

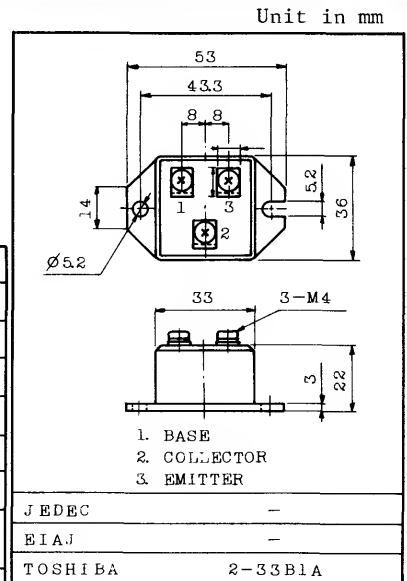
HIGH POWER SWITCHING APPLICATIONS.

FEATURES:

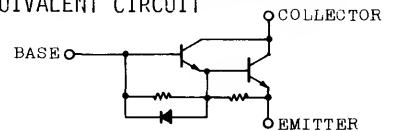
- The Collector is Isolated from Ground.
- High DC Current Gain : $h_{FE}=100(\text{Min.})$ ($I_C=30A$)
- Low Saturation Voltage : $V_{CE}(\text{sat})=2V(\text{Max.})$ ($I_C=30A$)
- High Speed : $t_f=2\mu s(\text{Max.})$ ($I_C=30A$)

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	600	V
Collector-Emitter Voltage		$V_{CEO}(\text{SUS})$	450	V
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current	DC	I_C	30	A
	Pulse	I_{CP}	60	A
Base Current		I_B	2	A
Collector Power Dissipation ($T_c=25^\circ\text{C}$)		P_C	250	W
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-40 ~ 125	$^\circ\text{C}$
Isolation Voltage		V_{isol}	2000 (AC 1Minute)	V
Screw Torque			20	kg·cm



EQUIVALENT CIRCUIT



ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

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}	$V_{EB}=6V, I_C=0$	-	-	200	mA
Collector-Emitter Sustaining Voltage		$V_{CEO}(\text{SUS})$	$I_C=0.5A, L=40mH$	450	-	-	V
DC Current Gain		h_{FE}	$V_{CE}=5V, I_C=30A$	100	-	-	
Collector-Emitter Saturation Voltage		$V_{CE}(\text{sat})$	$I_C=30A, I_B=0.6A$	-	-	2.0	V
Base-Emitter Saturation Voltage		$V_{BE}(\text{sat})$		-	-	2.5	V
Collector Output Capacitance		C_{ob}	$V_{CB}=50V, I_E=0, f=1MHz$	-	250	-	pF
Switching Time	Turn-on Time	t_{on}		-	-	1.0	μs
	Storage Time	t_{stg}		-	-	12	
	Fall Time	t_f		-	-	2.0	
Thermal Resistance		$R_{th(j-c)}$	Junction to Case	-	-	0.5	$^\circ\text{C/W}$

MG30G1BL2

