

9097250 TOSHIBA (DISCRETE/OPTO)

90D 16203

DT-33-35



SEMICONDUCTOR

TECHNICAL DATA

TOSHIBA GTR MODULE

MG15G4GL1 MG15G6EL1

SILICON NPN TRIPLE DIFFUSED TYPE

HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

FEATURES :

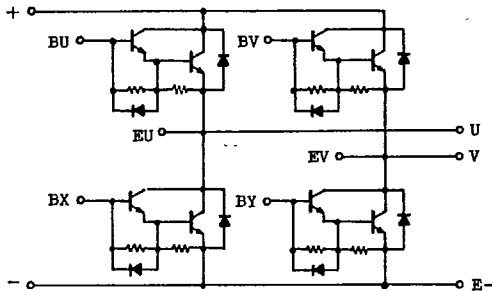
- .The Collector is Isolated from Case
- .4 or 6 Darlingtons including Free Wheeling Diodes are Built-in to 1 package
- .High DC Current Gain

: $h_{FE}=100(\text{Min.}) (I_C=15A)$

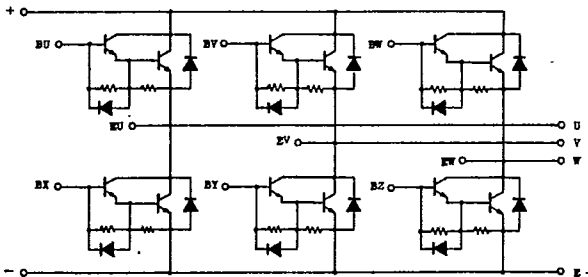
- .Low Saturation Voltage

: $V_{CE(\text{sat})}=2V(\text{Max.}) (I_C=15A)$

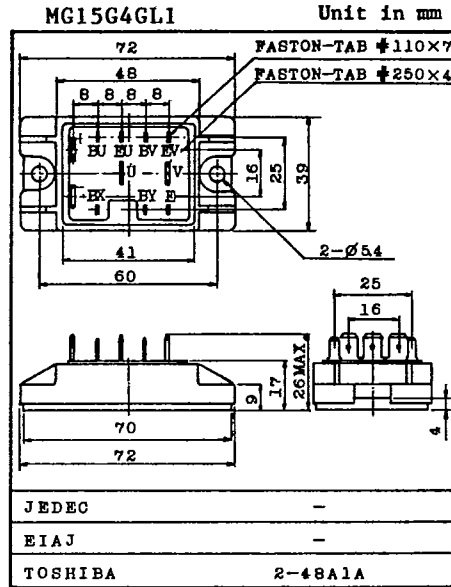
EQUIVALENT CIRCUIT



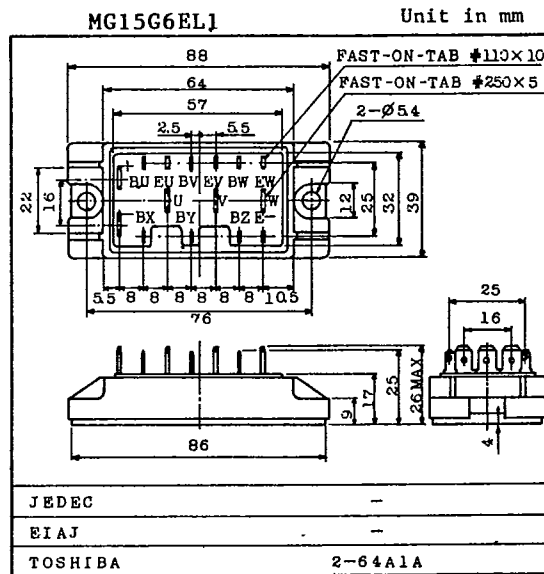
MG15G4GL1



MG15G6EL1



Weight : 140g



Weight : 180g

TOSHIBA CORPORATION

9097250 TOSHIBA (DISCRETE/OPTO)

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TECHNICAL DATA

M G 1 5 G 4 G L 1

M G 1 5 G 6 E 1 1

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		VCBO	600	V
Collector-Emitter Voltage		VCEO	600	V
Collector-Emitter Sustaining Voltage		VCEO(SUS)	450	V
Emitter-Base Voltage		VEBO	6	V
Collector Current	DC	IC	15	A
	1ms	IC	30	A
	DC	-IC	15	A
Base Current		IB	1	A
Collector Power Dissipation (Tc=25°C)		PC	100	W
Junction Temperature		Tj	150	°C
Storage Temperature Range		Tstg	-40 ~ 125	°C
Isolation Voltage		VIsol	2500(AC 1 Minute)	V
Screw Torque			30	kg·cm

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	VCB=600V, IE=0	-	-	1.0	mA
Emitter Cut-off Current		IEBO	VEB=6V, IC=0	-	-	100	mA
Collector-Emitter Sustaining Voltage		VCEO(SUS)	IC=0.5A, L=40mH	450	-	-	V
DC Current Gain		hFE	VCE=5V, IC=15A	100	-	-	
Collector-Emitter Saturation Voltage		VCE(sat)	IC=15A, IB=0.4A	-	-	2.0	V
Base-Emitter Saturation Voltage		VBE(sat)		-	-	2.5	V
Emitter-Collector Voltage		VECO	IE=15A, IB=0	-	-	1.6	V
Reverse Recovery Time		trr	-IC=15A, VEB=2V, VCE=300V	-	-	0.7	μs
Collector Output Capacitance		Cob	VCB=50V, IE=0, f=1MHz	-	400	-	pF
Switching Time	Turn-on Time	ton		-	-	1.0	μs
	Storage Time	tstg		-	-	12	
	Fall Time	tf		IB1=-IB2=0.4A DUTY CYCLE=0.5%	-	-	
Thermal Resistance (Junction to Case)		Rth(j-e)		-	-	1.25	°C/W

TOSHIBA CORPORATION

GT1A2