TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON N CHANNEL IGBT

GT8G103

STROBE FLASH APPLICATIONS

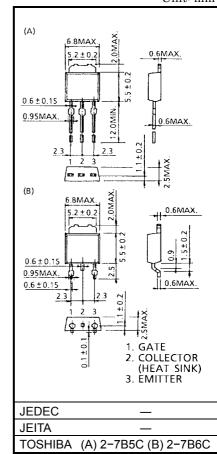
- 3rd Generation
- Enhancement-Mode
- Low Saturation Voltage: VCE (sat) = 8 V (Max.) (@IC = 150 A)
- 4.5 V Gate Drive

COLLECTOR φ



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	IC	8	А	
	1 ms	I _{CP}	150	А	
Collector Power Dissipation	Ta = 25°C	P _C	1.3	W	
	Tc = 25°C	PC	20	W	
Junction Temperature		Тj	150	°C	
Storage Temperature Range		T _{stg}	-55~150	°C	



Weight: 0.36g

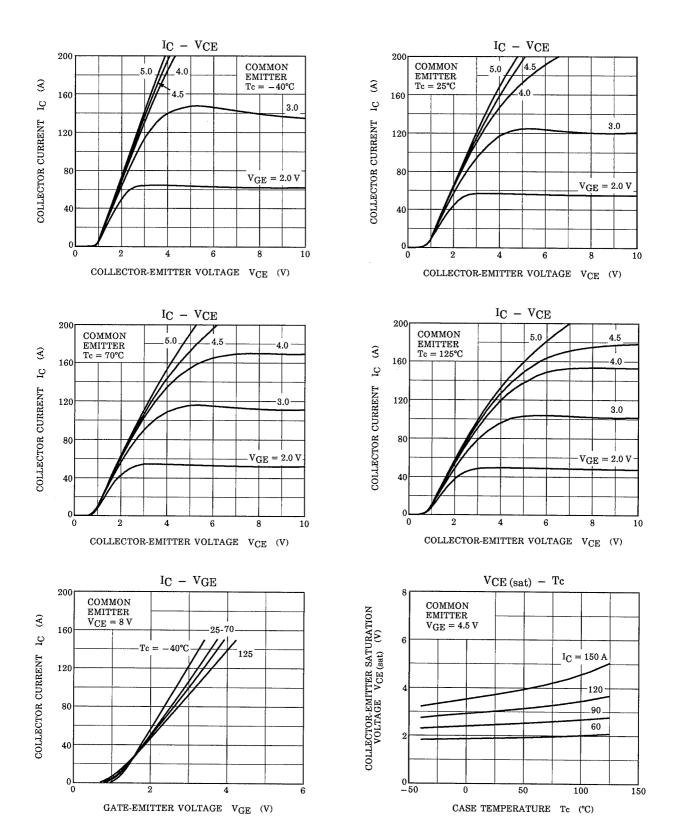
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Gate Leakage Current		IGES	V _{GE} = 6 V, V _{CE} = 0	_	_	10	μA
Collector Cut-off Current		ICES	V _{CE} = 400 V, V _{GE} = 0	_	_	10	μA
Gate-Emitter Cut-off Voltage		V _{GE (OFF)}	I _C = 1 mA, V _{CE} = 5 V	0.5	_	1.2	V
Collector-Emitter Saturation Voltage		V _{CE (sat)}	I _C = 150 A, V _{GE} = 4.5 V (Pulsed)	_	5	8	V
Input Capacitance		Cies	V _{CE} = 10 V, V _{GE} = 0, f = 1 MHz	_	1900	-	pF
Switching Time	Rise Time	tr	$\begin{array}{c} 4.5 \text{ V} \\ 0 \\ V_{\text{IN}} : t_r \leq 100 \text{ ns} \\ t_f \leq 100 \text{ ns} \\ \text{Duty cycle} \leq 1\% \end{array} \xrightarrow{51 \Omega} \xrightarrow{60}_{\text{Cons}} $	_	1.2	_	- µs
	Turn-on Time	t _{on}		_	1.4	_	
	Fall Time	t _f		_	1.8	_	
	Turn-off Time	t _{off}		_	2.4	_	
Thermal Resistance		R _{th (j−c)}	—	_	_	6.25	°C/W

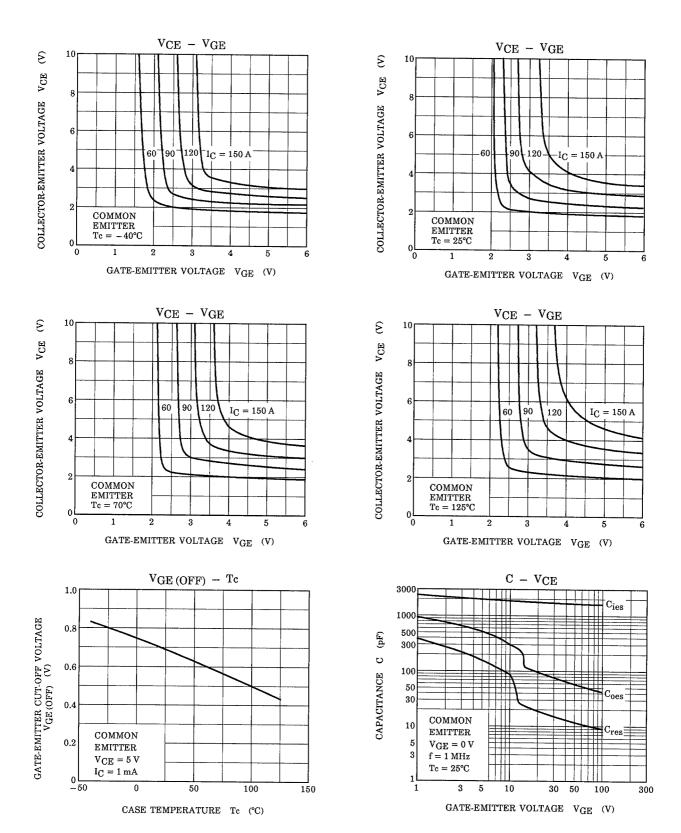
These devices are MOS type. Users should follow proper ESD Handling Procedures. Operating condition of turn-off dv / dt should be lower than 400 V / $\mu s.$

Unit: mm

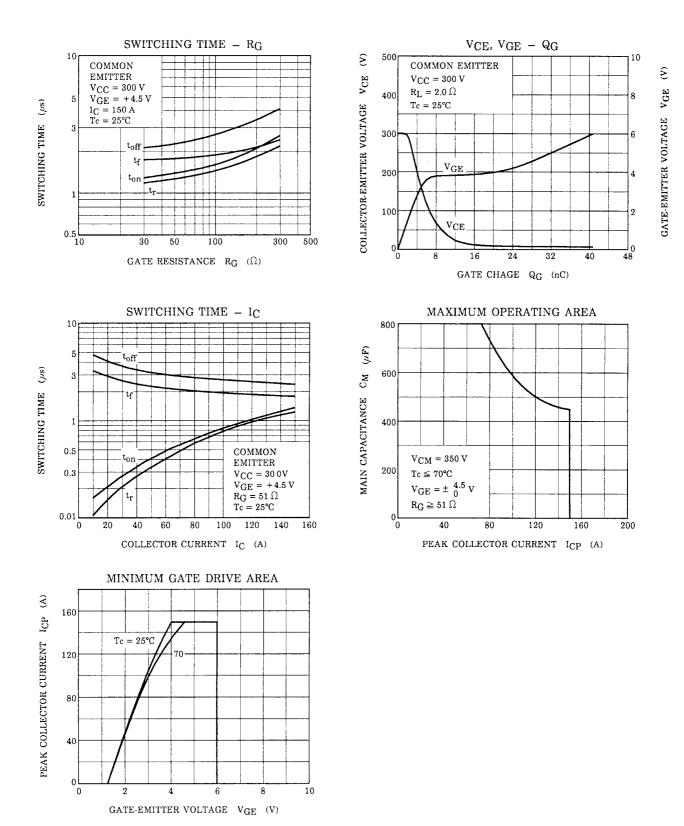
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