

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC2705

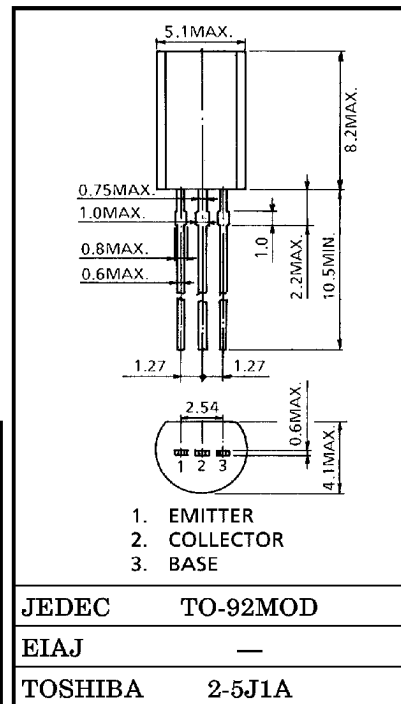
AUDIO FREQUENCY AMPLIFIER APPLICATIONS.

Unit in mm

- Complementary to 2SA1145.
- Small Collector Output Capacitance : $C_{ob} = 1.8\text{pF}$ (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}	$-55 \sim 150$	$^\circ\text{C}$



Weight : 0.36g

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	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_C = 0$	—	—	0.1	μA
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}	$V_{CB} = 10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$	—	1.8	—	pF

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

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