

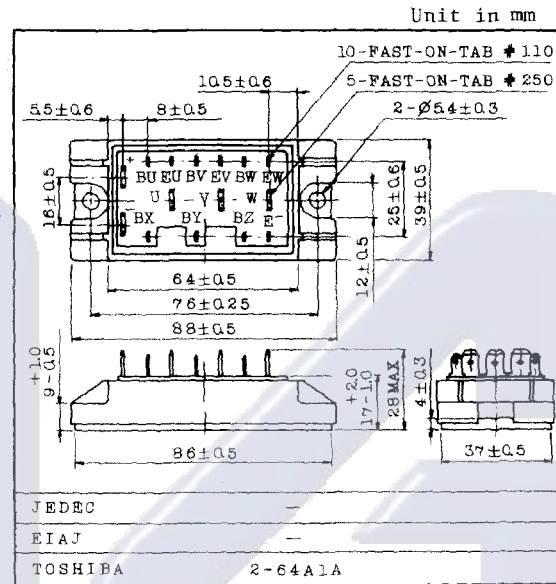
MG15G6EL1

GTR MODULE
SILICON NPN TRIPLE DIFFUSED TYPE

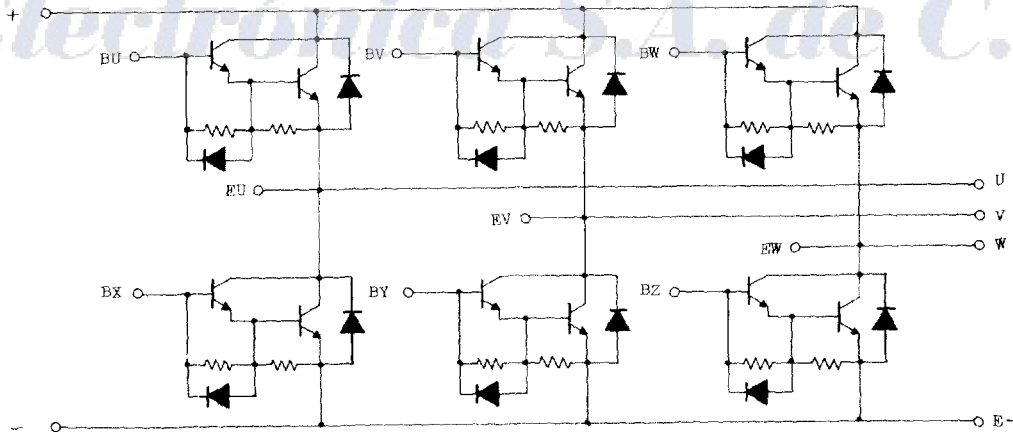
HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

FEATURES:

- . The Collector is Isolated from Case.
- . 6 Darlington Transistors are Built-in to 1 Package.
- . With Built-in Free Wheeling Diodes.
- . High DC Current Gain
 - : $h_{FE}=100(\text{Min.})$ ($I_C=15A$)
- . Low Saturation Voltage
 - : $V_{CE(sat)}=2V(\text{Max.})$ ($I_C=15A$)
- . High Speed : $t_f=2\mu s(\text{Max.})$ ($I_C=15A$)



EQUIVALENT CIRCUIT

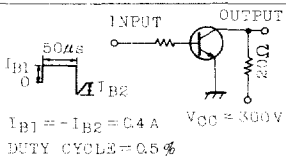


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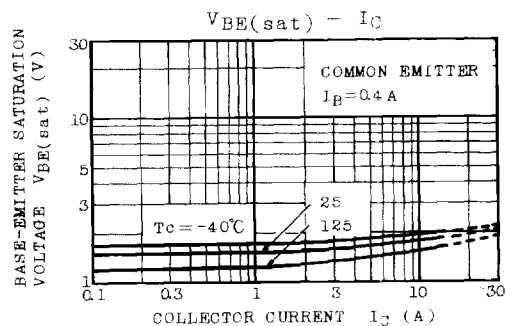
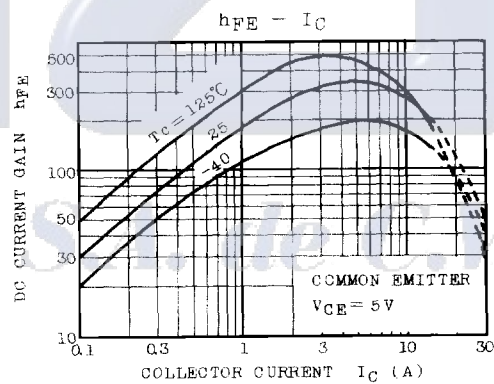
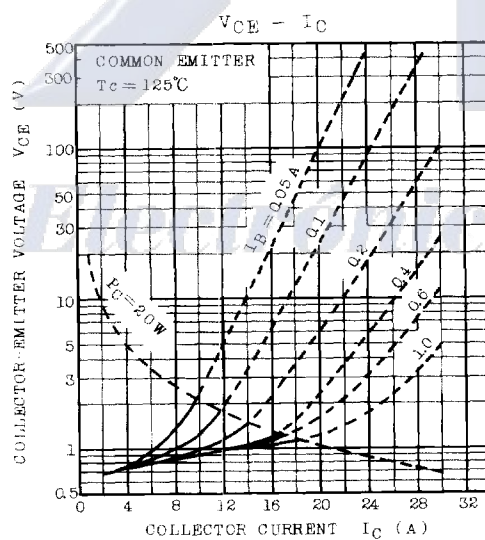
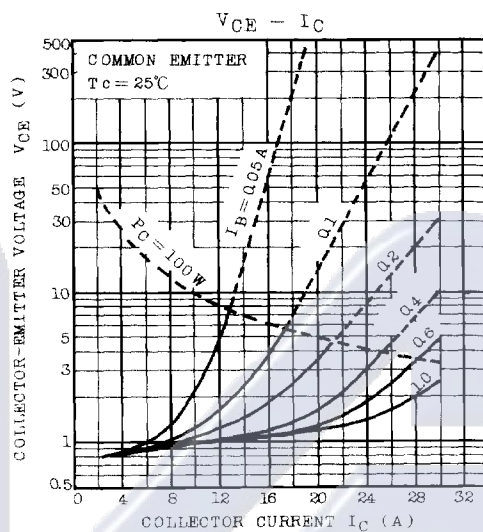
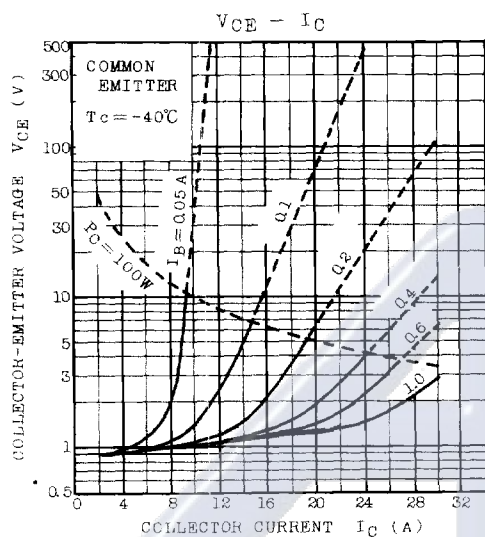
MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

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_{EB0}	6	V
Collector Current	DC	I_C	15	A
	1ms	I_{CP}	30	A
Forward Current	DC	I_F	15	A
	1ms	I_{FM}	30	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
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	$I_F=15\text{A}$, $I_B=0$	-	-	1.6	V
Reverse Recovery Time		t_{rr}	$I_F=15\text{A}$, $V_{BE}=-2\text{V}$ $di/dt=60\text{A}/\mu\text{s}$	-	-	0.7	μs
Thermal Resistance		$R_{th(j-c)}$	-	-	-	1.25	$^\circ\text{C}/\text{W}$

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