

2SC2085

Silicon PNP Triple-Diffused Planar Type

Line-Operated AF Amplifier
Chrominance Output

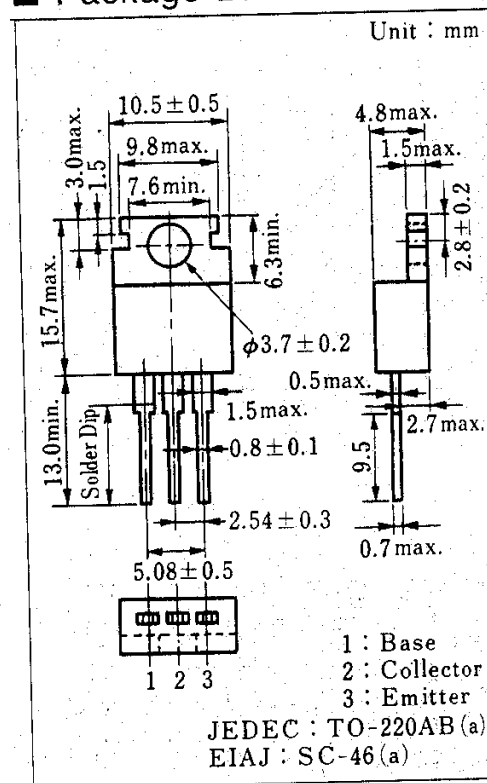
■ Features

- 1W output in class-A operation
- Large collector power dissipation (P_C)

■ Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CB0}	300	V
Collector-emitter voltage ($R_{BE} \leq 3 \text{ k}\Omega$)	V_{CER}	300	V
Emitter-base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	150	mA
Collector current	I_C	100	mA
Collector power dissipation ($T_c=70^\circ\text{C}$)	P_C	10	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

■ Package Dimensions



■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CEO}	$V_{CE}=300 \text{ V}, I_B=0$			20	μA
Collector-emitter voltage	V_{CER}	$I_C=5 \text{ mA}, R_{BE}=3 \text{ k}\Omega$	300			V
Emitter-base voltage	V_{EBO}	$I_E=0.1 \text{ mA}, I_C=0$	5			V
DC current gain	h_{FE1}	$V_{CE}=10 \text{ V}, I_C=10 \text{ mA}$	30			
	h_{FE2}^*	$V_{CE}=10 \text{ V}, I_C=50 \text{ mA}$	30		150	
Base-emitter voltage	V_{BE}	$V_{CE}=10 \text{ V}, I_C=50 \text{ mA}$			1.2	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100 \text{ mA}, I_B=10 \text{ mA}$			5	V
Transition frequency	f_T	$V_{CB}=30 \text{ V}, I_E=-20 \text{ mA}, f=200 \text{ MHz}$		55		MHz
Collector output capacitance	C_{ob}	$V_{CB}=30 \text{ V}, I_E=0, f=1 \text{ MHz}$		8		pF
Base resistance	r_{bb}	$V_{CB}=50 \text{ V}, I_C=20 \text{ mA}$		10		Ω

* h_{FE2} Classifications

Class	P	Q	R
h_{FE2}	30 ~ 60	50 ~ 100	80 ~ 150