TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON N-CHANNEL IGBT

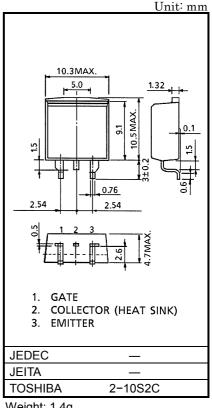
GT20G101(SM)

STROBE FLASH APPLICATIONS

- High Input Impedance
- Low Saturation Voltage : $V_{CE (sat)} = 8V (Max.) (I_C = 130A)$
- Enhancement-Mode
- 20V Gate Drive

MAXIMUM RATINGS (Ta = 25°C)

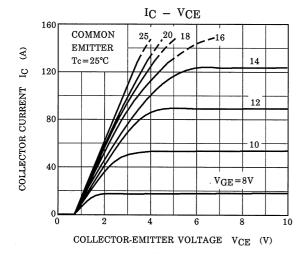
CHARACTERISTIC		SYMBOL	RATING	UNIT	
Collector-Emitter Voltage	V _{CES}	400	V		
Gate-Emitter Voltage		V_{GES}	±25	V	
Collector Current	DC	Ic	20	Α	
	1ms	I _{CP}	130		
Collector Power Dissipation	Ta = 25°C	PC	1.3	W	
	Tc = 25°C	PC	60	VV	
Junction Temperature		Tj	150	°C	
Storage Temperature Range		T _{stg}	-55~150	°C	

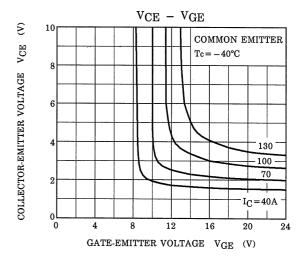


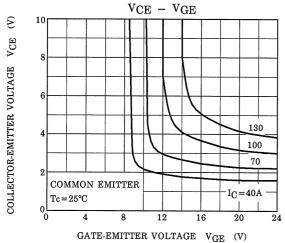
Weight: 1.4g

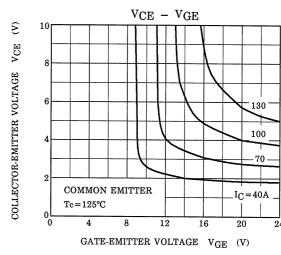
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

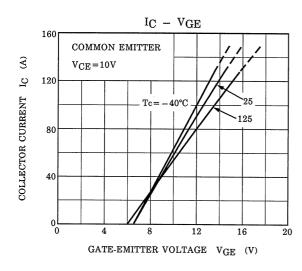
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Gate Leakage Current		I _{GES}	V _{GE} = ±25V, V _{CE} = 0	_	_	±100	nA
Collector Cut-off Current		I _{CES}	V _{CE} = 400V, V _{GE} = 0	_	_	10	μA
Gate-Emitter Cut-off Voltage		V _{GE} (OFF)	I _C = 1mA, V _{CE} = 5V	4	5	7	V
Collector-Emitter Saturation Voltage		V _{CE} (sat)	I _C = 130A, V _{GE} = 20V	_	5	8	V
Input Capacitance		C _{ies}	V _{CE} = 10V, V _{GE} = 0, f = 1MHz	_	1350	_	pF
Switching Time	Rise Time	t _r	$\begin{array}{c c} 20\text{V} & 51\Omega \\ 0\text{V} & 51\Omega \\ \text{V}_{\text{IN}} : t_{\text{r}} \leq 100\text{ns} \\ t_{\text{f}} \leq 100\text{ns} \\ \text{Duty cycle} \leq 1\% \end{array}$	_	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)}	_	_	_	2.08	°C/W

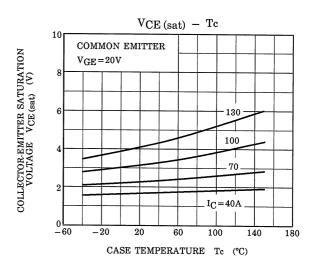




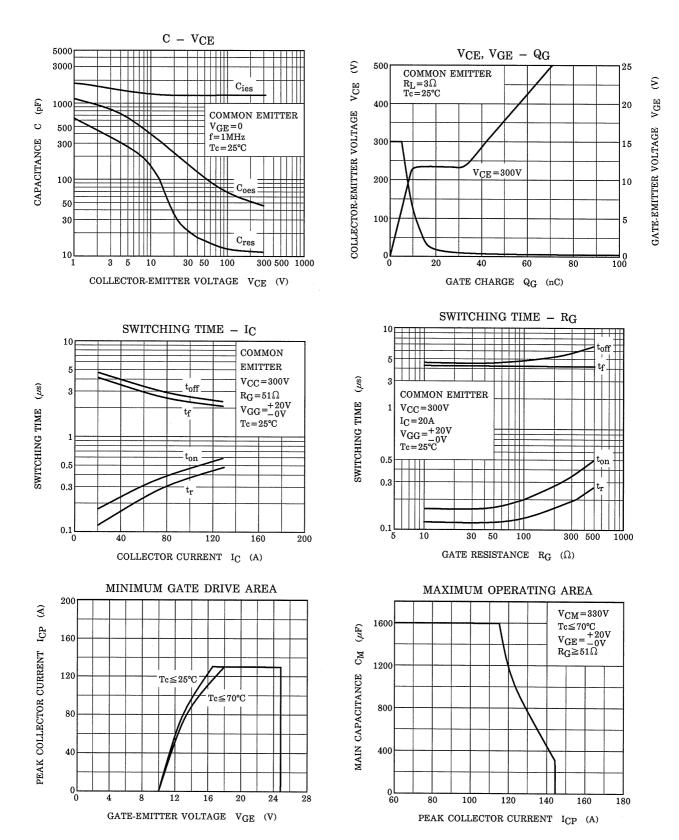








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