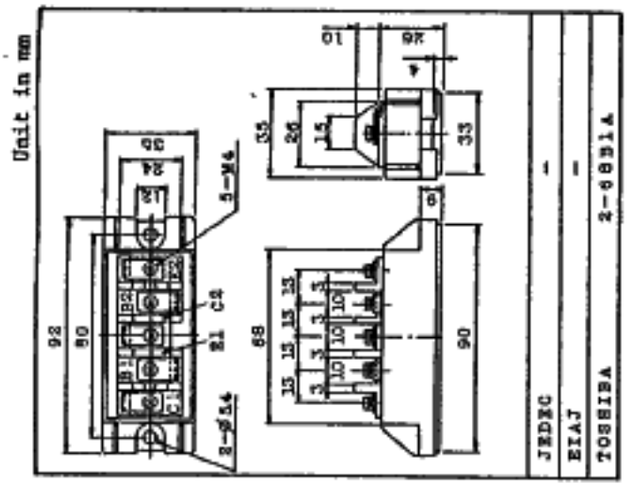
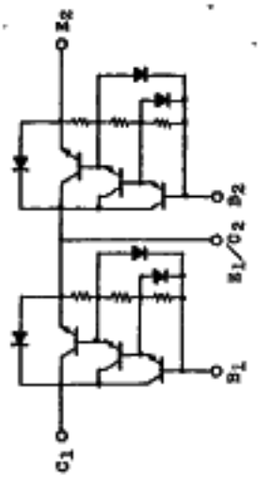
SEMICONDUCTOR
TECHNICAL DATA

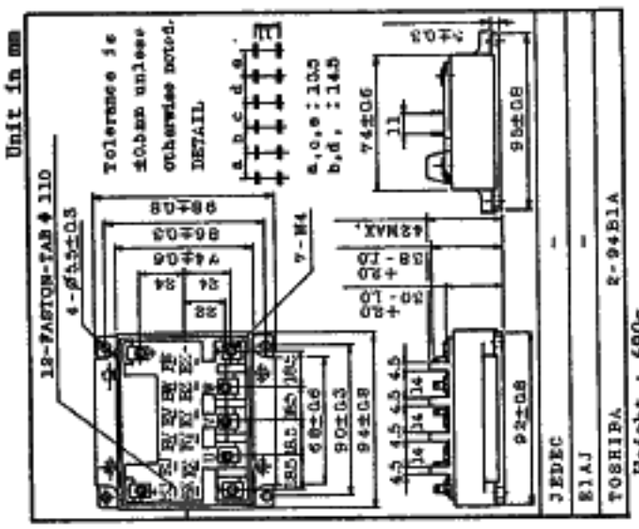
MG15N2CK1

MG15N6EK1

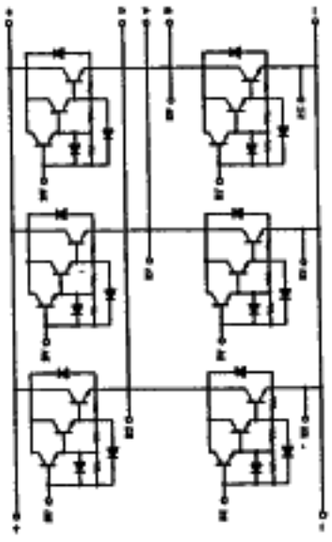


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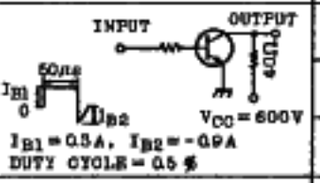
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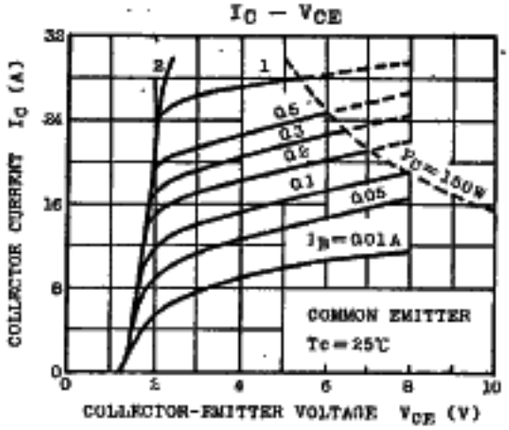
MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	1100	V
Collector-Emitter Sustaining Voltage		$V_{CEX(SUS)}$	1100	V
Collector-Emitter Sustaining Voltage		$V_{CEO(SUS)}$	900	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current	DC	I_C	15	A
	1ms	I_{CP}	30	
Forward Current	DC	I_F	15	A
	1ms	I_{FM}	30	
Base Current		I_B	1.5	A
Collector Power Dissipation (Tc=25°C)		P_C	150	W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-40~125	°C
Isolation Voltage		V_{Iso1}	2500 (AC 1 Minute)	V
Screw Torque (Terminal/Mounting)		-	20/30	kg·cm

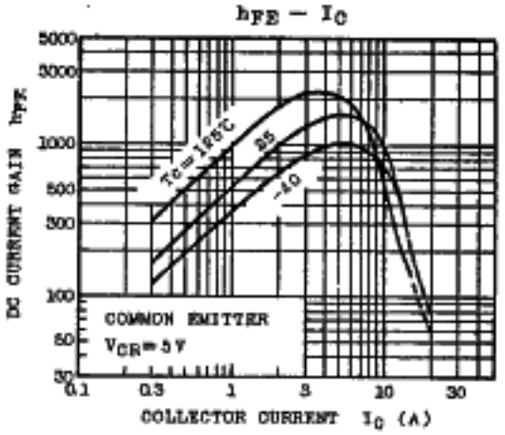
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=1100V, I_E=0	-	-	1.0	mA
Emitter Cut-off Current		I_{EBO}	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=15A	100	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=15A, I_B=0.3A	-	1.8	2.5	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$		-	2.6	3.5	
Switching Time	Turn-on Time	t_{on}		-	0.5	2.0	μs
	Storage Time	t_{stg}		-	8	11	
	Fall Time	t_f	I_{B1}=0.3A, I_{B2}=-0.9A DUTY CYCLE=0.5 %	-	4	6	
Forward Voltage		V_F	I_F=15A, I_B=0	-	1.0	1.5	V
Reverse Recovery Time		t_{rr}	I_F=15A, V_{BE}=-3V di/dt=60A/μs	-	0.5	1.0	μs
Thermal Resistance		$R_{th(j-c)}$	Transistor	-	-	0.83	°C/W
			Diode	-	-	1.3	

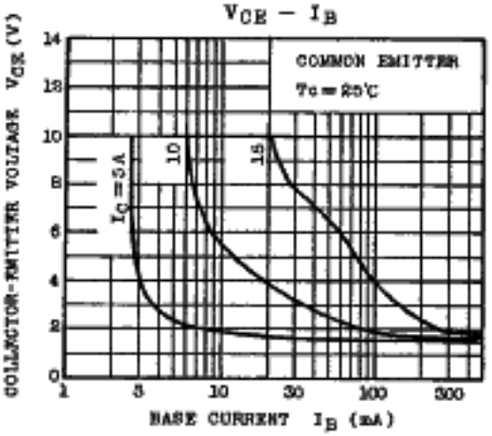
$I_C - V_{CE}$



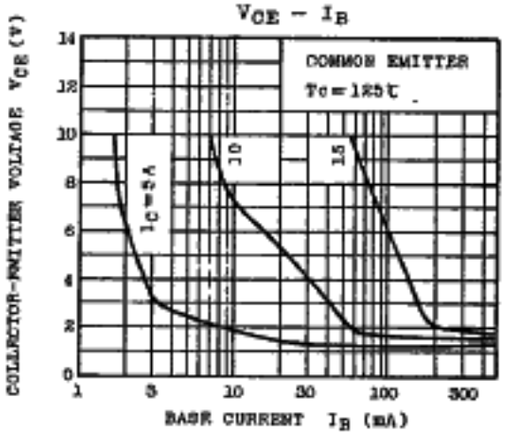
$h_{FE} - I_C$



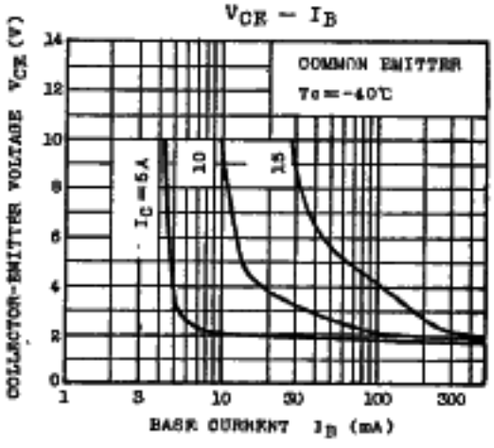
$V_{CE} - I_B$



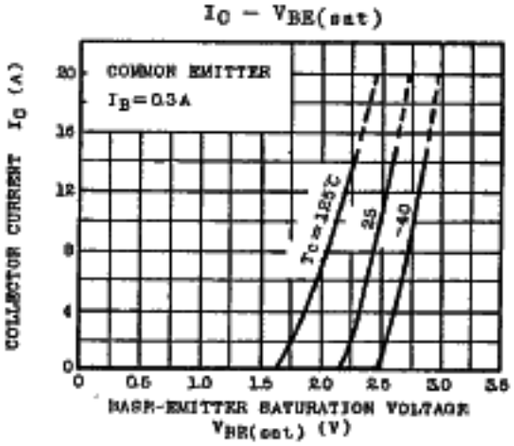
$V_{CE} - I_B$



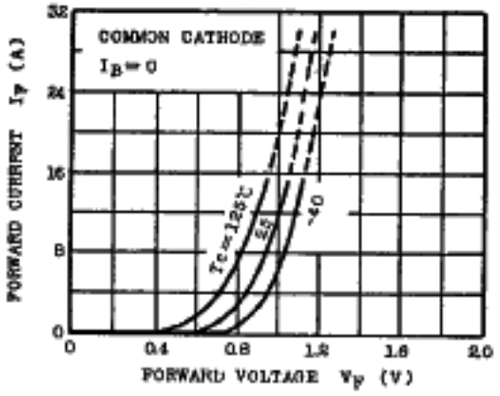
$V_{CE} - I_B$



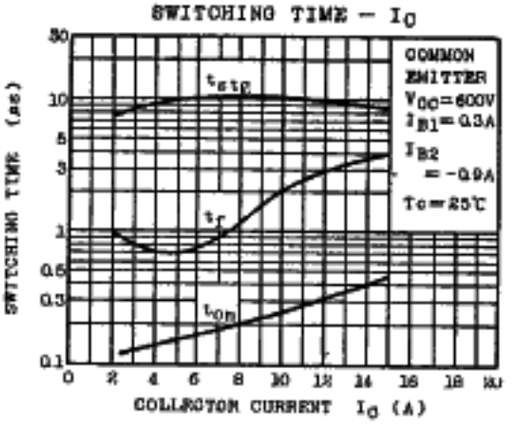
$I_C - V_{BE(sat)}$



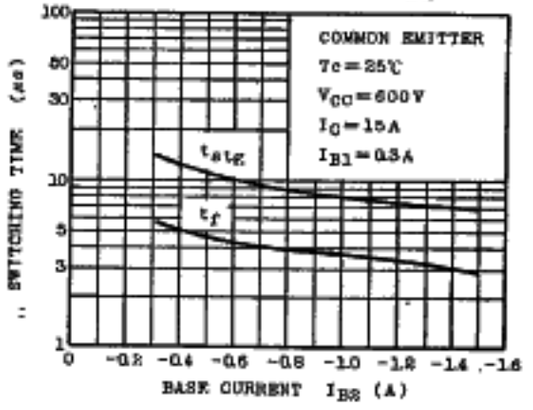
$I_F - V_F$



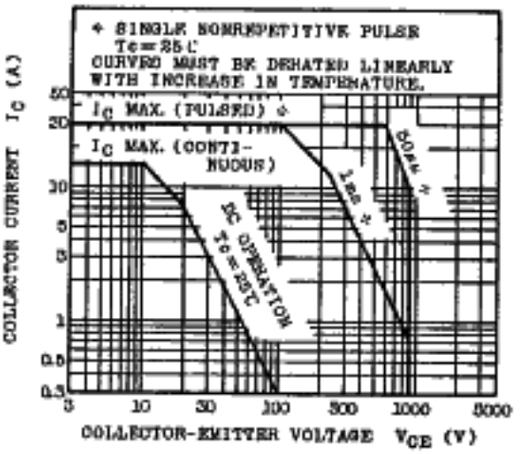
SWITCHING TIME — I_C



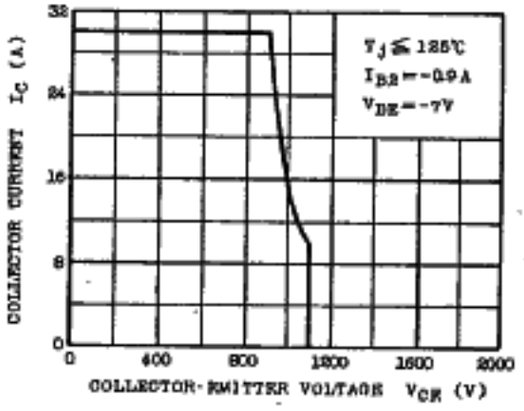
SWITCHING TIME — I_{B2}



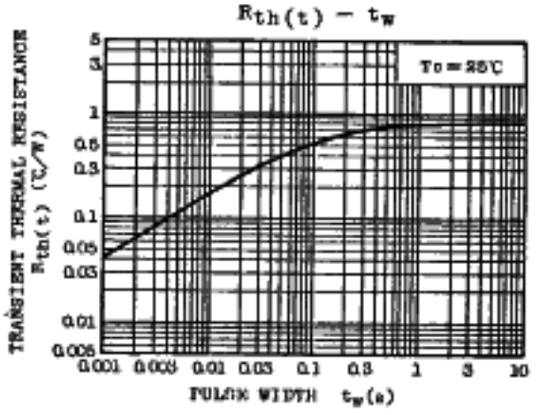
AREA OF SAFETY OPERATION

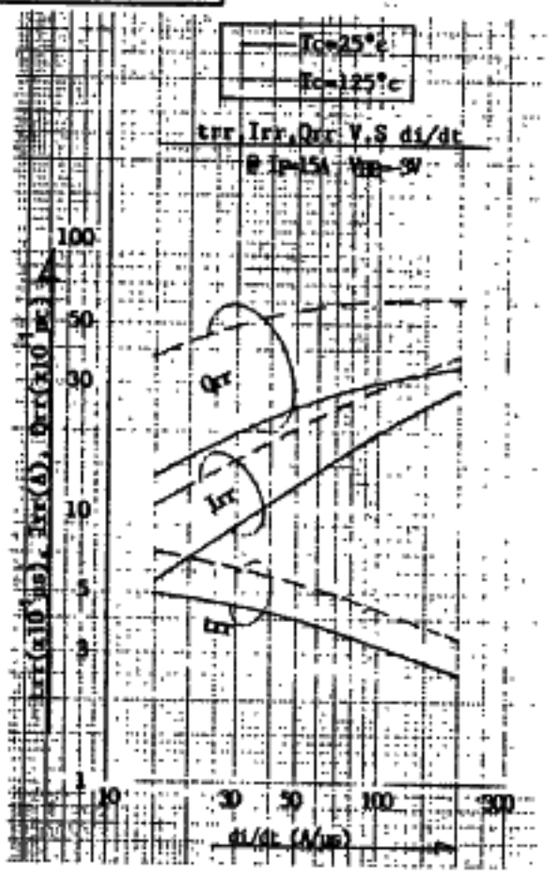


REVERSE BIAS ASO



$R_{th(t)} - t_w$




Tc=25°c
Tc=125°c
trr, Irr, Qrr V.S di/dt
@ Ip=15A Vcc=5V
100
50
30
10
5
3
1
10
30
50
100
300
di/dt (A/μs)
Qrr
Irr
trr

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