

TOSHIBA INSULATED GATE BIPOlar TRANSISTOR SILICON N-CHANNEL IGBT

GT15Q101

HIGH POWER SWITCHING APPLICATIONS

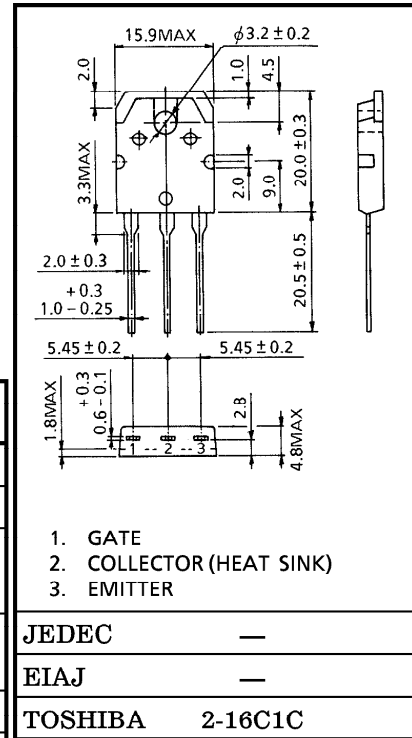
Unit in mm

MOTOR CONTROL APPLICATIONS

- High Input Impedance
- High Speed : $t_f=0.5\mu s$ (Max.)
- Low Saturation Voltage : $V_{CE(sat)}=4.0V$ (Max.)
- Enhancement-Mode

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	V_{CES}	1200	V
Gate-Emitter Voltage	V_{GES}	± 20	V
Collector Current	DC	15	A
	1ms	30	
Collector Power Dissipation (Tc = 25°C)	P_C	150	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C



Weight : 4.6g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I_{GES}	$V_{GE} = \pm 20V, V_{CE} = 0$	—	—	± 500	nA
Collector Cut-off Current	I_{CES}	$V_{CE} = 1200V, V_{GE} = 0$	—	—	1.0	mA
Gate-Emitter Cut-off Voltage	$V_{GE(OFF)}$	$I_C = 15mA, V_{CE} = 5V$	3.0	—	6.0	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 15A, V_{GE} = 15V$	—	3.0	4.0	V
Input Capacitance	C_{ies}	$V_{CE} = 10V, V_{GE} = 0, f = 1MHz$	—	1800	—	pF
Switching Time	Rise Time		—	0.3	0.6	μs
	Turn-on Time		—	0.4	0.8	
	Fall Time		—	0.25	0.5	
	Turn-off Time		—	0.8	1.5	

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