

**2SD1853****Driver Applications****Applications**

- Motor drivers, hammer drivers, relay drivers.

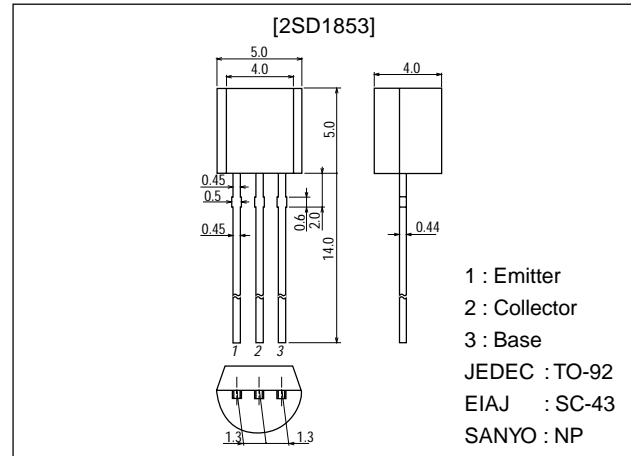
Features

- High DC current gain.
- Low saturation voltage.

Package Dimensions

unit:mm

2003B

**Specifications****Absolute Maximum Ratings at Ta = 25°C**

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|-----------|------------|-------------|------|
| Collector-to-Base Voltage | V_{CB0} | | 80 | V |
| Collector-to-Emitter Voltage | V_{CEO} | | 60 | V |
| Emitter-to-Base Voltage | V_{EBO} | | 6 | V |
| Collector Current | I_C | | 1.5 | A |
| Collector Current (Pulse) | I_{CP} | | 3 | A |
| Collector Dissipation | P_C | | 0.7 | W |
| Junction Temperature | T_J | | 150 | °C |
| Storage Temperature | T_{stg} | | -55 to +150 | °C |

Electrical Characteristics at Ta = 25°C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|---------------------------|---------|-----|-----|---------|
| | | | min | typ | max | |
| Collector Cutoff Current | I_{CBO} | $V_{CB}=60V, I_E=0$ | | | 10 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=5V, I_C=0$ | | | 2.5 | mA |
| DC Current Gain | h_{FE1} | $V_{CE}=2V, I_C=0.5A$ | 1000 | | | |
| | h_{FE2} | $V_{CE}=2V, I_C=1A$ | 2000 | | | |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=1A, I_B=2mA$ | | | 1.5 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=1A, I_B=2mA$ | | | 2.0 | V |
| Collector-to-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=1mA, I_E=0$ | 80 | | | V |
| Collector-to-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=25mA, R_{BE}=\infty$ | 60 | | | V |

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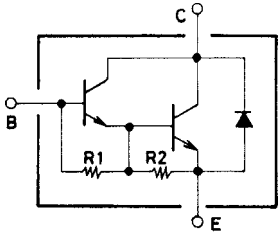
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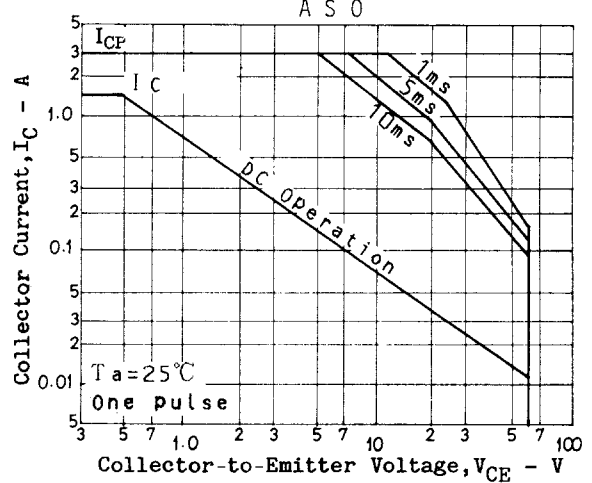
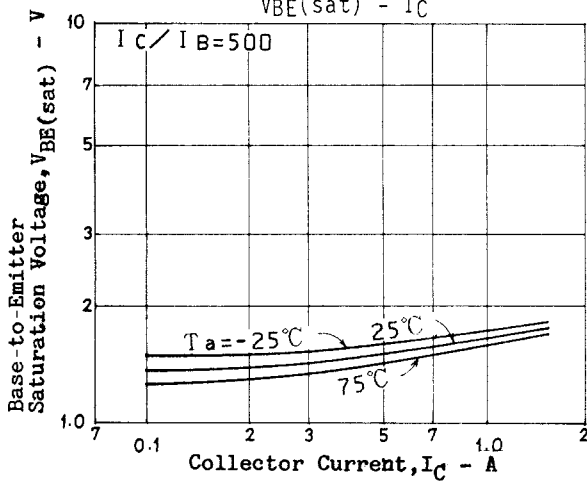
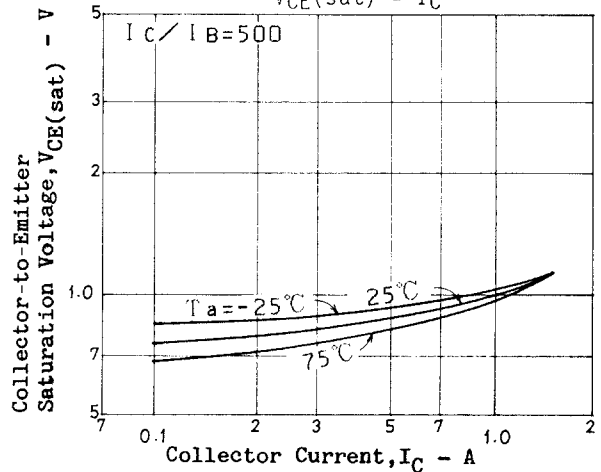
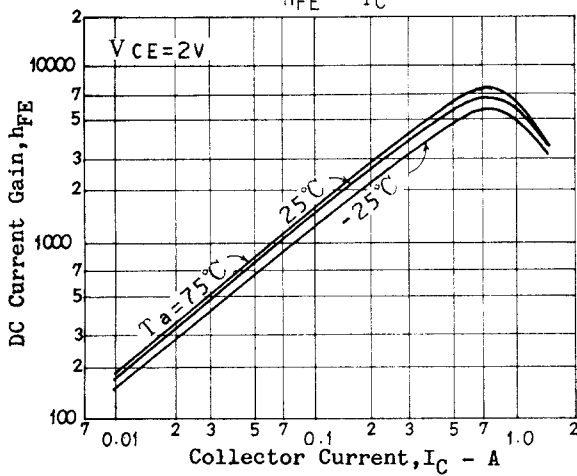
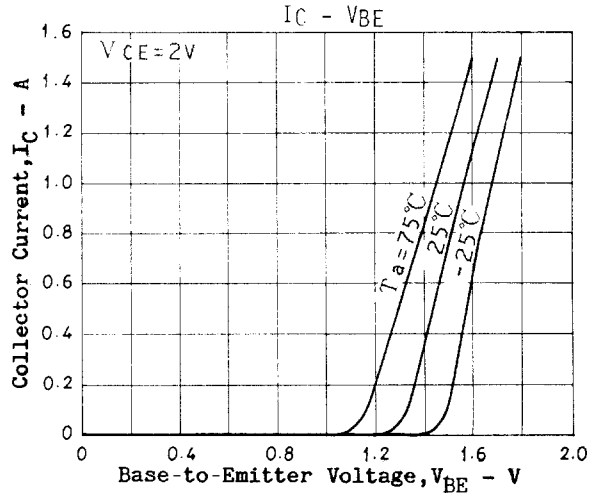
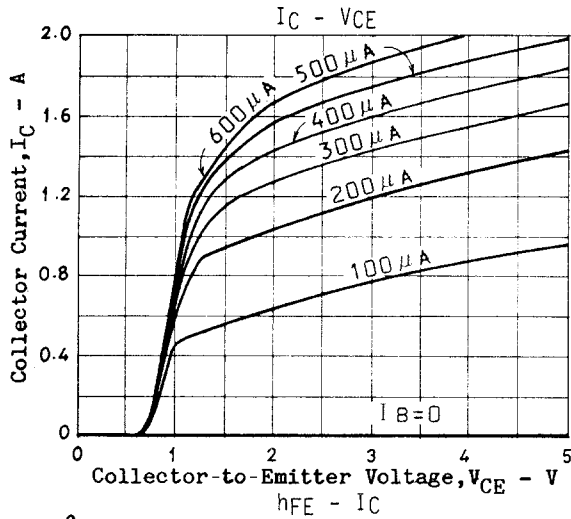
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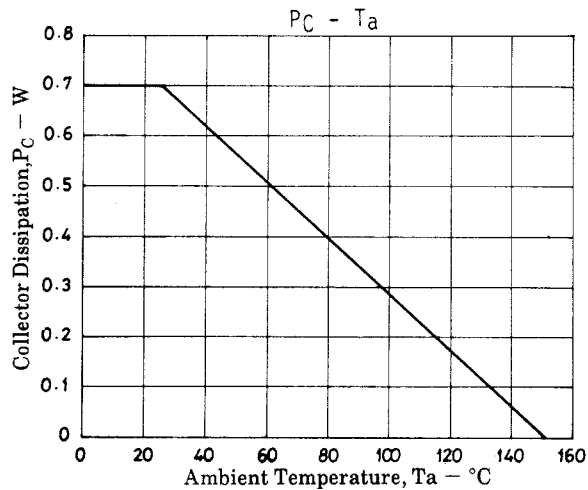
Electrical Connection



$R1 \cong 5k\Omega$
 $R2 \cong 500\Omega$



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