

9097250 TOSHIBA (DISCRETE/OPTO)

90D 16129 D T-33-13

TOSHIBA SEMICONDUCTOR

TECHNICAL DATA

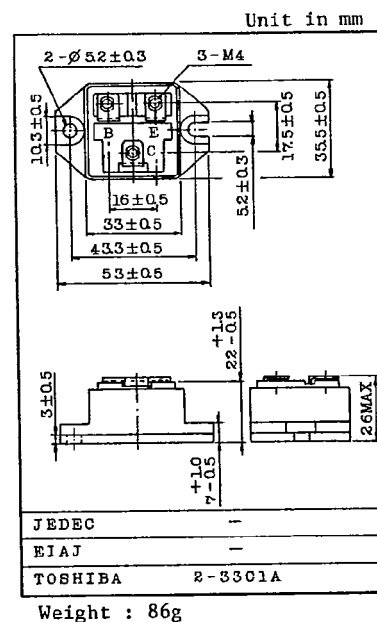
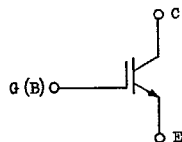
TOSHIBA GTR MODULE
MG50H1BS1
SILICON N CHANNEL IGBT

HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

FEATURES:

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

EQUIVALENT CIRCUIT

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	50	A
	1ms	I_{CP}	100	
Collector Power Dissipation ($T_c=25^\circ C$)		P_C	150	W
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	-40~125	$^\circ C$
Isolation Voltage		V_{isol}	2500 (AC, 1 Minute)	V
Screw Torque (Terminal/Mounting)		-	20/30	kg·cm

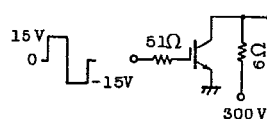
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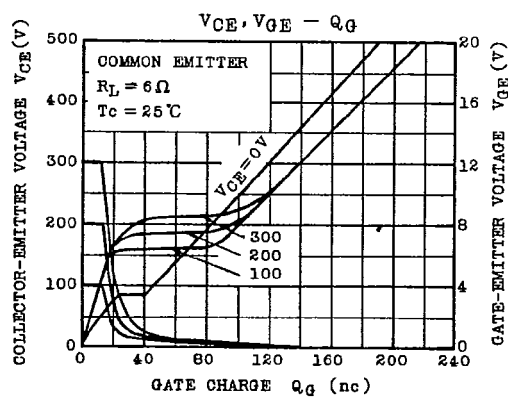
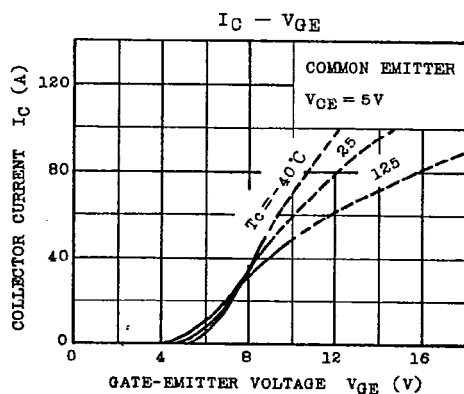
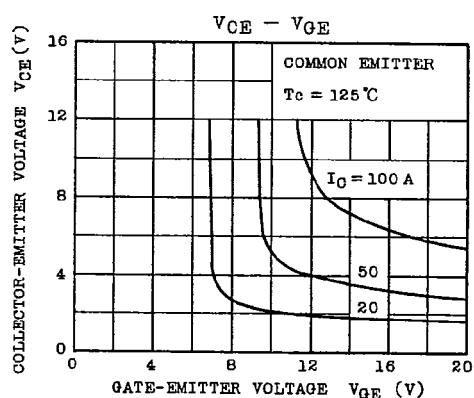
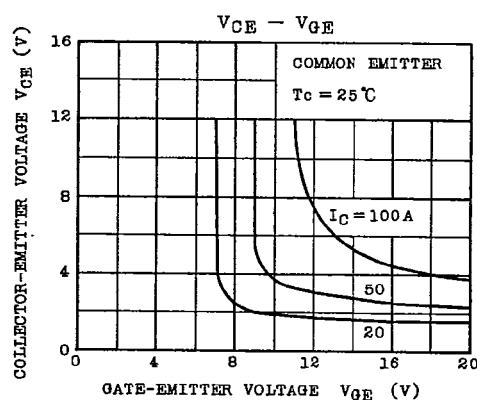
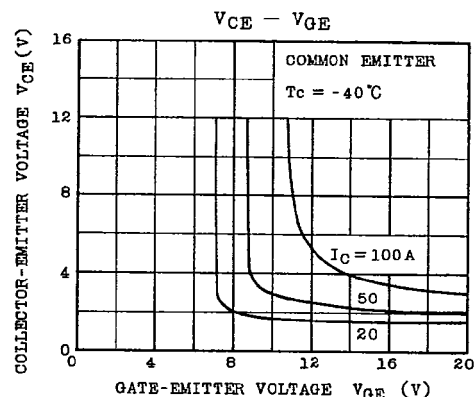
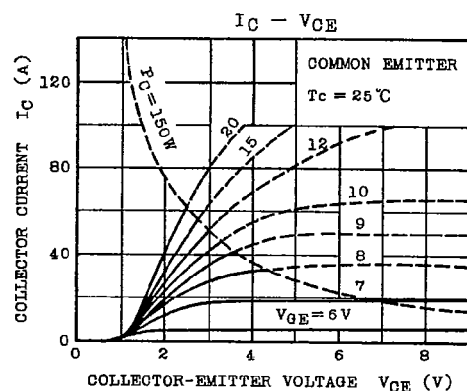
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	IGES	VGE=±20V, VCE=0	-	-	±500	nA
Collector Cut-off Current	ICES	VCE=500V, VGE=0	-	-	1.0	mA
Collector-Emitter Breakdown Voltage	V(BR)CES	IC=10mA, VGE=0	500	-	-	V
Gate-Emitter Cut-off Voltage	VCE(OFF)	IC=50mA, VCE=5V	3.0	-	6.0	V
Collector-Emitter Saturation Voltage	VCE(sat)	IC=50A, VGE=15V	-	3.0	5.0	V
Input Capacitance	Cies	VCE=10V, VGE=0, f=1MHz	-	3000	-	pF
Switching Time	Rise Time	tr	-	0.5	1.0	μs
	Turn-on Time	ton	-	0.6	1.0	
	Fall Time	tf	-	0.4	1.0	
	Turn-off Time	toff	-	0.9	1.5	
Thermal Resistance	Rth(j-c)	-	-	-	0.83	°C/W



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MG 50 H 1 B S 1



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