

TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE (PCT PROCESS)

## 2SA1432

HIGH VOLTAGE CONTROL APPLICATIONS

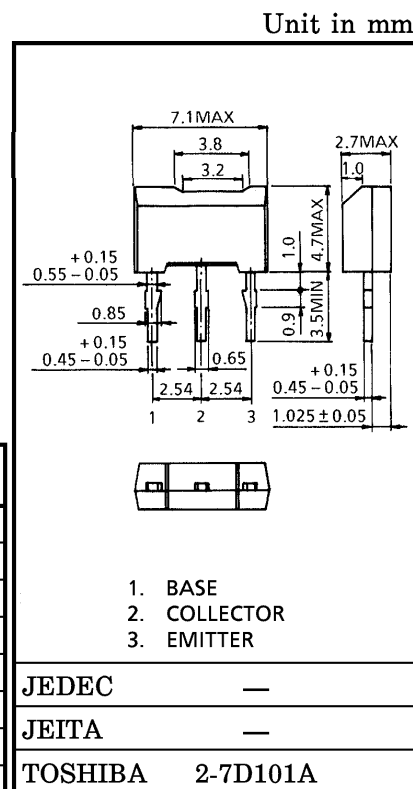
PLASMA DISPLAY, NIXIE TUBE DRIVER APPLICATIONS

CATHODE RAY TUBE BRIGHTNESS CONTROL APPLICATIONS

- High Voltage :  $V_{CBO} = -300\text{ V}$ ,  $V_{CEO} = -300\text{ V}$
- Low Saturation Voltage :  $V_{CE(sat)} = -0.5\text{ V (Max.)}$
- Small Collector Output Capacitance :  $C_{ob} = 6\text{ pF (Typ.)}$
- Complementary to 2SC3672

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

| CHARACTERISTIC              | SYMBOL    | RATING  | UNIT             |
|-----------------------------|-----------|---------|------------------|
| Collector-Base Voltage      | $V_{CBO}$ | -300    | V                |
| Collector-Emitter Voltage   | $V_{CEO}$ | -300    | V                |
| Emitter-Base Voltage        | $V_{EBO}$ | -8      | V                |
| Collector Current           | $I_C$     | -100    | mA               |
| Base Current                | $I_B$     | -20     | mA               |
| Collector Power Dissipation | $P_C$     | 1000    | mW               |
| Junction Temperature        | $T_j$     | 150     | $^\circ\text{C}$ |
| Storage Temperature Range   | $T_{stg}$ | -55~150 | $^\circ\text{C}$ |

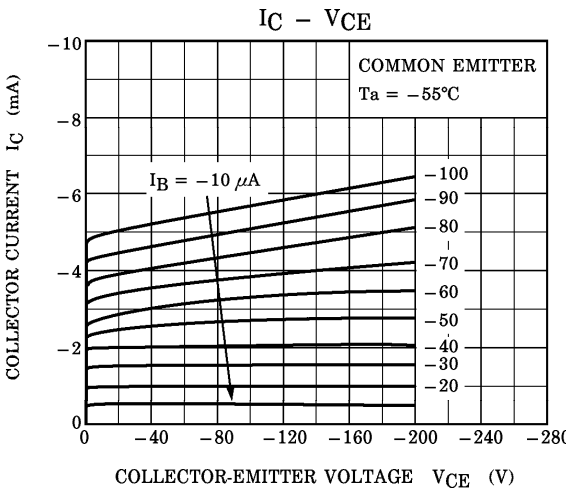
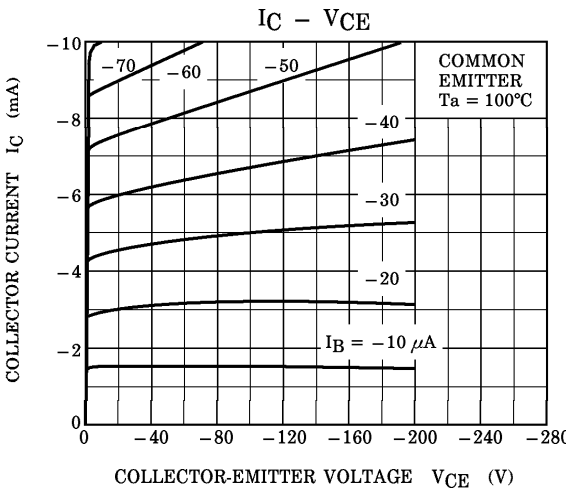
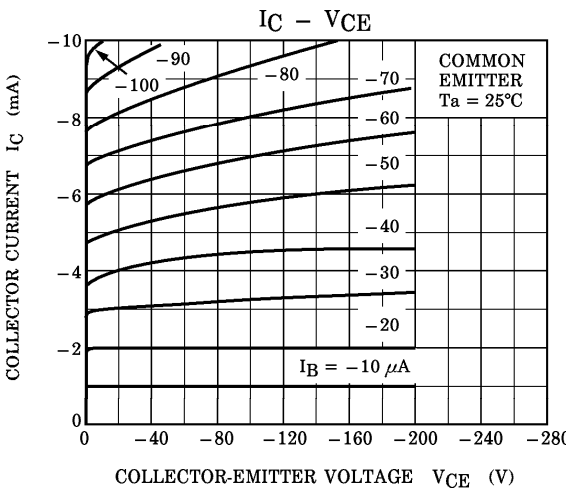
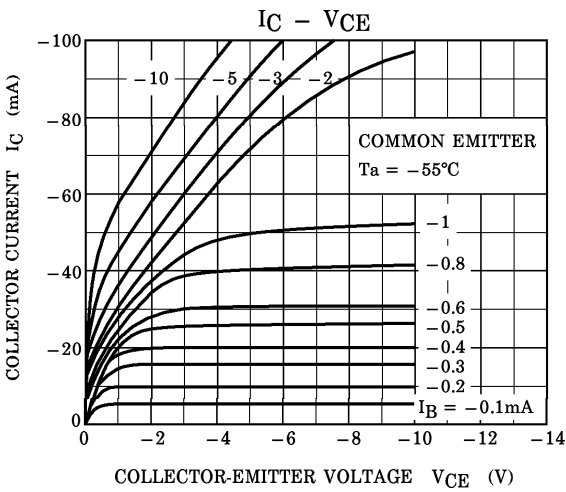
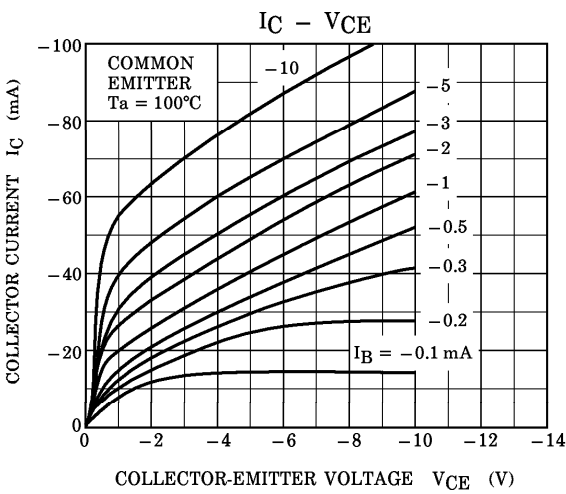
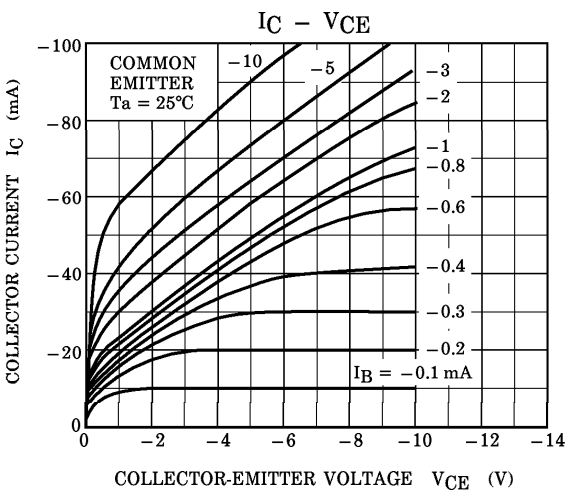


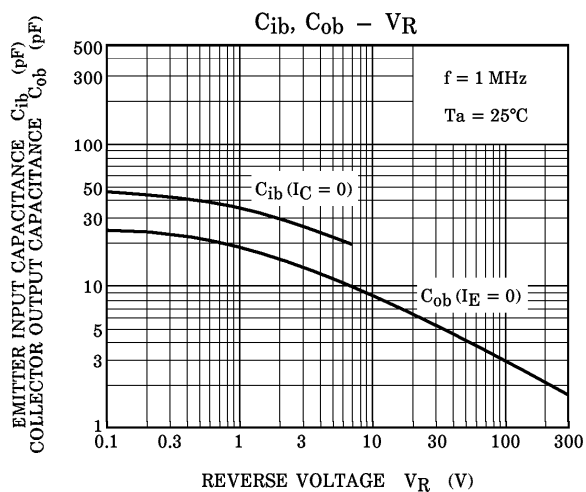
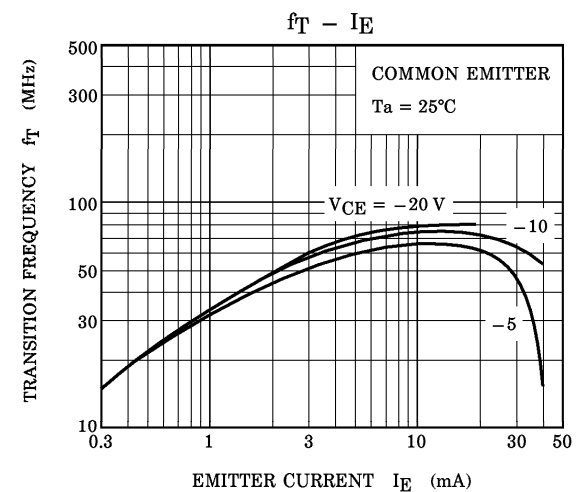
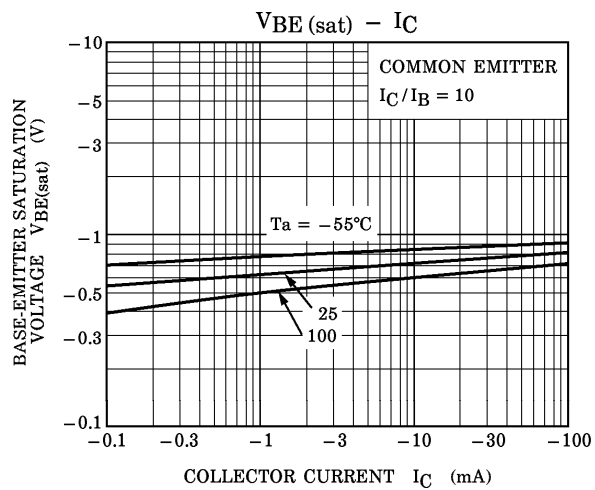
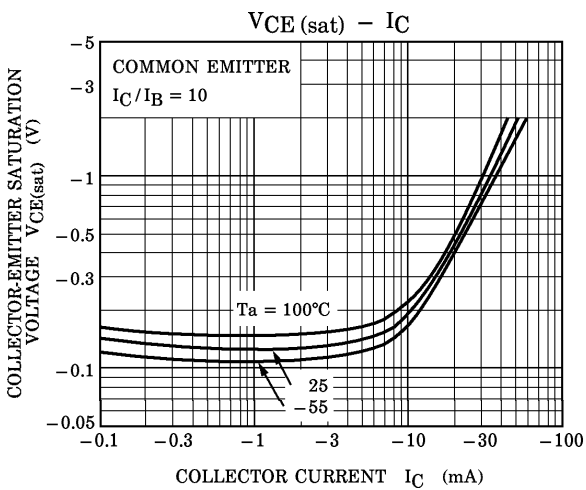
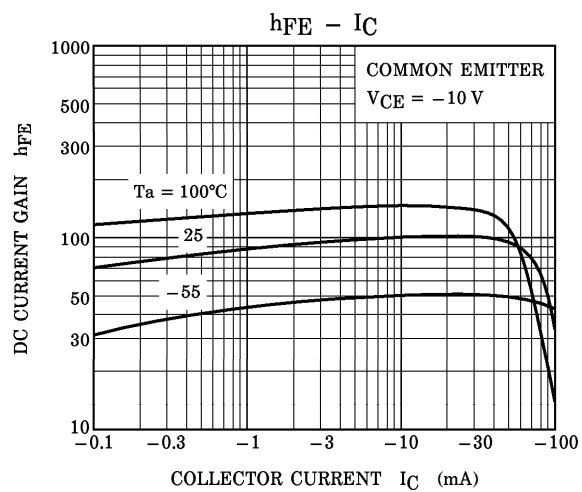
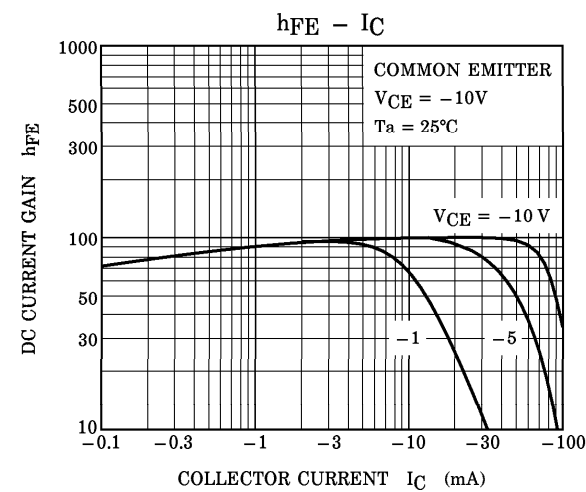
Weight : 0.2 g (Typ.)

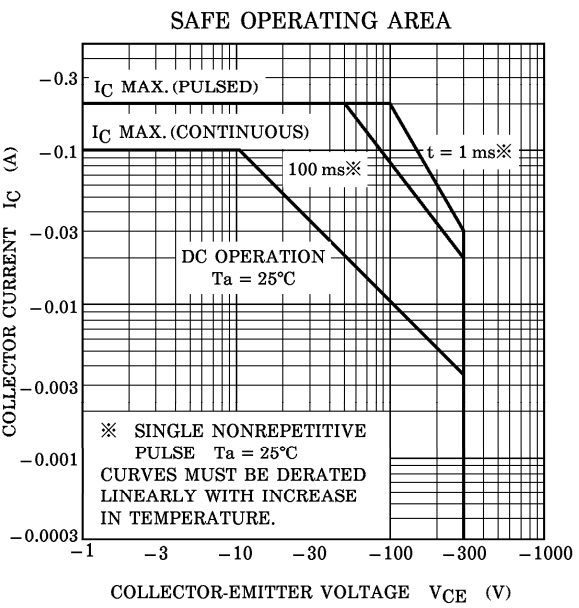
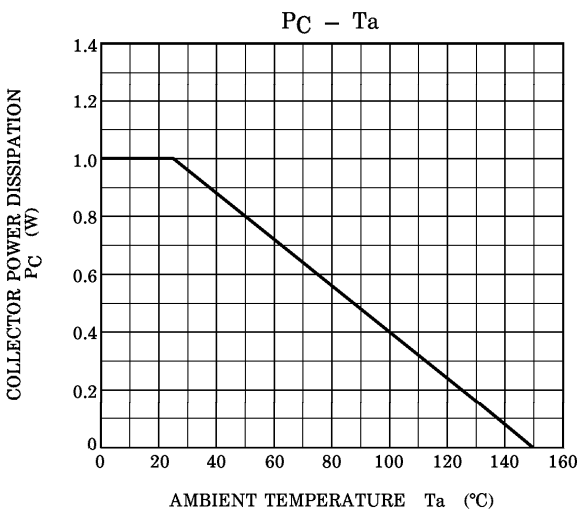
ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

| CHARACTERISTIC                       | SYMBOL                | TEST CONDITION                                           | MIN. | TYP. | MAX. | UNIT          |
|--------------------------------------|-----------------------|----------------------------------------------------------|------|------|------|---------------|
| Collector Cut-off Current            | $I_{CBO}$             | $V_{CB} = -300\text{ V}$ , $I_E = 0$                     | —    | —    | -0.1 | $\mu\text{A}$ |
| Emitter Cut-off Current              | $I_{EBO}$             | $V_{EB} = -8\text{ V}$ , $I_C = 0$                       | —    | —    | -0.1 | $\mu\text{A}$ |
| Collector-Emitter Breakdown Voltage  | $V_{(BR)CBO}$         | $I_C = -0.1\text{ mA}$ , $I_E = 0$                       | -300 | —    | —    | V             |
| Collector-Emitter Breakdown Voltage  | $V_{(BR)CEO}$         | $I_C = -1\text{ mA}$ , $I_B = 0$                         | -300 | —    | —    | V             |
| DC Current Gain                      | $h_{FE(1)}$<br>(Note) | $V_{CE} = -10\text{ V}$ , $I_C = -20\text{ mA}$          | 30   | —    | 150  |               |
|                                      | $h_{FE(2)}$           | $V_{CE} = -10\text{ V}$ , $I_C = -1\text{ mA}$           | 20   | —    | —    |               |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$         | $I_C = -20\text{ mA}$ , $I_B = -2\text{ mA}$             | —    | —    | -0.5 | V             |
| Base-Emitter Saturation Voltage      | $V_{BE(sat)}$         | $I_C = -20\text{ mA}$ , $I_B = -2\text{ mA}$             | —    | —    | -1.2 | V             |
| Transition Frequency                 | $f_T$                 | $V_{CE} = -10\text{ V}$ , $I_C = -20\text{ mA}$          | 40   | 60   | —    | MHz           |
| Collector Output Capacitance         | $C_{ob}$              | $V_{CB} = -20\text{ V}$ , $I_E = 0$ , $f = 1\text{ MHz}$ | —    | 6    | 8    | pF            |

(Note) :  $h_{FE(1)}$  Classification R : 30~90, O : 50~150







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