

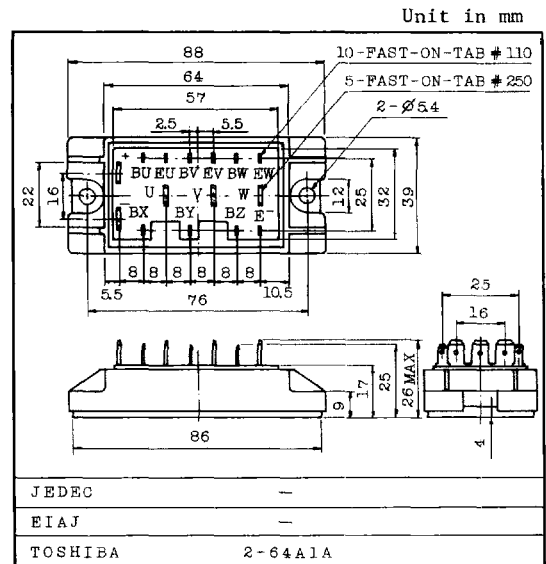
MG20G6EL2

GTR MODULE
SILICON NPN TRIPLE DIFFUSED TYPE

HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

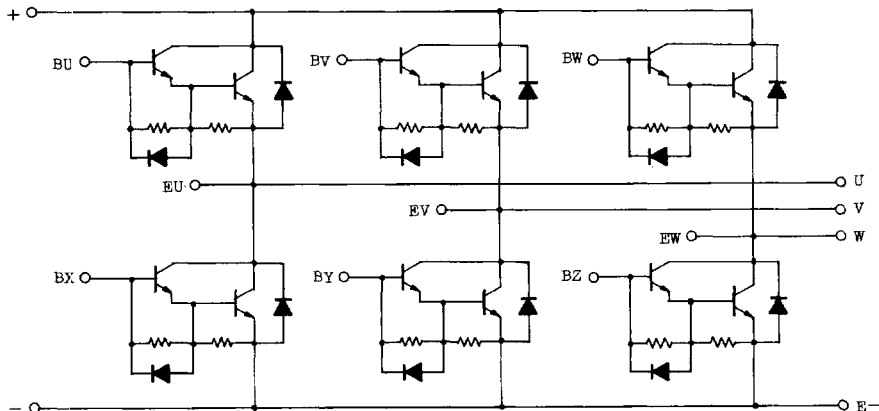
FEATURES:

- . The Collector is Isolated from Case.
- . 6 Darlingtons Transistors are Built-in to 1 Package.
- . With Built-in Free Wheeling Diodes.
- . High DC Current Gain
: $h_{FE}=100(\text{Min.})(I_C=20A)$
- . Low Saturation Voltage
: $V_{CE(\text{sat})}=2V(\text{Max.})(I_C=20A)$
- . High Speed : $t_f=3\mu s(\text{Max.})(I_C=20A)$



Weight : 180g

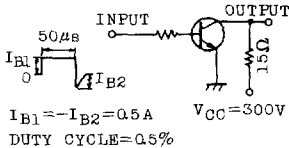
EQUIVALENT CIRCUIT



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)}	400	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 (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	400	-	-	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	-	1.3	2.0	V
Base-Emitter Saturation Voltage		V _{BE(sat)}		-	2.0	2.5	V
Switching Time	Turn-on Time	t _{on}	 <p> INPUT OUTPUT 50µs I_{B1} I_{B2} L C V_{CC}=300V I_{B1} ≈ -I_{B2} = 0.5A DUTY CYCLE = 0.5% </p>	-	0.5	1.0	µs
	Storage Time	t _{stg}		-	5	12	
	Fall Time	t _f		-	1.2	3.0	
Forward Voltage		V _F	I _F =20A, I _B =0	-	1.2	1.7	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)}		-	-	1.25	°C/W

