

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC2458

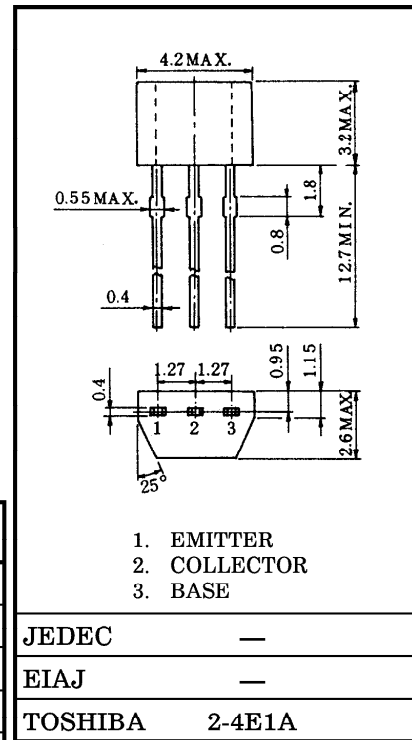
AUDIO AMPLIFIER APPLICATIONS.

Unit in mm

- High Current Capability : $I_C = 150\text{mA}$ (Max.)
- High DC Current Gain : $h_{FE} = 70 \sim 700$
- Excellent h_{FE} Linearity
: $h_{FE}(I_C = 0.1\text{mA}) / h_{FE}(I_C = 2\text{mA}) = 0.95$ (Typ.)
- Low Noise : $NF(2) = 1\text{dB}$ (Typ.), 10dB (Max.)
- Complementary to 2SA1048.
- Small Package.

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

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|-----------|---------|------------------|
| Collector-Base Voltage | V_{CBO} | 50 | V |
| Collector-Emitter Voltage | V_{CEO} | 50 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current | I_C | 150 | mA |
| Base Current | I_B | 50 | mA |
| Collector Power Dissipation | P_C | 200 | mW |
| Junction Temperature | T_j | 125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -55~125 | $^\circ\text{C}$ |



Weight : 0.13g

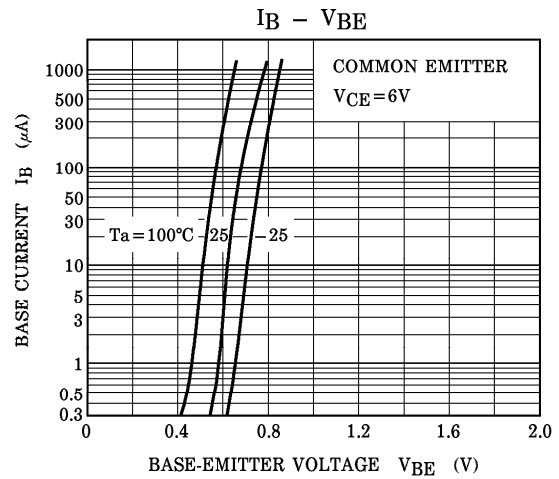
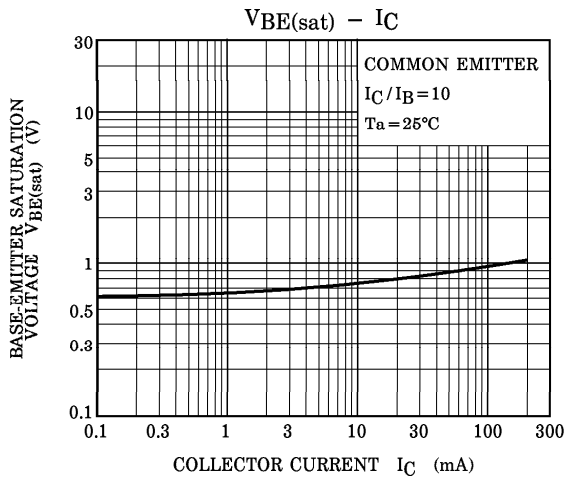
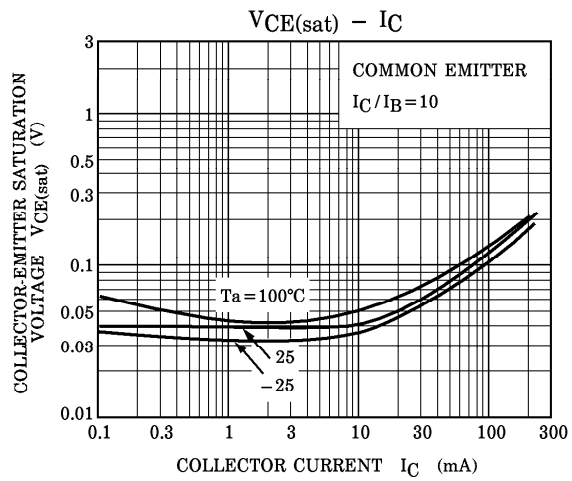
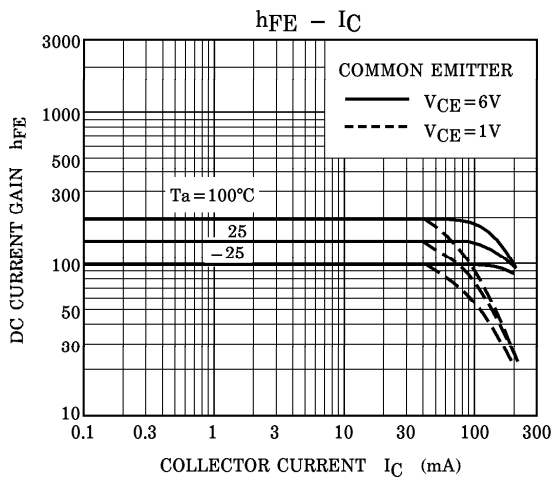
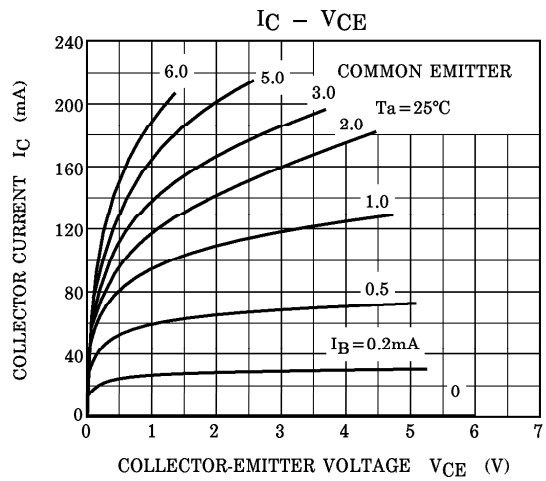
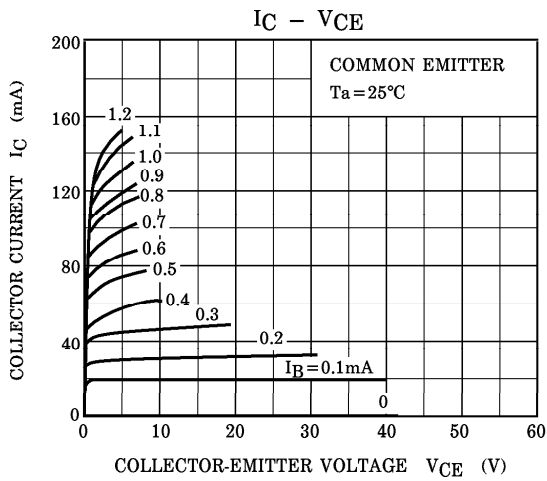
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|-----------------|---|------|------|------|---------------|
| Collector Cut-off Current | I_{CBO} | $V_{CB} = 50\text{V}, I_E = 0$ | — | — | 0.1 | μA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB} = 5\text{V}, I_C = 0$ | — | — | 0.1 | μA |
| DC Current Gain | h_{FE} (Note) | $V_{CE} = 6\text{V}, I_C = 2\text{mA}$ | 70 | — | 700 | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 100\text{mA}, I_B = 10\text{mA}$ | — | 0.1 | 0.25 | V |
| Transition Frequency | f_T | $V_{CE} = 10\text{V}, I_C = 1\text{mA}$ | 80 | — | — | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$ | — | 2.0 | 3.5 | pF |
| Noise Figure | NF | $V_{CE} = 6\text{V}, I_C = 0.1\text{mA}, f = 1\text{kHz}, R_g = 10\text{k}\Omega$ | — | 1.0 | 10 | dB |

Note : h_{FE} Classification O : 70~140, Y : 120~240, GR : 200~400, BL : 350~700

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