

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

2SC3963

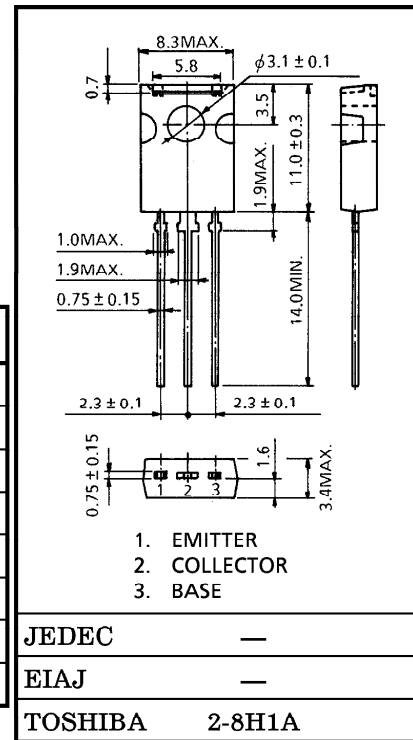
HIGH VOLTAGE GENERAL AMPLIFIER APPLICATIONS
 COLOR TV CLASS B SOUND OUTPUT APPLICATIONS

Unit in mm

- High Voltage : $V_{CEO} = 160V$

MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------------|-----------|---------|------|
| Collector-Base Voltage | V_{CBO} | 200 | V |
| Collector-Emitter Voltage | V_{CEO} | 160 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current | I_C | 200 | mA |
| Base Current | I_B | 100 | mA |
| Collector Power Dissipation | P_C | 1.5 | W |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature Range | T_{stg} | -55~150 | °C |



Weight : 1.4g (Typ.)

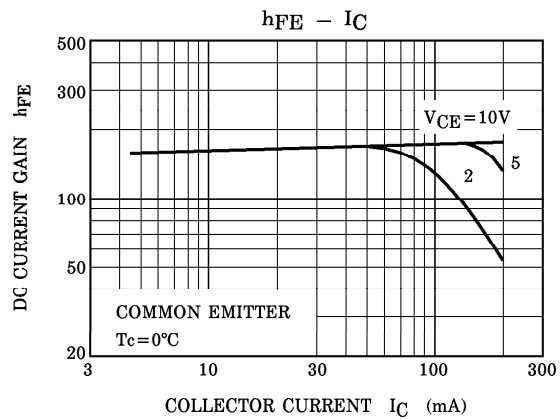
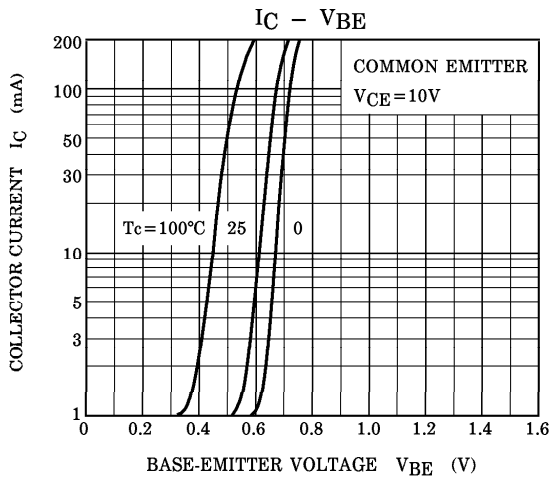
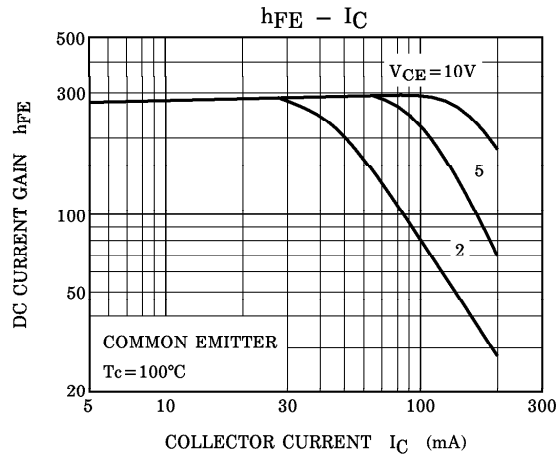
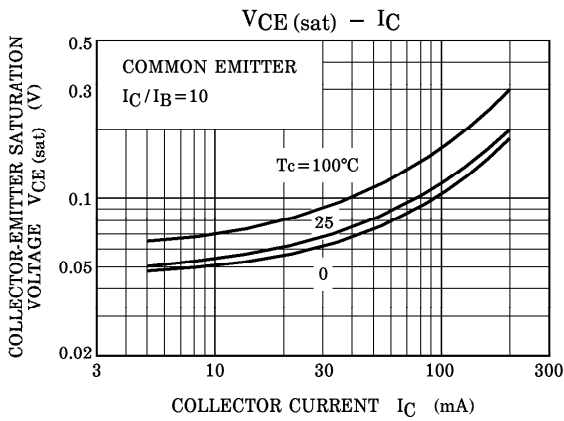
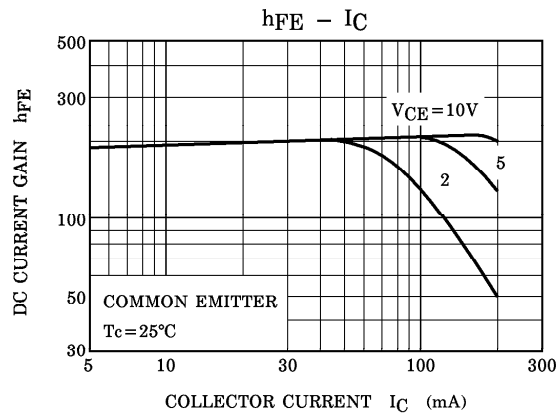
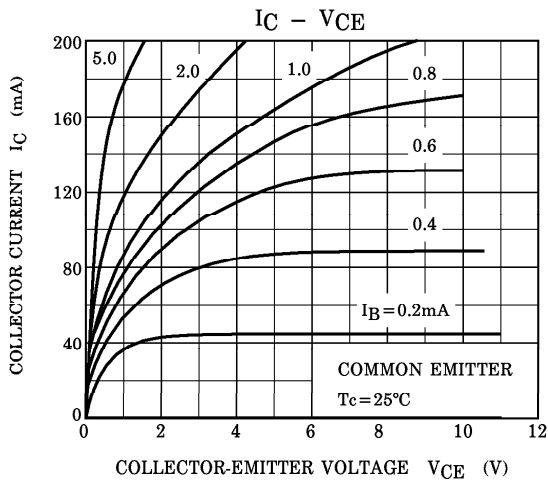
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------------|-----------------------|-----------------------------------|------|------|------|---------|
| Collector Cut-off Current | I_{CBO} | $V_{CB} = 200V, I_E = 0$ | — | — | 0.1 | μA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB} = 5V, I_C = 0$ | — | — | 0.1 | μA |
| DC Current Gain | $h_{FE(1)}$ (Note) | $V_{CE} = 10V, I_C = 50mA$ | 100 | — | 320 | |
| | $h_{FE(2)}$ | $V_{CE} = 10V, I_C = 150mA$ | 80 | — | — | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 200mA, I_B = 20mA$ | — | — | 1.0 | V |
| Base-Emitter Voltage | V_{BE} | $V_{CE} = 10V, I_C = 5mA$ | 0.55 | 0.65 | 0.75 | V |
| Transition Frequency | f_T | $V_{CE} = 10V, I_C = 50mA$ | 50 | — | — | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB} = 10V, I_E = 0, f = 1MHz$ | — | — | 10 | pF |

Note : $h_{FE(1)}$ Classification O : 100~200, Y : 160~320

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