

MG150M2CK1

GTR MODULE

SILICON NPN TRIPLE DIFFUSED TYPE

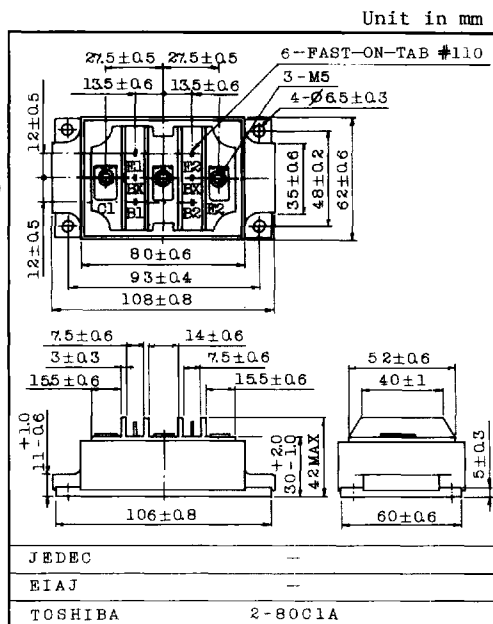
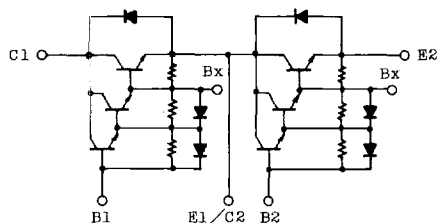
HIGH POWER SWITCHING APPLICATIONS.

MOTOR CONTROL APPLICATIONS.

FEATURES:

- . The Collector is Isolated from Case.
- . Power Transistors and 2 Free Wheeling Diodes are Built-in to 1 Package.
- . High DC Current Gain : $h_{FE}=100$ (Min.) ($I_C=150A$)
- . Low Saturation Voltage
: $V_{CE(sat)}=2.5V$ (Max.) ($I_C=150A$)

EQUIVALENT CIRCUIT

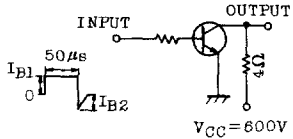


Weight : 510g

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	1000	V
Collector-Emitter Sustaining Voltage		$V_{CEX(SUS)}$	1000	V
Collector-Emitter Sustaining Voltage		$V_{CEO(SUS)}$	880	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current	DC	I_C	150	A
	1ms	I_{CP}	300	A
Forward Current	DC	I_F	150	A
	1ms	I_{FM}	300	A
Base Current		I_B	15	A
Collector Power Dissipation ($T_c=25^\circ C$)		P_C	800	W
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	-40 ~ 125	$^\circ C$
Isolation Voltage		V_{isol}	2500 (AC 1 Minute)	V
Screw Torque (Terminal/Mounting)		-	30/30	kg·cm

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=1000V, I_E=0$	-	-	4	mA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=7V, I_C=0$	-	-	400	mA
Collector-Emitter Sustaining Voltage		$V_{CEX(SUS)}$	$I_C=1A, V_{BE}=-2V$	1000	-	-	V
		$V_{CEO(SUS)}$	$I_C=1A, L=40mH$	880	-	-	
DC Current Gain		h_{FE}	$V_{CE}=5V, I_C=150A$	100	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=150A, I_B=3A$	-	-	2.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$		-	-	3.5	V
Switching Time	Turn-on Time	t_{on}	 $I_{B1}=50\mu s$ I_{B1} I_{B2} $V_{CC}=600V$	-	-	2.0	μs
	Storage Time	t_{stg}		-	-	15	
	Fall Time	t_f		-	-	5	
Forward Voltage		V_F	$I_F=150A, I_B=0$	-	-	1.8	V
Reverse Recovery Time		t_{rr}	$I_F=150A, V_{BE}=-3V$ $di/dt=100A/\mu s$	-	-	1.0	μs
Thermal Resistance		$R_{th(j-c)}$	Transistor	-	-	0.156	$^{\circ}C/W$
			Diode	-	-	0.65	

