

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

# 2SC5855

HORIZONTAL DEFLECTION OUTPUT FOR  
SUPER HIGH RESOLUTION

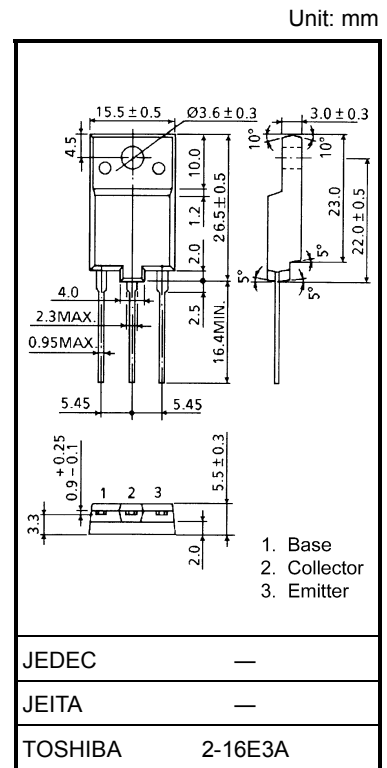
DISPLAY, COLOR TV, DIGITAL TV

HIGH SPEED SWITCHING APPLICATIONS

- High Voltage :  $V_{CBO} = 1500\text{ V}$
- Low Saturation Voltage :  $V_{CE(sat)} = 3\text{ V (max)}$
- High Speed :  $t_f(2) = 0.1\ \mu\text{s (typ.)}$

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

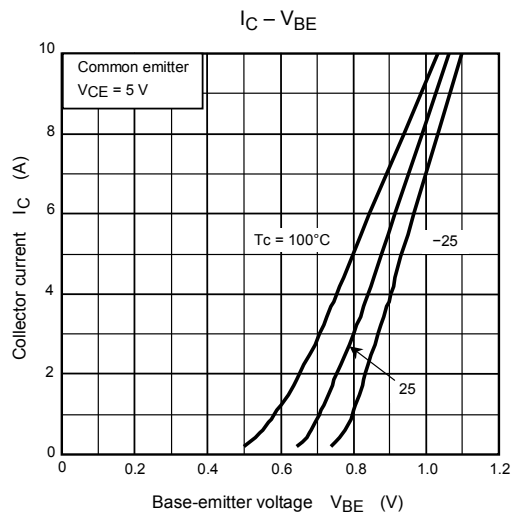
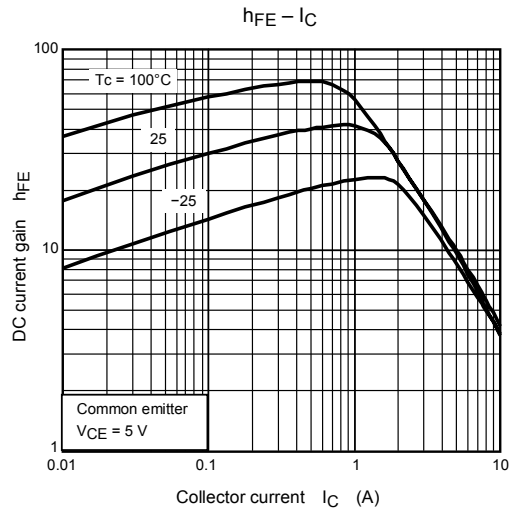
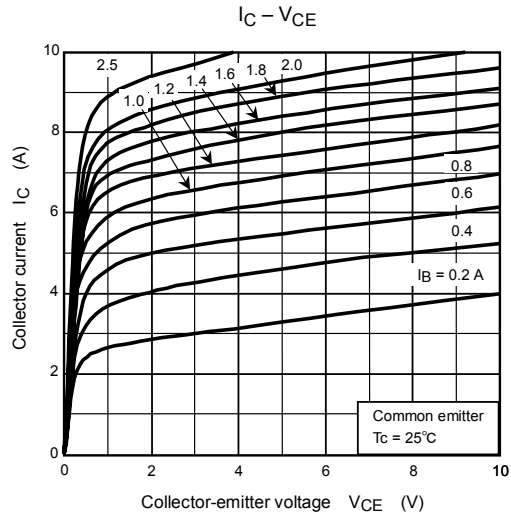
| CHARACTERISTIC              | SYMBOL    | RATING   | UNIT             |
|-----------------------------|-----------|----------|------------------|
| Collector-Base Voltage      | $V_{CBO}$ | 1500     | V                |
| Collector-Emitter Voltage   | $V_{CEO}$ | 700      | V                |
| Emitter-Base Voltage        | $V_{EBO}$ | 5        | V                |
| Collector Current           | DC        | $I_C$    | 10               |
|                             | Pulse     | $I_{CP}$ | 20               |
| Base Current                | $I_B$     | 5        | A                |
| Collector Power Dissipation | $P_C$     | 50       | W                |
| Junction Temperature        | $T_j$     | 150      | $^\circ\text{C}$ |
| Storage Temperature Range   | $T_{stg}$ | -55~150  | $^\circ\text{C}$ |

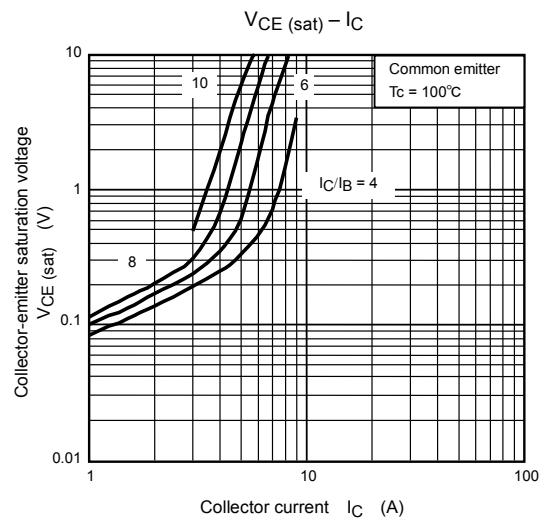
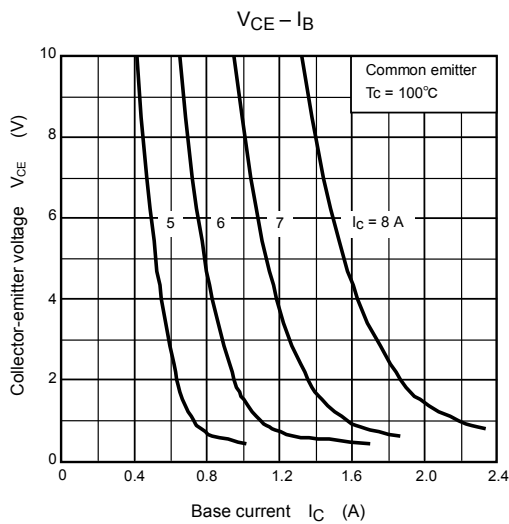
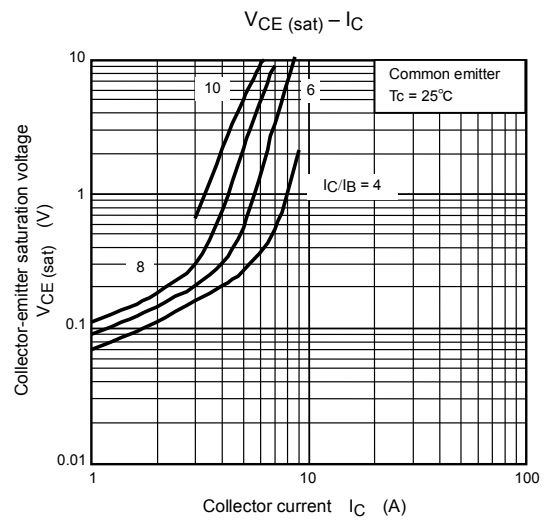
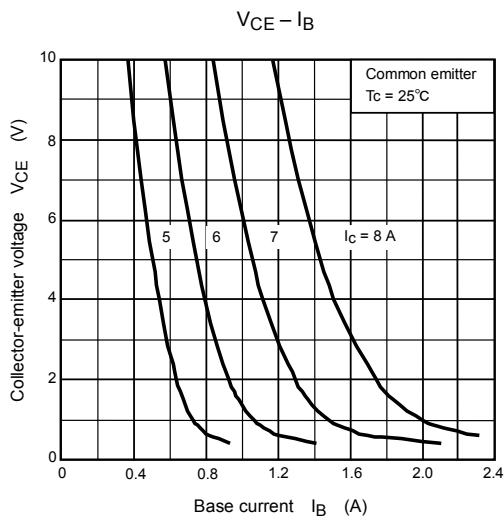
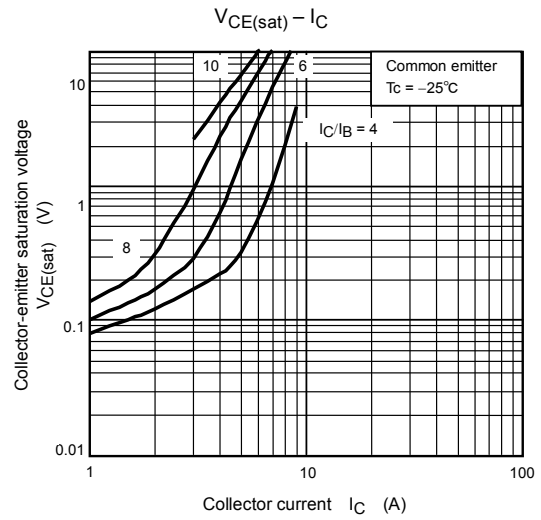
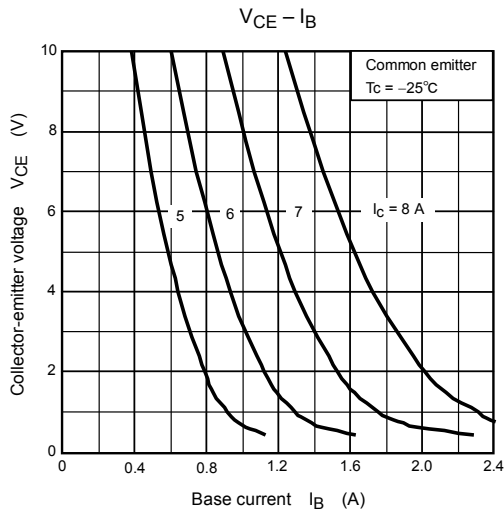


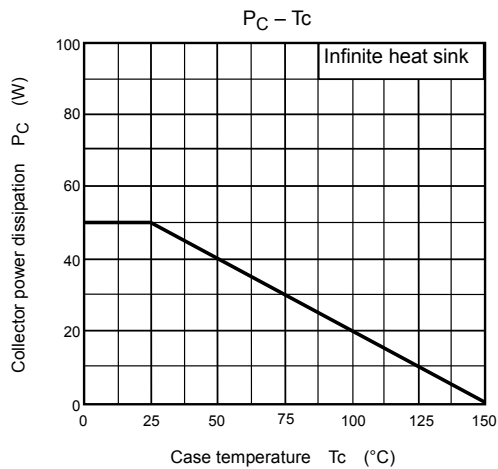
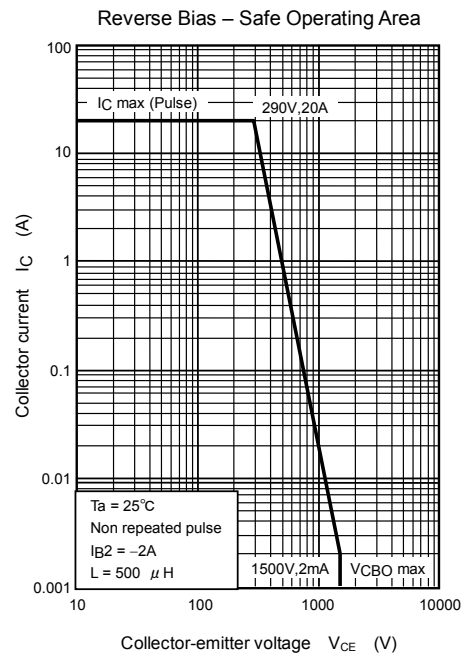
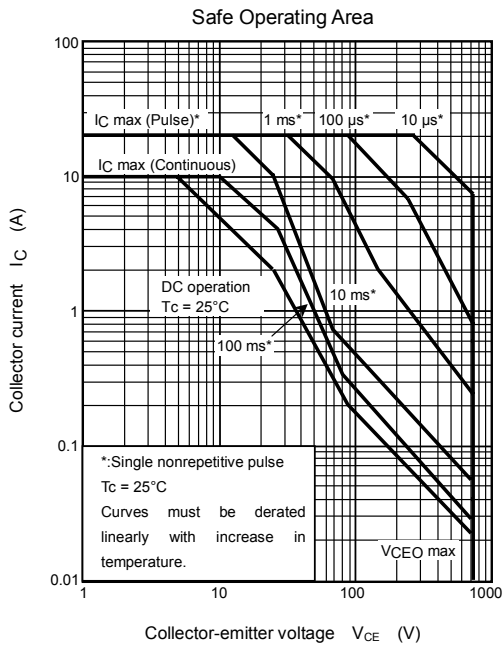
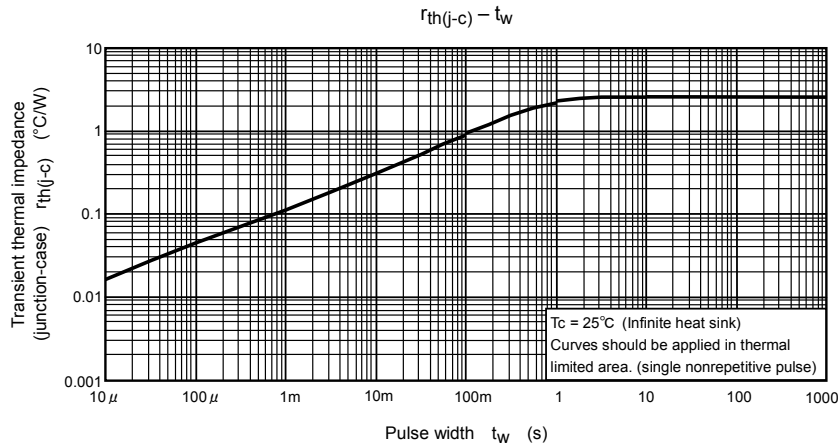
Weight: 5.5 g (typ.)

### 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               | $I_{EBO}$     | $V_{EB} = 5\text{ V}, I_C = 0$                    | —   | —    | 100 | $\mu\text{A}$ |
| Collector - Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = 10\text{ mA}, I_B = 0$                     | 700 | —    | —   | V             |
| DC Current Gain                       | $h_{FE(1)}$   | $V_{CE} = 5\text{ V}, I_C = 1\text{ A}$           | 28  | —    | 60  | —             |
|                                       | $h_{FE(2)}$   | $V_{CE} = 5\text{ V}, I_C = 6\text{ A}$           | 6.2 | —    | 10  |               |
|                                       | $h_{FE(3)}$   | $V_{CE} = 5\text{ V}, I_C = 8\text{ A}$           | 4.3 | —    | 6.7 |               |
| Collector-Emitter Saturation Voltage  | $V_{CE(sat)}$ | $I_C = 8\text{ A}, I_B = 2\text{ A}$              | —   | —    | 3   | V             |
| Base-Emitter Saturation Voltage       | $V_{BE(sat)}$ | $I_C = 8\text{ A}, I_B = 2\text{ A}$              | —   | 1.0  | 1.4 | V             |
| Transition Frequency                  | $f_T$         | $V_{CE} = 10\text{ V}, I_C = 0.1\text{ A}$        | —   | 2    | —   | MHz           |
| Collector Output Capacitance          | $C_{ob}$      | $V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$ | —   | 120  | —   | pF            |
| Switching Time                        | Storage Time  | $t_{stg(1)}$                                      | —   | 2.8  | —   | $\mu\text{s}$ |
|                                       | Fall Time     | $t_f(1)$  |     | 0.2  | —   |               |
|                                       | Storage Time  | $t_{stg(2)}$                                      | —   | 2.3  | —   | $\mu\text{s}$ |
|                                       | Fall Time     | $t_f(2)$  |     | 0.1  | —   |               |







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