

2SB955(K)

Silicon PNP Triple Diffused

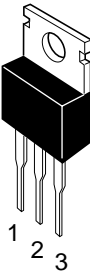
HITACHI

Application

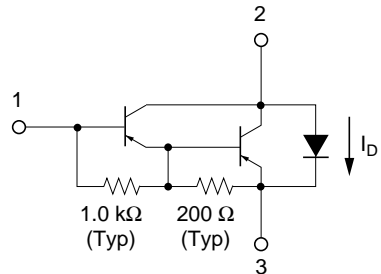
Power switching complementary pair with 2SD1126(K)

Outline

TO-220AB



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



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

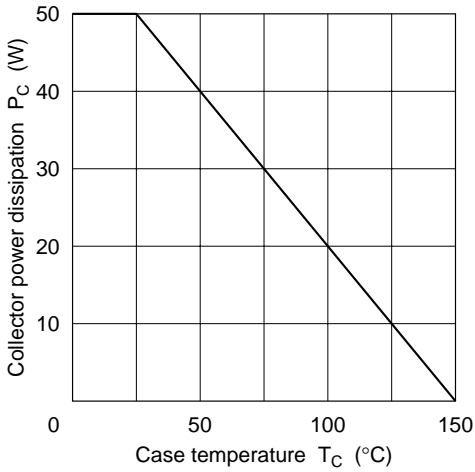
| Item | Symbol | Rating | Unit |
|------------------------------|----------------------|-------------|------------------|
| Collector to base voltage | V_{CBO} | -120 | V |
| Collector to emitter voltage | V_{CEO} | -120 | V |
| Emitter to base voltage | V_{EBO} | -7 | V |
| Collector current | I_{C} | -10 | A |
| Collector peak current | $I_{\text{C(peak)}}$ | -15 | A |
| C to E diode forward current | I_{D}^{*1} | 10 | A |
| Collector power dissipation | P_{C}^{*2} | 50 | W |
| Junction temperature | T_{j} | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

Notes: 1. Value at $T_{\text{C}} = 25^\circ\text{C}$ 2. $PW \leq 1 \text{ ms}$ 1 shot**Electrical Characteristics** ($T_a = 25^\circ\text{C}$)

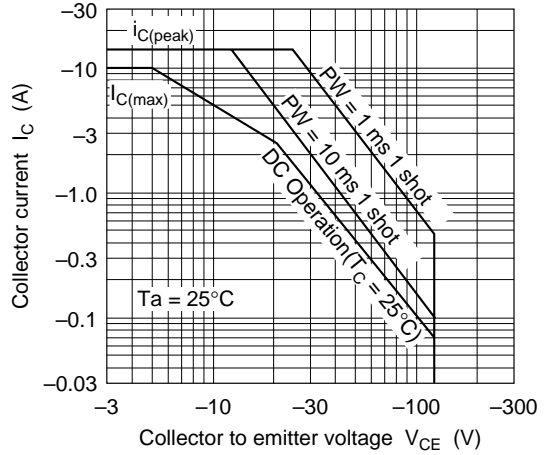
| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|-----------------------------|------|-----|-------|---------------|---|
| Collector to emitter breakdown voltage | $V_{(\text{BR})\text{CEO}}$ | -120 | — | — | V | $I_{\text{C}} = -25 \text{ mA}$, $R_{\text{BE}} = \infty$ |
| Emitter to base breakdown voltage | $V_{(\text{BR})\text{EBO}}$ | -7 | — | — | V | $I_{\text{E}} = -200 \text{ mA}$, $I_{\text{C}} = 0$ |
| Collector cutoff current | I_{CBO} | — | — | -100 | μA | $V_{\text{CB}} = -120 \text{ V}$, $I_{\text{E}} = 0$ |
| | I_{CEO} | — | — | -10 | μA | $V_{\text{CE}} = -100 \text{ V}$, $R_{\text{BE}} = \infty$ |
| DC current transfer ratio | h_{FE} | 1000 | — | 20000 | | $V_{\text{CE}} = -3 \text{ V}$, $I_{\text{C}} = -5 \text{ A}^{*1}$ |
| Collector to emitter saturation voltage | $V_{\text{CE(sat)1}}$ | — | — | -1.5 | V | $I_{\text{C}} = -5 \text{ A}$, $I_{\text{B}} = -10 \text{ mA}^{*1}$ |
| | $V_{\text{CE(sat)2}}$ | — | — | -3.0 | V | $I_{\text{C}} = -10 \text{ A}$, $I_{\text{B}} = -0.1 \text{ A}^{*1}$ |
| Base to emitter saturation voltage | $V_{\text{BE(sat)1}}$ | — | — | -2.0 | V | $I_{\text{C}} = -5 \text{ A}$, $I_{\text{B}} = -10 \text{ mA}^{*1}$ |
| | $V_{\text{BE(sat)2}}$ | — | — | -3.5 | V | $I_{\text{C}} = -10 \text{ A}$, $I_{\text{B}} = -0.1 \text{ A}^{*1}$ |
| C to E diode forward voltage | V_{D} | — | — | 3.0 | V | $I_{\text{D}} = 10 \text{ A}^{*1}$ |
| Turn on time | t_{on} | — | 0.8 | — | μs | $V_{\text{CC}} = -30 \text{ V}$ |
| Turn off time | t_{off} | — | 4.0 | — | μs | $I_{\text{C}} = -5 \text{ A}$, $I_{\text{B1}} = -I_{\text{B2}} = -10 \text{ mA}$ |

Note: 1. Pulse test

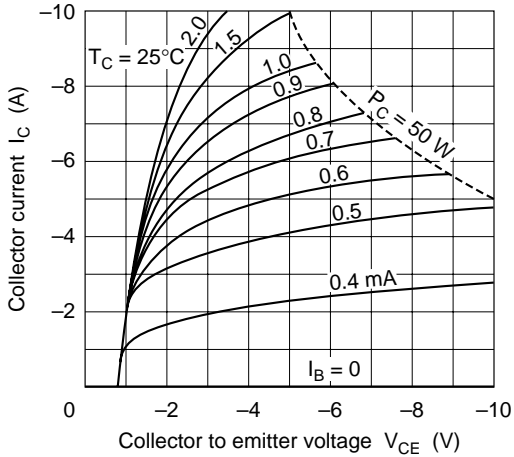
Maximum Collector Dissipation Curve



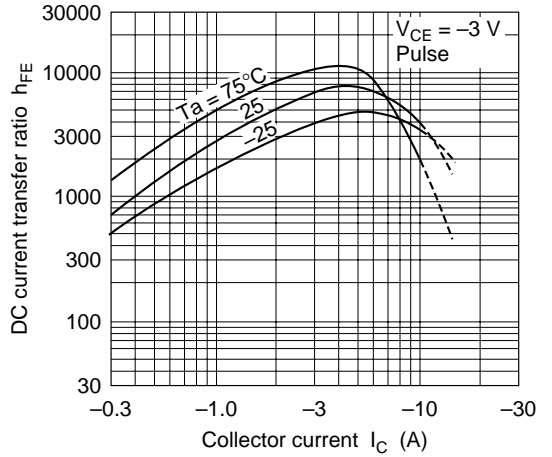
Area of Safe Operation

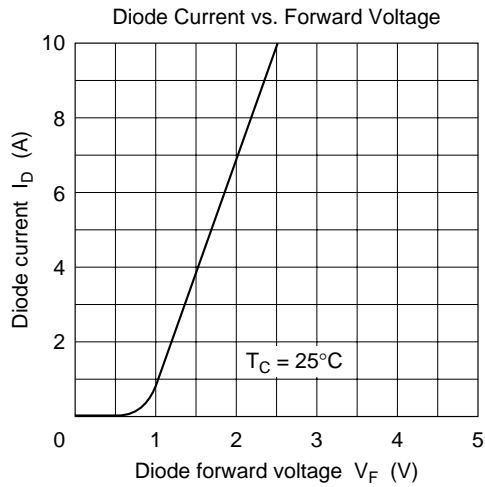
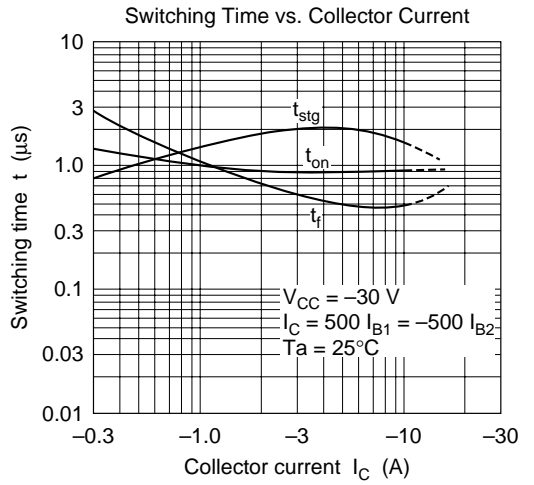
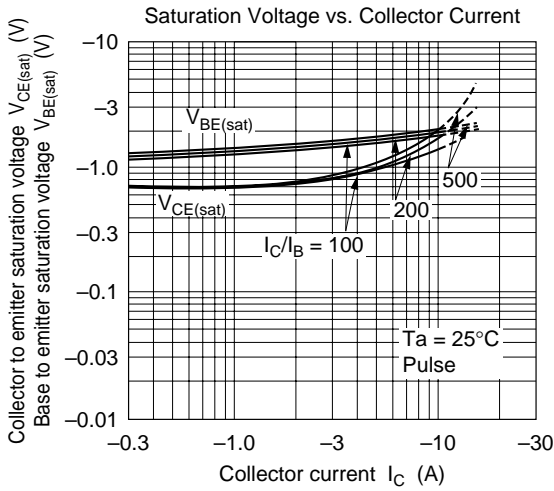


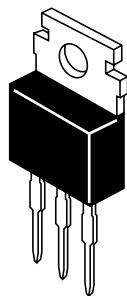
Typical Output Characteristics



DC Current Transfer Ratio vs. Collector Current







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

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