

GTR MODULE
SILICON N CHANNEL IGBT

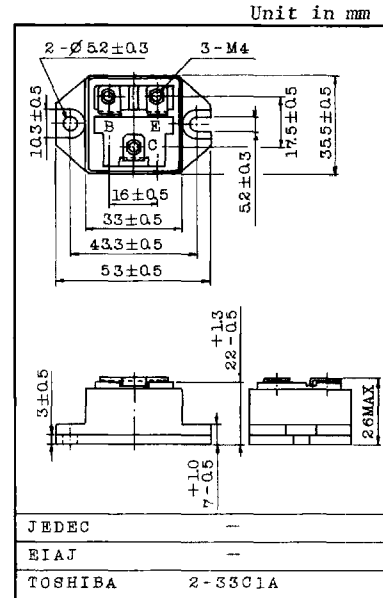
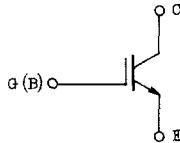
MG50H1BS1

HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

FEATURES:

- . High Input Impedance
- . High Speed : $t_f=1.0\mu s(\text{Max.})$
- . Low Saturation Voltage : $V_{CE(\text{sat})}=5.0V(\text{Max.})$
- . Enhancement-Mode
- . The Electrodes are Isolated from Case.

EQUIVALENT CIRCUIT



Weight : 86g

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	V_{CES}	500	V
Gate-Emitter Voltage	V_{GES}	±20	V
Collector Current	DC	I_C	50
	lms	I_{CP}	100
Collector Power Dissipation (Tc=25°C)	P_C	150	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 (Terminal/Mounting)	-	20/30	kg·cm

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ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		IGES	$V_{GE}=\pm 20V, V_{CE}=0$	-	-	± 500	nA
Collector Cut-off Current		ICES	$V_{CE}=500V, V_{GE}=0$	-	-	1.0	mA
Collector-Emitter Breakdown Voltage		$V_{(BR)CES}$	$I_C=10mA, V_{GE}=0$	500	-	-	V
Gate-Emitter Cut-off Voltage		$V_{GE(OFF)}$	$I_C=50mA, V_{CE}=5V$	3.0	-	6.0	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=50A, V_{GE}=15V$	-	3.0	5.0	V
Input Capacitance		C_{ies}	$V_{CE}=10V, V_{GE}=0, f=1MHz$	-	3000	-	pF
Switching Time	Rise Time	t_r		-	0.5	1.0	μs
	Turn-on Time	t_{on}		-	0.6	1.0	
	Fall Time	t_f		-	0.4	1.0	
	Turn-off Time	t_{off}		-	0.9	1.5	
Thermal Resistance		$R_{th(j-c)}$	-	-	-	0.83	$^{\circ}C/W$

