

TOSHIBA GTR MODULE SILICON N CHANNEL IGBT

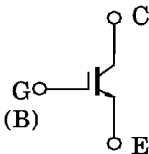
MG150J1BS11

HIGH POWER SWITCHING APPLICATIONS

MOTOR CONTROL APPLICATIONS

- High Input Impedance
- High Speed : $t_f=1.0\mu s$ (Max.) ($I_C=150A$)
- Low Saturation Voltage : $V_{CE(sat)}=2.7V$ (Max.) ($I_C=150A$)
- Enhancement-Mode
- The Electrodes are Isolated from Case.

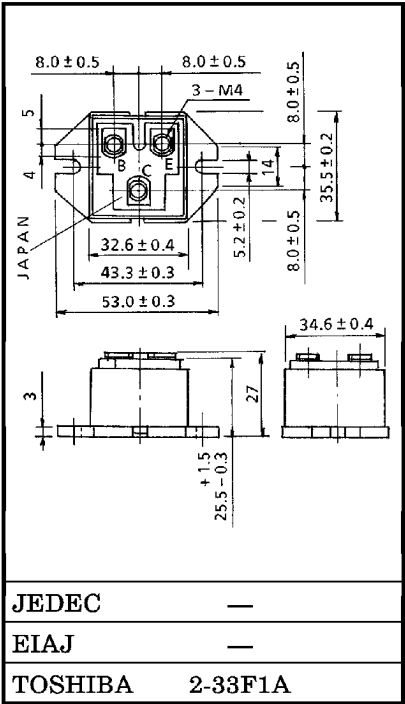
EQUIVALENT CIRCUIT



MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		V_{CES}	600	V
Gate-Emitter Voltage		V_{GES}	± 20	V
Collector Current	DC	I_C	150	A
	1ms	I_{CP}	300	
Collector Power Dissipation		P_C	450	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)		—	2 / 3	N·m

Unit in mm



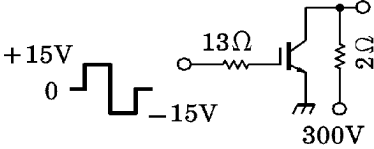
JEDEC	—
EIAJ	—
TOSHIBA	2-33F1A

Weight : 86g

961001EAA1

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		IGES	VGE = ±20V, VCE = 0	—	—	±500	nA
Collector Cut-Off Current		ICES	VCE = 600V, VGE = 0	—	—	1.0	mA
Gate-Emitter Cut-Off Voltage		VGE (off)	VCE = 5V, IC = 150mA	3.0	—	6.0	V
Collector-Emitter Saturation Voltage		VCE (sat)	IC = 150A, VGE = 15V	—	2.3	2.7	V
Input Capacitance		Cies	VCE = 10V, VGE = 0, f = 1MHz	—	12000	—	pF
Switching Time	Rise Time	tr		—	0.3	0.8	μs
	Turn-On Time	ton		—	0.4	1.0	
	Fall Time	tf		—	0.6	1.0	
	Turn-Off Time	toff		—	1.0	1.6	
Thermal Resistance		Rth (j-c)		—	—	0.278	°C / W

