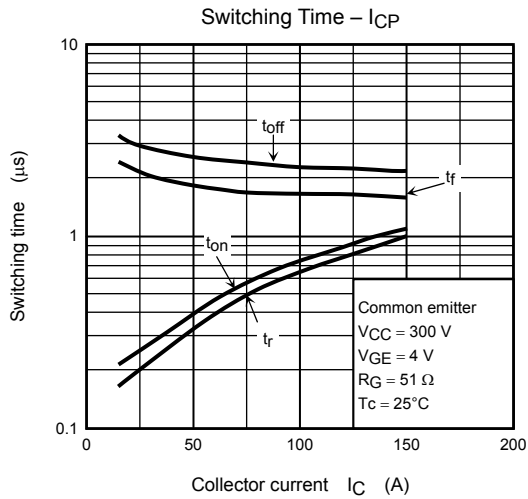
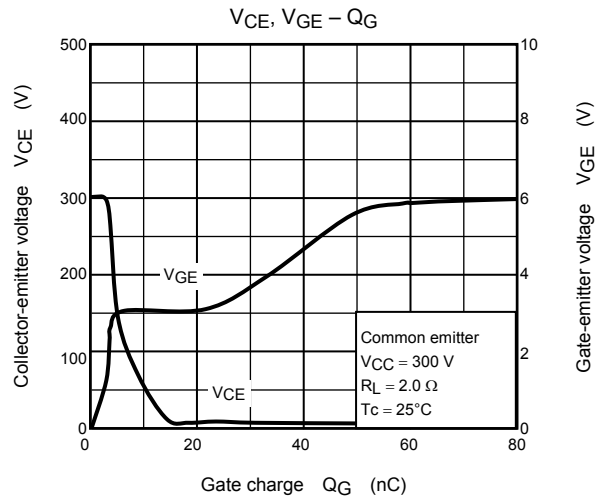
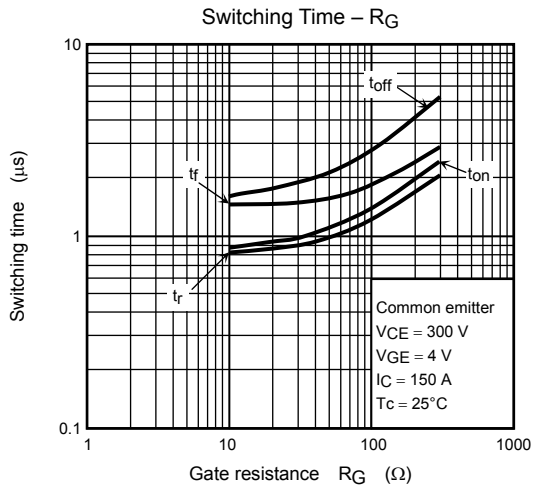


Week of manufacture (01 for first week of year, continues up to 52 or 53)

Year of manufacture (One low-order digits of calendar year)







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20070701-EN

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