

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

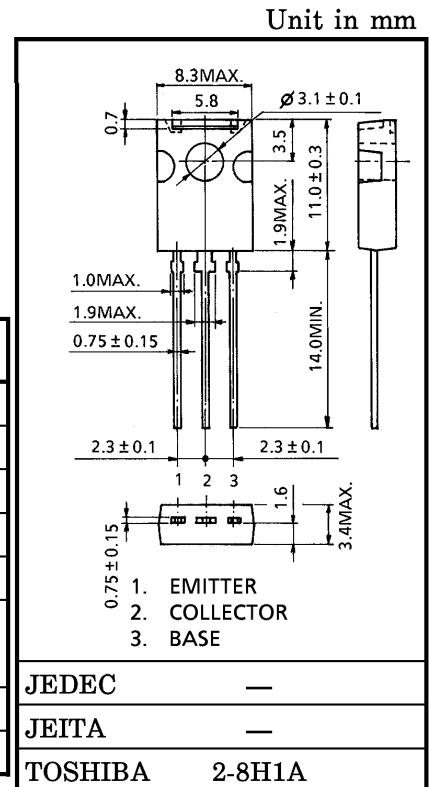
# 2SA1360

AUDIO FREQUENCY AMPLIFIER APPLICATIONS

- Complementary to 2SC3423
- Small Collector Output Capacitance :  $C_{ob}=2.5\text{pF}$  (Typ.)
- High Transition Frequency :  $f_T=200\text{MHz}$  (Typ.)

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

| 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 | $P_C$     | $T_a = 25^\circ\text{C}$ | 1.2              |
|                             |           | $T_c = 25^\circ\text{C}$ | 5                |
| Junction Temperature        | $T_j$     | 150                      | $^\circ\text{C}$ |
| Storage Temperature Range   | $T_{stg}$ | -55~150                  | $^\circ\text{C}$ |

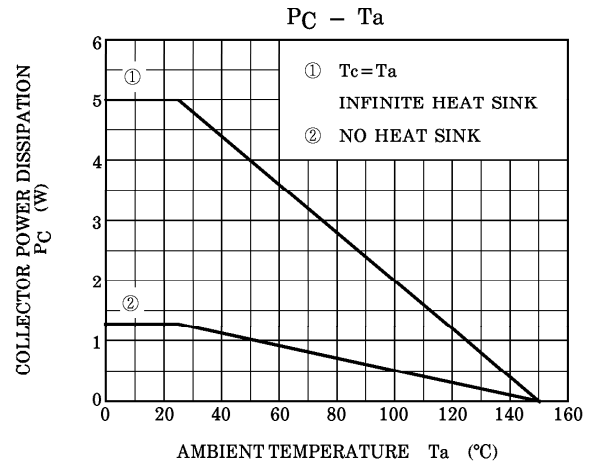
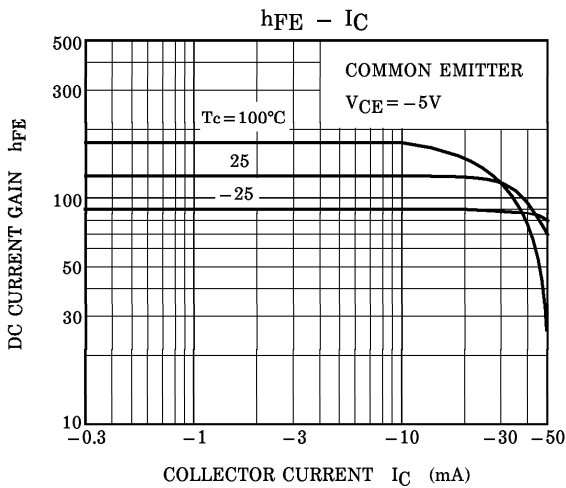
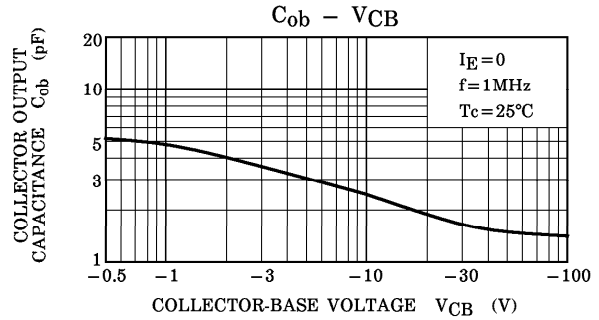
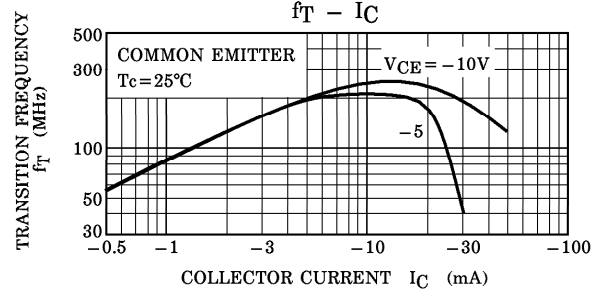
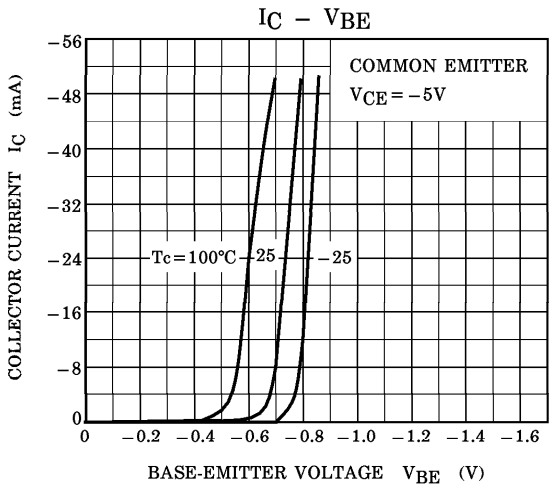
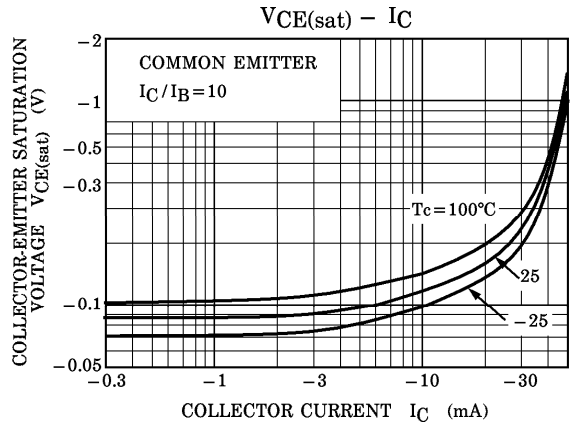
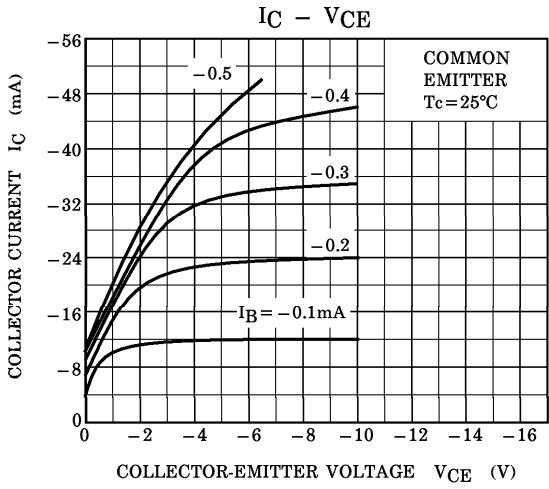


Weight : 0.82g (Typ.)

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

| 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                      | $h_{FE}$<br>(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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