

GT50G102

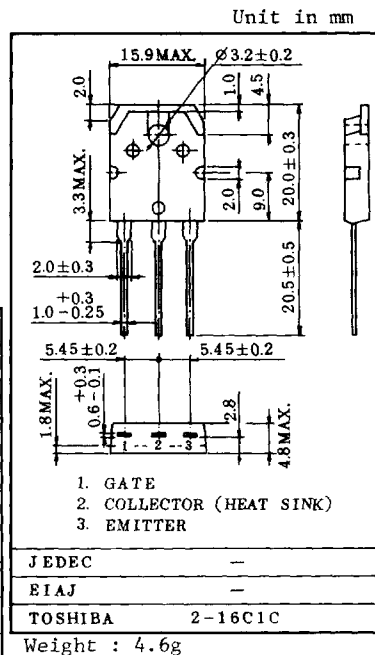
INSULATED GATE BIPOLAR TRANSISTOR SILICON N CHANNEL IGBT TYPE

STROBE FLASH APPLICATIONS

- High Input Impedance
- High Speed : $t_f = 1.3\mu s$ (Typ.)
- Low Saturation Voltage: $V_{CE(sat)} = 4.0V$ (Max.) ($I_C = 50A$)
- Enhancement-Mode
- Recommended $C_M = 650\mu F$

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		V_{CES}	400	V
Gate-Emitter Voltage		V_{GES}	± 25	V
Collector Current	DC	I_C	50	A
	lms	I_{CP}	120	
Collector Power Dissipation	$T_a = 25^\circ C$	P_C	2.5	W
	$T_c = 25^\circ C$	P_C	150	
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	$-55 \sim 150$	$^\circ C$
Screw Torque		-	8	kg·cm



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

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}	$V_{CE} = 330V, V_{GE} = 0$	-	-	100	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CES}$	$I_C = 2mA, V_{GE} = 0$	400	-	-	V
Gate-Emitter Cut-off Voltage		$V_{GE(OFF)}$	$I_C = 25mA, V_{CE} = 5V$	2.0	3.5	5.0	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C = 50A, V_{GE} = 20V$	-	-	4.0	V
Input Capacitance		C_{iss}	$V_{CE} = 10V, V_{GE} = 0, f = 1MHz$	-	1500	-	pF
Switching Time	Rise Time	t_r		-	0.3	1.0	μs
	Turn-on Time	t_{on}		-	0.4	1.0	
	Fall Time	t_f		-	1.3	3.0	
	Turn-off Time	t_{off}		-	1.8	3.5	
Thermal Resistance		$R_{th(j-c)}$	-	-	-	0.83	$^\circ C/W$

