

TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON N-CHANNEL IGBT

GT40M101

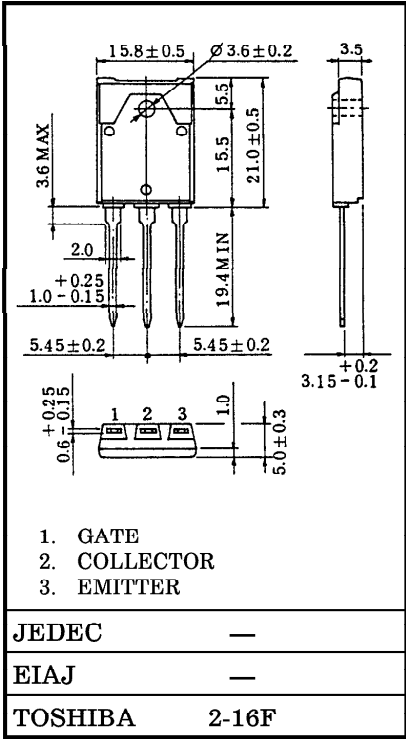
HIGH POWER SWITCHING APPLICATIONS.

Unit in mm

- High Input Impedance
- High Speed : $t_f=0.4\mu s$ (Max.)
- Low Saturation Voltage : $V_{CE(sat)}=3.4V$ (Max.)
- Enhancement-Mode

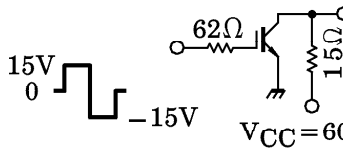
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		V_{CES}	900	V
Gate-Emitter Voltage		V_{GES}	± 25	V
Collector Current	DC	I_C	40	A
	1ms	I_{CP}	80	
Collector Power Dissipation (Tc = 25°C)		P_C	90	W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55~150	°C
Screw Torque		—	0.8	N·m



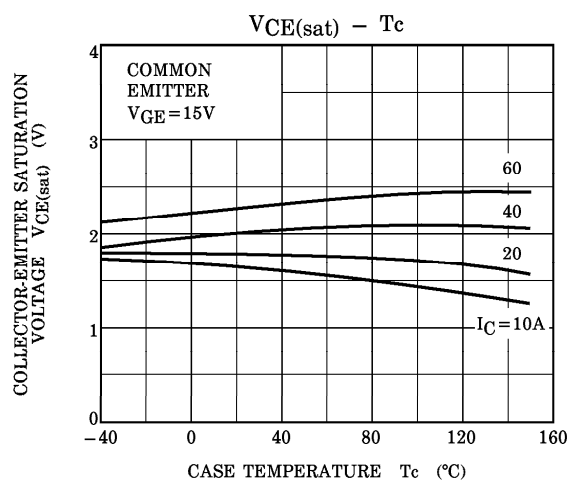
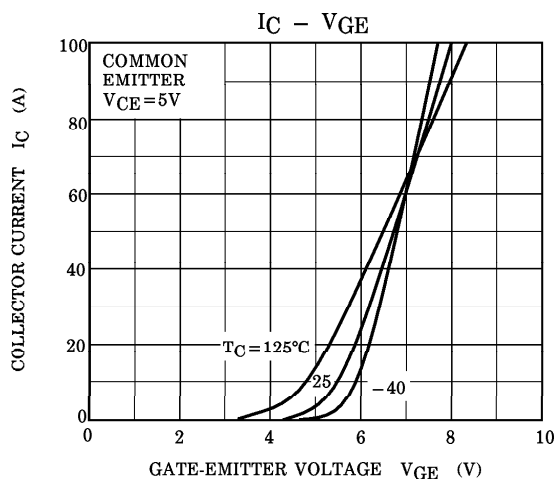
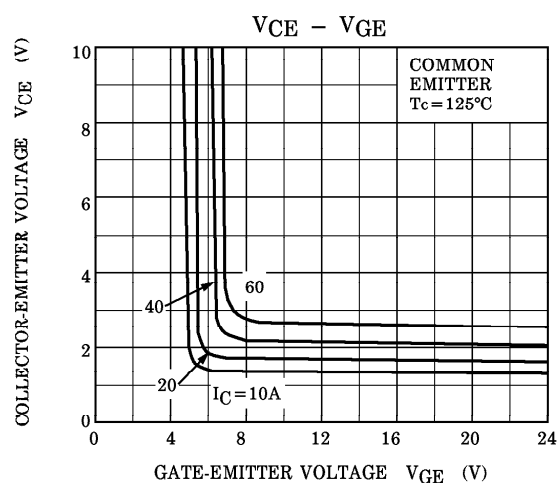
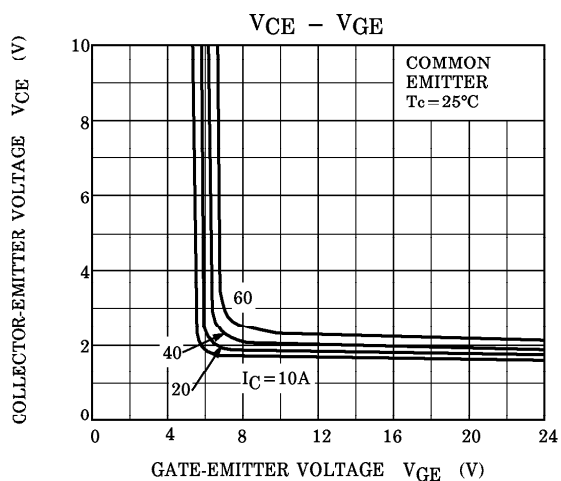
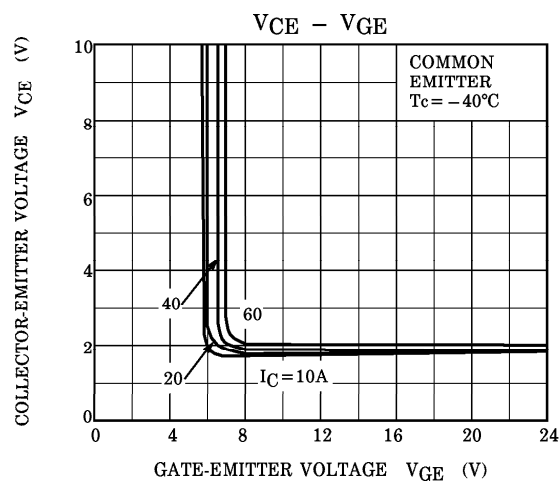
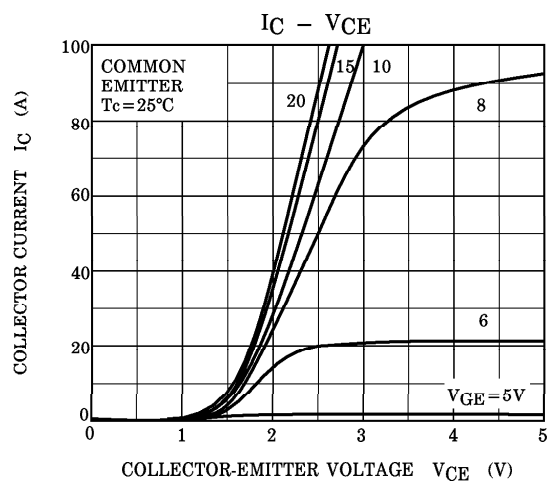
Weight : 5.8g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		I _{GES}	V _{GE} =±25V, V _{CE} =0	—	—	±500	nA
Collector Cut-off Current		I _{CES}	V _{CE} =900V, V _{GE} =0	—	—	1.0	mA
Gate-Emitter Cut-off Voltage		V _{GE(OFF)}	I _C =40mA, V _{CE} =5V	3.0	—	6.0	V
Collector-Emitter Saturation Voltage		V _{CE(sat)(1)}	I _C =8A, V _{GE} =15V	—	—	2.4	V
		V _{CE(sat)(2)}	I _C =40A, V _{GE} =15V	—	2.4	3.7	
Input Capacitance		C _{ies}	V _{CE} =30V, V _{GE} =0, f=1MHz	—	2100	—	pF
Switching Time	Rise Time	t _r		—	0.30	0.60	μs
	Turn-on Time	t _{on}		—	0.40	0.70	
	Fall Time	t _f		—	0.25	0.40	
	Turn-off Time	t _{off}		—	0.60	1.00	
Thermal Resistance		R _{th(j-c)}	—	—	—	1.39	°C / W

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