

9097250 TOSHIBA (DISCRETE/OPTO)

90D 16335 DT-33-35

TOSHIBA SEMICONDUCTOR

TECHNICAL DATA

TOSHIBA GTR MODULE
MG50N2CK1

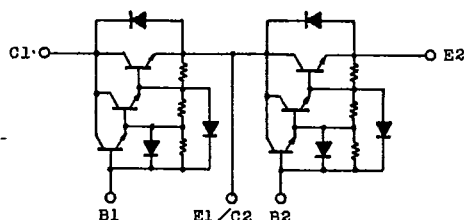
SILICON NPN TRIPLE DIFFUSED TYPE

HIGH POWER SWITCHING APPLICATIONS.
MOTOR CONTROL APPLICATIONS.

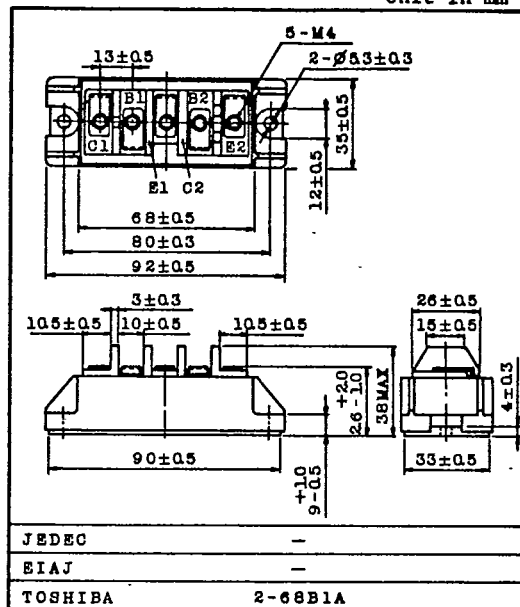
FEATURES:

- The Collector is Isolated from Case.
- 2 Power Transistors and 2 Free Wheeling Diodes are Built Into 1 Package.
- High DC Current Gain
: $h_{FE}=100(\text{Min.})$ ($I_C=50A$)
- Low Saturation Voltage
: $V_{CE(\text{sat})}=2.5V(\text{Max.})$ ($I_C=50A$)
- High Speed

EQUIVALENT CIRCUIT



Unit in mm



Weight : 215g

MAXIMUM RATINGS ($T_c=25^\circ\text{C}$)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V _{CBO}	1100	V
Collector-Emitter Sustaining Voltage		V _{CEX(SUS)}	1100	V
		V _{CEO(SUS)}	900	
Emitter-Base Voltage		V _{EBO}	7	V
Collector Current	DC	I _C	50	A
	1ms	I _{CP}	100	
Forward Current	DC	I _F	50	A
	1ms	I _{FM}	100	
Base Current		I _B	5	A
Collector Power Dissipation (T _c =25°C)		P _C	350	W
Junction Temperature		T _j	150	°C
Storage Temperature Range		T _{stg}	-40~125	°C
Isolation Voltage		V _{Isol}	2500 (AC 1 Minute)	V
Screw Torque	Terminal/Mounting	-	20/30	kg·cm

EGA-MG50N2CK1-1

1986-6-5

TOSHIBA CORPORATION

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90D 16336

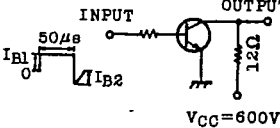
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ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V _{CB} =1100V, I _E =0	-	-	1.0	mA
Emitter Cut-off Current		IEBO	V _{EB} =7V, I _C =0	-	-	200	mA
Collector-Emitter Sustaining Voltage		V _{CEO(SUS)}	I _C =1A, L=40mH	900	-	-	V
DC Current Gain		h _{FE}	V _{CE} =5V, I _C =50A	100	-	-	
Collector-Emitter Saturation Voltage		V _{CE(sat)}	I _C =50A, I _B =1A	-	-	2.5	V
Base-Emitter Saturation Voltage		V _{BE(sat)}		-	-	3.0	V
Switching Time	Turn-on Time	t _{on}	 INPUT OUTPUT 50µs IB1 IB2 12Ω V_{CC}=600V I_{B1}=1A, I_{B2}=-3A DUTY CYCLE=0.5%	-	-	2	µs
	Storage Time	t _{stg}		-	-	15	
	Fall Time	t _f		-	-	5	
Forward Voltage		V _F	I _F =50A, I _B =0	-	-	1.8	V
Reverse Recovery Time		t _{rr}	I _F =50A, V _{BE} =-3V di/dt=100A/µs	-	-	1.0	µs
Thermal Resistance		R _{th(j-c)}	Transistor	-	-	0.35	°C/W
			Diode	-	-	1.3	

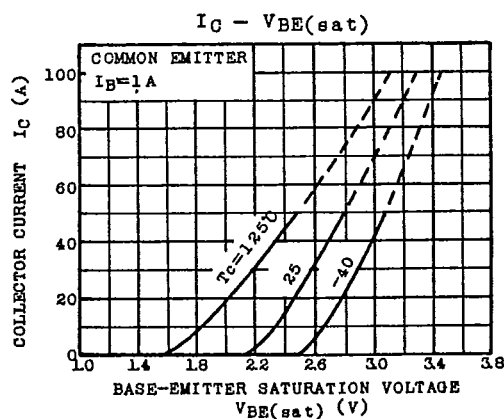
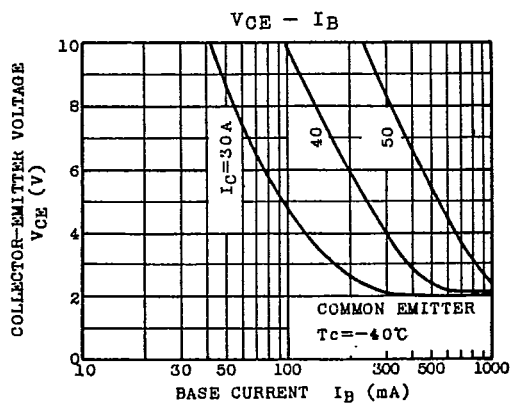
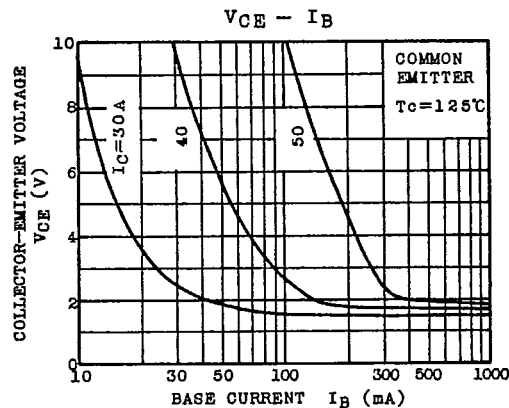
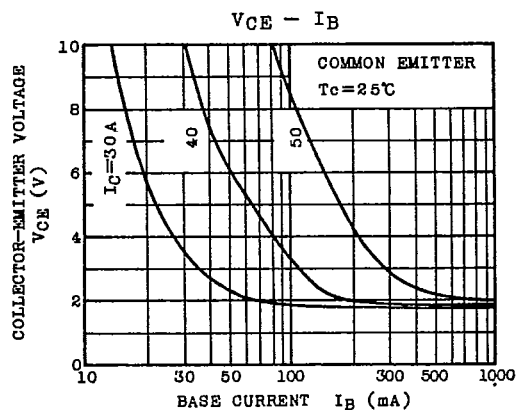
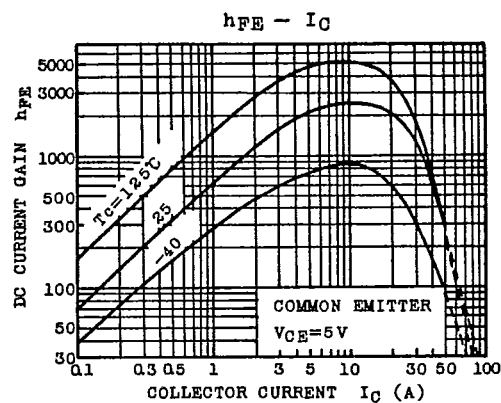
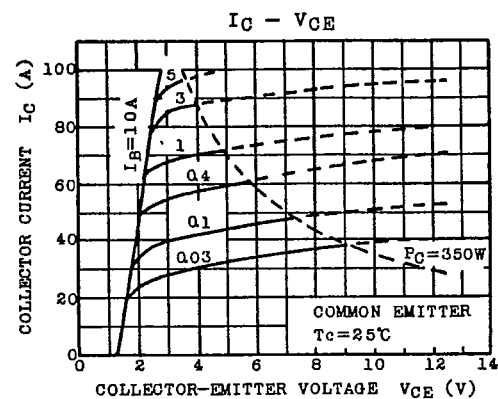
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