TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON N CHANNEL MOS TYPE

GT8Q102(SM)

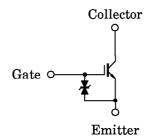
HIGH POWER SWITCHING APPLICATIONS

MOTOR CONTROL APPLICATIONS

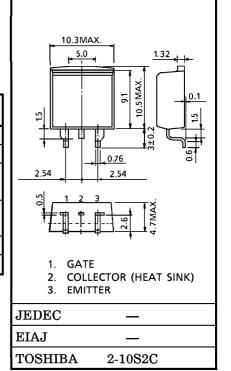
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT	
Collector-Emitter Voltage		v_{CES}	1200	V	
Gate-Emitter Voltage	v_{GES}	±20	V		
Callastan Comment	DC	$I_{\mathbf{C}}$	8	A	
Collector Current	1ms	I_{CP}	16		
Collector Power	(Tc=25°C)	Da	50	w	
Dissipation	(10-25 0)	$P_{\mathbf{C}}$	30		
Junction Temperature	$\mathrm{T_{j}}$	150	°C		
Storage Temperature Range		$\mathrm{T_{stg}}$	-55~150	°C	

EQUIVALENT CIRCUIT



Unit in mm

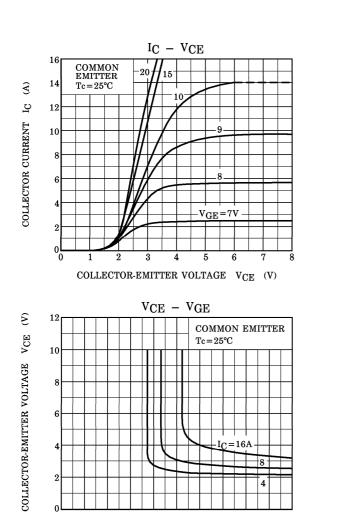


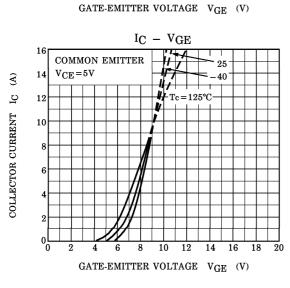
Weight: 1.4g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		$I_{ ext{GES}}$	$V_{GE} = \pm 20V, V_{CE} = 0$	_	_	±10	μ A
Collector Cut-off Current		I_{CES}	$V_{CE} = 1200V, V_{GE} = 0$	_	_	1.0	mA
Gate-Emitter Cut-off Voltage		V _{GE} (OFF)	$V_{CE}=5V, I_{C}=8mA$	3.0	_	6.0	V
Collector-Emitter Saturation Voltage		V _{CE} (sat)	I_{C} =8A, V_{GE} =15V	_	3.0	4.0	V
Input Capacitance		Cies	$V_{\text{CE}} = 10\text{V}, V_{\text{GE}} = 0,$ f = 1MHz	_	1000	_	рF
Switching Turner Fall	Rise Time	t_r	$\begin{array}{c c} V_{OUT} \\ V_{IN} \\ 15V \\ 0 \\ V_{CC} = 600V \end{array}$	_	0.3	0.6	
	Turn-on Time	ton		_	0.4	0.8	
	Fall Time	t_f		_	0.25	0.5	μ s
	Turn-off Time	${ m t_{off}}$		_	0.7	1.3	

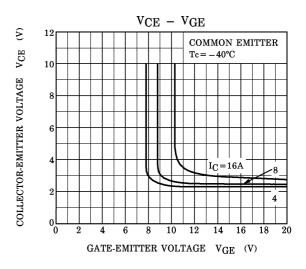
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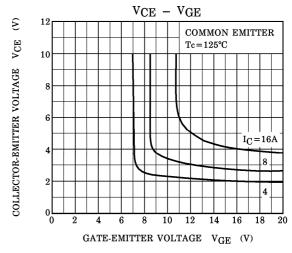


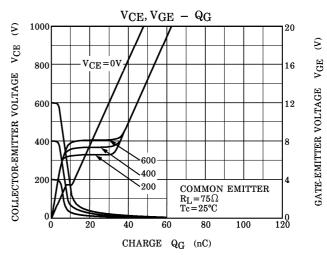


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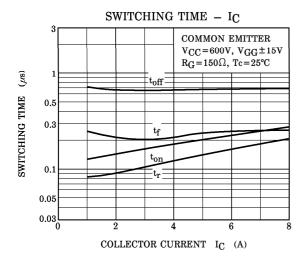
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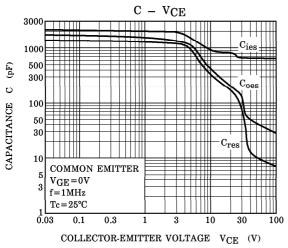


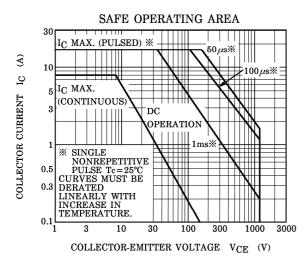


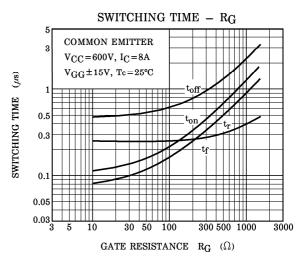


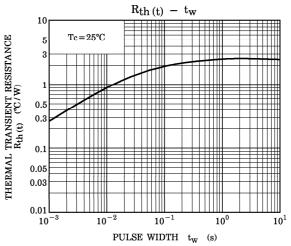
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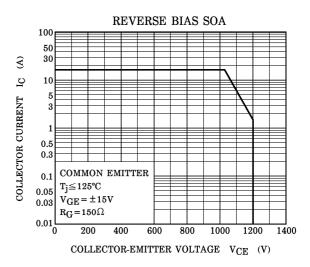












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