

9097250 TOSHIBA (DISCRETE/OPTO)

90D 16213 DT-33-35



SEMICONDUCTOR
TECHNICAL DATA

TOSHIBA GTR MODULE

MG20G4GL1 MG20G6EL1

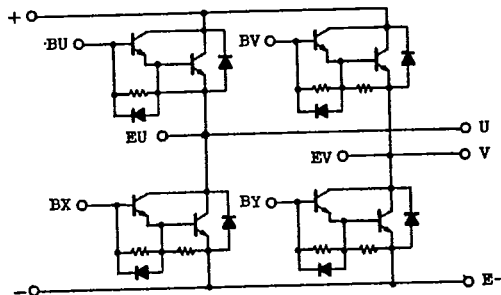
SILICON NPN TRIPLE DIFFUSED TYPE

HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

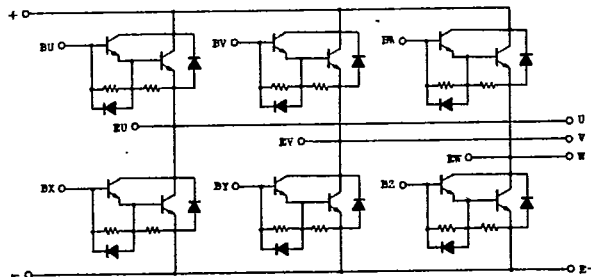
FEATURES :

- The Collector is Isolated from Case
- 4 or 6 Darlingtons Transistors including Free Wheeling Diodes are Built-in to 1 package
- High DC Current Gain
: $h_{FE}=100(\text{Min.}) (I_C=20A)$
- Low Saturation Voltage
: $V_{CE(\text{sat})}=2V(\text{Max.}) (I_C=20A)$

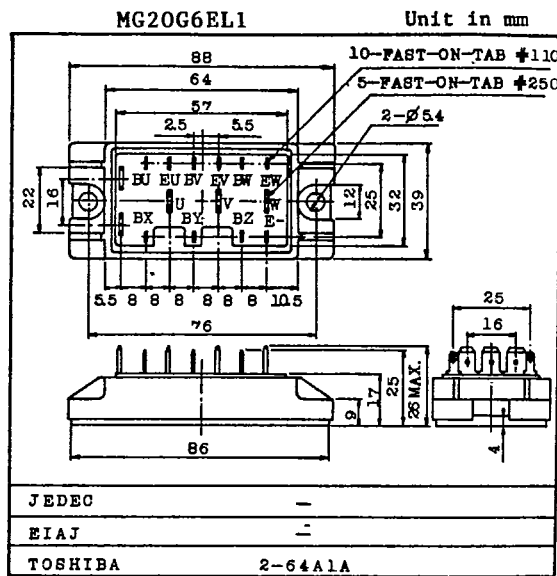
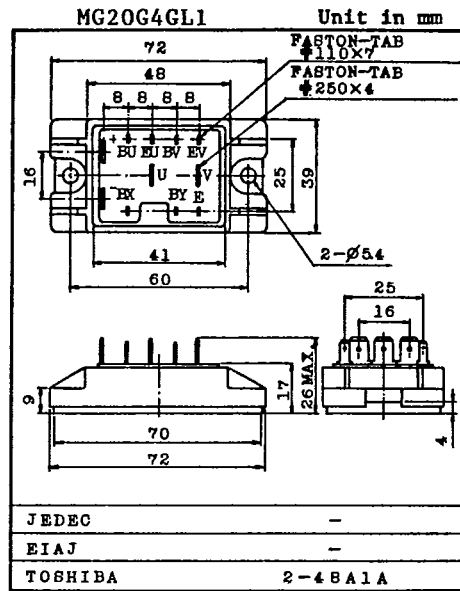
EQUIVALENT CIRCUIT



MG20G4GL1



MG20G6EL1



TOSHIBA CORPORATION

9097250 TOSHIBA (DISCRETE/OPTO)

90D 16214 DT-33-35



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TECHNICAL DATA

M G 2 0 G 4 G L 1

M G 2 0 G 6 E L 1

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V _{CB0}	600	V
Collector-Emitter Sustaining Voltage		V _{CEX(SUS)}	600	V
Collector-Emitter Sustaining Voltage		V _{CEO(SUS)}	450	V
Emitter-Base Voltage		V _{EBO}	6	V
Collector Current	DC	I _C	20	A
	1ms	I _{CP}	40	A
Forward Current	DC	I _F	20	A
	1ms	I _{FM}	40	A
Base Current		I _B	2	A
Collector Power Dissipation (Tc=25°C)		P _C	125	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 =20A	100	-	-	
Collector-Emitter Saturation Voltage		V _{CE(sat)}	I _C =20A, I _B =0.5A	-	-	2.0	V
Base-Emitter Saturation Voltage		V _{BE(sat)}		-	-	2.5	V
Switching Time	Turn-on Time	t _{on}		-	-	1.0	µs
	Storage Time	t _{stg}		-	-	12	
	Fall Time	t _f		-	-	2.0	
Forward Voltage		V _F	I _F =20A, I _B =0	-	-	1.6	V
Reverse Recovery Time		t _{rr}	I _F =20A, V _{BE} =-2V di/dt=60A/µs	-	-	0.7	µs
Thermal Resistance		R _{th(j-c)}		-	-	1.0	°C/W

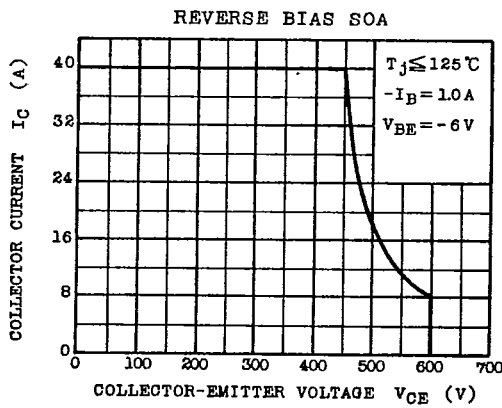
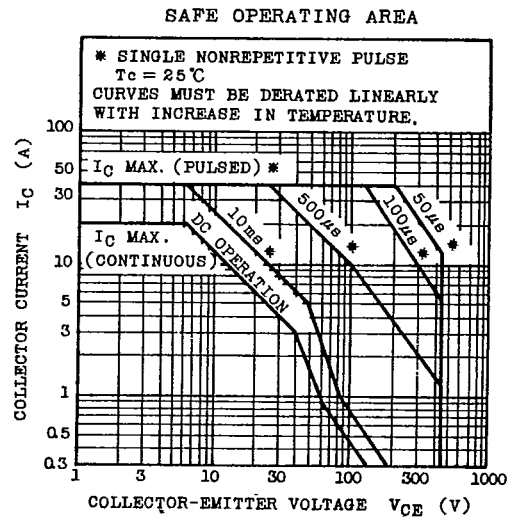
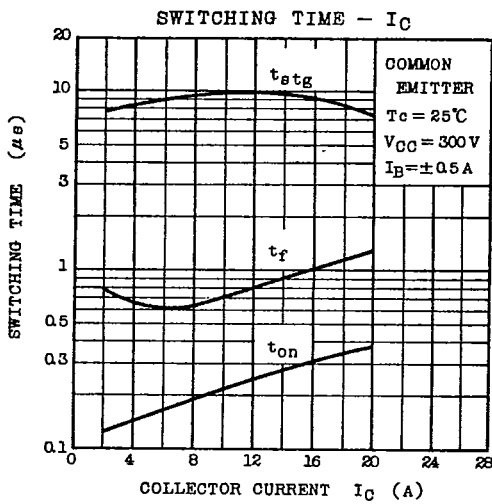
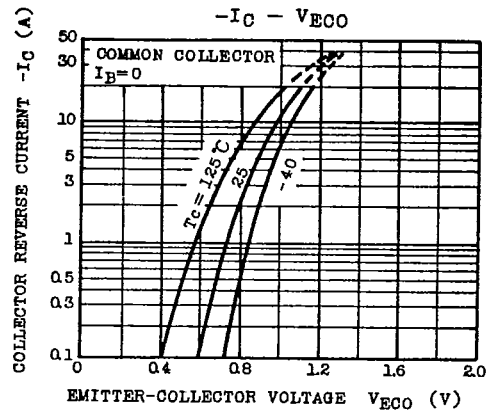
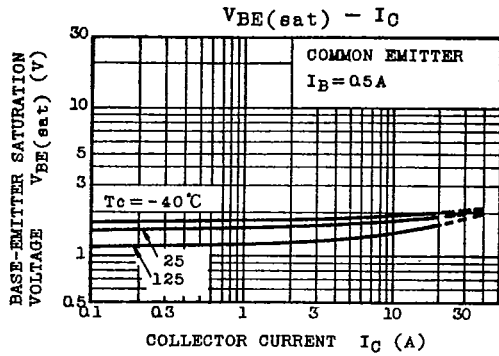
TOSHIBA CORPORATION

GT1A2A



SEMICONDUCTOR
TECHNICAL DATA

MG20G4GL1
MG20G6EL1



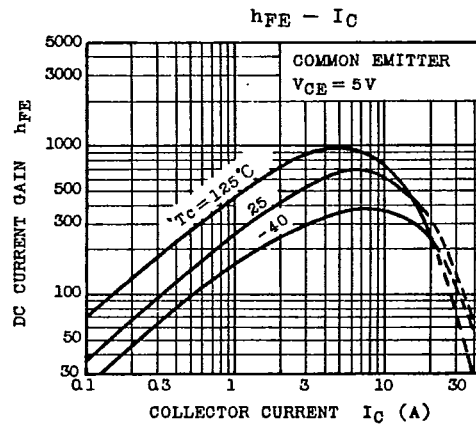
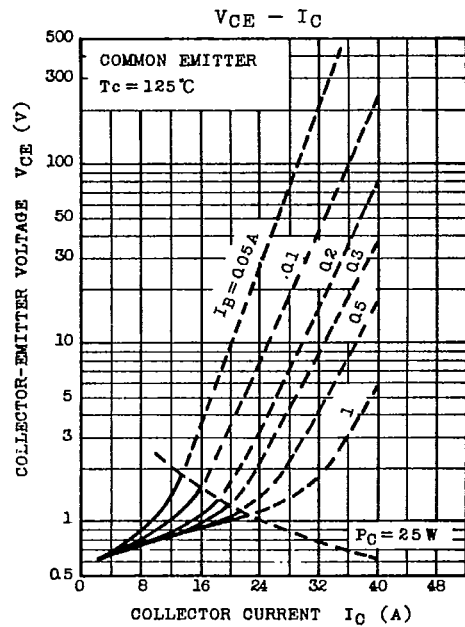
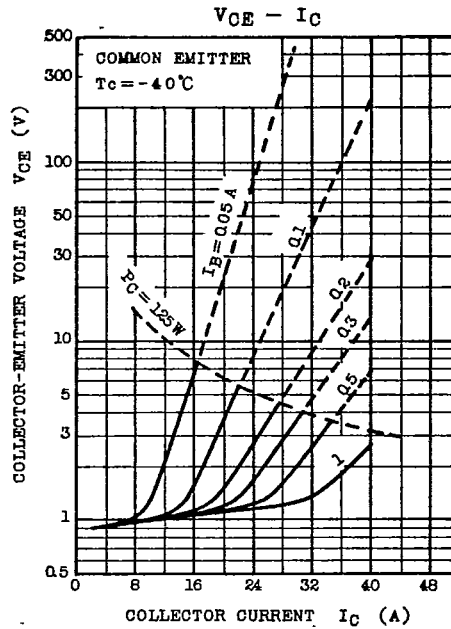
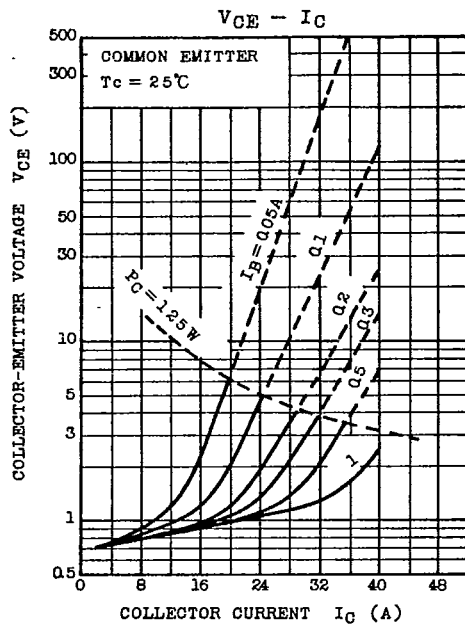
TOSHIBA CORPORATION

G71A2A



SEMICONDUCTOR
TECHNICAL DATA

MG 2 0 G 4 G L 1
MG 2 0 G 6 E L 1



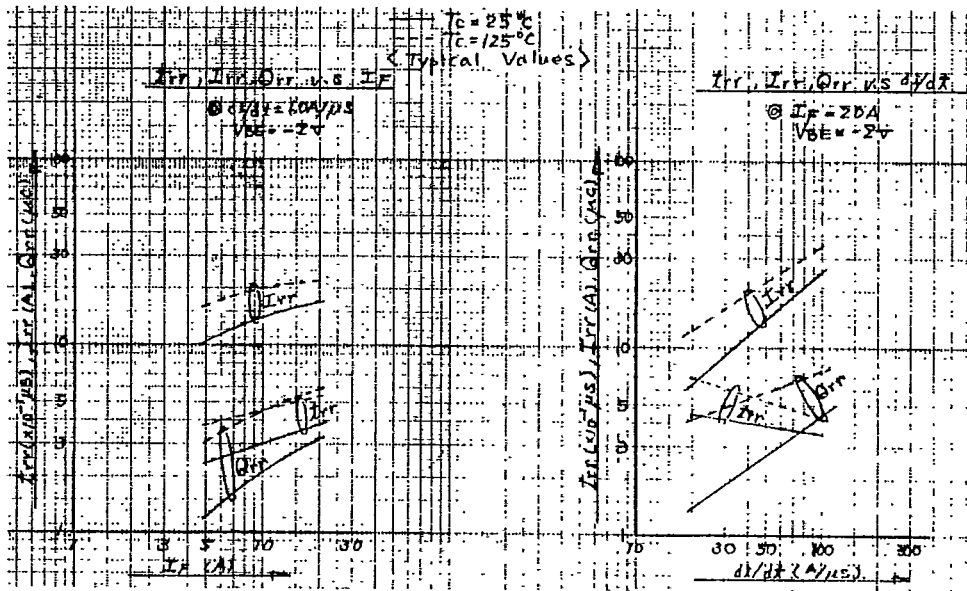
TOSHIBA CORPORATION

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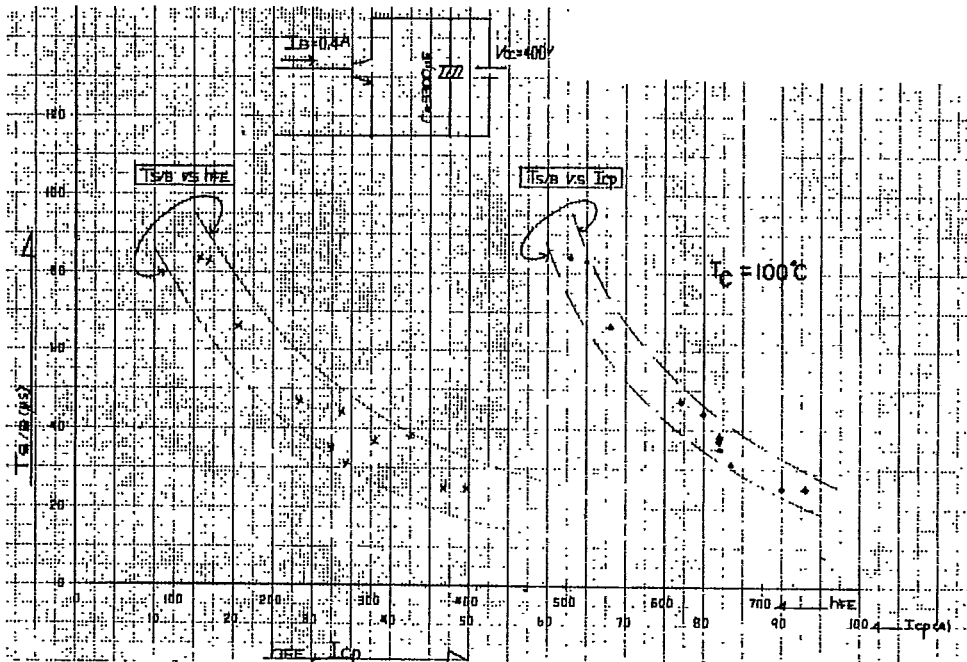


SEMICONDUCTOR
TECHNICAL DATA

MG20G4GLI
MG20G6ELI



SHORT CIRCUIT



TOSHIBA CORPORATION

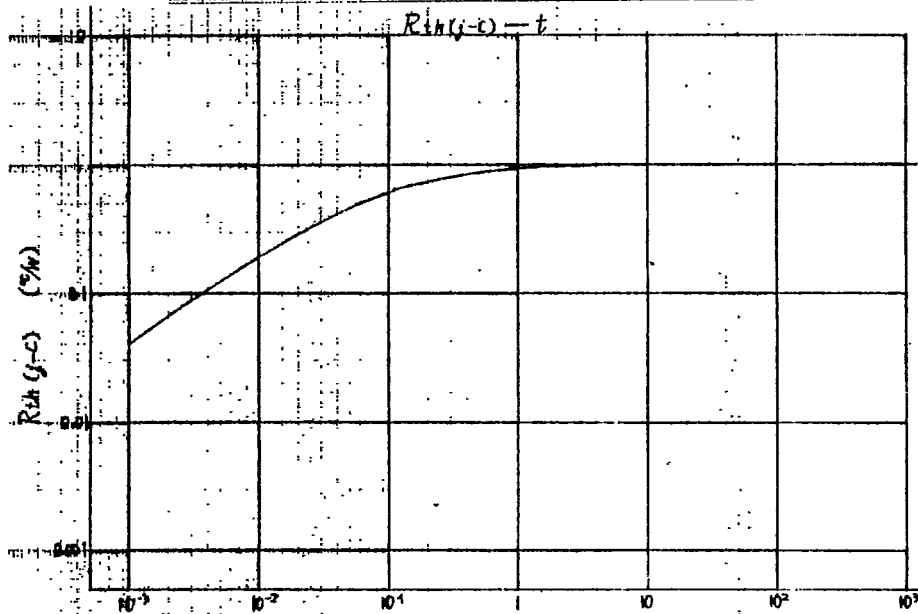
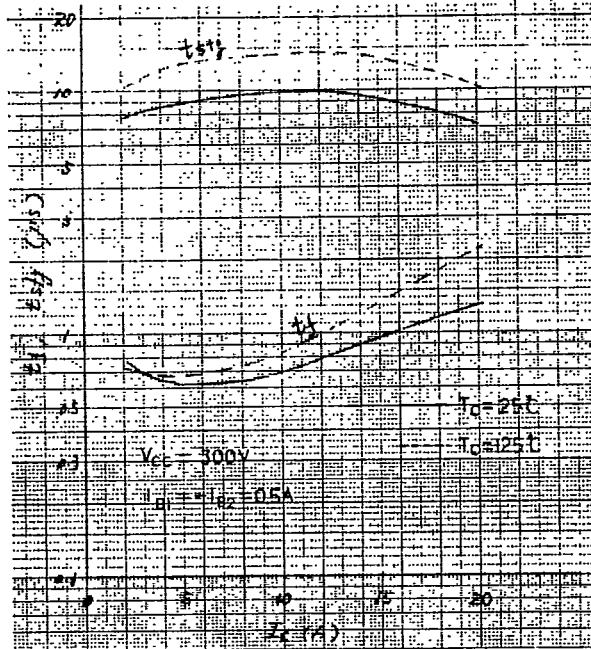
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SEMICONDUCTOR

TECHNICAL DATA

MG20G4GLI
MG20G6ELI



TOSHIBA CORPORATION