

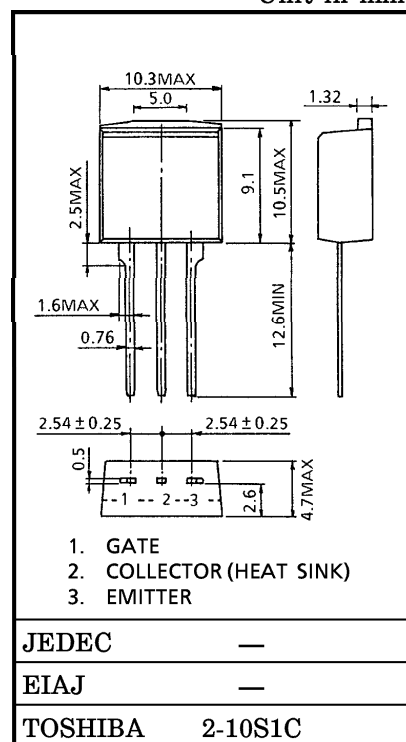
TOSHIBA INSULATED GATE BIPOLAR TRANSISTOR SILICON N-CHANNEL IGBT

# GT20G101

**STROBE FLASH APPLICATIONS**

- High Input Impedance
- Low Saturation Voltage :  $V_{CE(sat)} = 8V$  (Max.) ( $I_C = 130A$ )
- Enhancement-Mode
- 20V Gate Drive

Unit in mm



**MAXIMUM RATINGS (Ta = 25°C)**

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		$V_{CES}$	400	V
Gate-Emitter Voltage		$V_{GES}$	±25	V
Collector Current	DC	$I_C$	20	A
	1ms	$I_{CP}$	130	
Collector Power Dissipation	Ta = 25°C	$P_C$	1.3	W
	Tc = 25°C	$P_C$	60	
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_{stg}$	-55 ~ 150	°C

Weight : 1.5g

**ELECTRICAL CHARACTERISTICS (Ta = 25°C)**

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		$I_{GES}$	$V_{GE} = \pm 25V, V_{CE} = 0$	—	—	±100	nA
Collector Cut-off Current		$I_{CES}$	$V_{CE} = 400V, V_{GE} = 0$	—	—	10	μA
Gate-Emitter Cut-off Voltage		$V_{GE(OFF)}$	$I_C = 1mA, V_{CE} = 5V$	4	5	7	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 130A, V_{GE} = 20V$ (Pulsed)	—	5	8	V
Input Capacitance		$C_{ies}$	$V_{CE} = 10V, V_{GE} = 0, f = 1MHz$	—	1350	—	pF
Switching Time	Rise Time	$t_r$		—	0.1	0.5	μs
	Turn-on Time	$t_{on}$		—	0.15	0.5	
	Fall Time	$t_f$		—	4.0	6.0	
	Turn-off Time	$t_{off}$		—	4.5	7.0	
Thermal Resistance		$R_{th(j-c)}$	—	—	2.08	—	°C / W

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