

TOSHIBA**GT25Q101**

TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON N-CHANNEL IGBT

GT25Q101

HIGH POWER SWITCHING APPLICATIONS

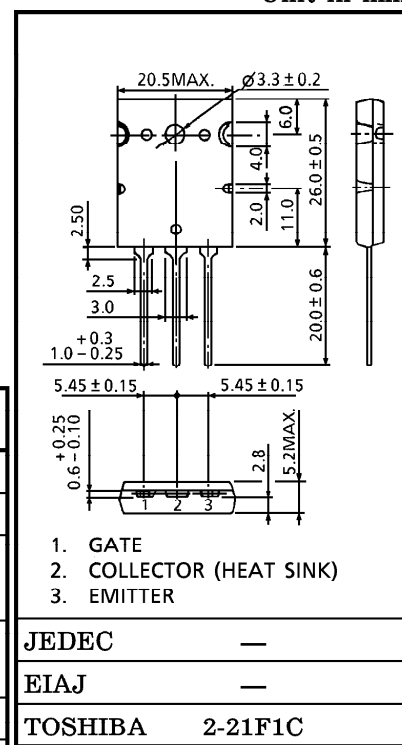
MOTOR CONTROL APPLICATIONS

Unit in mm

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

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	V_{CES}	1200	V
Gate-Emitter Voltage	V_{GES}	± 20	V
Collector Current	DC	I_C	25
	1ms	I_{CP}	50
Collector Power Dissipation ($T_c = 25^\circ\text{C}$)	P_C	200	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-55 \sim 150$	$^\circ\text{C}$



JEDEC —

EIAJ —

TOSHIBA 2-21F1C

Weight : 9.75g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I_{GES}	$V_{GE} = \pm 20\text{V}$, $V_{CE} = 0$	—	—	± 500	nA
Collector Cut-off Current	I_{CES}	$V_{CE} = 1200\text{V}$, $V_{GE} = 0$	—	—	1.0	mA
Gate-Emitter Cut-off Voltage	$V_{GE(OFF)}$	$I_C = 25\text{mA}$, $V_{CE} = 5\text{V}$	3.0	—	6.0	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 25\text{A}$, $V_{GE} = 15\text{V}$	—	3.0	4.0	V
Input Capacitance	C_{ies}	$V_{CE} = 10\text{V}$, $V_{GE} = 0$, $f = 1\text{MHz}$	—	3200	—	pF
Switching Time	Rise Time	t_r	—	0.2	0.6	μs
	Turn-on Time	t_{on}	—	0.3	0.8	
	Fall Time	t_f	—	0.3	0.5	
	Turn-off Time	t_{off}	—	0.8	1.5	

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