

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

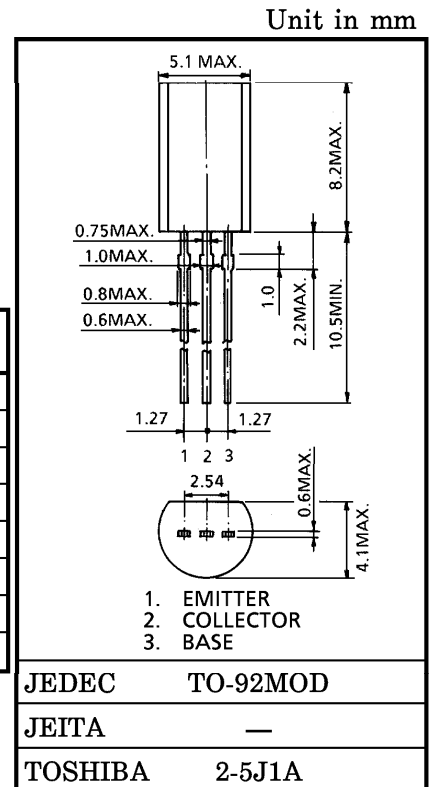
# 2SA1145

AUDIO FREQUENCY AMPLIFIER APPLICATIONS

- Complementary to 2SC2705.
- Small Collector Output Capacitance :  $C_{ob} = 2.5 \text{ pF (Typ.)}$
- High Transition Frequency :  $f_T = 200 \text{ MHz (Typ.)}$

MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	-150	V
Collector-Emitter Voltage	$V_{CEO}$	-150	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-50	mA
Base Current	$I_B$	-5	mA
Collector Power Dissipation	$P_C$	800	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ\text{C}$



Weight : 0.36 g (Typ.)

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -150 \text{ V}, I_E = 0$	—	—	-0.1	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -5 \text{ V}, I_C = 0$	—	—	-0.1	$\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1 \text{ mA}, I_B = 0$	-150	—	—	V
DC Current Gain	$h_{FE}$ (Note)	$V_{CE} = -5 \text{ V}, I_C = -10 \text{ mA}$	80	—	240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$	—	—	-1.0	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE} = -5 \text{ V}, I_C = -10 \text{ mA}$	—	—	-0.8	V
Transition Frequency	$f_T$	$V_{CE} = -5 \text{ V}, I_C = -10 \text{ mA}$	—	200	—	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = -10 \text{ V}, I_E = 0,$ $f = 1 \text{ MHz}$	—	2.5	—	pF

(Note) :  $h_{FE}$  Classification O : 80~160, Y : 120~240

