

TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON N CHANNEL MOS TYPE

GT8Q102(SM)

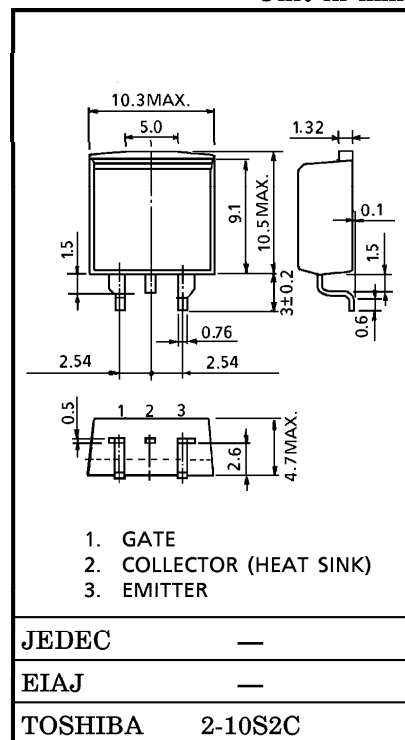
HIGH POWER SWITCHING APPLICATIONS

MOTOR CONTROL APPLICATIONS

Unit in mm

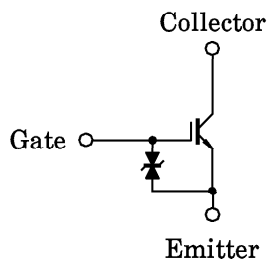
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	V _{CES}	1200	V
Gate-Emitter Voltage	V _{GES}	±20	V
Collector Current	DC	I _C	8
	1ms	I _{CP}	16
Collector Power Dissipation	(T _c = 25°C) P _C	50	W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55~150	°C



Weight : 1.4g

EQUIVALENT CIRCUIT

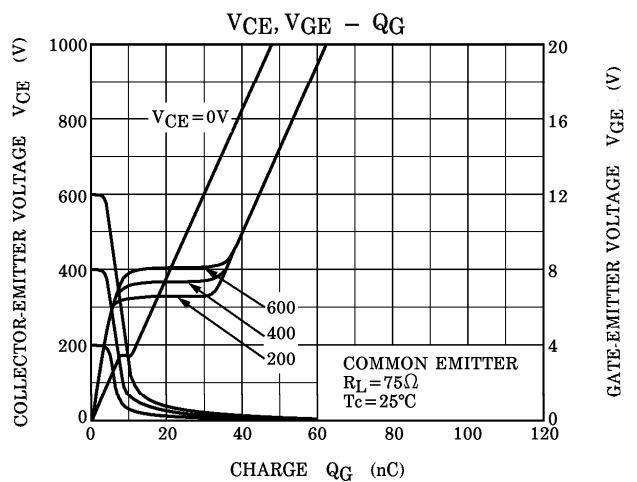
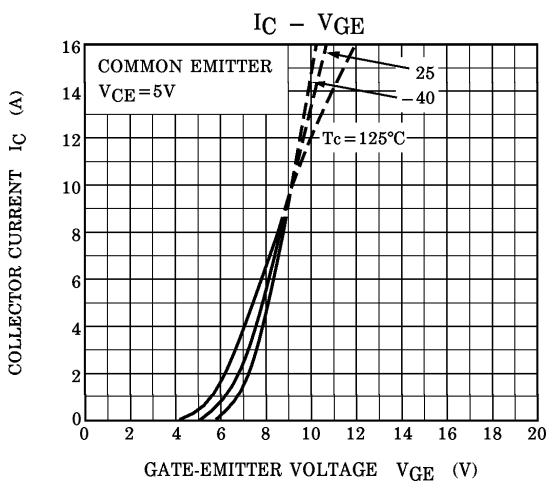
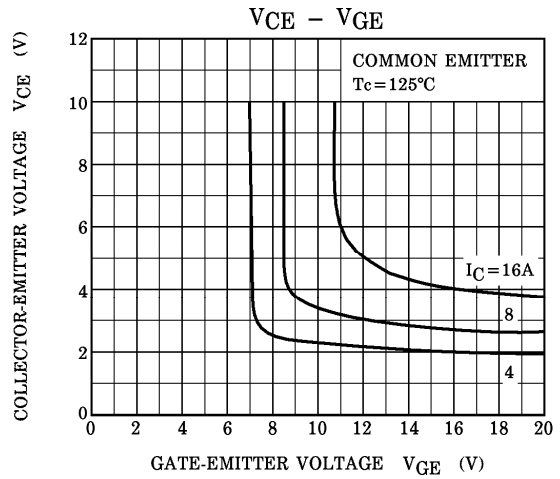
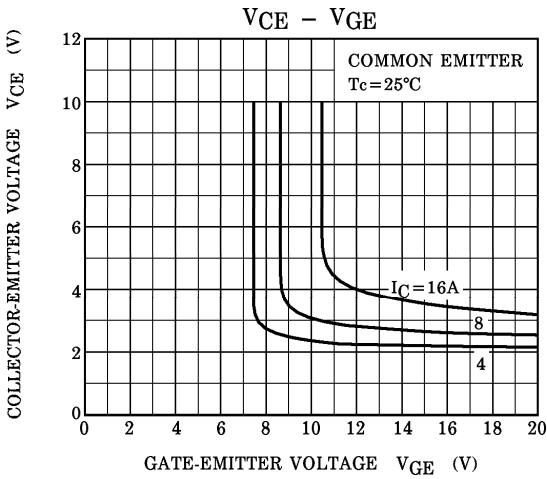
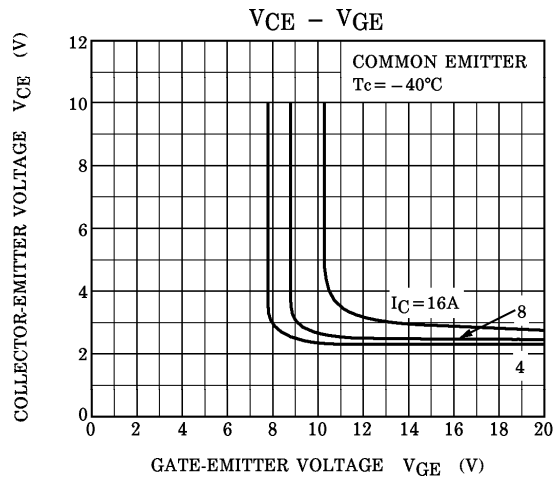
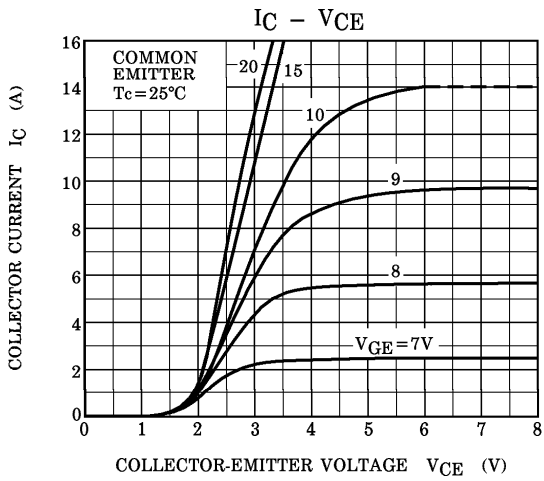


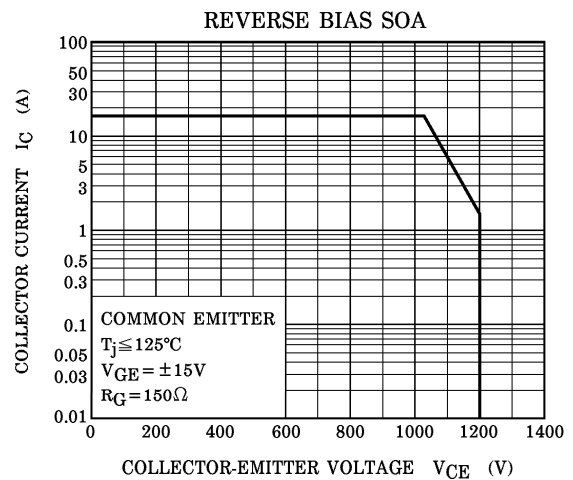
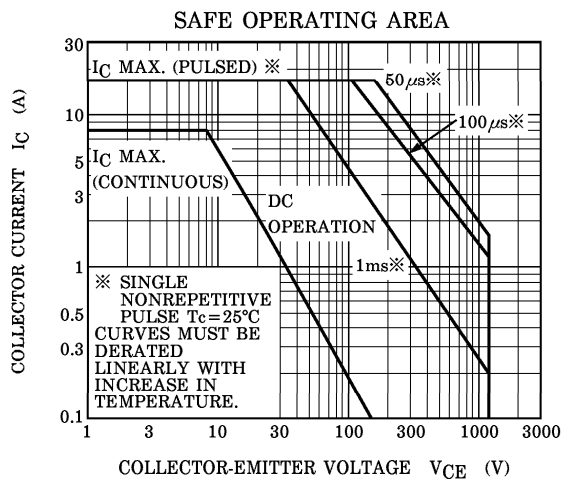
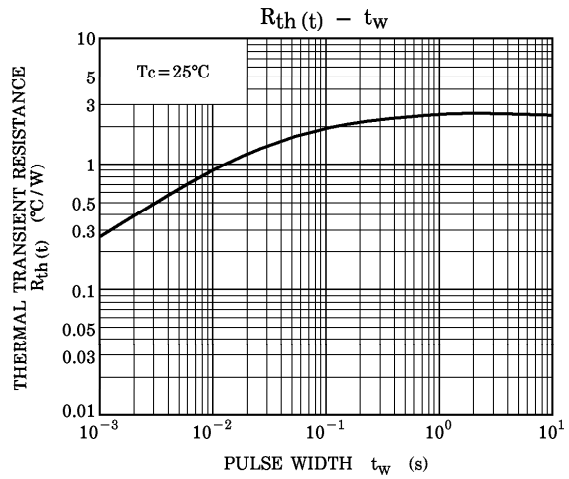
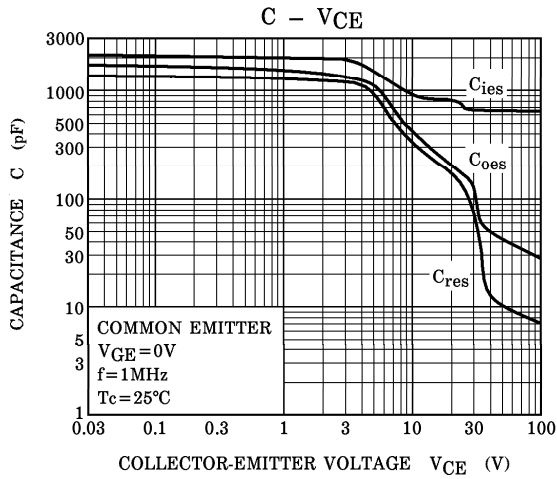
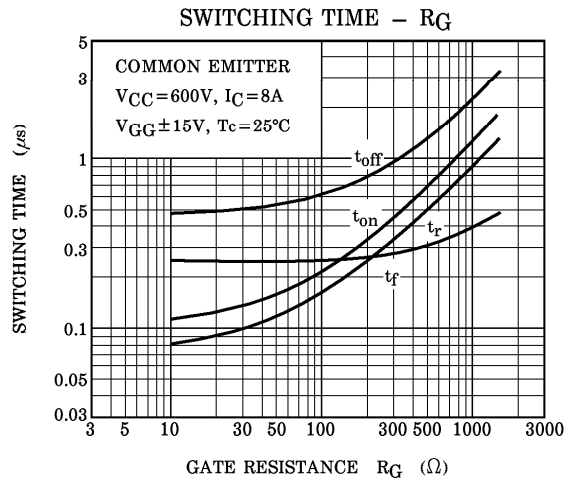
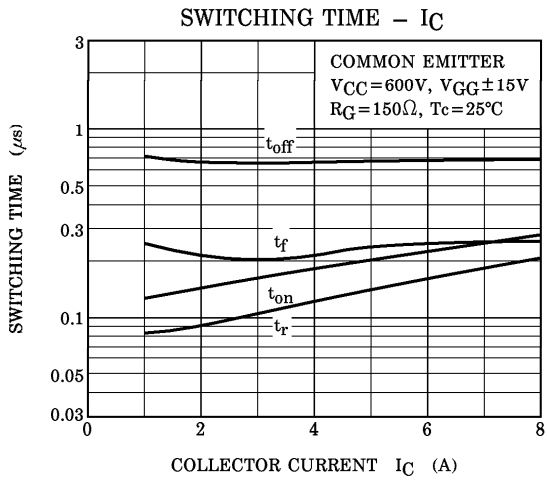
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I _{GES}	V _{GE} = ±20V, V _{CE} = 0	—	—	±10	μA
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	C _{ies}	V _{CE} = 10V, V _{GE} = 0, f = 1MHz	—	1000	—	pF
Switching Time	Rise Time	t _r	—	0.3	0.6	μs
	Turn-on Time	t _{on}	—	0.4	0.8	
	Fall Time	t _f	—	0.25	0.5	
	Turn-off Time	t _{off}	—	0.7	1.3	

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