

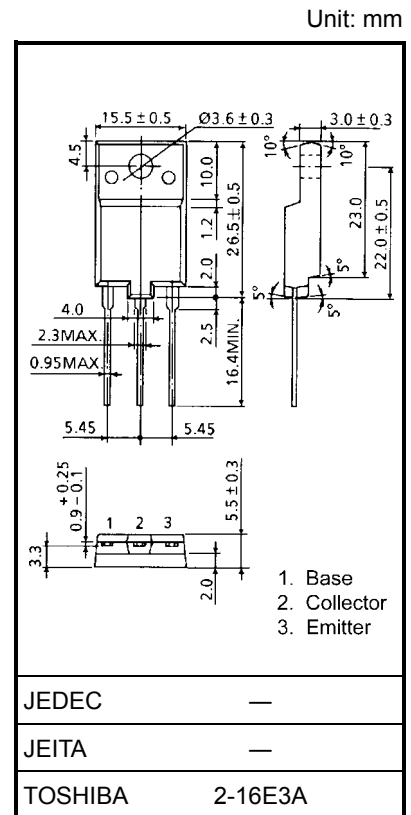
# 2SD2599

## HORIZONTAL DEFLECTION OUTPUT FOR COLOR TV

- High Voltage :  $V_{CBO} = 1500\text{ V}$
- Low Saturation Voltage :  $V_{CE(sat)} = 8\text{ V (Max.)}$
- High Speed :  $t_f = 0.5\ \mu\text{s (Typ.)}$
- Built-in Damper Type
- Collector Metal (Fin) is Fully Covered with Mold Resin.

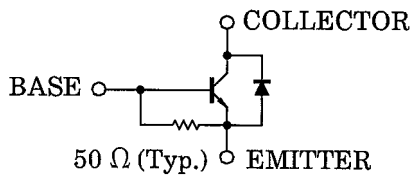
### MAXIMUM RATINGS ( $T_c = 25^\circ\text{C}$ )

| CHARACTERISTIC              | SYMBOL    | RATING   | UNIT             |
|-----------------------------|-----------|----------|------------------|
| Collector-Base Voltage      | $V_{CBO}$ | 1500     | V                |
| Collector-Emitter Voltage   | $V_{CEO}$ | 600      | V                |
| Emitter-Base Voltage        | $V_{EBO}$ | 5        | V                |
| Collector Current           | DC        | $I_C$    | 3.5              |
|                             | Pulse     | $I_{CP}$ | 7                |
| Base Current                | $I_B$     | 1        | A                |
| Collector Power Dissipation | $P_C$     | 40       | W                |
| Junction Temperature        | $T_j$     | 150      | $^\circ\text{C}$ |
| Storage Temperature Range   | $T_{stg}$ | -55~150  | $^\circ\text{C}$ |



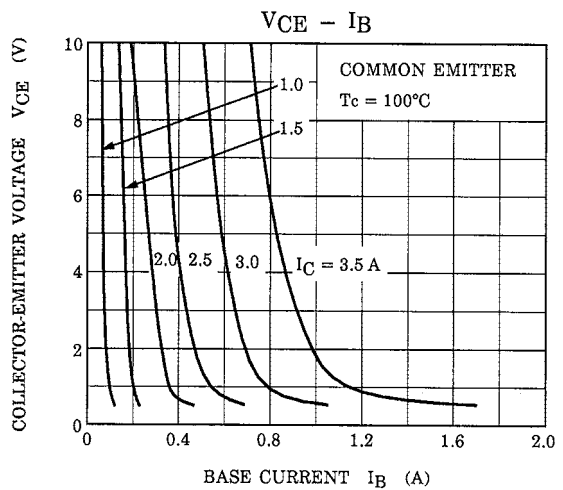
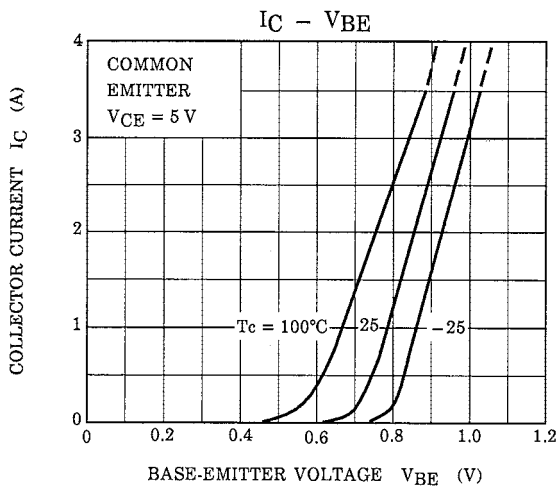
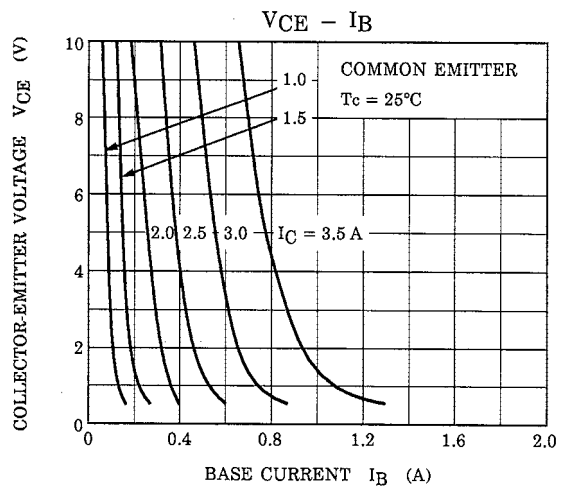
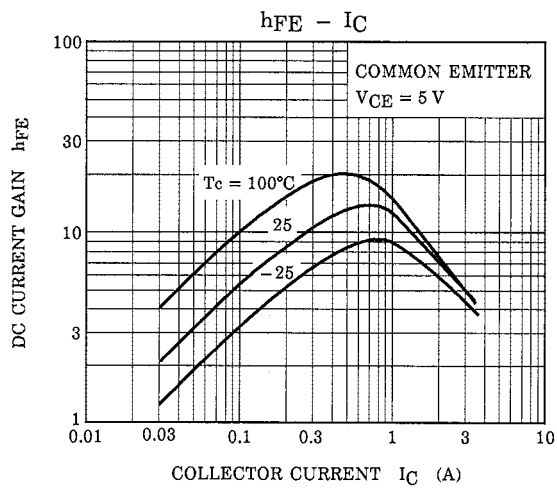
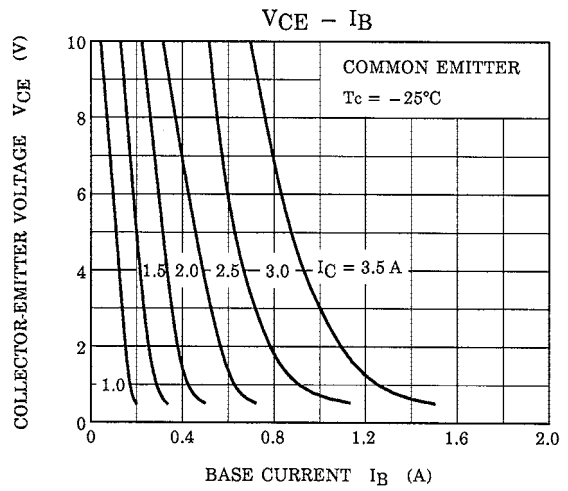
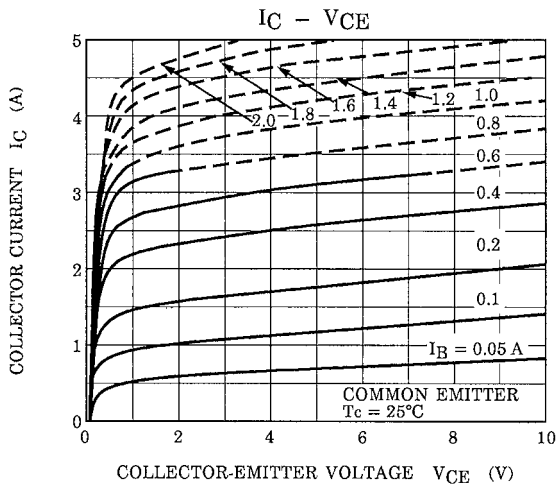
Weight: 5.5 g (typ.)

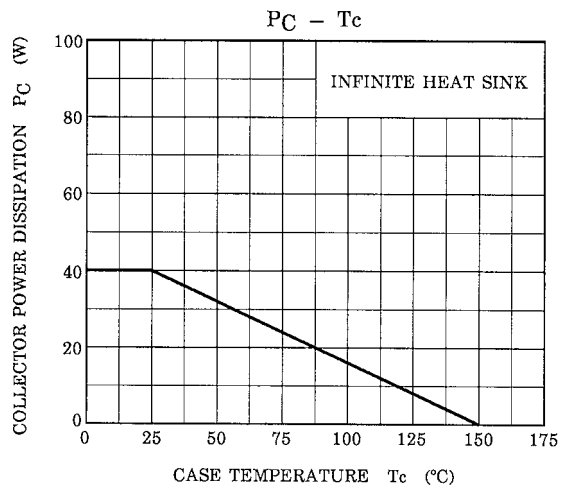
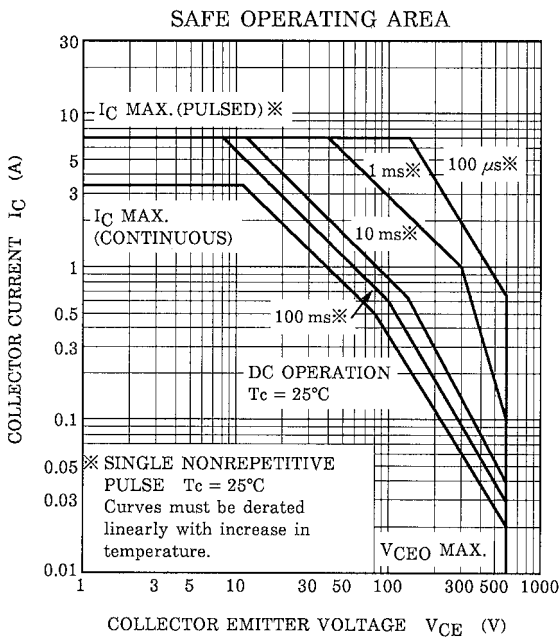
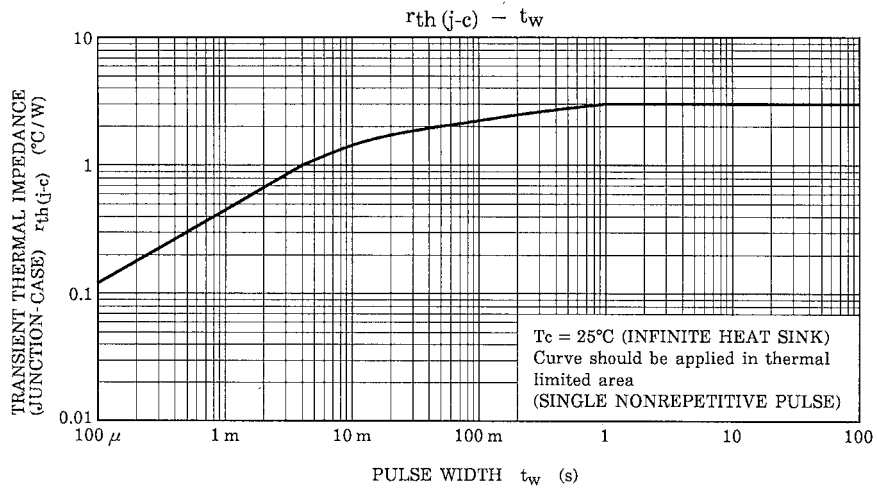
### EQUIVALENT CIRCUIT



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

| CHARACTERISTIC                       | SYMBOL        | TEST CONDITION   | MIN | TYP. | MAX | UNIT          |
|--------------------------------------|---------------|--|-----|------|-----|---------------|
| Collector Cut-off Current            | $I_{CBO}$     | $V_{CB} = 1500\text{ V}, I_E = 0$  | —   | —    | 1   | mA            |
| Emitter Cut-off Current              | $I_{EBO}$     | $V_{EB} = 5\text{ V}, I_C = 0$   | 66  | —    | 200 | mA            |
| Emitter-Base Breakdown Voltage       | $V_{(BR)EBO}$ | $I_C = 300\text{ mA}, I_C = 0$   | 5   | —    | —   | V             |
| DC Current Gain                      | $h_{FE}$      | $V_{CE} = 5\text{ V}, I_C = 0.5\text{ A}$  | 8   | —    | 25  | —             |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 3\text{ A}, I_B = 0.8\text{ A}$   | —   | 5    | 8   | V             |
| Base-Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C = 3\text{ A}, I_B = 0.8\text{ A}$   | —   | 0.9  | 1.5 | V             |
| Forward Voltage (Damper Diode)       | $V_F$         | $I_F = 3.5\text{ A}$   | —   | 1.5  | 2.0 | V             |
| Transition Frequency                 | $f_T$         | $V_{CE} = 10\text{ V}, I_C = 0.1\text{ A}$   | —   | 3    | —   | MHz           |
| Collector Output Capacitance         | $C_{ob}$      | $V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$                                    | —   | 55   | —   | pF            |
| Switching Time                       | Storage Time  | $I_{CP} = 3\text{ A}, I_{B1}(\text{end}) = 0.8\text{ A}$<br>$f_H = 15.75\text{ kHz}$ | —   | 7.5  | 10  | $\mu\text{s}$ |
|                                      | Fall Time     |  | —   | 0.5  | 1.0 |               |





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