

TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON N CHANNEL MOS TYPE

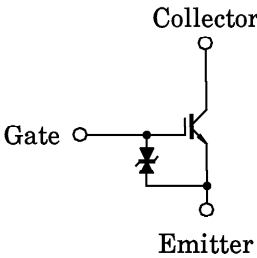
GT8Q102(SM)

HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

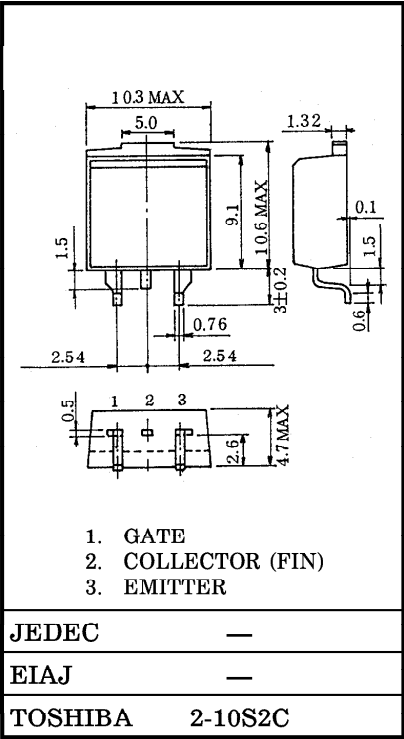
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTICS		SYMBOL	RATINGS	UNIT
Collector-Emitter Voltage		V _{CES}	1200	V
Gate-Emitter Voltage		V _{GES}	±20	V
Collector Current	DC	I _C	8	A
	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

EQUIVALENT CIRCUIT



Unit in mm



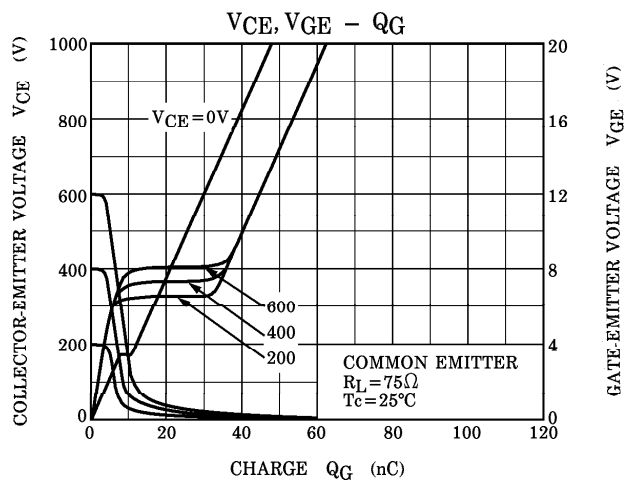
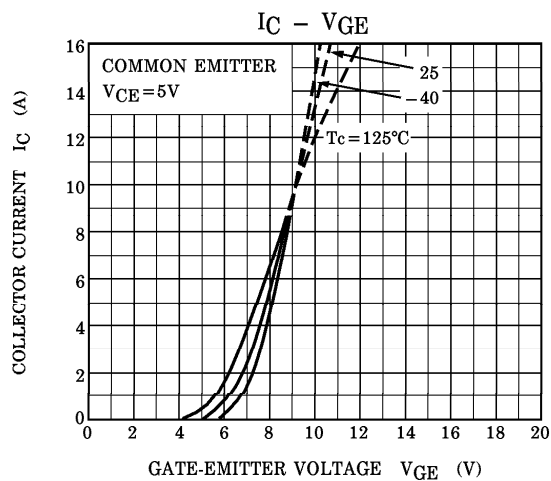
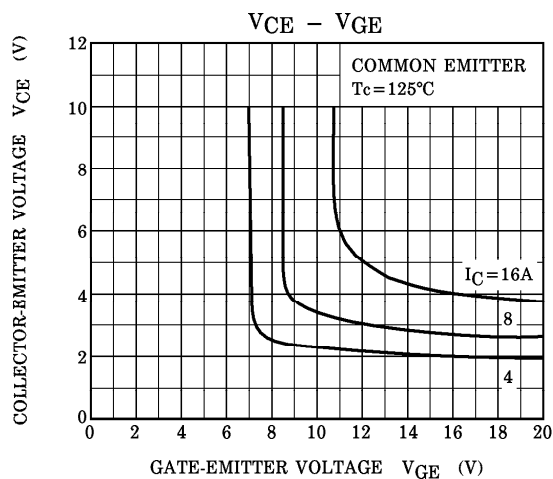
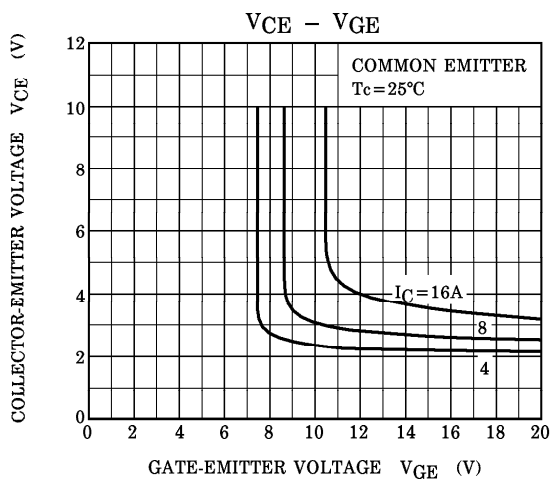
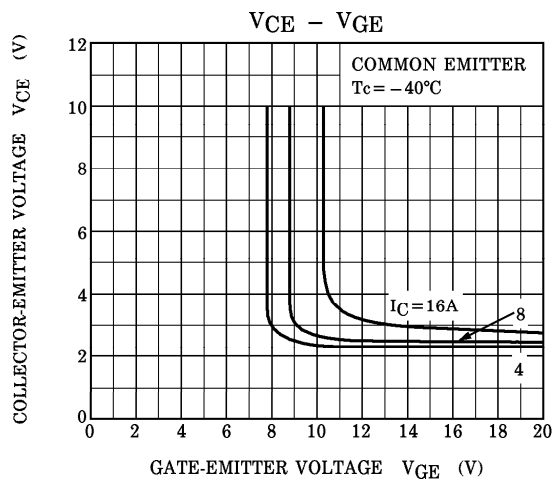
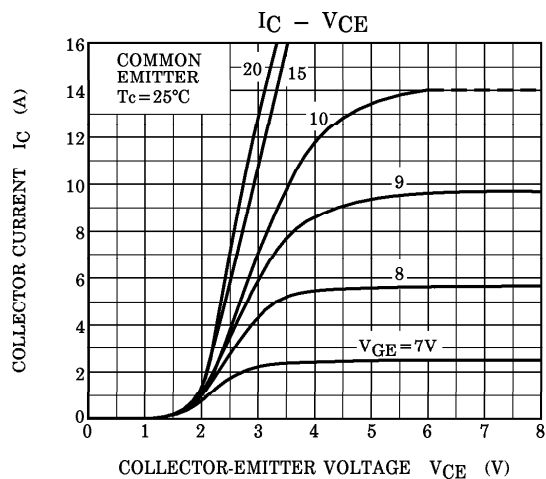
Weight : 1.4g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		I _{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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