

2SB791(K)

Silicon PNP Epitaxial

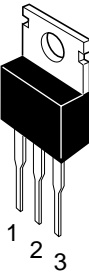
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Application

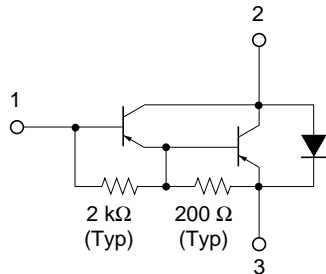
Medium speed and power switching complementary pair with 2SD970(K)

Outline

TO-220AB



1. Base
2. Collector (Flange)
3. Emitter



Absolute Maximum Ratings (Ta = 25°C)

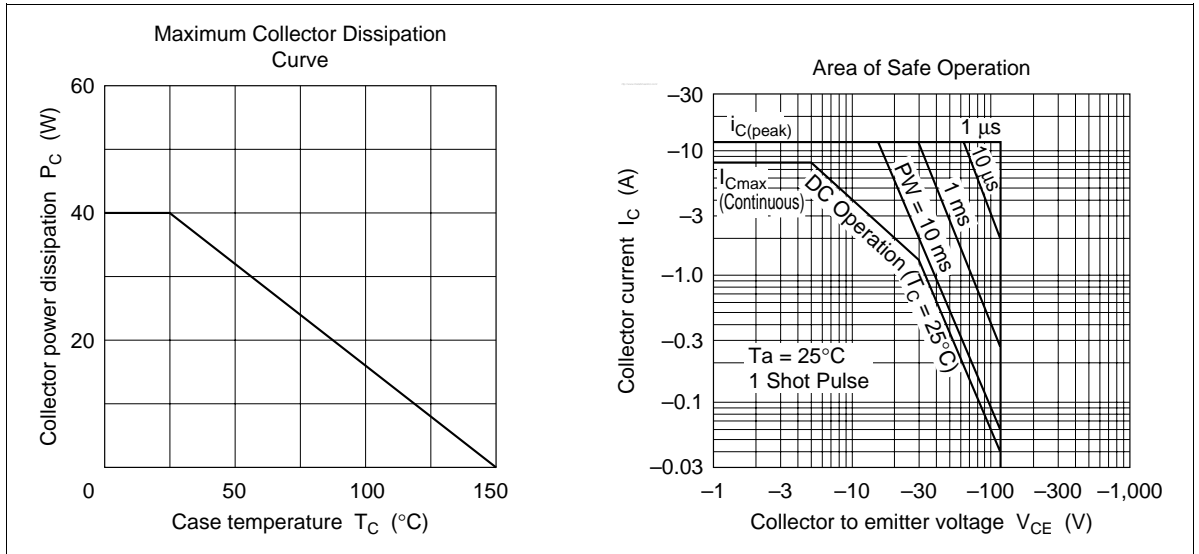
| Item | Symbol | Rating | Unit |
|------------------------------|---------------|-------------|------|
| Collector to base voltage | V_{CBO} | -120 | V |
| Collector to emitter voltage | V_{CEO} | -120 | V |
| Emitter to base voltage | V_{EBO} | -7 | V |
| Collector current | I_C | -8 | A |
| Collector peak current | $I_{C(peak)}$ | -12 | A |
| Collector power dissipation | P_C^{*1} | 40 | W |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |

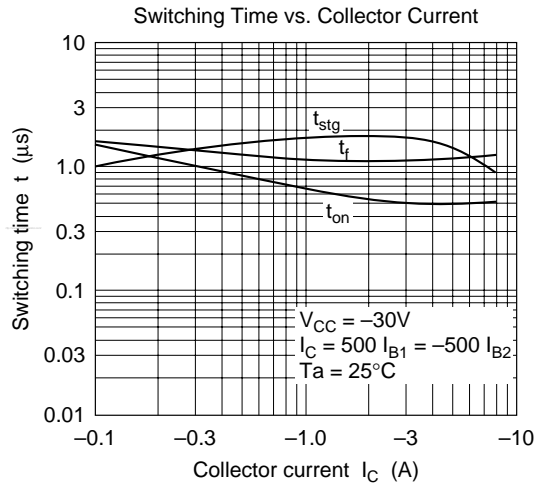
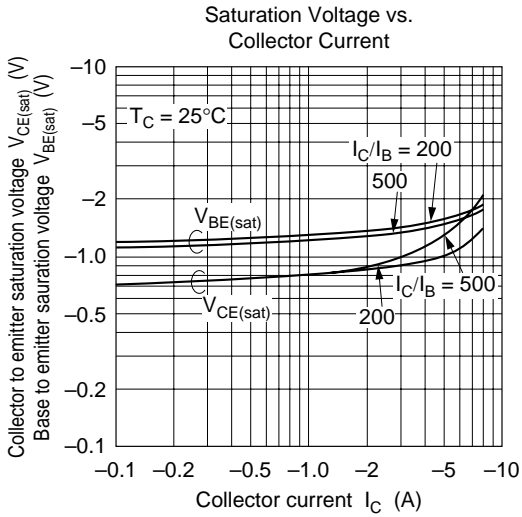
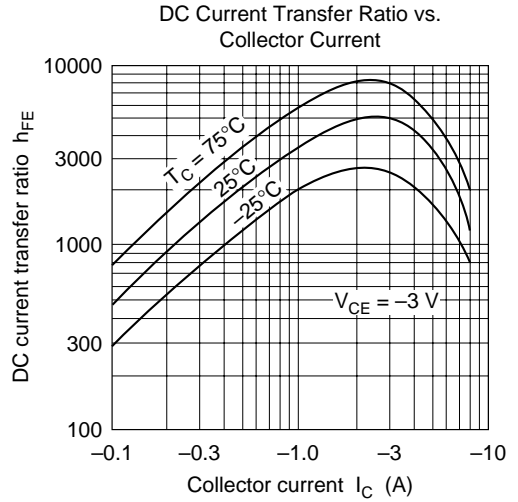
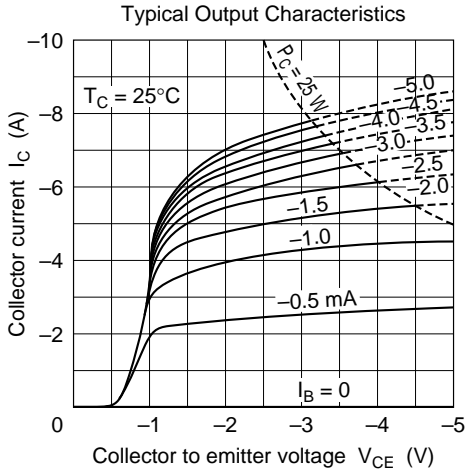
Note: 1. Value at $T_c = 25^\circ\text{C}$

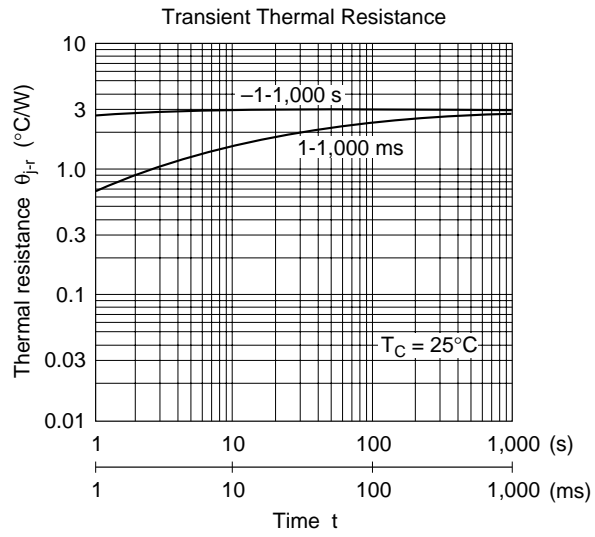
Electrical Characteristics (Ta = 25°C)

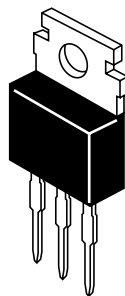
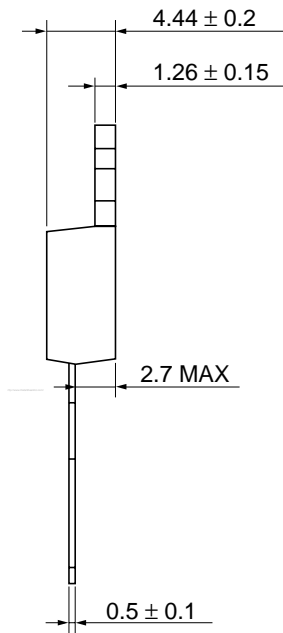
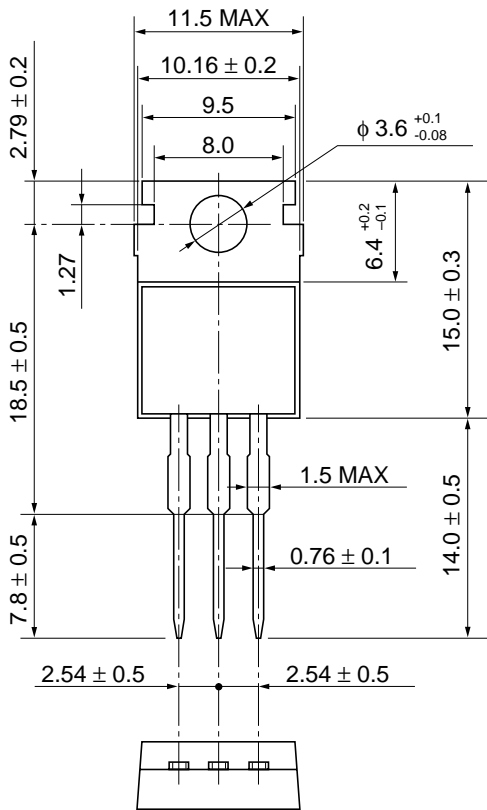
| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|------------------|------|-----|-------|---------------|--|
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | -120 | — | — | V | $I_C = -25 \text{ mA}$, $R_{BE} = \infty$ |
| Emitter to base breakdown voltage | $V_{(BR)EBO}$ | -7 | — | — | V | $I_E = -50 \text{ mA}$, $I_C = 0$ |
| Collector cutoff current | I_{CBO} | — | — | -100 | μA | $V_{CB} = -120 \text{ V}$, $I_E = 0$ |
| | I_{CEO} | — | — | -10 | μA | $V_{CE} = -100 \text{ V}$, $R_{BE} = \infty$ |
| DC current transfer ratio | h_{FE} | 1000 | — | 20000 | | $V_{CE} = -3 \text{ V}$, $I_C = -4 \text{ A}^{*1}$ |
| Collector to emitter saturation voltage | $V_{CE(sat)(1)}$ | — | — | -1.5 | V | $I_C = -4 \text{ A}$, $I_B = -8 \text{ mA}^{*1}$ |
| | $V_{CE(sat)(2)}$ | — | — | -3.0 | V | $I_C = -8 \text{ A}$, $I_B = -80 \text{ mA}^{*1}$ |
| Base to emitter saturation voltage | $V_{BE(sat)(1)}$ | — | — | -2.0 | V | $I_C = -4 \text{ A}$, $I_B = -8 \text{ mA}^{*1}$ |
| | $V_{BE(sat)(2)}$ | — | — | -3.5 | V | $I_C = -8 \text{ A}$, $I_B = -80 \text{ mA}^{*1}$ |
| Turn on time | t_{on} | — | 0.5 | — | μs | $I_C = -4 \text{ A}$, $I_{B1} = I_{B2} = -8 \text{ mA}$ |
| Storage time | t_{stg} | — | 1.6 | — | μs | |
| Fall time | t_f | — | 1.5 | — | μs | |

Note: 1. Pulse test









| | |
|--------------------------|----------|
| Hitachi Code | TO-220AB |
| JEDEC | Conforms |
| EIAJ | Conforms |
| Weight (reference value) | 1.8 g |

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