

TOSHIBA SEMICONDUCTOR TECHNICAL DATA

TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR

GT25H101

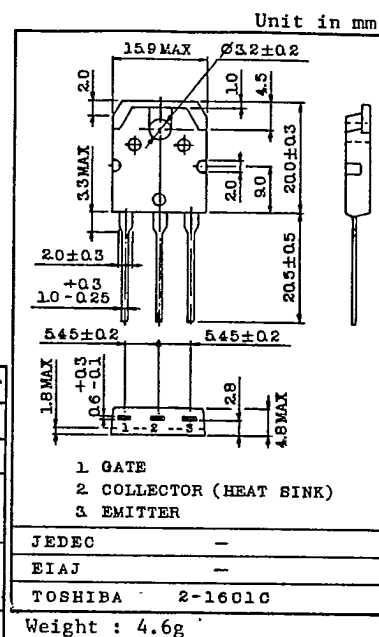
SILICON N-CHANNEL MOS TYPE

HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

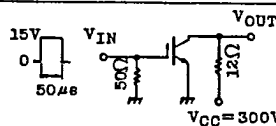
- High Input Impedance
- High Speed : $t_f=1.0\mu s$ (Max.)
- Low Saturation Voltage : $V_{CE(sat)}=5.0V$ (Max.)
- Enhancement-Mode

MAXIMUM RATINGS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	V_{CES}	500	V
Gate-Emitter Voltage	V_{GES}	± 20	V
Collector Current	DC	I_C	25
	1ms	I_{CP}	50
Collector Power Dissipation ($T_c=25^\circ C$)	P_C	150	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	$-55\sim 150$	$^\circ C$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I_{GES}	$V_{GE}=\pm 20V, V_{CE}=0$	—	—	± 500	nA
Collector Cut-off Current	I_{CES}	$V_{CE}=500V, V_{GE}=0$	—	—	1.0	mA
Collector-Emitter Breakdown Voltage	$V_{(BR)CES}$	$I_C=2mA, V_{GE}=0$	500	—	—	V
Gate-Emitter Cut-off Voltage	$V_{GE(off)}$	$I_C=25mA, V_{CE}=5V$	3.0	—	6.0	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=25A, V_{GE}=15V$	—	3.5	5.0	V
Input Capacitance	C_{ies}	$V_{CE}=10V, V_{GE}=0, f=1MHz$	—	1500	—	pF
Switching Time	Rise Time	t_r	—	0.4	0.6	μs
	Turn-on Time	t_{on}	—	0.5	0.7	
	Fall Time	t_f	—	0.4	1.0	
	Turn-off Time	t_{off}	—	0.6	1.2	



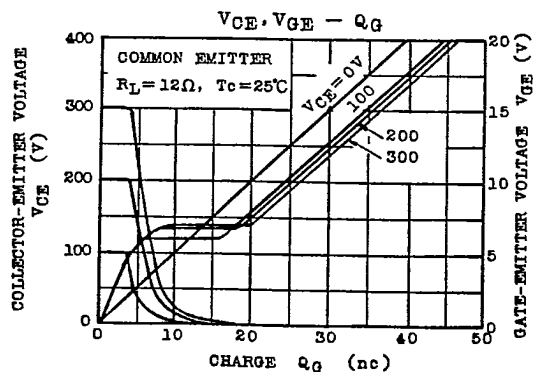
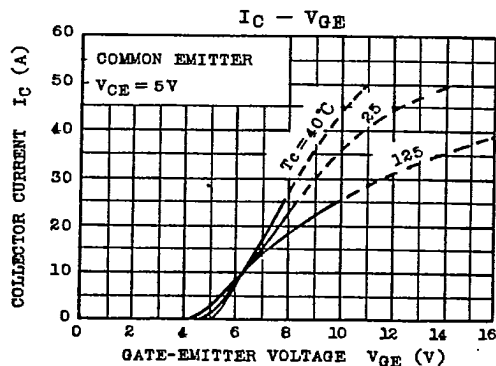
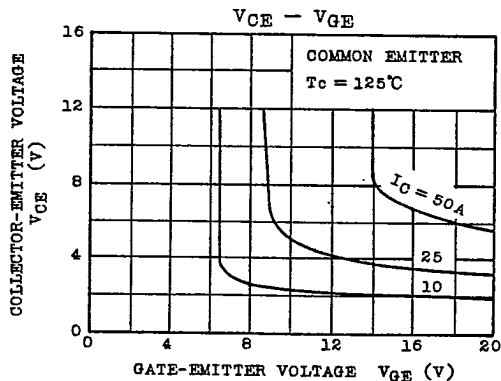
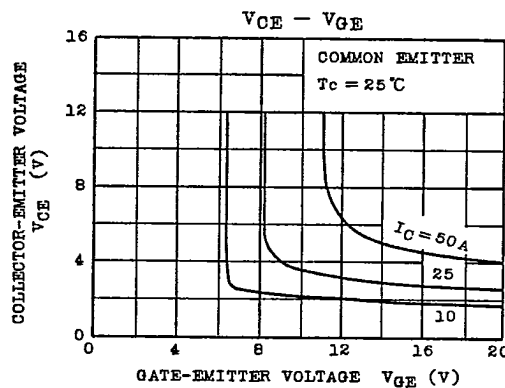
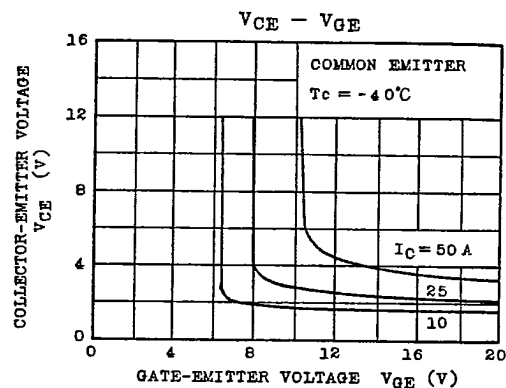
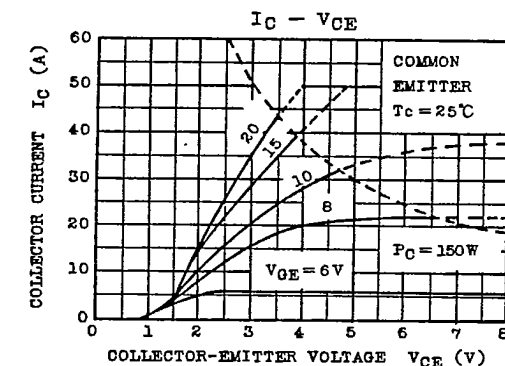
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TOSHIBA CORPORATION

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