Unit in mm

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED TYPE (PCT PROCESS)

## 2 S C 5 0 2 7

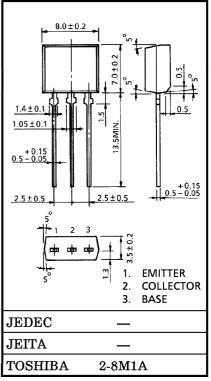
HIGH VOLTAGE SWITCHING AND AMPLIFIER APPLICATIONS
COLOR TV HORIZONTAL DRIVER APPLICATIONS
COLOR TV CHROMA OUTPUT APPLICATIONS

• High Voltage : V<sub>CEO</sub>=300V

• Small Collector Output Capacitance : Cob=3.0pF (Typ.)

## MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC              | SYMBOL             | RATING  | UNIT |
|-----------------------------|--------------------|---------|------|
| Collector-Base Voltage      | V <sub>CBO</sub>   | 300     | V    |
| Collector-Emitter Voltage   | $V_{CEO}$          | 300     | V    |
| Emitter-Base Voltage        | $V_{\mathrm{EBO}}$ | 7       | V    |
| Collector Current           | $I_{\mathbf{C}}$   | 100     | mA   |
| Base Current                | IB                 | 50      | mA   |
| Collector Power Dissipation | PC                 | 1.3     | W    |
| Junction Temperature        | $T_{j}$            | 150     | °C   |
| Storage Temperature Range   | $\mathrm{T_{stg}}$ | -55~150 | °C   |

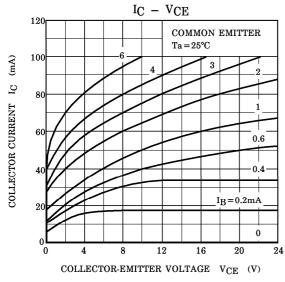


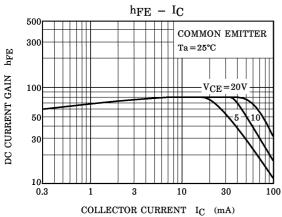
Weight: 0.55g (Typ.)

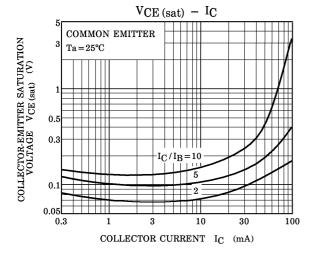
## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

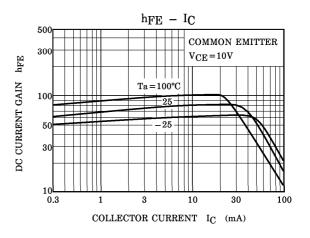
| CHARACTERISTIC               | SYMBOL                     | TEST CONDITION                      | MIN. | TYP. | MAX. | UNIT    |
|------------------------------|----------------------------|-------------------------------------|------|------|------|---------|
| Collector Cut-off Current    | $I_{CBO}$                  | $V_{CB} = 240V, I_{E} = 0$          | _    | _    | 1.0  | $\mu$ A |
| Emitter Cut-off Current      | $I_{EBO}$                  | $V_{EB} = 7V, I_{C} = 0$            | _    |      | 1.0  | $\mu$ A |
| IDC Current Gain             | h <sub>FE (1)</sub>        | $V_{CE} = 10V$ , $I_{C} = 4mA$      | 20   | _    | _    |         |
|                              | h <sub>FE</sub> (2)        | $V_{CE} = 10V, I_{C} = 20mA$        | 30   | _    | 200  |         |
| Collector-Emitter Saturation | Van                        | $I_C=10$ mA, $I_B=1$ mA             | 1    | _    | 1.0  | V       |
| Voltage                      | V <sub>CE</sub> (sat)      |                                     |      |      |      |         |
| Base-Emitter Saturation      | Vpp ( )                    | $I_C=10mA$ , $I_B=1mA$              |      | _    | 1.0  | V       |
| Voltage                      | V <sub>BE</sub> (sat)      |                                     |      |      |      |         |
| Transition Frequency         | ${ m f_T}$                 | $V_{CE} = 10V$ , $I_{C} = 20$ mA    | 50   | 70   | _    | MHz     |
| Collector Output Capacitance | $\mathrm{c}_{\mathrm{ob}}$ | $V_{CB} = 20V, I_{E} = 0, f = 1MHz$ | _    | 3.0  | _    | pF      |

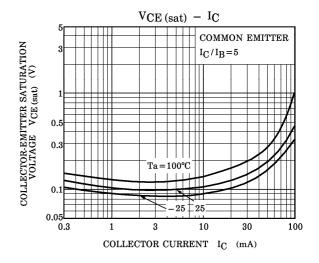
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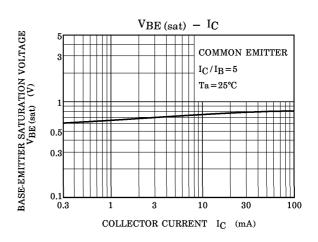




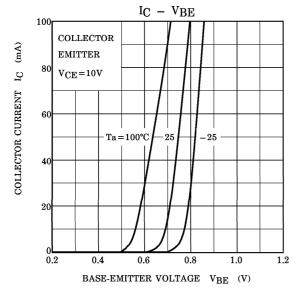


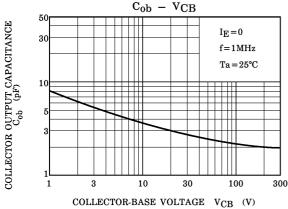


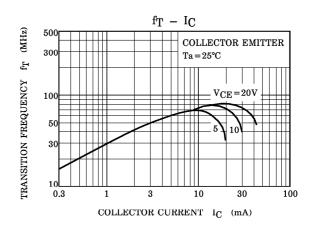


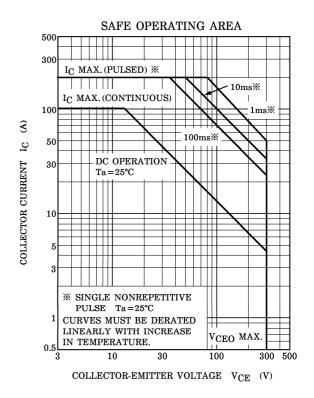


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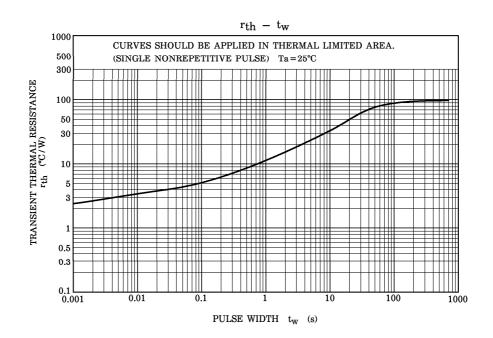


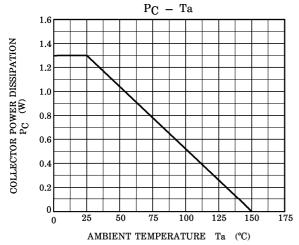






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