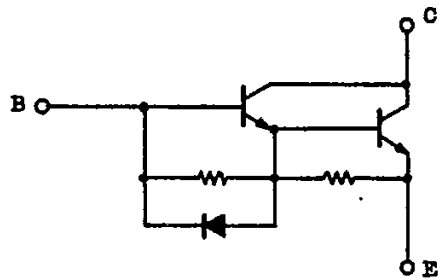




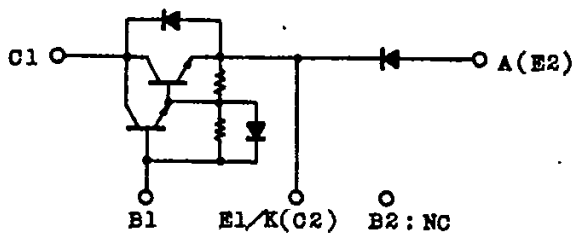
SEMICONDUCTOR

TECHNICAL DATA

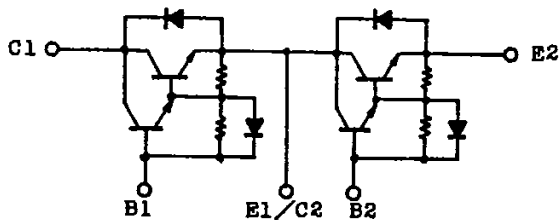
MG30G1BL3
MG30G1JL1
MG30G2CL3
MG30G2DL1
MG30G6EL1



MG30G1BL3

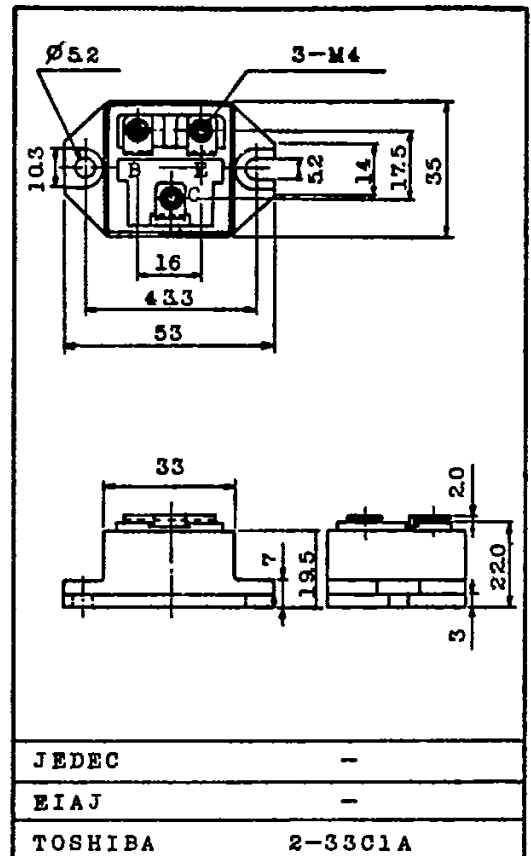


MG30G1JL1

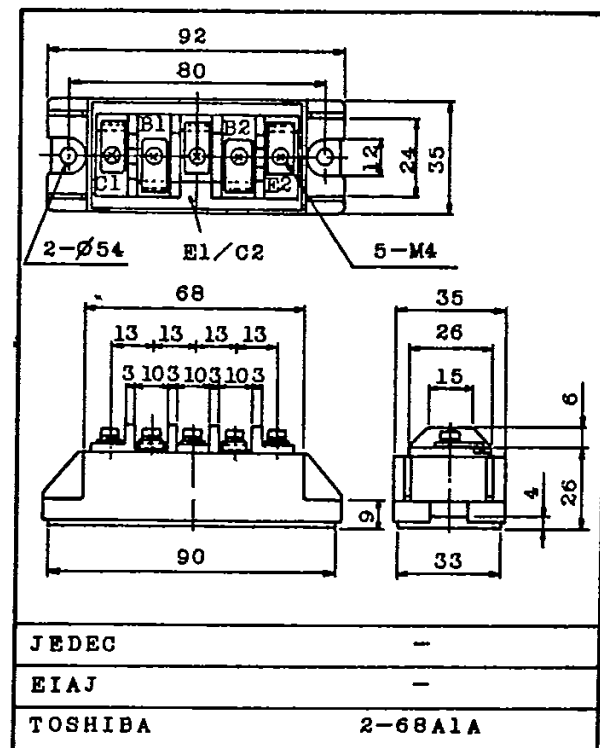


MG30G2CL3

Unit in mm



Weight : 86g



Weight : 210g

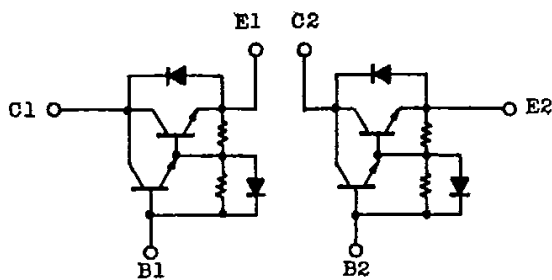


SEMICONDUCTOR

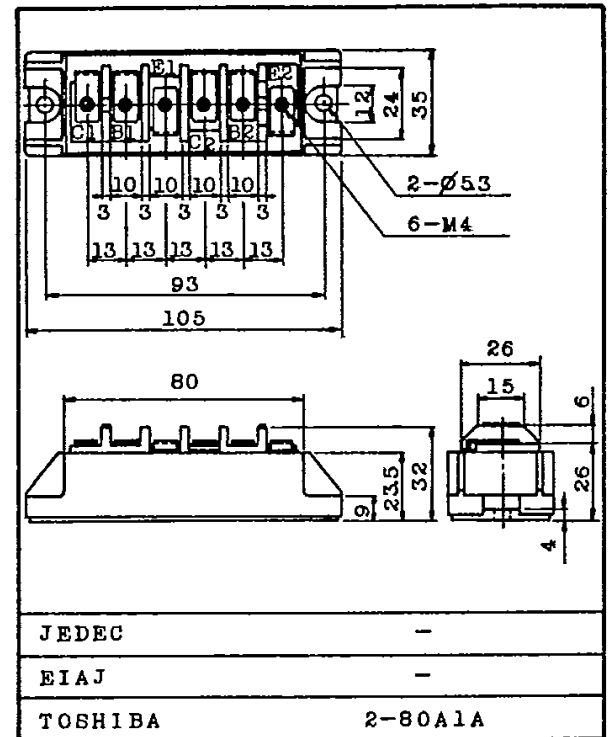
TECHNICAL DATA

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MG30G1JL1
MG30G2CL3
MG30G2DL1
MG30G6EL1

MG30G2DL1

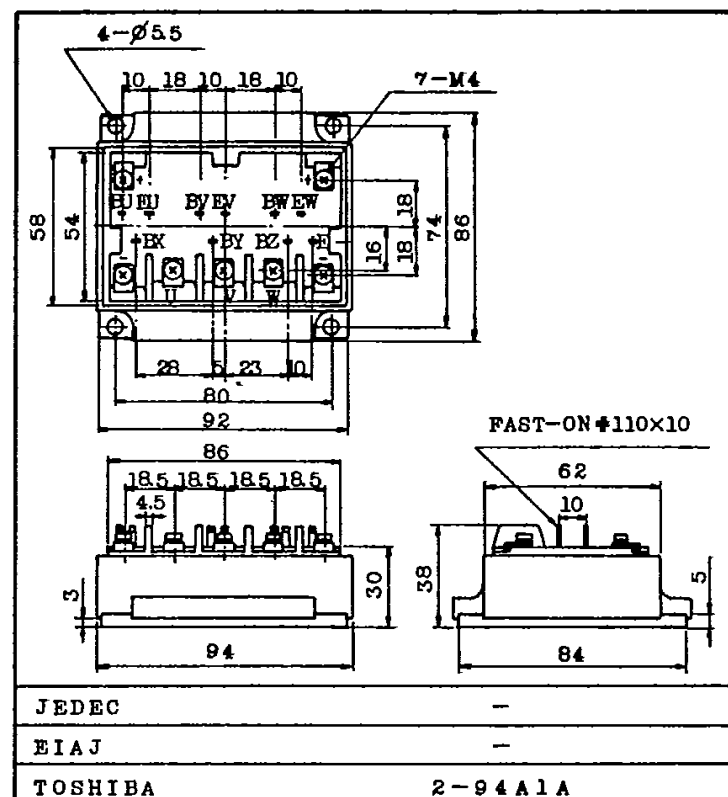
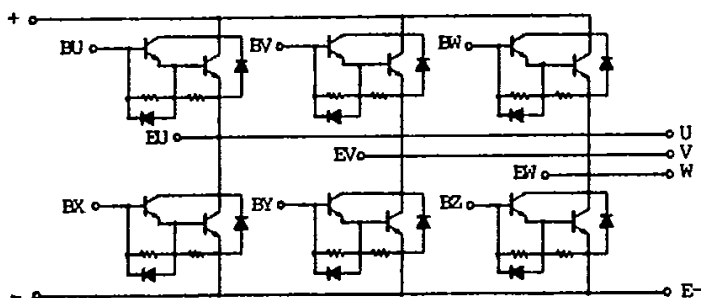


Unit in mm



Weight : 245g

MG30G6EL1

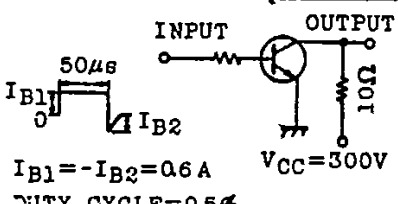


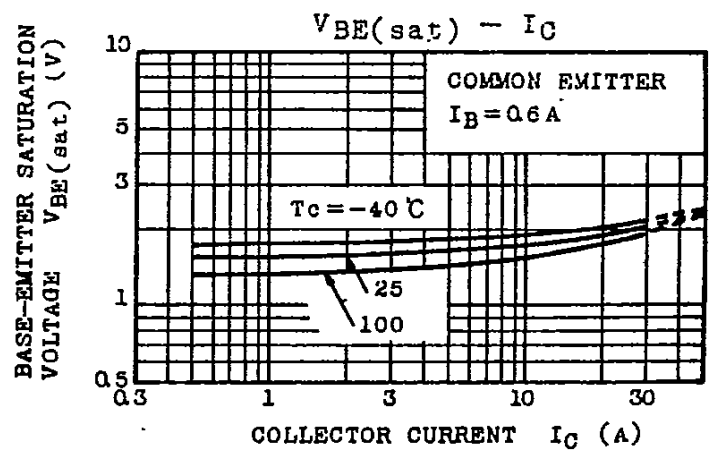
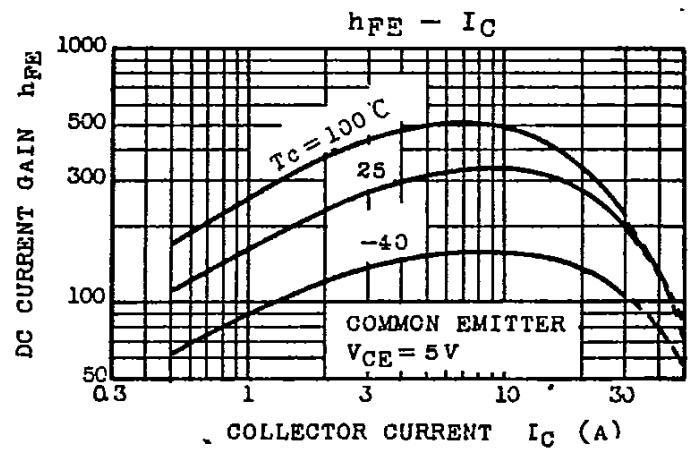
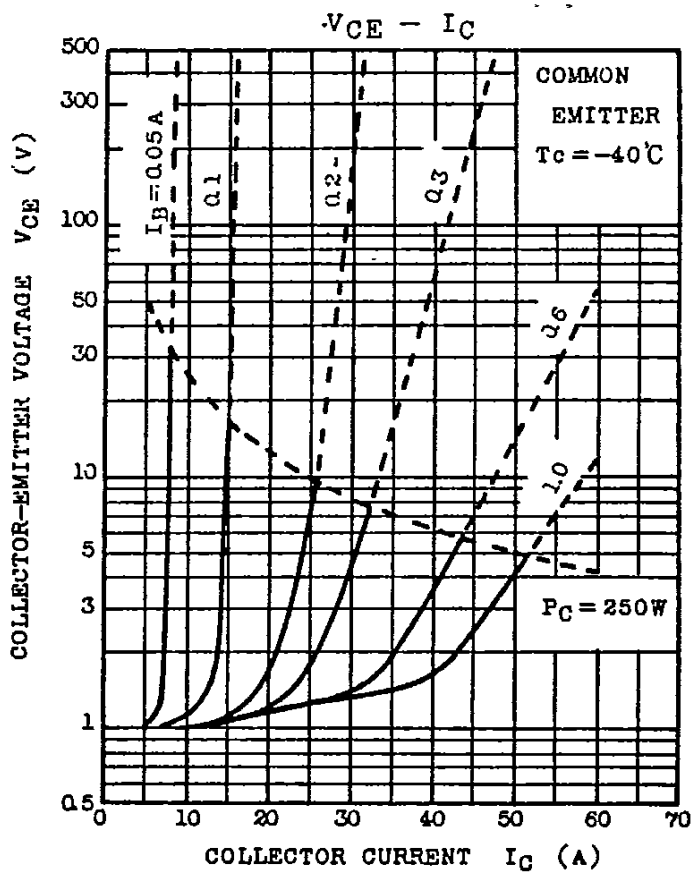
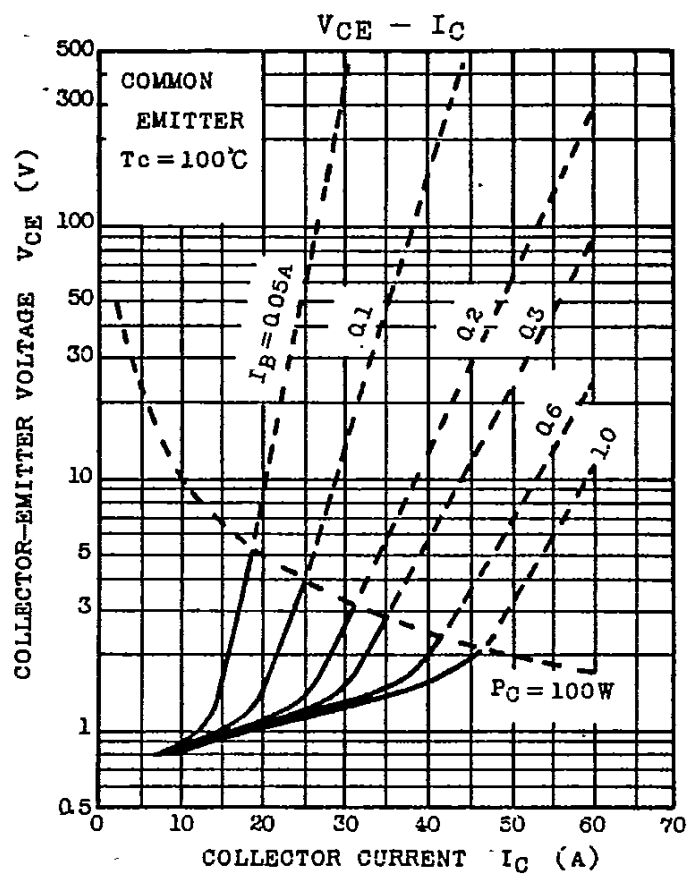
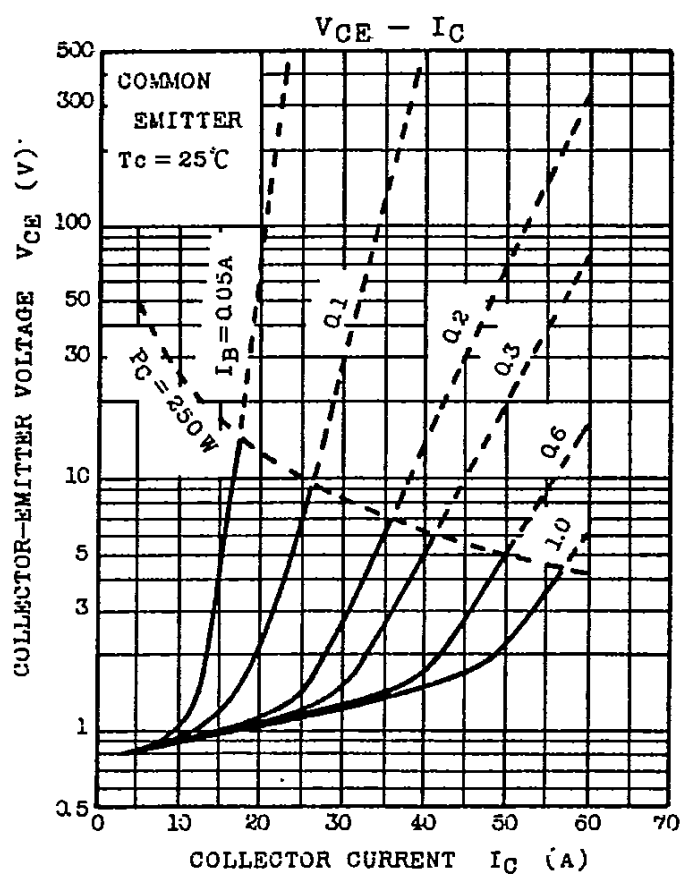
Weight : 600g

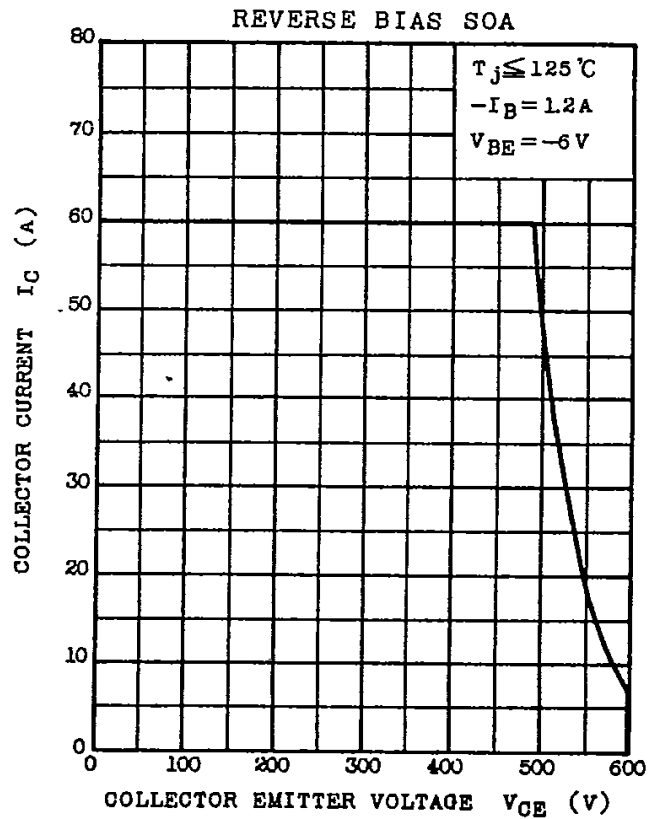
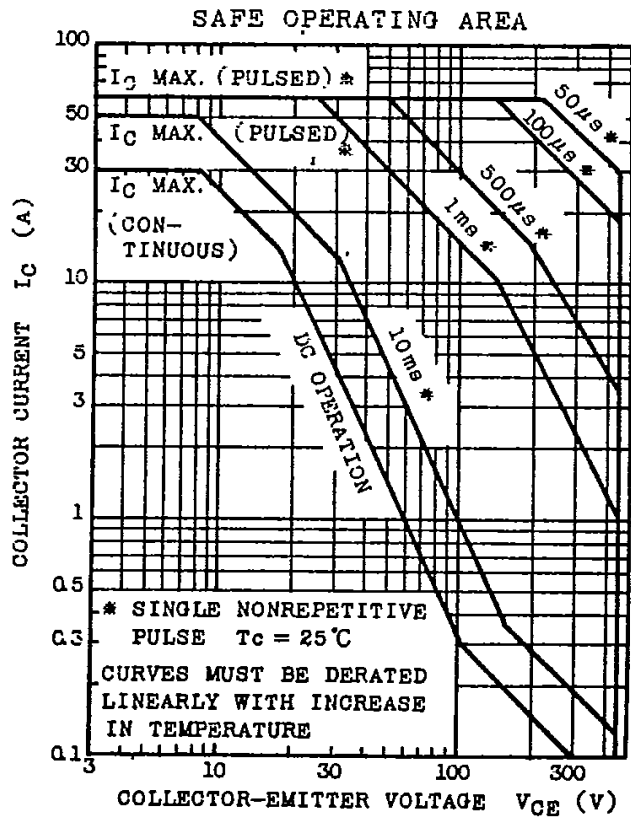
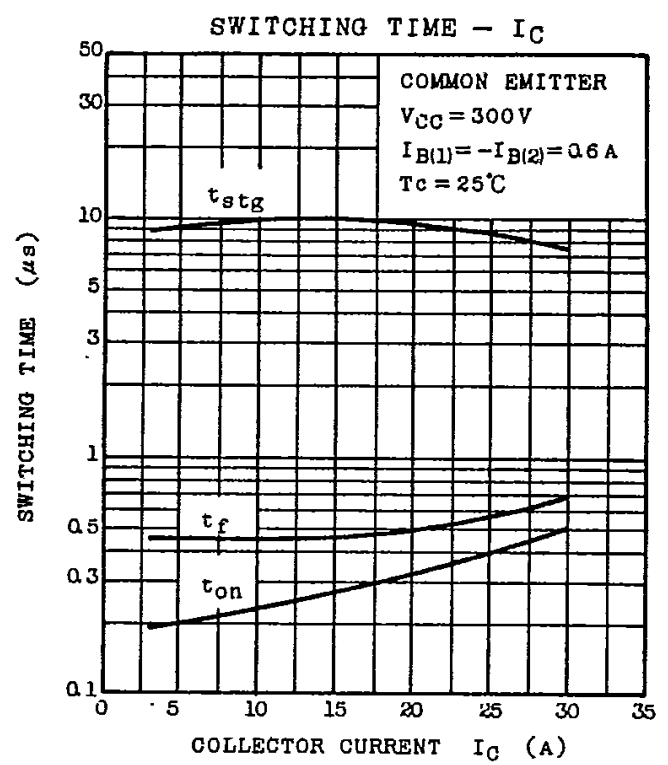
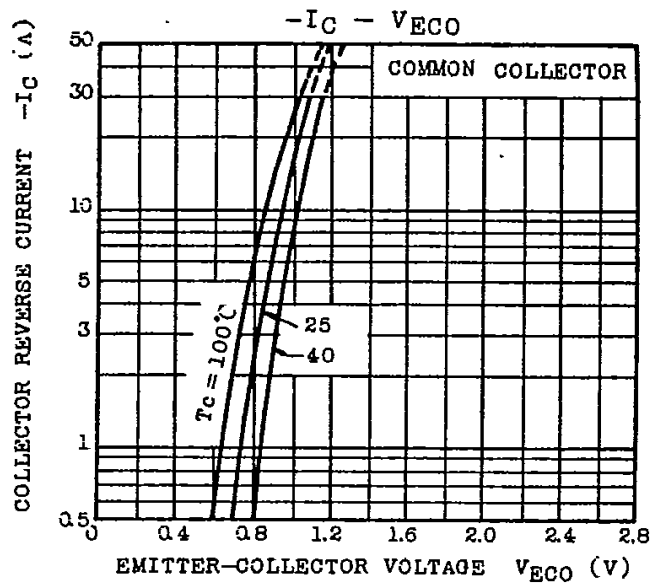
MAXIMUM RATINGS (Ta=25°C)

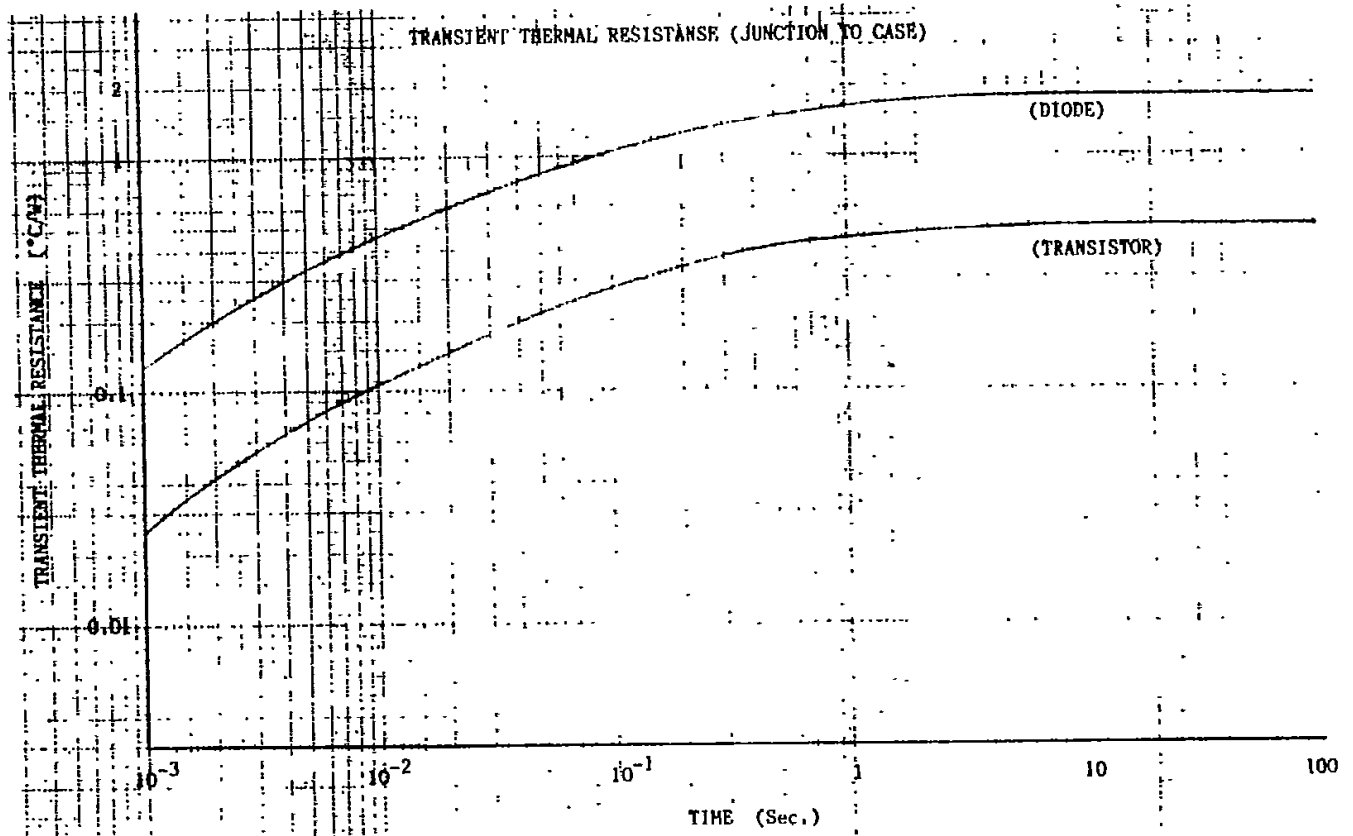
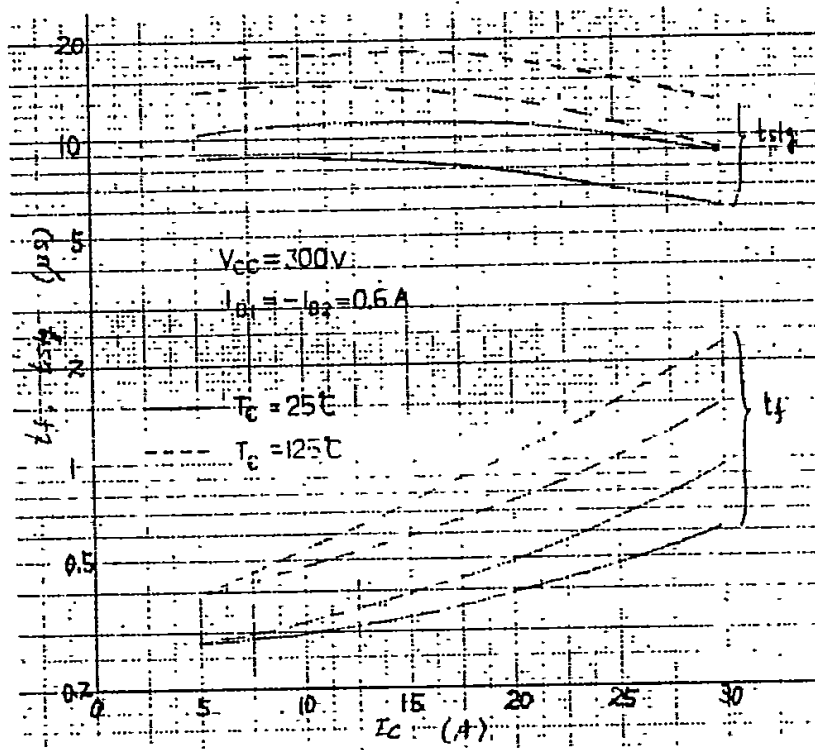
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V _{CB0}	600	V
Collector-Emitter Sustaining Voltage		V _{CEX(SUS)}	600	V
Collector-Emitter Sustaining Voltage		V _{CEO(SUS)}	450	V
Emitter-Base Voltage		V _{EB0}	6	V
Collector Current	DC	I _C	30	A
	lms	I _{CP}	60	A
Forward Current	DC	I _F	30	A
	lms	I _{FM}	60	A
Base Current		I _B	2	A
Collector Power Dissipation (Tc=25°C)		P _C	250	W
Junction Temperature		T _j	150	°C
Storage Temperature Range		T _{stg}	-40 ~ 125	°C
Isolatic. Voltage		V _{Isol}	2500 (AC 1 Minute)	V
Screw Torque (Terminal/Mounting)		-	20/30	kg·cm

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I _{CB0}	V _{CB} =600V, I _E =0	-	-	1.0	mA
Emitter Cut-off Current		I _{EB0}	V _{EB} =6V, I _C =0	-	-	200	mA
Collector-Emitter Sustaining Voltage		V _{CEO(SUS)}	I _C =0.5A, L=40mH	450	-	-	V
DC Current Gain		h _{FE}	V _{CE} =5V, I _C =30A	100	-	-	
Collector-Emitter Saturation Voltage		V _{CE(sat)}	I _C =30A, I _B =0.6A	-	-	2.0	V
Base-Emitter Saturation Voltage		V _{BE(sat)}		-	-	2.5	V
Switching Time	Turn-on Time	t _{on}	 INPUT OUTPUT 50μs I_{B1} I_{B2} I_{B1}=-I_{B2}=0.6A DUTY CYCLE=0.5 V_{CC}=300V	-	-	1.0	μs
	Storage Time	t _{stg}		-	-	12	
	Fall Time	t _f		-	-	2.0	
Forward Voltage		V _F	I _F =30A, I _B =0	-	-	1.5	V
Reverse Recovery Time		t _{rr}	I _F =30A, V _{BE} =-3V di/dt=100A/μs	-	-	2.0	μs
Thermal Resistance		R _{th(j-c)}	Transistor	-	-	0.5	°C/W
			Diode	-	-	1.8	







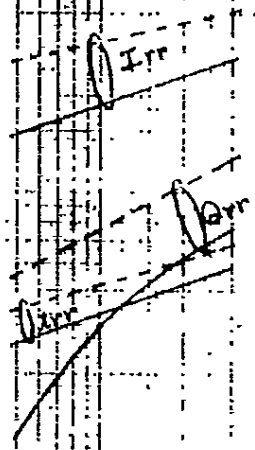
$T_a = 85^\circ\text{C}$
 $T_c = 125^\circ\text{C}$
 (Typical Values)

I_{rr}, I_{rr}, Q_{rr} v.s. I_F

$@ \frac{dI_F}{dt} = 100 \text{ A}/\mu\text{s}$
 $V_{DE} = 30 \text{ V}$

$I_{rr} (\mu\text{C}/\mu\text{s}), I_{rr} (\text{A}), Q_{rr} (\mu\text{C})$

10 8 6 4 2



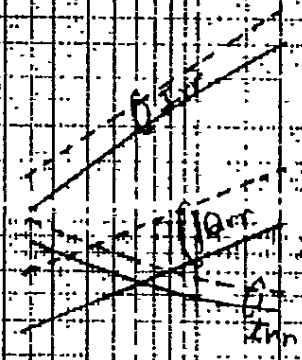
$I_F (\text{A})$
 0 5 10 20 30 40 50

I_{rr}, I_{rr}, Q_{rr} v.s. dI_F/dt

$@ I_F = 30 \text{ A}$
 $V_{DE} = 30 \text{ V}$

$I_{rr} (\mu\text{C}/\mu\text{s}), I_{rr} (\text{A}), Q_{rr} (\mu\text{C})$

10 8 6 4 2



$dI_F/dt (\text{A}/\mu\text{s})$
 0 50 100 150 200