TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON N-CHANNEL IGBT

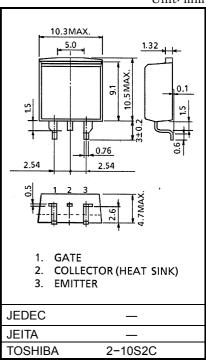
GT25G102(SM)

STROBE FLASH APPLICATIONS

- High Input Impedance
- Low Saturation Voltage: V_{CE} (sat) = 8V (Max.) (I_C = 150A)
- 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	Ι _C	25	А	
	1ms	I _{CP}	150		
Collector Power Dissipation	Ta = 25°C	P _C	1.3	A	
	Tc = 25°C	P _C	75		
Junction Temperature		Tj	150	°C	
Storage Temperature Range		T _{stg}	-55~150	°C	



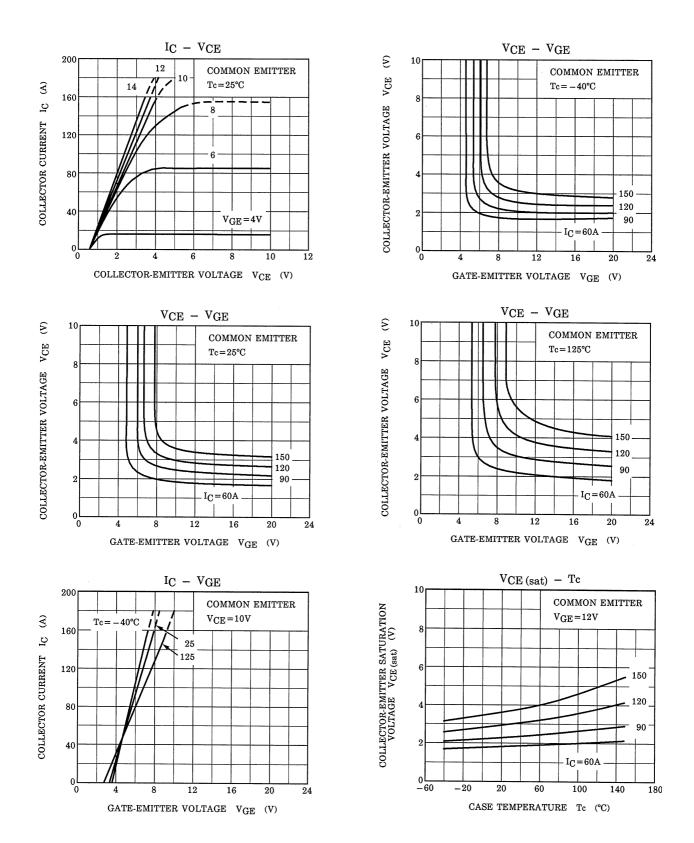
Weight: 1.4g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

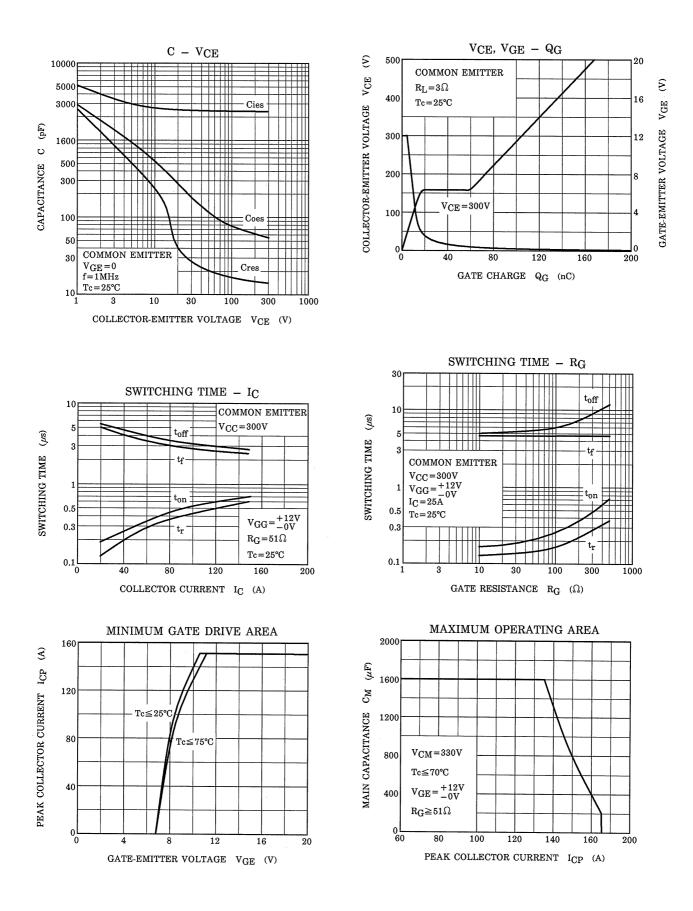
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Gate Leakage Cu	urrent	I _{GES}	$V_{GE} = \pm 20V, V_{CE} = 0$		_	±100	nA
Collector Cut-off	Current	ICES	V _{CE} = 400V, V _{GE} = 0	_	_	10	μA
Gate-Emitter Cut	t-off Voltage	V _{GE (OFF)}	I _C = 1mA, V _{CE} = 5V	2	_	5	V
Collector-Emitter Saturation Voltage		V _{CE (sat)}	I _C = 150A, V _{GE} = 12V (Pulsed)	_	4	8	V
Input Capacitance		Cies	V_{CE} = 10V, V_{GE} = 0, f = 1MHz	-	2600	_	pF
Switching Time	Rise Time	t _r	$\begin{array}{c}12V\\0\\V_{IN}:t_{r}\leq100ns\\t_{f}\leq100ns\\Duty \ cycle\leq1\%\end{array}$	_	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} .		R _{th (j−c)}	—	_	_	1.66	°C/W

Unit: mm

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