

9097250 TOSHIBA (DISCRETE/OPTO)

90D 16203

DT-33-35



SEMICONDUCTOR

TECHNICAL DATA

TOSHIBA GTR MODULE

MG15G4GL1 MG15G6EL1

SILICON NPN TRIPLE DIFFUSED TYPE

HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

FEATURES :

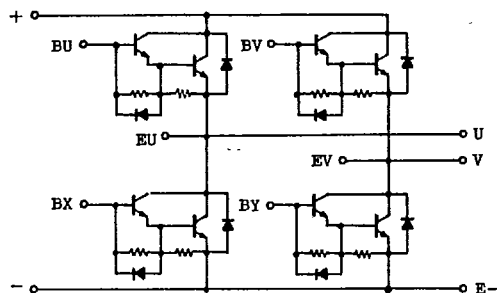
- .The Collector is Isolated from Case
- .4 or 6 Darlington Transistors including Free Wheeling Diodes are Built-in to 1 package
- .High DC Current Gain

: $h_{FE}=100(\text{Min.})$ ($I_C=15A$)

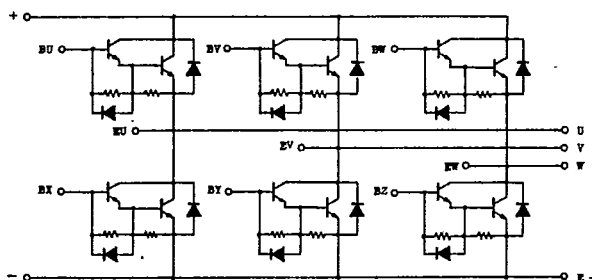
- ### .Low Saturation Voltage

$$\therefore V_{CE(sat)} = 2V(\text{Max.}) \quad (I_C = 15A)$$

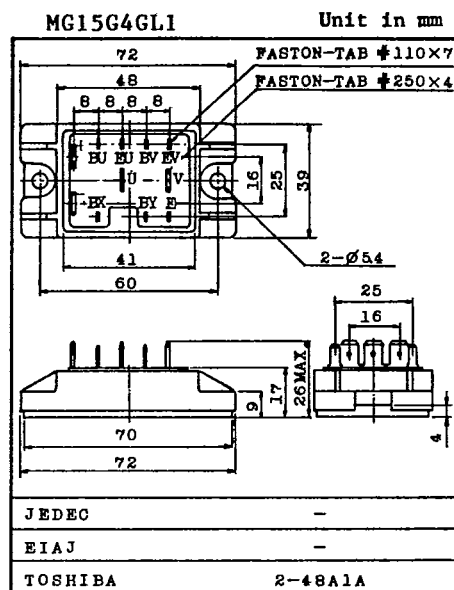
EQUIVALENT CIRCUIT



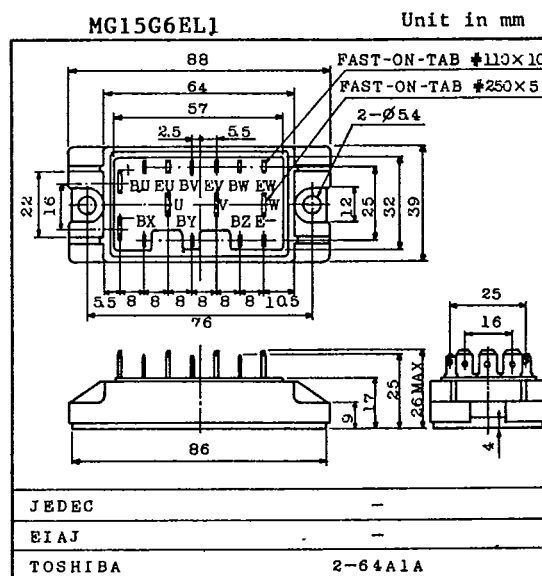
MG15G4GL1



MG15G6EL1



Weight : 140g



Weight : 180g

TOSHIBA CORPORATION

GT 1 A 2 A

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M G 1 5 G 4 G L 1

M G 1 5 G 6 E 1 1

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	600	V
Collector-Emitter Voltage		V_{CEO}	600	V
Collector-Emitter Sustaining Voltage		$V_{CEO(SUS)}$	450	V
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current	DC	I_C	15	A
	1ms	I_C	30	A
	DC	$-I_C$	15	A
Base Current		I_B	1	A
Collector Power Dissipation ($T_c=25^\circ\text{C}$)		P_C	100	W
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-40 ~ 125	$^\circ\text{C}$
Isolation Voltage		V_{isol}	2500(AC 1 Minute)	V
Screw Torque			30	kg·cm

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

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=600\text{V}, I_E=0$	-	-	1.0	mA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=6\text{V}, I_C=0$	-	-	100	mA
Collector-Emitter Sustaining Voltage		$V_{CEO(SUS)}$	$I_C=0.5\text{A}, L=40\text{mH}$	450	-	-	V
DC Current Gain		h_{FE}	$V_{CE}=5\text{V}, I_C=15\text{A}$	100	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=15\text{A}, I_B=0.4\text{A}$	-	-	2.0	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$		-	-	2.5	V
Emitter-Collector Voltage		V_{ECO}	$I_E=15\text{A}, I_B=0$	-	-	1.6	V
Reverse Recovery Time		t_{rr}	$-I_C=15\text{A}, V_{EB}=2\text{V}, V_{CE}=300\text{V}$	-	-	0.7	μs
Collector Output Capacitance		C_{ob}	$V_{CB}=50\text{V}, I_E=0, f=1\text{MHz}$	-	400	-	pF
Switching Time	Turn-on Time	t_{on}		-	-	1.0	μs
	Storage Time	t_{stg}		-	-	12	
	Fall Time	t_f		-	-	2.0	
Thermal Resistance (Junction to Case)		$R_{th(j-c)}$		-	-	1.25	$^\circ\text{C/W}$

TOSHIBA CORPORATION

GT1A2

9097250 TOSHIBA (DISCRETE/OPTO)

90D 16205 DT-33-35



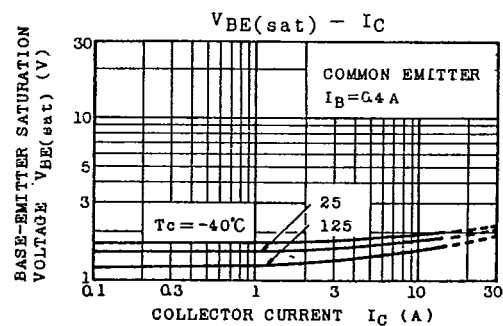
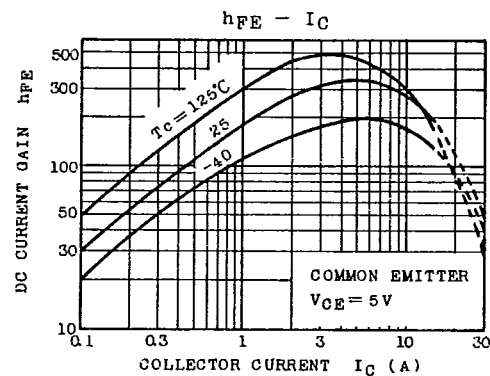
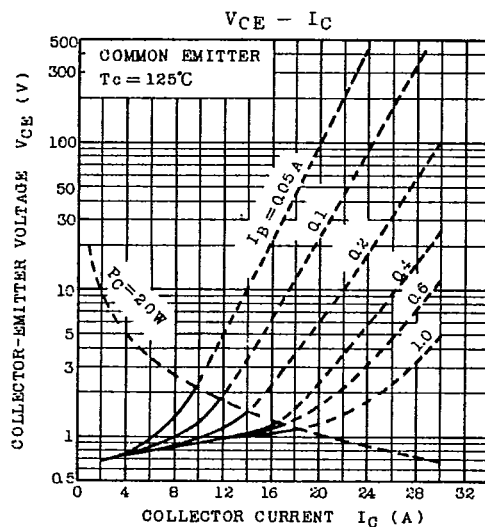
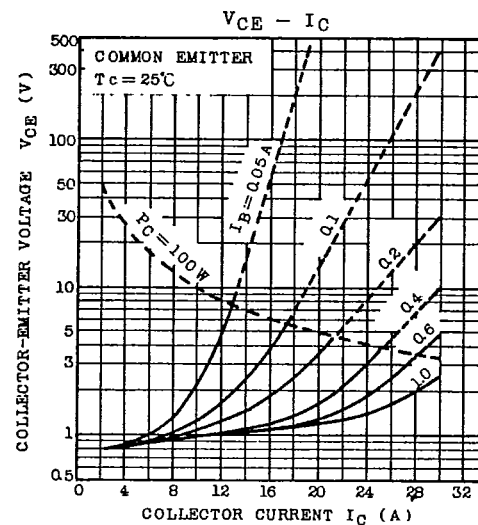
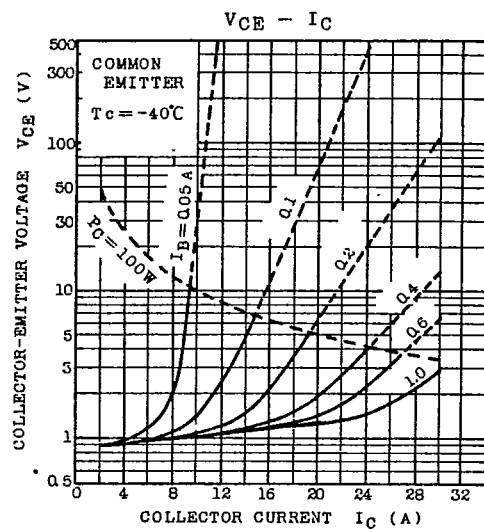
SEMICONDUCTOR

東芝

TECHNICAL DATA

MG15G4GL1

MG15G6BL1



TOSHIBA CORPORATION

GT1A2



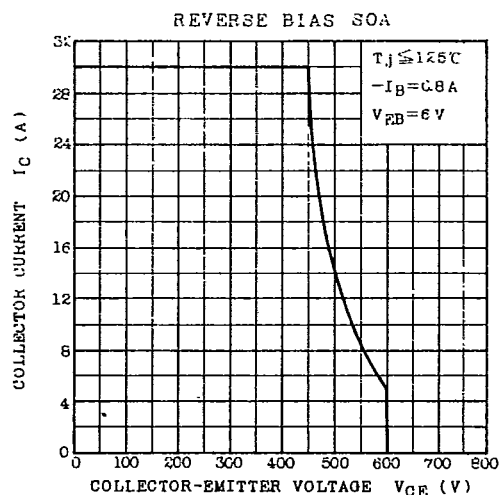
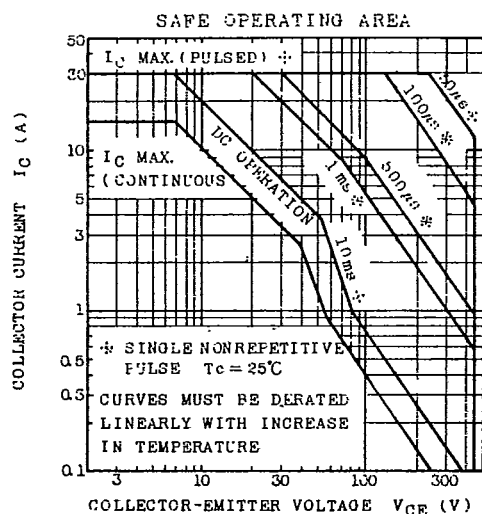
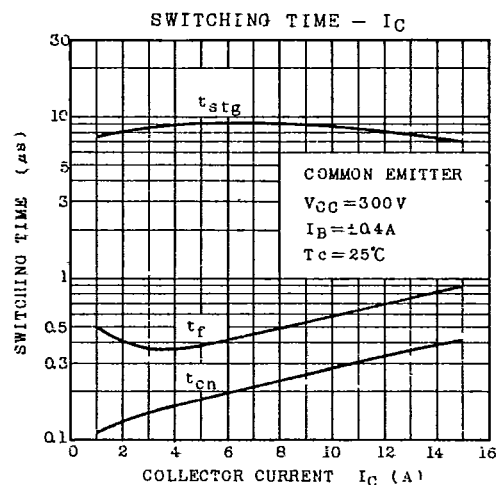
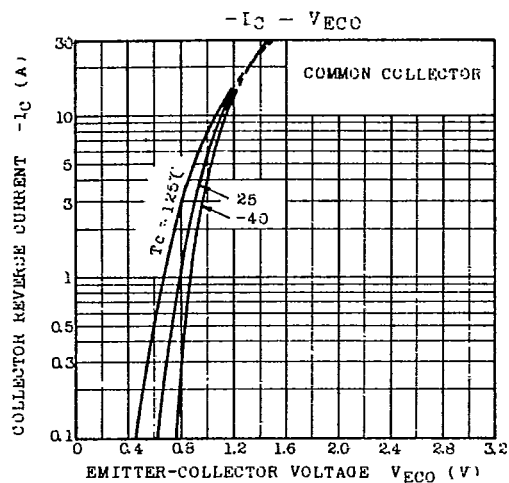
SEMICONDUCTOR

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TECHNICAL DATA

MG15G4GL1

MG15G6EL1



TOSHIBA CORPORATION

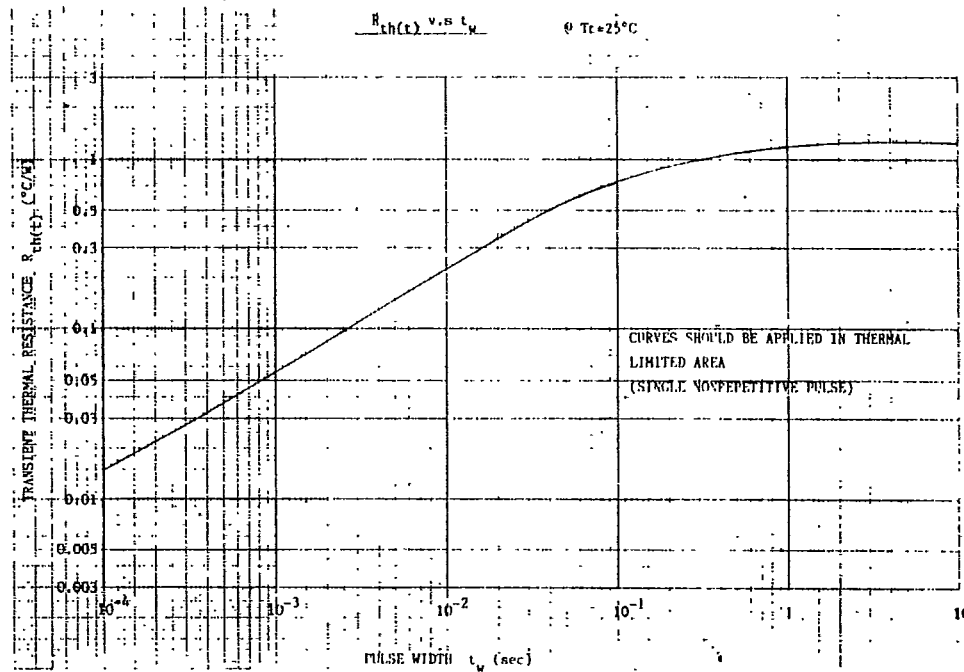
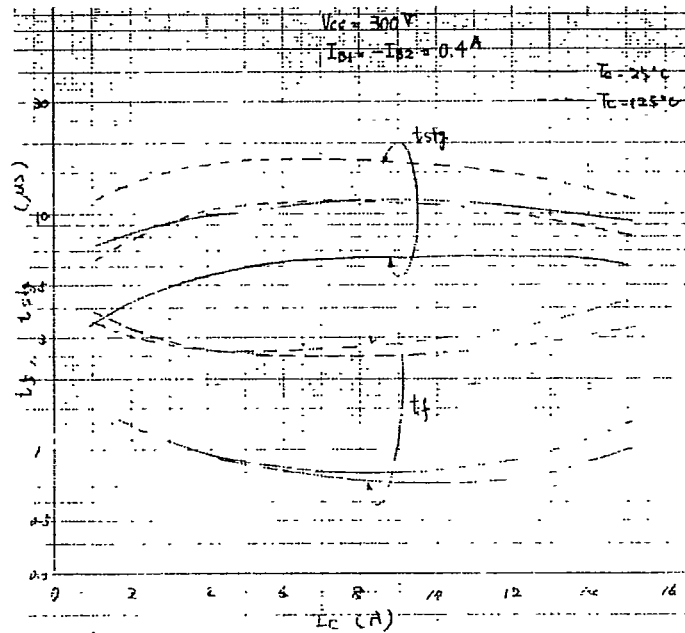
GT1A2



SEMICONDUCTOR

TECHNICAL DATA

MG1EG4GLI
MG1EG6ELI



TOSHIBA CORPORATION

GT1A2A

9097250 TOSHIBA (DISCRETE/OPTO)

90D 16208

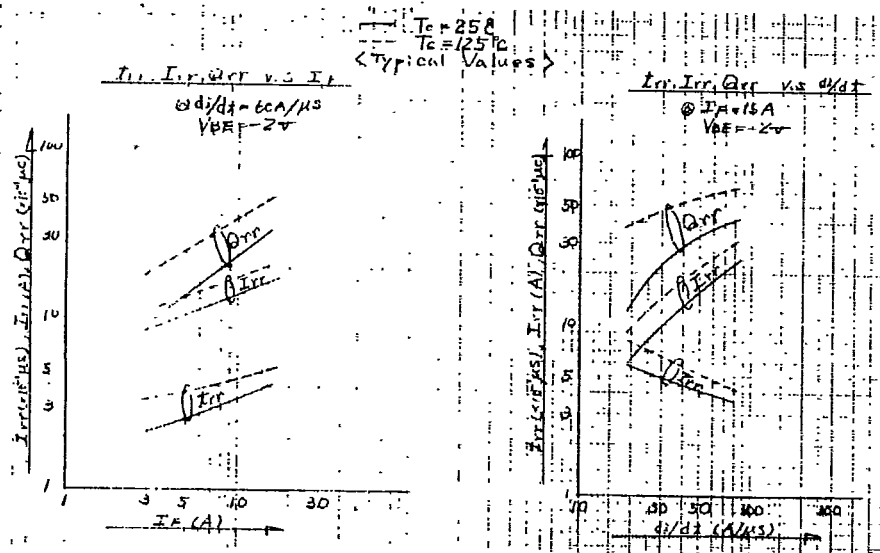
DT-33-35



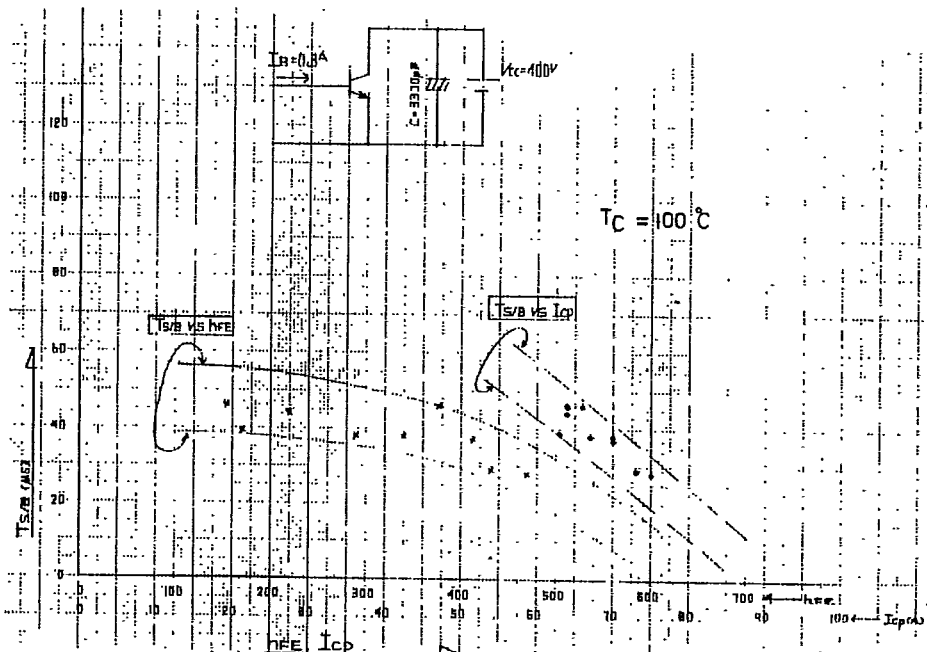
SEMICONDUCTOR

TECHNICAL DATA

MG15G4GLI
MG15G6ELI



SHORT CIRCUIT



TOSHIBA CORPORATION

GT1A2A