

IGBT Transistor

GT50J301

600V / 50A

DATASHEET

OEM – Toshiba

Source: Toshiba Databook 1995/96

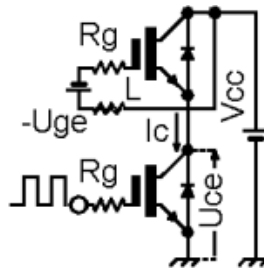
MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	Vces	600	V
Gate-Emitter Voltage	Vges	+/-20	V
Collector Current	DC	IC	50
	1ms	Icp	100
Collector Power Dissipation	Pc	200	W
Junction Temperature	Tj	150	°C
Storage Temperature Range	Tstg	-55~150	°C
Screw Torque	-	0.80	N*m

Source: Toshiba IGBT Databook 95/96

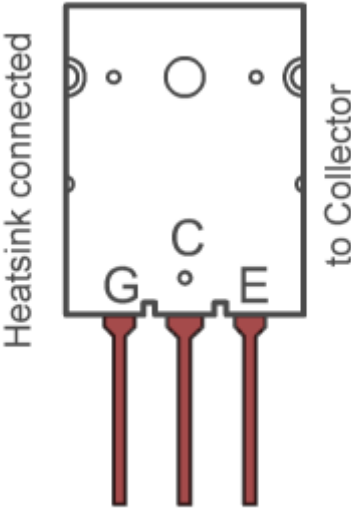
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	Iges	Uge=+/-20V, Vce=0	-	-	+500	nA
Collector Cut-off Current	Ices	Uce=600V, Uge=0	-	-	1.0	mA
Gate-Emitter Cut-off Voltage	Uge (off)	Ic=5mA, Uce=5V	5.0	7.0	8.0	V
Collector-Emitter Saturation Voltage	Uce (sat)	IC=50A, Uge=15V	-	2.1	2.7	V
Input Capacitance	Cies	Uce=10V, Uge=0, f=1MHz	-	4500	-	pF
Switching Time	Turn-on Delay	td(on)	-	0.08	-	uS
	Rise Time	tr	-	0.12	-	
	Turn-on Time	ton	-	0.40	-	
	Turn-off Delay	td (off)	-	0.20	-	
	Fall Time	tf	-	0.15	0.30	
	Turn-off Time	toff	-	0.50	-	
Forward Voltage	Vf	If=50A, Uge=0	-	2.40	3.30	V
Reverse Recovery Time	trr	If=50A, Uge=-10V di/dt=100A/uS	-	0.10	0.20	uS
Thermal Resistance	Rth (j-c)	Transistor	-	-	0.625	°C/W
		Diode	-	-	3.13	



Note 1

2-21F2C



EQUIVALENT CIRCUIT

