

TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON N CHANNEL MOS TYPE

GT40T101

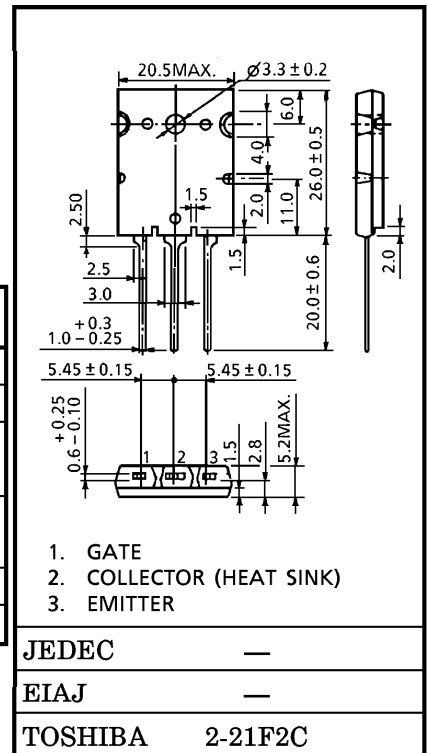
HIGH POWER SWITCHING APPLICATIONS.

Unit in mm

- Enhancement-Mode
- High Speed : $t_f = 0.4 \mu s$ (Max.) ($I_C = 40 A$)
- Low Saturation : $V_{CE(sat)} = 5.0 V$ (Max.) ($I_C = 40 A$)

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		V_{CES}	1500	V
Gate-Emitter Voltage		V_{GES}	± 25	V
Collector Current	DC	I_C	40	A
	1 ms	I_{CP}	80	
Collector Power Dissipation ($T_c = 25^\circ C$)		P_C	200	W
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55~150	$^\circ C$



Weight : 9.75 g

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

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		I_{GES}	$V_{GE} = \pm 25 V, V_{CE} = 0$	—	—	± 500	nA
Collector Cut-off Current		I_{CES}	$V_{CE} = 1500 V, V_{GE} = 0$	—	—	1.0	mA
Gate-Emitter Cut-off Voltage		$V_{GE(OFF)}$	$I_C = 40 mA, V_{CE} = 5 V$	3.0	—	6.0	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 40 A, V_{GE} = 15 V$	—	4.0	5.0	V
Input Capacitance		C_{ies}	$V_{CE} = 10 V, V_{GE} = 0, f = 1 MHz$	—	3600	—	pF
Switching Time	Rise Time	t_r		—	0.6	1.0	μs
	Turn-on Time	t_{on}		—	0.7	1.1	
	Fall Time	t_f		—	0.2	0.4	
	Turn-off Time	t_{off}		—	0.5	1.0	
Thermal Resistance		$R_{th(j-c)}$	—	—	—	0.625	$^\circ C / W$

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