

9097250 TOSHIBA (DISCRETE) 107

SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

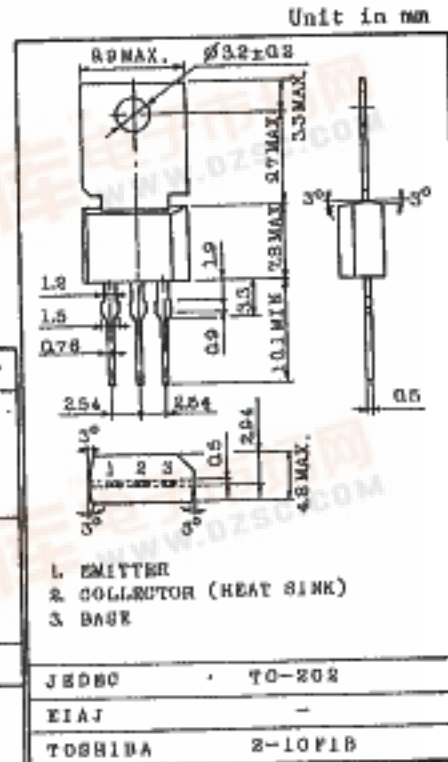
TBF869 TBF871

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

. PNP Complements are TBF870 and TBF872.

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT	
Collector-Base Voltage	TBF869	250	V	
	TBF871	300		
Collector-Emitter Voltage	TBF869	250	V	
	TBF871	300		
Emitter-Base Voltage	V _{EB0}	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	



Weight : 1.4g

THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	RATING	UNIT
Thermal Resistance (Junction-Ambient)	R _{θJA}	78.3	°C/W
Thermal Resistance (Junction-Case)	R _{θJC}	25	°C/W

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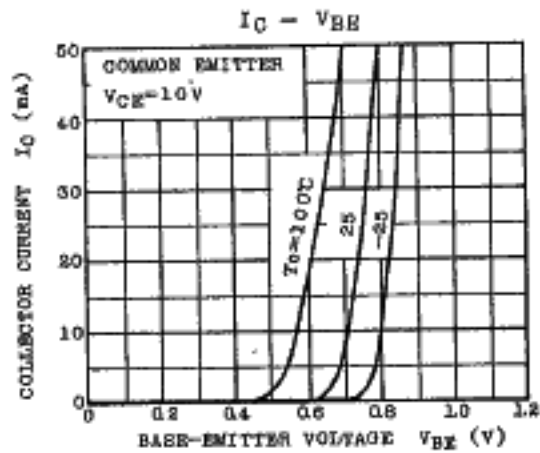
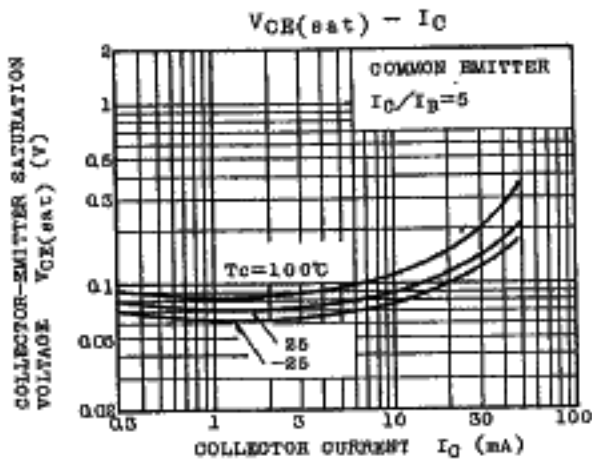
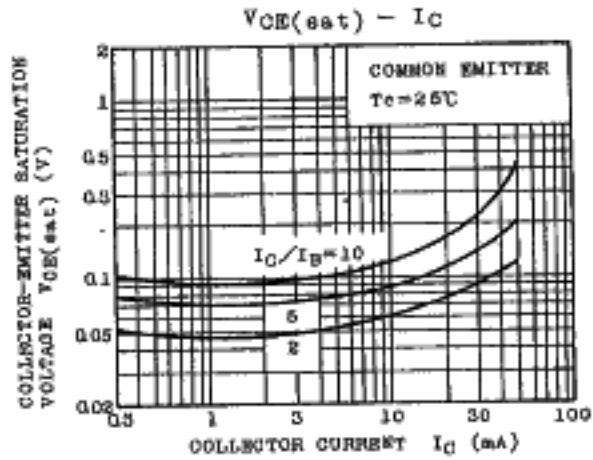
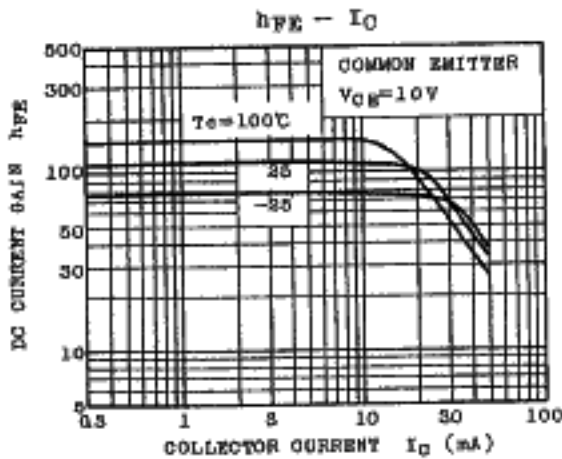
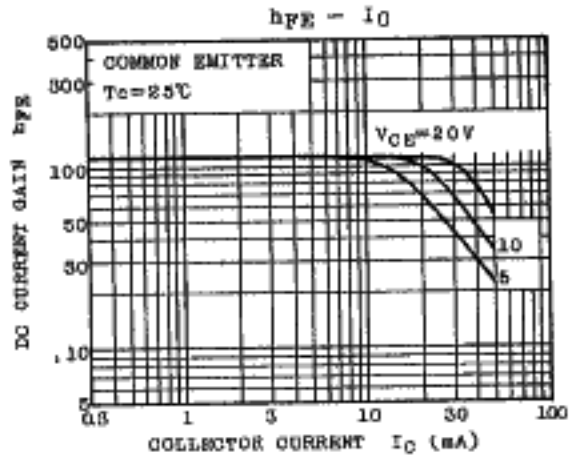
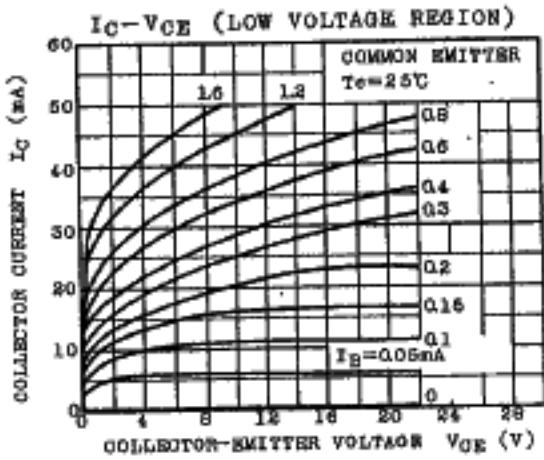


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ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Collector Cut-off Current	TBF869	I_{CBO}	$V_{CB}=200\text{V}, I_B=0$	-	-	0.1	μA
	TBF871	I_{CER}	$V_{CE}=250\text{V}, R_{BE}=2.7\text{k}\Omega$	-	-	0.05	
Emitter Cut-off Current		I_{EBO}	$V_{EB}=5\text{V}, I_C=0$	-	-	10	μA
Collector-Emitter Breakdown Voltage	TBF869	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	250	-	-	V
	TBF871	$V_{(BR)CER}$	$I_C=1\mu\text{A}, R_{BE}=2.7\text{k}\Omega$	300	-	-	
High Temperature Collector Cut-off Current		I_{CER}	$V_{CE}=200\text{V}, R_{BE}=2.7\text{k}\Omega$ $T_j=150^{\circ}\text{C}$	-	-	10	μA
DC Current Gain		h_{FE}	$V_{CE}=20\text{V}, I_C=25\text{mA}$	50	-	-	
Collector-Emitter RF Saturation Voltage		$V_{CE(sat)RF}$	$I_C=25\text{mA}, T_j=150^{\circ}\text{C}$	-	20	-	V
Base-Emitter Voltage		V_{BE}	$V_{CE}=20\text{V}, I_C=25\text{mA}$	-	0.75	-	V
Transition Frequency		f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}$	60	100	-	MHz
Reverse Transfer Capacitance		C_{re}	$V_{CB}=30\text{V}, I_B=0, f=1\text{MHz}$	-	1.3	1.8	pF

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