TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON N CHANNEL IGBT

GT20G102

STROBE FLASH APPLICATIONS

• High Input Impedance

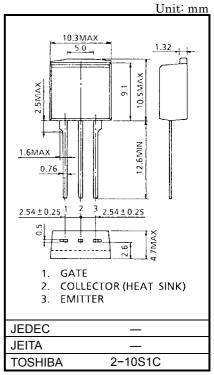
• Low Saturation Voltage : $V_{CE(sat)} = 8.0V \text{ (Max.)}$ ($I_{C} = 130A$)

• Enhancement-Mode

• 12V Gate Drive

MAXIMUM RATINGS (Ta = 25°C)

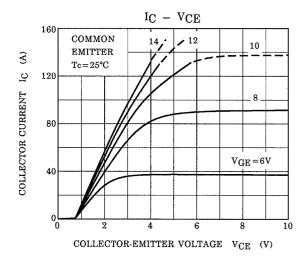
CHARACTERISTIC		SYMBOL	RATING	UNIT	
Collector-Emitter Voltage	V_{CES}	400	V		
Gate-Emitter Voltage	V_{GES}	±20	V		
Collector Current	DC	IC	20	А	
	1ms	I _{CP}	130		
Collector Power Dissipation	Ta = 25°C	PC	1.3	А	
	Tc = 25°C	PC	60		
Junction Temperature		Tj	150	°C	
Storage Temperature Range		T _{stg}	-55~150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

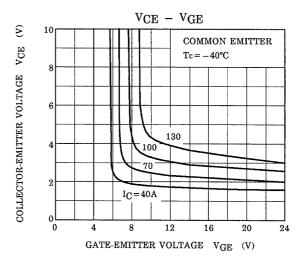


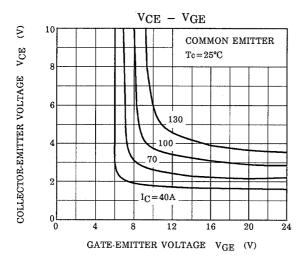
Weight: 1.5g

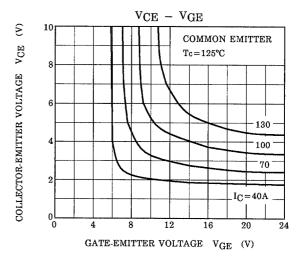
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

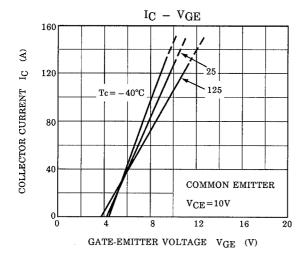
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Gate Leakage Current		I _{GES}	V _{GE} = ±20V, V _{CE} = 0	_	_	±100	nA
Collector Cut-off Current		I _{CES}	V _{CE} = 400V, V _{GE} = 0	_	_	10	μA
Gate-Emitter Cut-off Voltage		V _{GE} (OFF)	I _C = 1mA, V _{CE} = 5V	2	_	5	V
Collector–Emitter Saturation Voltage		V _{CE (sat)}	I _C = 130A, V _{GE} = 12V (Pulsed)	_	5	8	V
Input Capacitance		C _{ies}	V _{CE} = 10V, V _{GE} = 0, f = 1MHz	_	1850	_	pF
Switching Time	Rise Time	t _r	$\begin{array}{c c} 12\text{V} & \begin{array}{c} 51\Omega \\ 0 \end{array} \\ \text{V}_{\text{IN:}} \ t_r \leq 100 \text{ns} \\ \text{tf} \leq 100 \text{ns} \\ \text{Duty cycle} \leq 1\% \end{array} \qquad 300\text{V}$	_	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

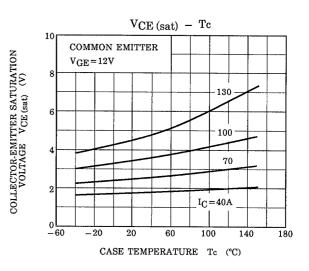


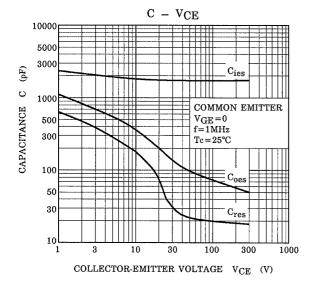


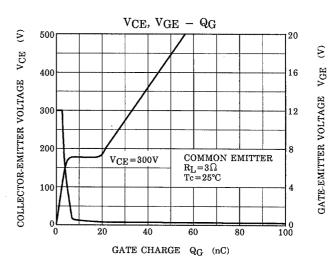


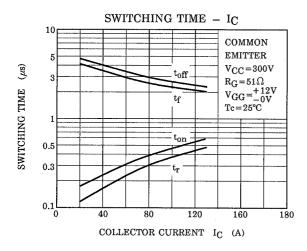


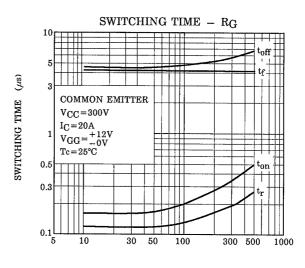


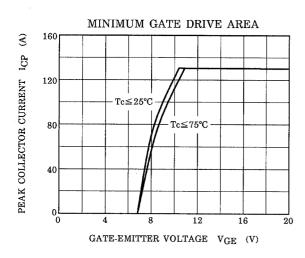


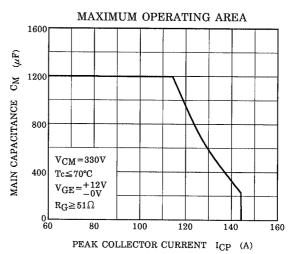












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