

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

# 2SA1145

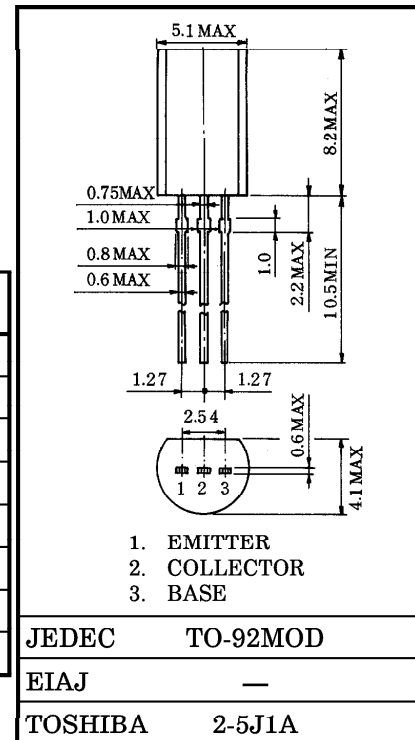
AUDIO FREQUENCY AMPLIFIER APPLICATIONS.

Unit in mm

- 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	$^\circ\text{C}$



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

Weight : 0.36g

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	$f_T$	$V_{CE} = -10\text{V}, I_C = -10\text{mA}$	—	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

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