TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

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TV HORIZONTAL DEFLECTION OUTPUT APPLICATIONS

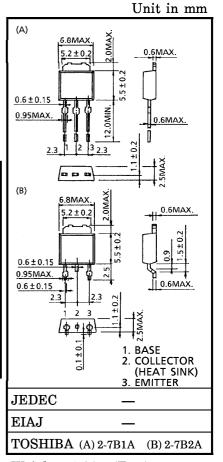
TV CHROMA OUTPUT APPLICATIONS

• High Voltage : $V_{CEO} = 300 \text{ V}$

• Low Output Capacitance : $C_{ob} = 3.0 \text{ pF}$ (Typ.)

MAXIMUM RATINGS (Ta = 25° C)

| CHARACTERISTIC | | SYMBOL | RATING | UNIT | |
|-----------------------------|-------|--------------------|---------|------|--|
| Collector-Base Voltage | | v_{CBO} | 300 | V | |
| Collector-Emitter Voltage | | v_{CEO} | 300 | V | |
| Emitter-Base Voltage | | v_{EBO} | 7 | V | |
| Collector Current | DC | $I_{\mathbf{C}}$ | 100 | mA | |
| | Pulse | I_{CP} | 200 | | |
| Base Current | | $I_{\mathbf{B}}$ | 50 | mA | |
| Collector Power Dissipation | | $P_{\mathbf{C}}$ | 10 | w | |
| $(Tc = 25^{\circ}C)$ | | 10 | 10 | | |
| Junction Temperature | | T_{j} | 150 | °C | |
| Storage Temperature Range | | $\mathrm{T_{stg}}$ | -55~150 | °C | |

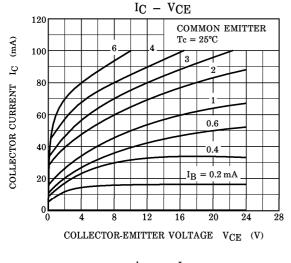


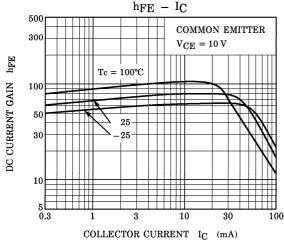
Weight: 0.36 g (Typ.)

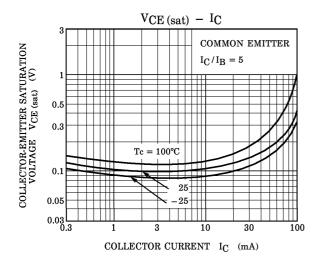
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

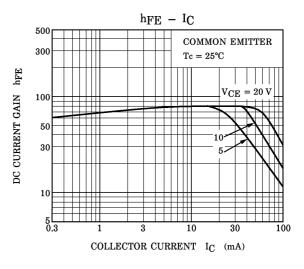
| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---|-----------------------|---|------|------|------|---------|
| Collector Cut-off Current | I_{CBO} | $V_{CB} = 240 \text{ V}, I_{E} = 0$ | _ | _ | 1.0 | μ A |
| Emitter Cut-off Current | $I_{ m EBO}$ | $V_{EB} = 7 V, I_{C} = 0$ | _ | _ | 1.0 | mA |
| DC Current Gain | hFE (1) | $ m V_{CE} = 10 \ V, \ I_{C} = 0.5 \ mA$ | 20 | | _ | |
| | h _{FE} (2) | $V_{CE} = 10 V, I_{C} = 20 mA$ | 30 | | 200 | |
| Collector-Emitter Saturation Voltage | V _{CE} (sat) | $I_{\mathrm{C}}=10\mathrm{mA},~I_{\mathrm{B}}=1\mathrm{mA}$ | _ | _ | 1.0 | V |
| Base-Emitter Saturation Voltage | V _{BE} (sat) | $I_{\mathrm{C}}=10\mathrm{mA},~I_{\mathrm{B}}=1\mathrm{mA}$ | _ | _ | 1.0 | V |
| Transition Frequency | ${ m f_T}$ | $V_{CE} = 10 \text{ V}, I_{C} = 20 \text{ mA}$ | 40 | 70 | _ | MHz |
| Collector Output Capacitance | $\mathrm{c_{ob}}$ | $V_{CB} = 20 V, I_{E} = 0, f = 1 MHz$ | _ | 3.0 | _ | pF |

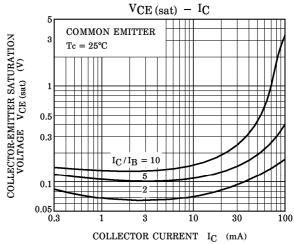
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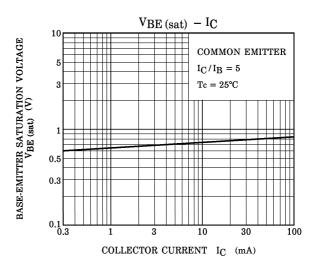




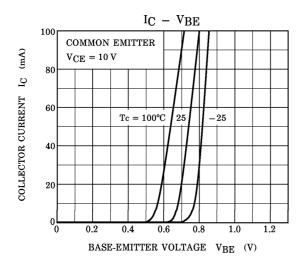


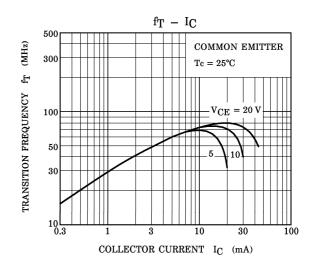


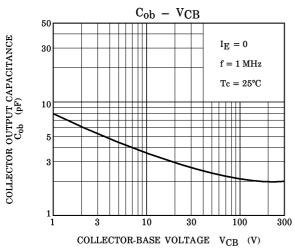


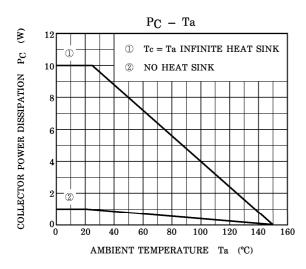


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