

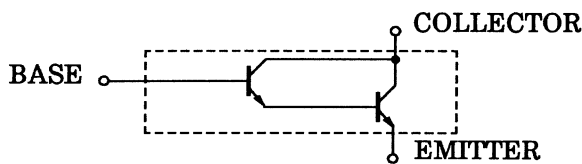
TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process) (Darlington)

## 2SC982TM

Printer Drive, Core Drive and LED Drive Applications  
Low Frequency Amplifier Applications

- High DC current gain:  $h_{FE(1)} = 5000$  (min) ( $I_C = 10$  mA)  
:  $h_{FE(2)} = 10000$  (min) ( $I_C = 100$  mA)

### Equivalent Circuit



### Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

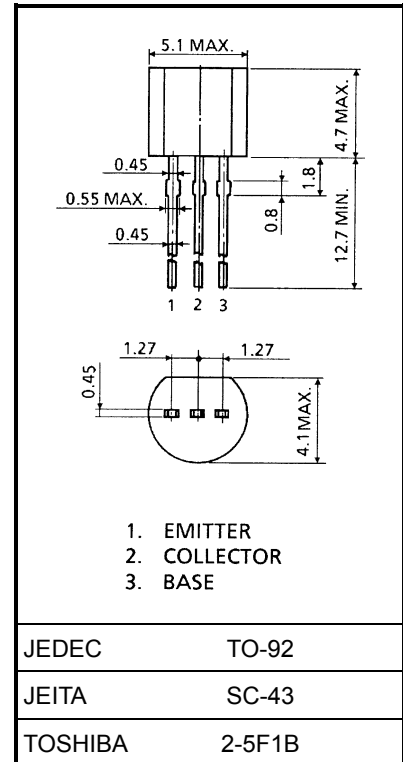
| Characteristics             | Symbol           | Rating   | Unit             |
|-----------------------------|------------------|----------|------------------|
| Collector-base voltage      | $V_{CBO}$        | 40       | V                |
| Collector-emitter voltage   | $V_{CEO}$        | 40       | V                |
| Emitter-base voltage        | $V_{EBO}$        | 10       | V                |
| Collector current           | DC               | $I_C$    | 300              |
|                             | Pulsed<br>(Note) | $I_{CP}$ | 500              |
| Base current                | $I_B$            | 10       | mA               |
| Collector power dissipation | $P_C$            | 400      | mW               |
| Junction temperature        | $T_j$            | 125      | $^\circ\text{C}$ |
| Storage temperature range   | $T_{stg}$        | -55~125  | $^\circ\text{C}$ |

Note: Pulse width  $\leq 10$  ms, duty cycle  $\leq 10\%$

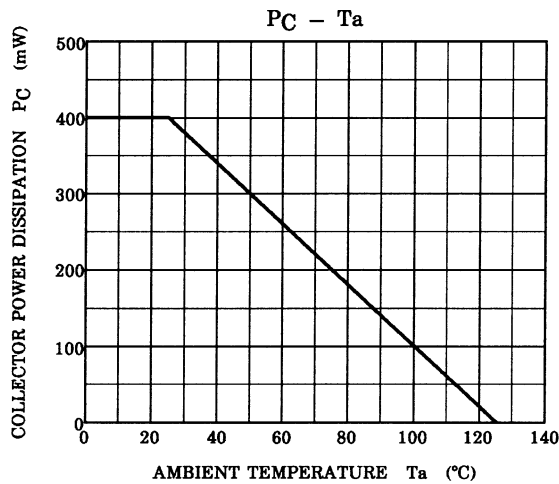
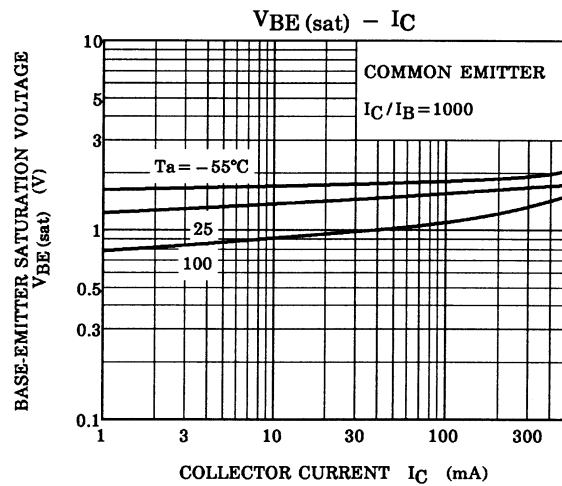
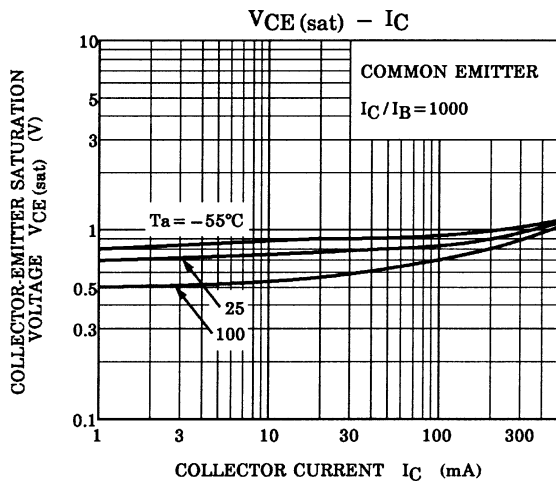
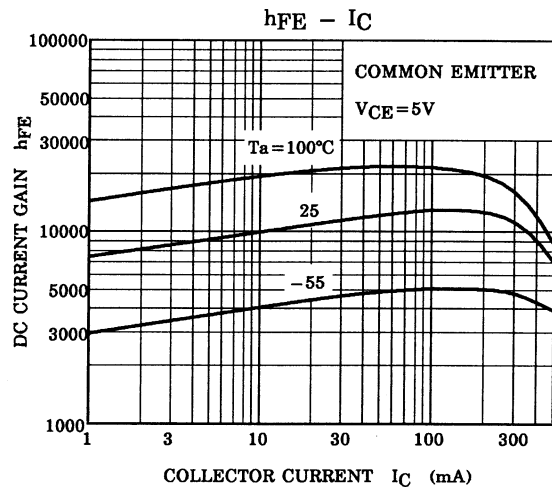
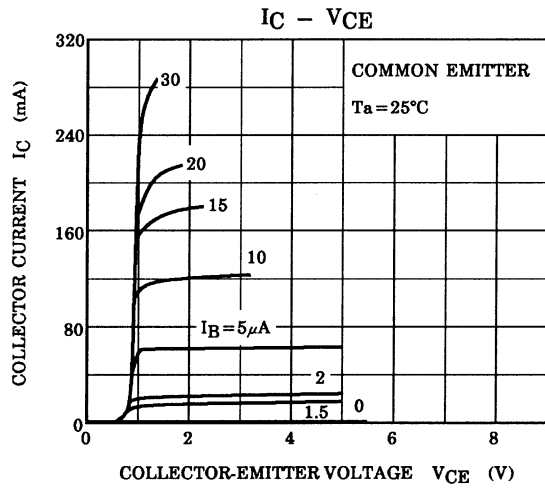
### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

| Characteristics                      | Symbol        | Test Condition                 | Min   | Typ. | Max | Unit          |
|--------------------------------------|---------------|--------------------------------|-------|------|-----|---------------|
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = 40$ V, $I_E = 0$     | —     | —    | 0.1 | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = 8$ V, $I_C = 0$      | —     | —    | 0.1 | $\mu\text{A}$ |
| DC current gain                      | $h_{FE(1)}$   | $V_{CE} = 5$ V, $I_C = 10$ mA  | 5000  | —    | —   |               |
|                                      | $h_{FE(2)}$   | $V_{CE} = 2$ V, $I_C = 100$ mA | 10000 | —    | —   |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 300$ mA, $I_B = 0.3$ mA | —     | 0.9  | 1.3 | V             |
| Base-emitter voltage                 | $V_{BE}$      | $V_{CE} = 2$ V, $I_C = 100$ mA | —     | 1.25 | 1.6 | V             |

Unit: mm



Weight: 0.21 g (typ.)



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