

INSULATED GATE BIPOLAR TRANSISTOR
SILICON N CHANNEL IGBT

GT15N101

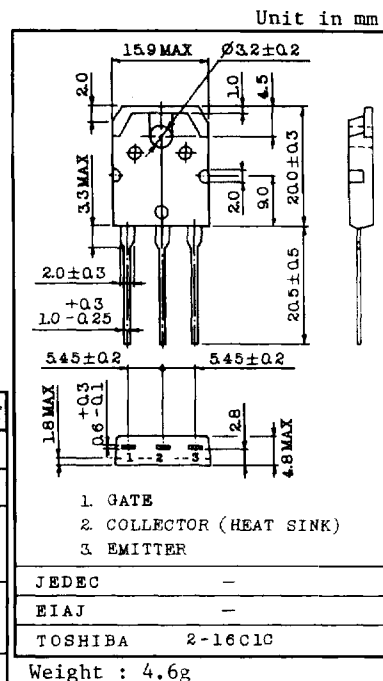
HIGH POWER SWITCHING APPLICATIONS.

MOTOR CONTROL APPLICATIONS.

- High Input Impedance
- High Speed : $t_f=1.0\mu s$ (Max.)
- Low Saturation Voltage : $V_{CE(sat)}=5.0V$ (Max.)
- Enhancement-Mode

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Emitter Voltage		V_{CES}	1000	V
Gate-Emitter Voltage		V_{GES}	± 20	V
Collector Current	DC	I_C	15	A
	lms	I_{CP}	30	
Collector Power Dissipation ($T_c=25^\circ C$)		P_C	150	W
Junction Temperature		T_j	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55~150	$^\circ C$



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

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current		I_{GES}	$V_{GE}=\pm 20V, V_{CE}=0$	-	-	± 500	nA
Collector Cut-off Current		I_{CES}	$V_{CE}=1000V, V_{GE}=0$	-	-	1.0	mA
Collector-Emitter Breakdown Voltage		$V(BR)_{CES}$	$I_C=2mA, V_{GE}=0$	1000	-	-	V
Gate-Emitter Cut-off Voltage		$V_{GE(off)}$	$I_C=15mA, V_{CE}=5V$	3.0	-	6.0	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=15A, V_{GE}=15V$	-	3.5	5.0	V
Input Capacitance		C_{ies}	$V_{CE}=10V, V_{GE}=0, f=1MHz$	-	2000	-	pF
Switching Time	Rise Time	t_r		-	0.3	0.5	μs
	Turn-on Time	t_{on}		-	0.4	0.6	
	Fall Time	t_f		-	0.5	1.0	
	Turn-off Time	t_{off}		-	0.8	1.3	

