

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 :

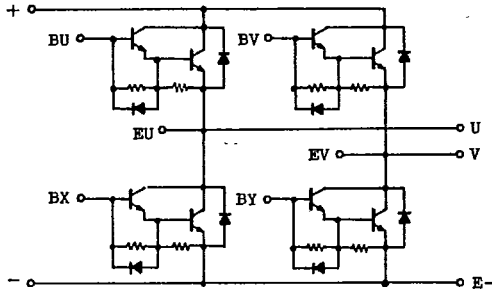
- .The Collector is Isolated from Case
- .4 or 6 Darlingtons including Free Wheeling Diodes are Built-in to 1 package
- .High DC Current Gain

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

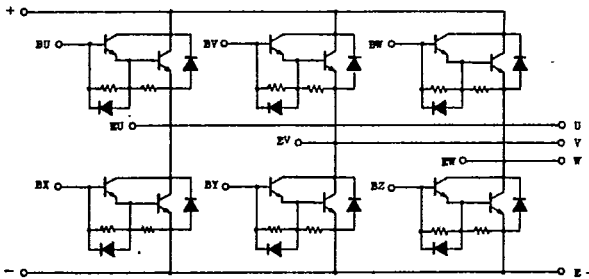
- .Low Saturation Voltage

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

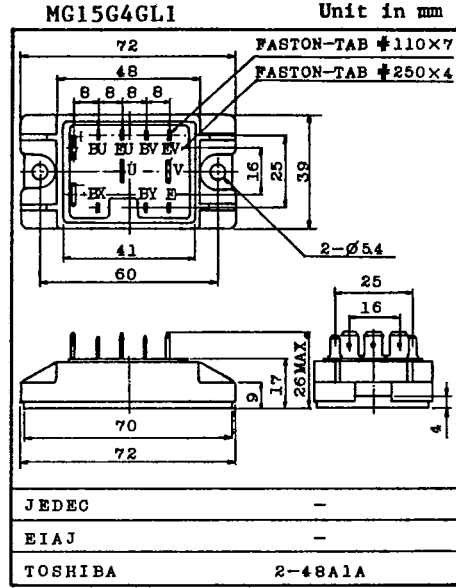
EQUIVALENT CIRCUIT



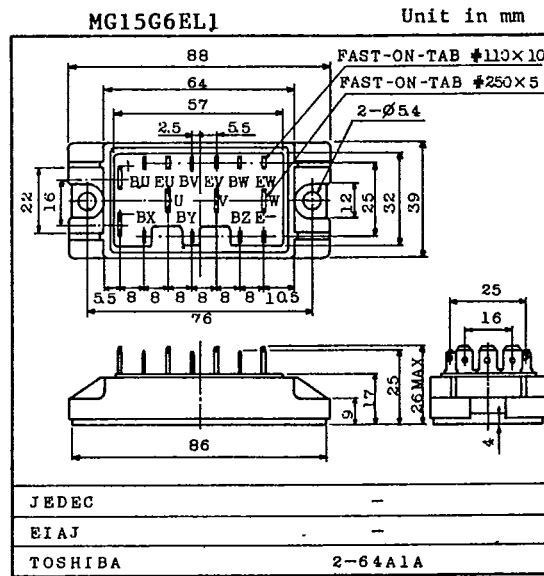
MG15G4GL1



MG15G6EL1



Weight : 140g



Weight : 180g

TOSHIBA CORPORATION

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M G 1 5 G 4 G L 1

M G 1 5 G 6 E 1 1

MAXIMUM RATINGS (Ta=25°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°C)		P _C	100	W
Junction Temperature		T _j	150	°C
Storage Temperature Range		T _{stg}	-40 ~ 125	°C
Isolation Voltage		V _{isol}	2500(AC 1 Minute)	V
Screw Torque			30	kg·cm

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I _{CBO}	V _{CB} =600V, I _E =0	-	-	1.0	mA
Emitter Cut-off Current		I _{EBO}	V _{EB} =6V, I _C =0	-	-	100	mA
Collector-Emitter Sustaining Voltage		V _{CEO(SUS)}	I _C =0.5A, L=40mH	450	-	-	V
DC Current Gain		h _{FE}	V _{CE} =5V, I _C =15A	100	-	-	
Collector-Emitter Saturation Voltage		V _{CE(sat)}	I _C =15A, I _B =0.4A	-	-	2.0	V
Base-Emitter Saturation Voltage		V _{BE(sat)}		-	-	2.5	V
Emitter-Collector Voltage		V _{ECO}	I _E =15A, I _B =0	-	-	1.6	V
Reverse Recovery Time		t _{rr}	-I _C =15A, V _{EB} =2V, V _{CE} =300V	-	-	0.7	μs
Collector Output Capacitance		C _{ob}	V _{CB} =50V, I _E =0, f=1MHz	-	400	-	pF
Switching Time	Turn-on Time	t _{on}		-	-	1.0	μs
	Storage Time	t _{stg}		-	-	12	
	Fall Time	t _f		I _{B1} =-I _{B2} =0.4A DUTY CYCLE=Q5%	-	-	
Thermal Resistance (Junction to Case)		R _{th(j-c)}		-	-	1.25	°C/W

TOSHIBA CORPORATION

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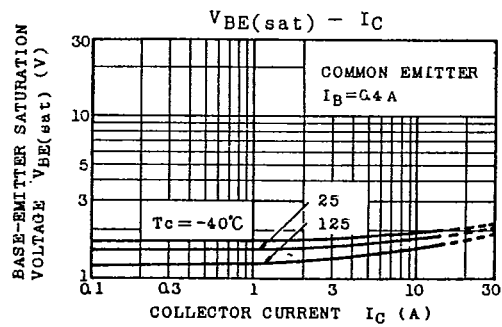
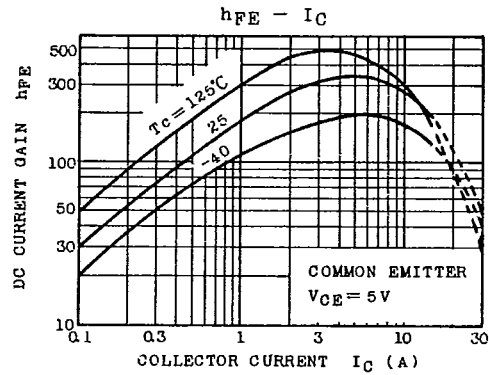
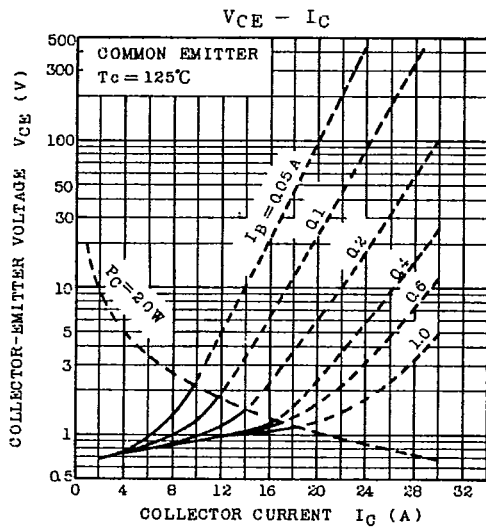
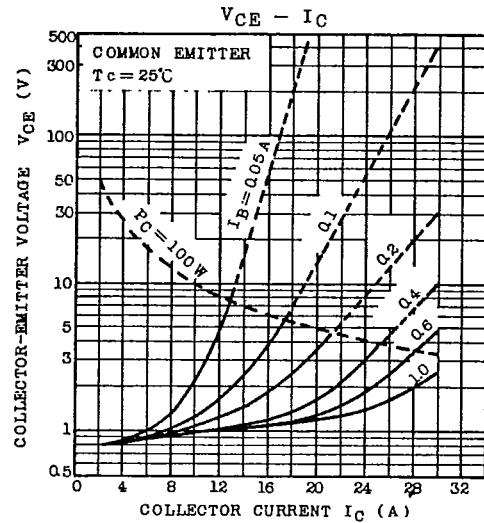
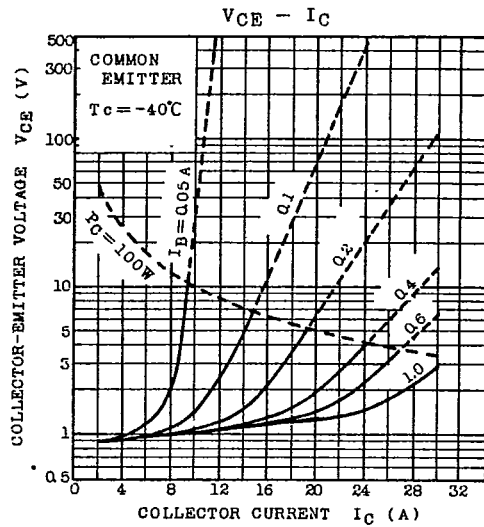


SEMICONDUCTOR

TECHNICAL DATA

MG15G4GL1

MG15G6BL1



TOSHIBA CORPORATION

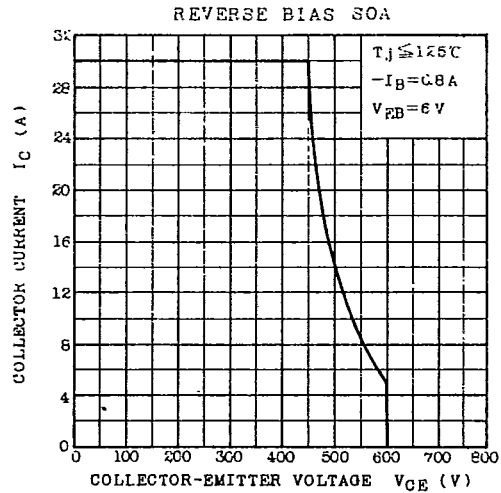
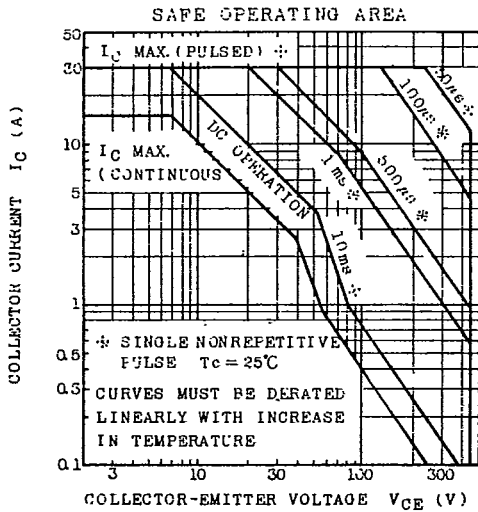
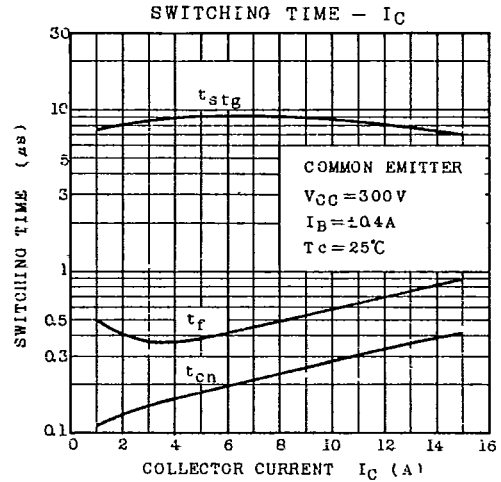
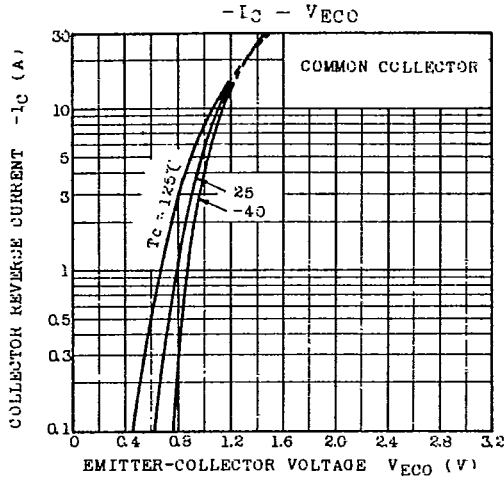
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SEMICONDUCTOR

TECHNICAL DATA

M G 1 5 G 4 G L 1
M G 1 5 G 6 E L 1



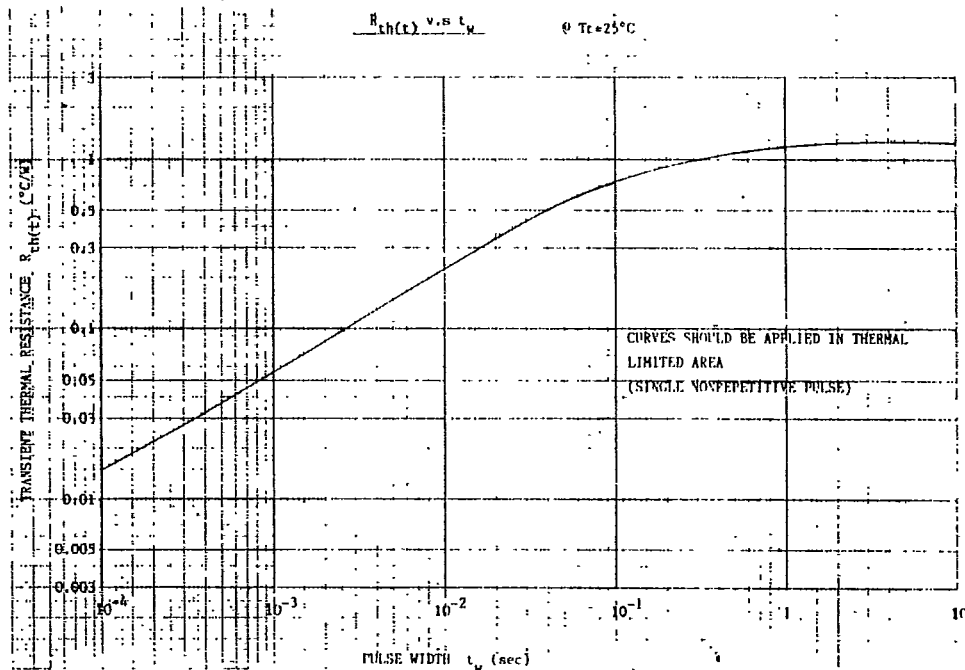
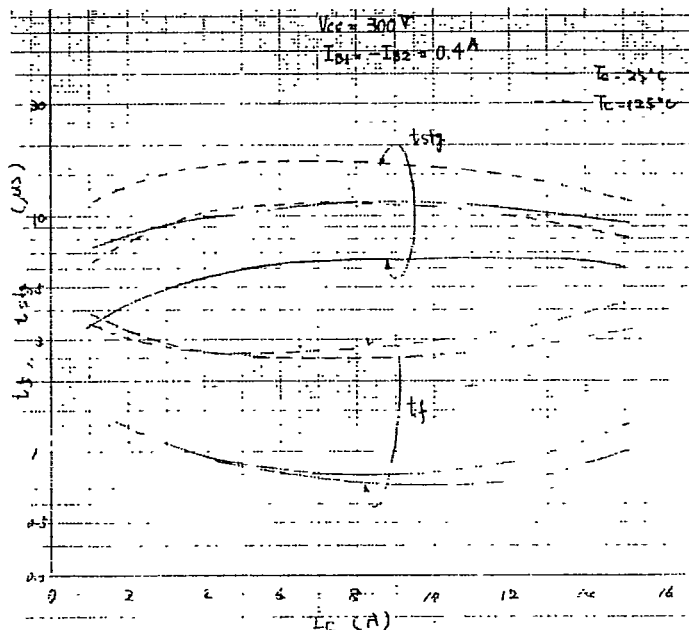
TOSHIBA CORPORATION



SEMICONDUCTOR

TECHNICAL DATA

MG1EG4GLI
MG15G6ELI

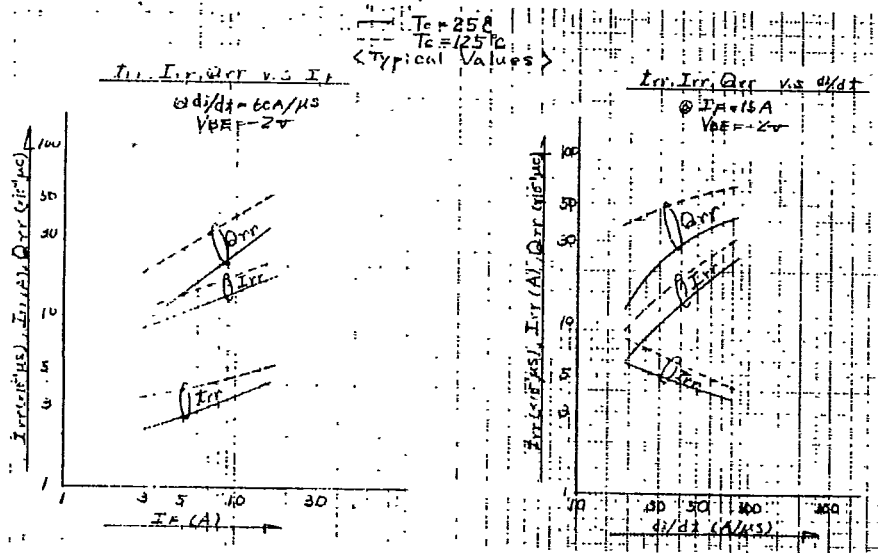


TOSHIBA CORPORATION

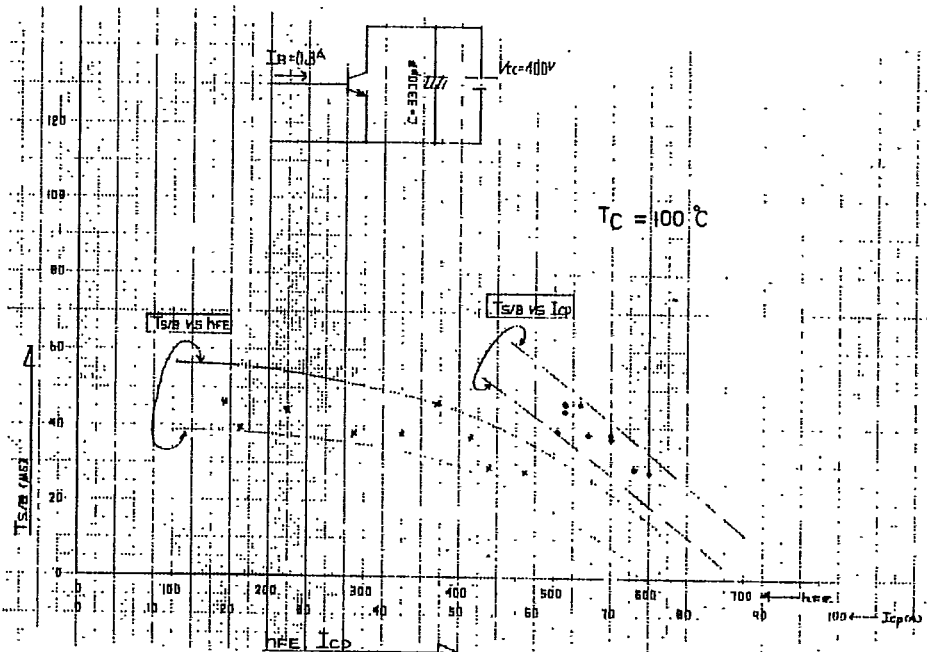


SEMICONDUCTOR
TECHNICAL DATA

MG15G4GLI
MG15G6ELI



SHORT CIRCUIT



TOSHIBA CORPORATION

GT1A2A