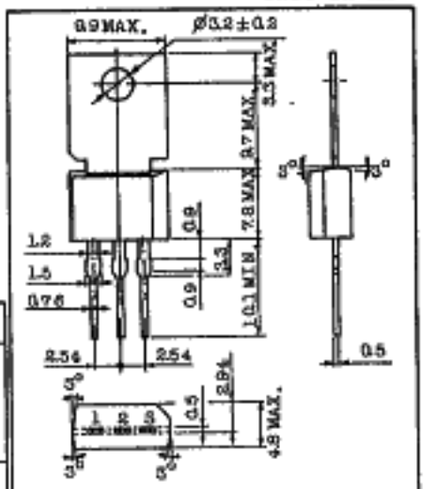
SILICON PNP TRIPLE DIFFUSED TYPE (PCT PROCESS)

TBF870
TBF872

HIGH VOLTAGE SWITCHING AND AMPLIFIER APPLICATIONS.
COLOR TV CHROMA OUTPUT APPLICATIONS.

. NPN Complements are TBF869 and TFB871.

Unit in mm



1. EMITTER
2. COLLECTOR (HEAT SINK)
3. BASE

JEDEC	TO-202
EIAJ	–
TOSHIBA	2-10F1B

Weight : 1.4g

MAXIMUM RATINGS (T_a=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	TBF870	V_{CBO}	-250	V
	TBF872		-300	
Collector-Emitter Voltage	TBF870	V_{CEO}	-250	V
	TBF872		-300	
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current	DC	I_C	-50	mA
	Peak	I_{CP}	-100	
Total Power Dissipation		P_{tot}	1.6	W
			5.0 (T_c=25°C)	
Base Current		I_B	-20	mA
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-65~150	°C
Solder Temperature, 1.5mm from Case for 10 Seconds		–	350	°C

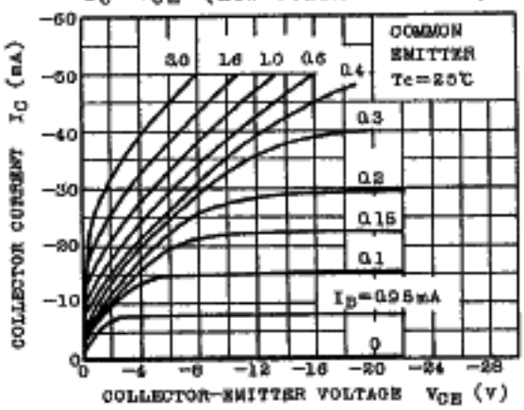
THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Thermal Resistance (Junction-Ambient)	RθJA	78.3	°C/W
Thermal Resistance (Junction-Case)	RθJC	25	°C/W

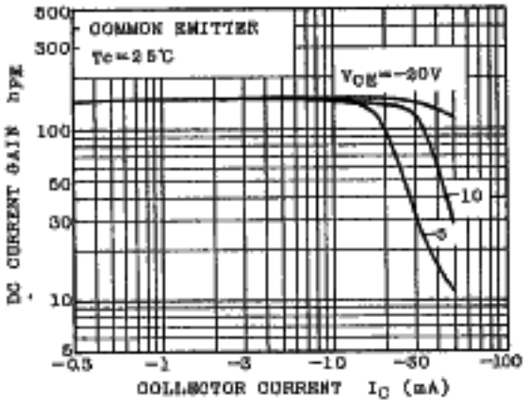
ELECTRICAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	TBF870	I_{CBO}	V_{CB}=-200V, I_E=0	-	-	-0.1	μA
	TBF872	I_{CER}	V_{CE}=-250V, R_{BE}=2.7kΩ	-	-	-0.05	
Emitter Cut-off Current		I_{EBO}	V_{EB}=-5V, I_C=0	-	-	-10	μA
Collector-Emitter Breakdown Voltage	TBF870	$V_{(BR)CEO}$	I_C=-1mA, I_B=0	-250	-	-	V
	TBF872	$V_{(BR)CER}$	I_C=-1μA, R_{BE}=2.7kΩ	-300	-	-	
High Temperature Collector Cut-off Current		I_{CER}	V_{CE}=-200V, R_{BE}=2.7kΩ T_j=150°C	-	-	-10	μA
DC Current Gain		h_{FE}	V_{CE}=-20V, I_C=-25mA	50	-	-	
Collector-Emitter RF Saturation Voltage		$V_{CE(sat)}$ RF	I_C=-25mA, T_j=150°C	-	-20	-	V
Base-Emitter Voltage		V_{BE}	V_{CE}=-20V, I_C=-25mA	-	-0.75	-	V
Transition Frequency		f_T	V_{CE}=-10V, I_C=-10mA	60	80	-	MHz
Reverse Transfer Capacitance		C_{re}	V_{CB}=-30V, I_E=0, f=1MHz	-	1.7	2.0	pF

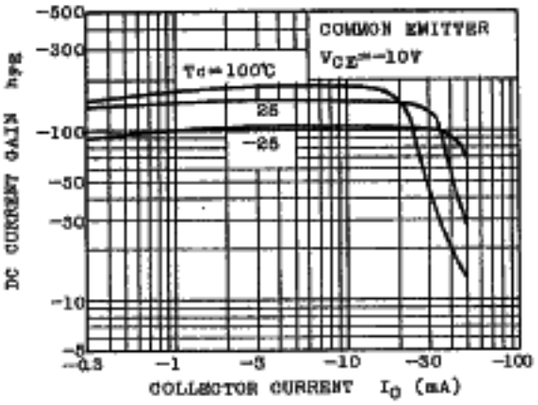
$I_C - V_{CE}$ (LOW VOLTAGE REGION)



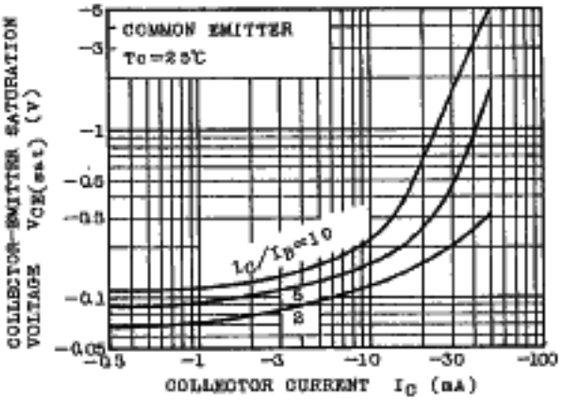
$h_{FE} - I_C$



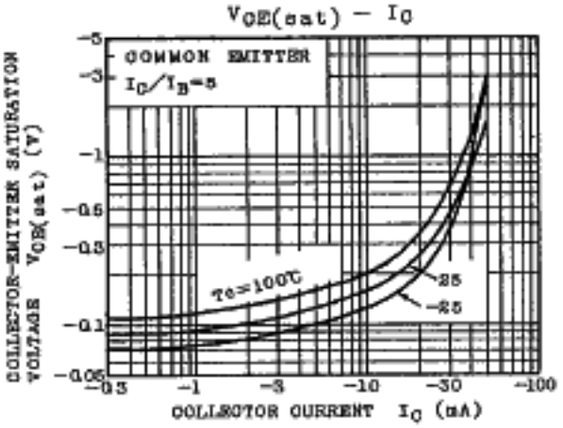
$h_{FE} - I_C$



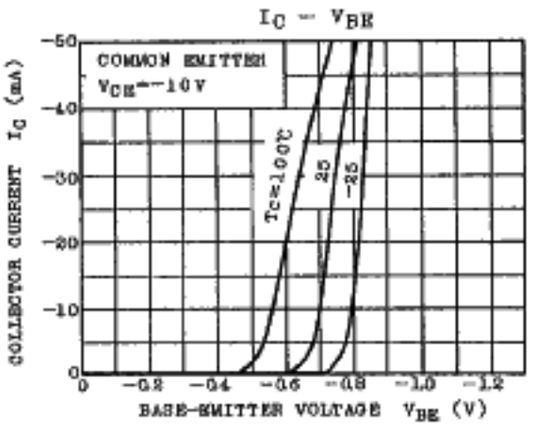
$V_{CE(sat)} - I_C$



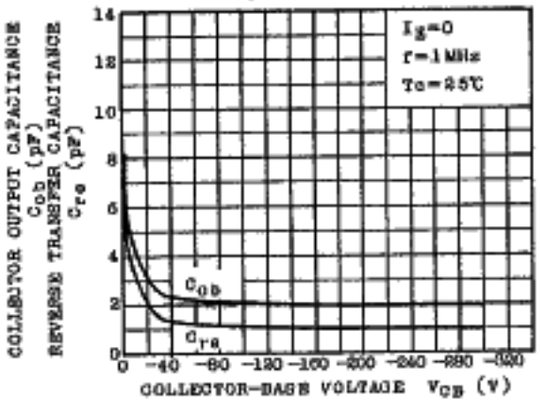
$V_{CE(sat)} - I_C$



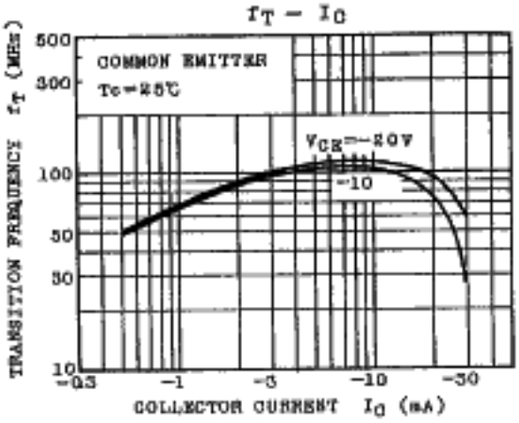
$I_C - V_{BE}$



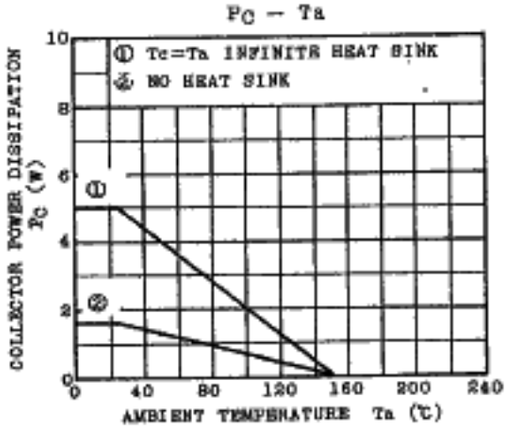
$C_{ob}, C_{re} - V_{CB}$



$f_T - I_C$



$P_C - Ta$



SAFE OPERATING AREA