RGB ELEKTRONIKA
Centrum automatyki przemysłowej

DATASHEET

TOSHIBA

MG20G6EL1

OTHER SYMBOLS:

RGB ELEKTRONIKA AGACIAK CIACIEK SPÓŁKA JAWNA

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+48 71 325 15 05

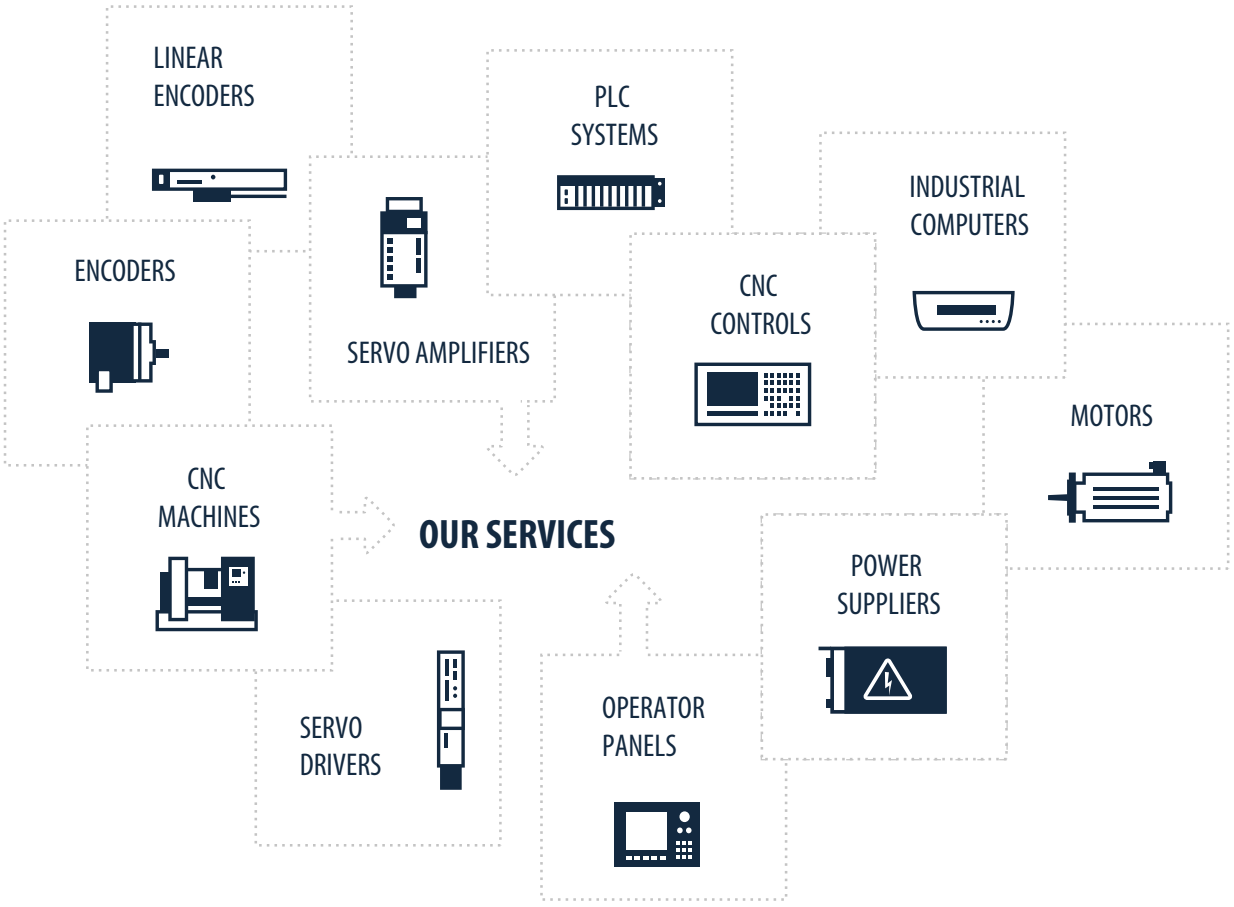
www.rgbelektronika.pl

www.rgbautomatyka.pl

YOUR PARTNER IN MAINTENANCE

Repair **this product** with RGB ELEKTRONIKA

ORDER A DIAGNOSIS »



At our premises in Wrocław, we have a fully equipped servicing facility. Here we perform all the repair works and test each later sold unit. Our trained employees, equipped with a wide variety of tools and having several testing stands at their disposal, are a guarantee of the highest quality service.

Buy **this product** at RGB AUTOMATYKA

BUY »

SEMICONDUCTOR
TECHNICAL DATA

TOSHIBA GTR MODULE

MG20G4GL1 MG20G6EL1

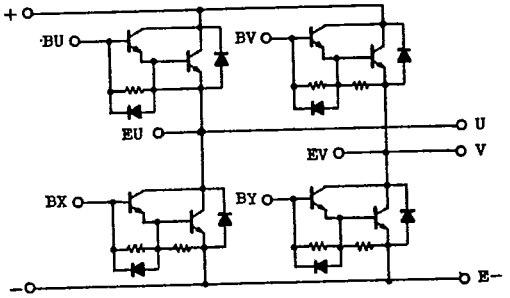
SILICON NPN TRIPLE DIFFUSED TYPE

HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

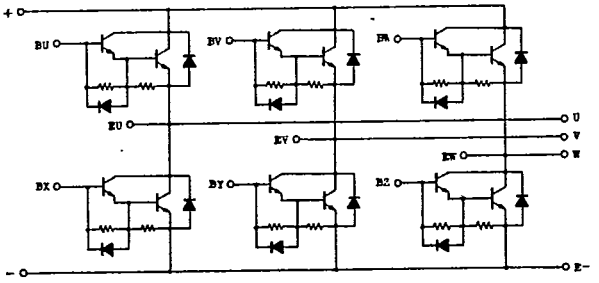
FEATURES :

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

EQUIVALENT CIRCUIT

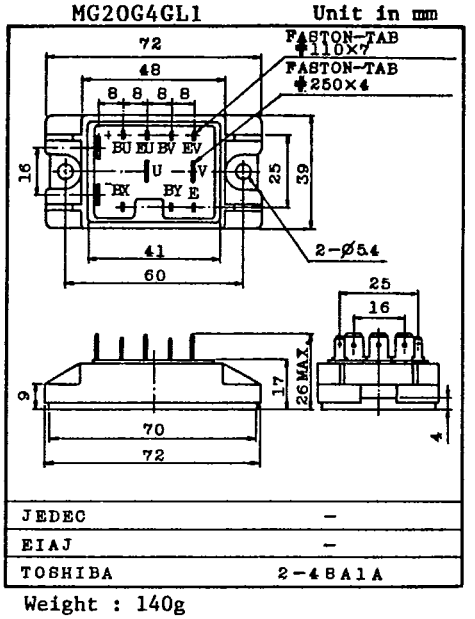


MG20G4GL1



MG20G6EL1

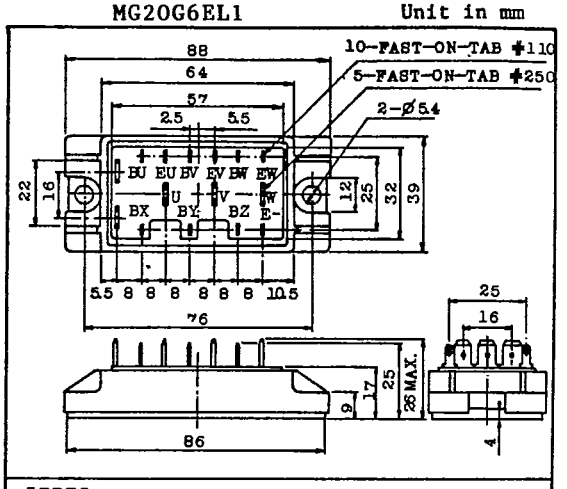
MG20G4GL1 Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	2-48A1A

Weight : 140g

MG20G6EL1 Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	2-64A1A

Weight : 180g

SEMICONDUCTOR

TECHNICAL DATA

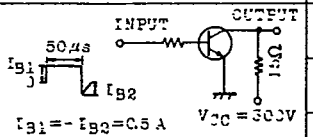
MG20G4GL1

MG20G6EL1

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	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	IFM	40	A
Base Current		I_B	2	A
Collector Power Dissipation (Tc=25°C)		P_C	125	W
Junction Temperature		Tj	150	°C
Storage Temperature Range		Tstg	-40 ~ 125	°C
Isolation Voltage		V_{Isol}	2500 (AC 1 Minute)	V
Screw Torque		-	30	kg·cm

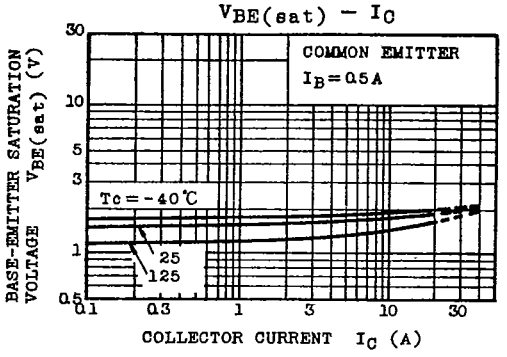
ELECTRICAL CHARACTERISTICS (Ta=25°C)

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		hFE	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	ton		-	-	1.0	μs
	Storage Time	tstg		-	-	12	
	Fall Time	tf	I_{B1}=-I_{B2}=0.5 A DUTY CYCLE=0.5%	-	-	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

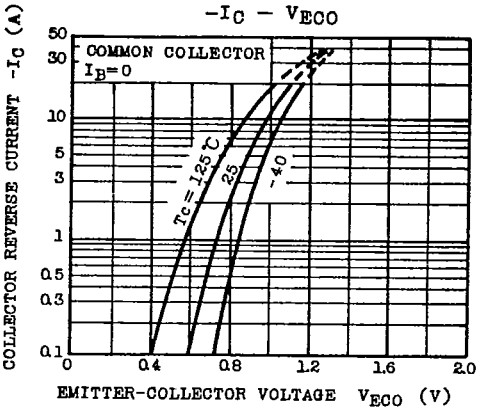
SEMICONDUCTOR
TECHNICAL DATA

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

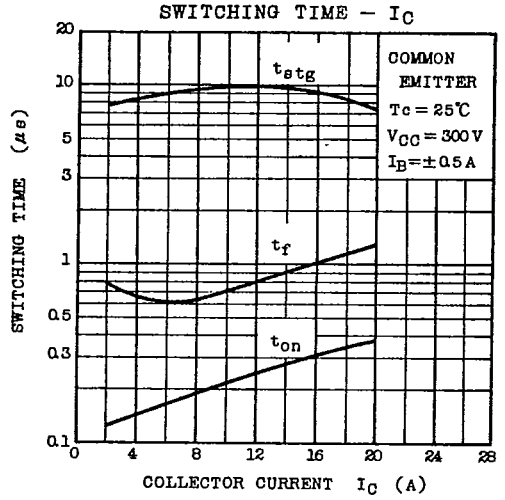
$V_{BE(sat)} - I_C$



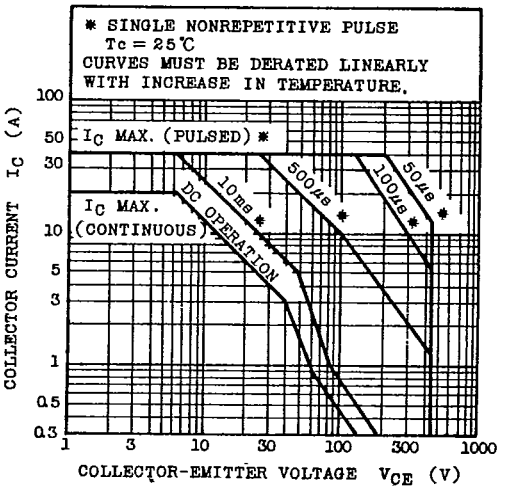
$-I_C - V_{ECO}$



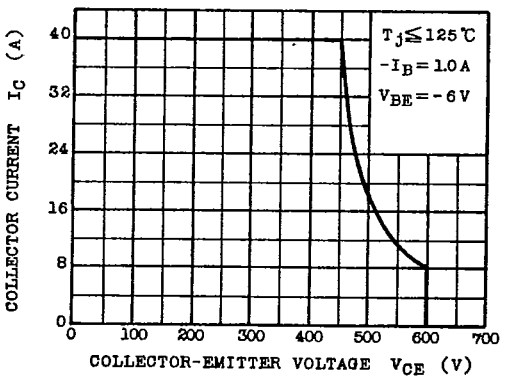
SWITCHING TIME - I_C



SAFE OPERATING AREA



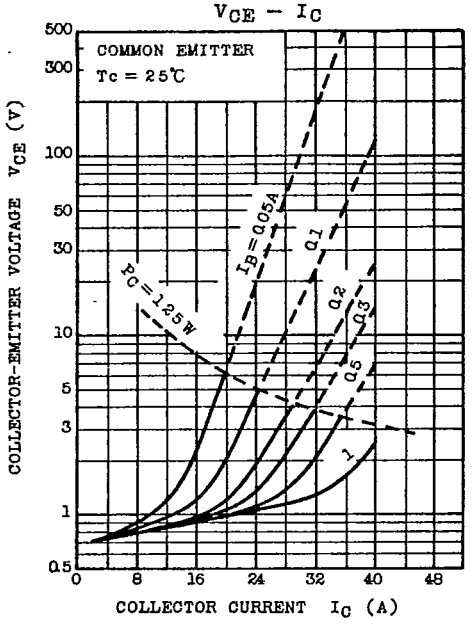
REVERSE BIAS SOA



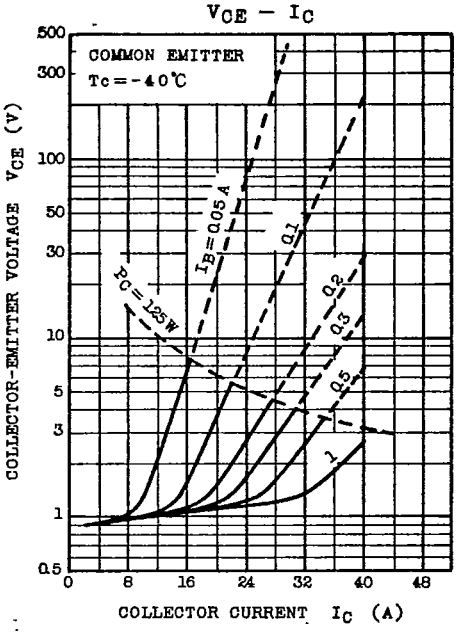
SEMICONDUCTOR
TECHNICAL DATA

MG20G4GL1
MG20G6EL1

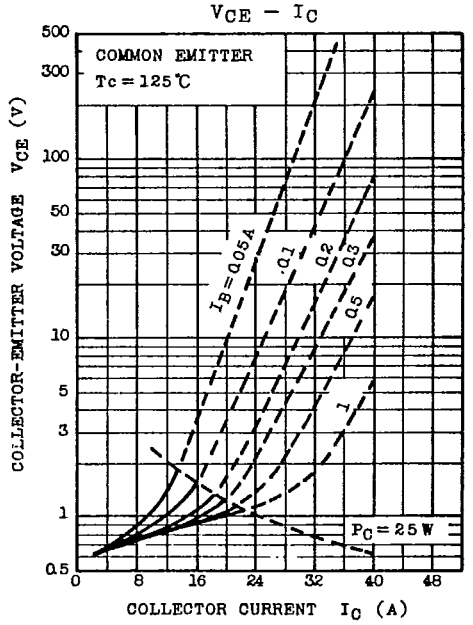
V_{CE} – I_C



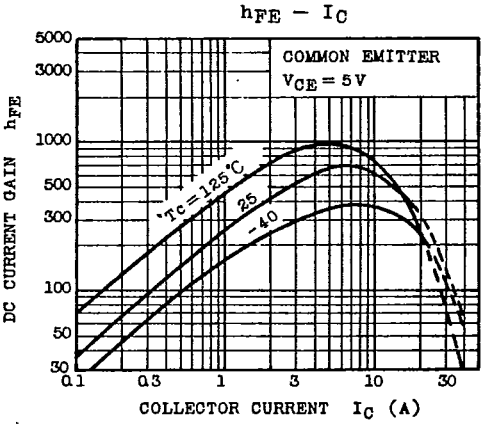
V_{CE} – I_C



V_{CE} – I_C

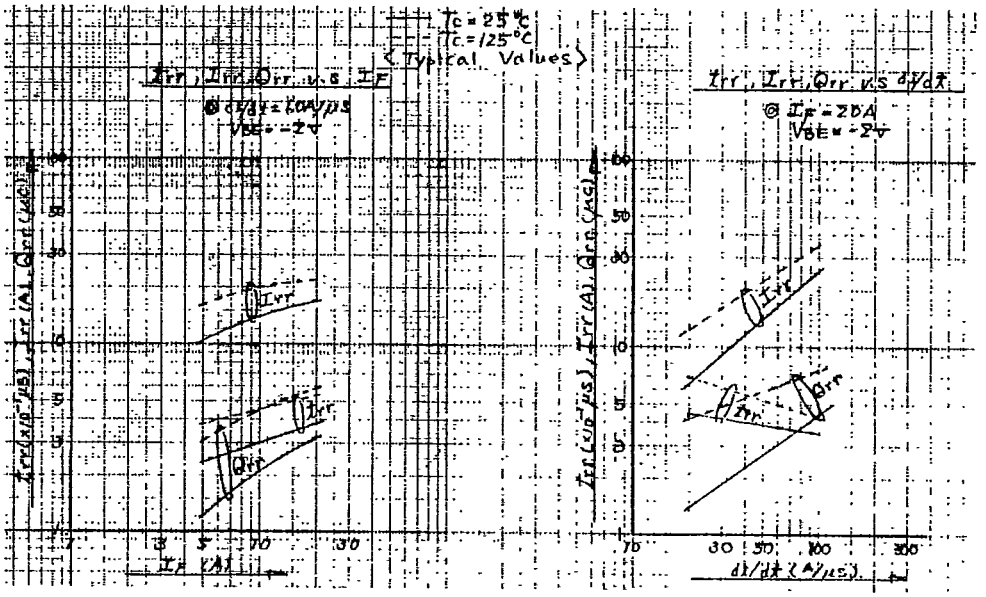


h_{FE} – I_C

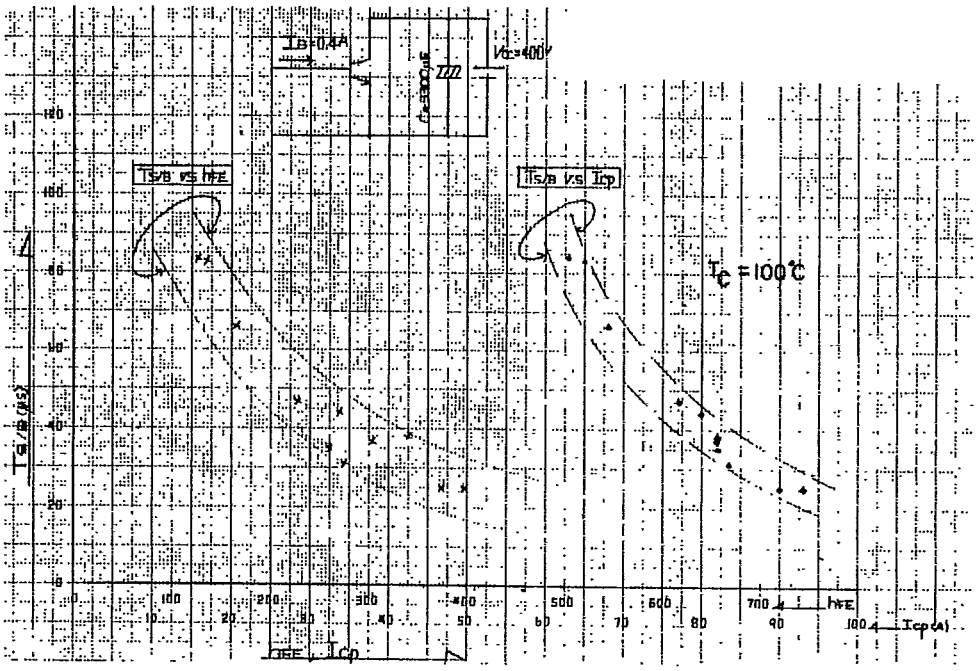


SEMICONDUCTOR
TECHNICAL DATA

MG20G4GLI
MG20G6ELI



SHORT CIRCUIT



SEMICONDUCTOR
TECHNICAL DATA

MG20G4GLI
MG20G6ELI