

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

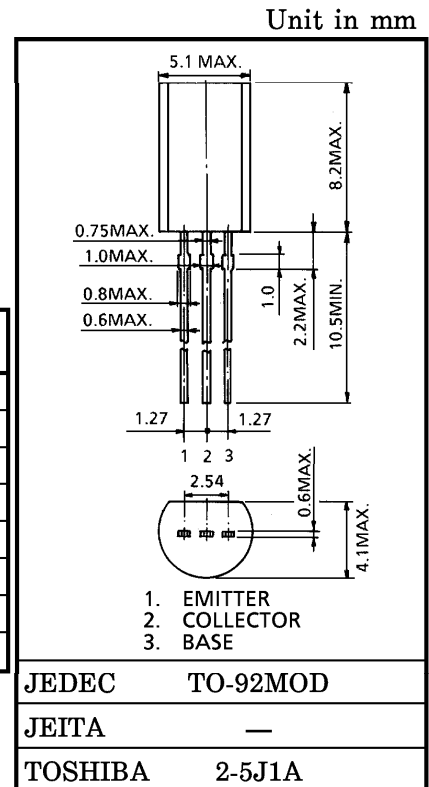
2SA1145

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 | $^\circ\text{C}$ |

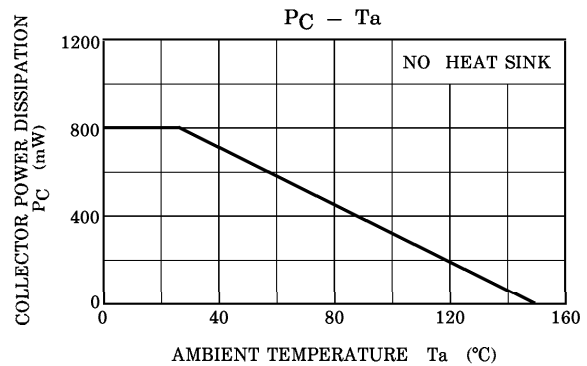
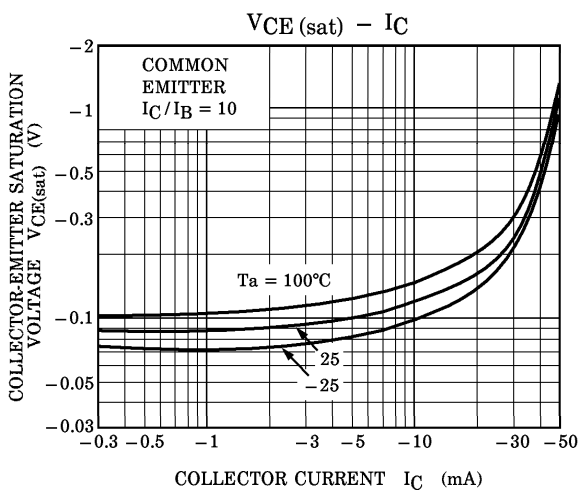
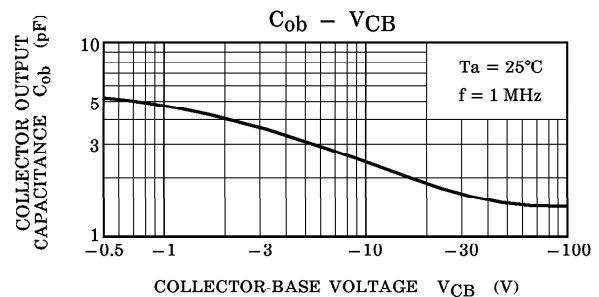
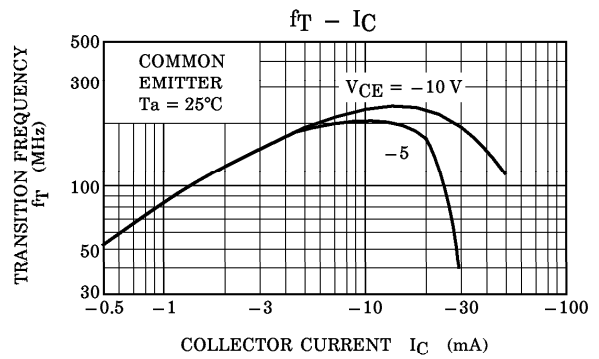
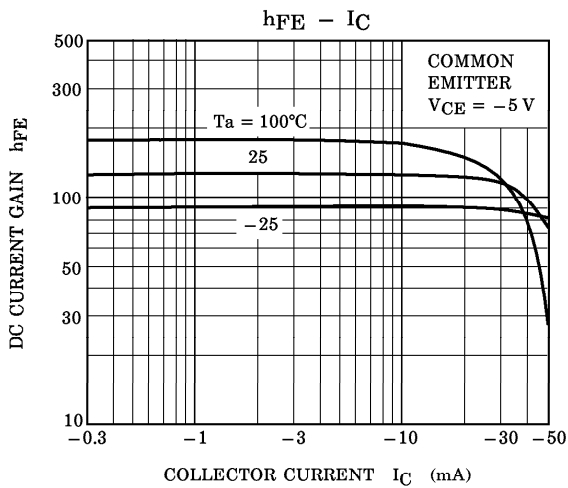
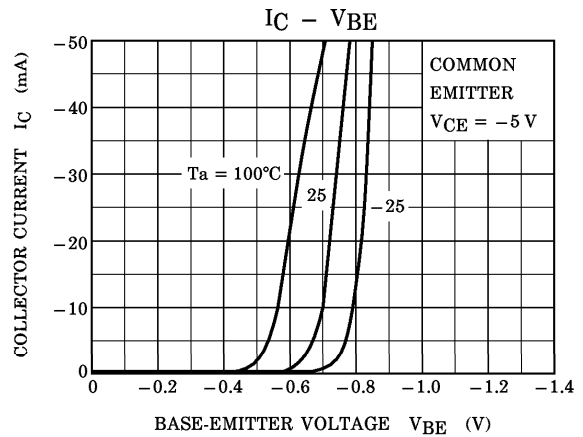
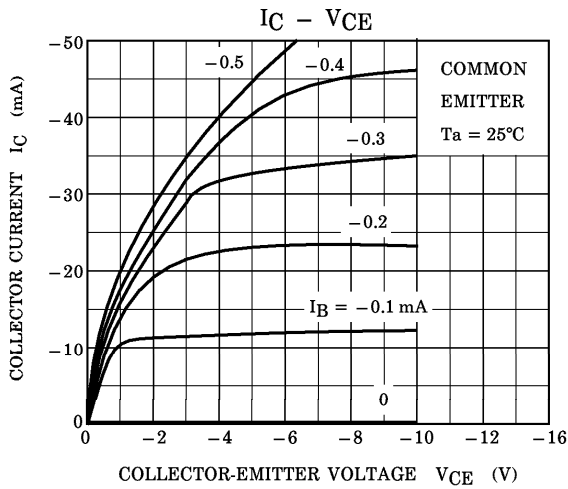


Weight : 0.36 g (Typ.)

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 | 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} | $V_{CB} = -10 \text{ V}, I_E = 0,$ $f = 1 \text{ MHz}$ | — | 2.5 | — | pF |

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



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