

TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON N-CHANNEL MOS TYPE

# GT80J101

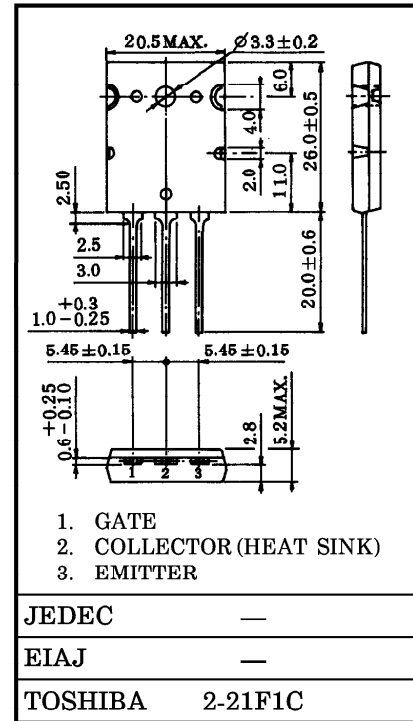
Unit in mm

HIGH POWER SWITCHING APPLICATIONS.

- High Input Impedance
- High Speed :  $t_f = 0.40 \mu s$  (Max.)
- Low Saturation Voltage :  $V_{CE(sat)} = 3.5V$  (Max.)
- Enhancement-Mode

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		$V_{CES}$	600	V
Gate-Emitter Voltage		$V_{GES}$	$\pm 20$	V
Collector Current	DC	$I_C$	80	A
	1ms	$I_{CP}$	160	
Collector Power Dissipation ( $T_c = 25^\circ C$ )		$P_C$	200	W
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	$-55 \sim 150$	$^\circ C$
Screw Torque		—	0.8	N · m



Weight : 9.75g

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

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		$I_{GES}$	$V_{GE} = \pm 20V, V_{CE} = 0$	—	—	$\pm 500$	nA
Collector Cut-Off Current		$I_{CES}$	$V_{CE} = 600V, V_{GE} = 0$	—	—	1.0	mA
Gate-Emitter Cut-off Voltage		$V_{GE(OFF)}$	$I_C = 80mA, V_{CE} = 5V$	3.0	—	6.0	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}(1)$	$I_C = 10A, V_{GE} = 15V$	—	—	2.0	V
		$V_{CE(sat)}(2)$	$I_C = 80A, V_{GE} = 15V$	—	2.5	3.5	
Input Capacitance		$C_{ies}$	$V_{CE} = 10V, V_{GE} = 0, f = 1MHz$	—	5500	—	pF
Switching Time	Rise Time	$t_r$		—	0.3	0.6	$\mu s$
	Turn-on Time	$t_{on}$		—	0.5	0.8	
	Fall Time	$t_f$		—	0.25	0.40	
	Turn-off Time	$t_{off}$		—	0.7	1.0	
Thermal Resistance		$R_{th(j-c)}$		—	—	0.625	$^\circ C/W$

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