
2SB1012(K)

Silicon PNP Epitaxial

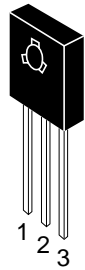
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Application

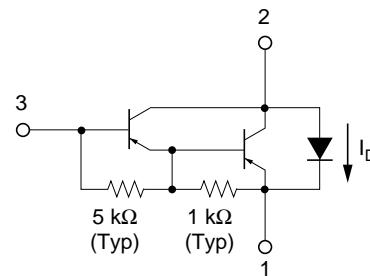
Low frequency power amplifier complementary pair with 2SD1376(K)

Outline

TO-126 MOD



- 1. Emitter
- 2. Collector
- 3. Base



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Absolute Maximum Ratings (Ta = 25°C)

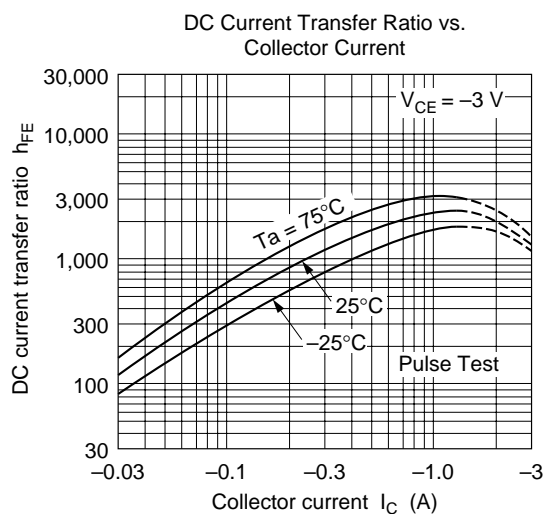
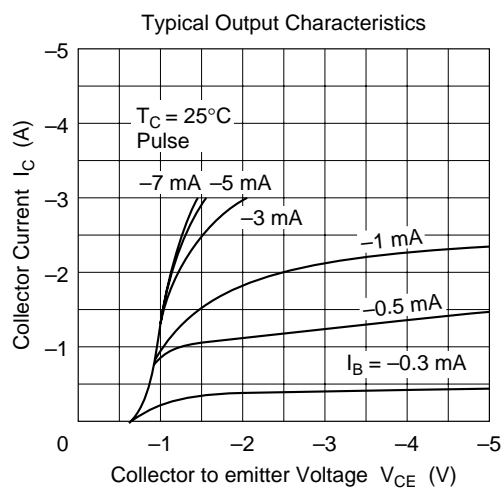
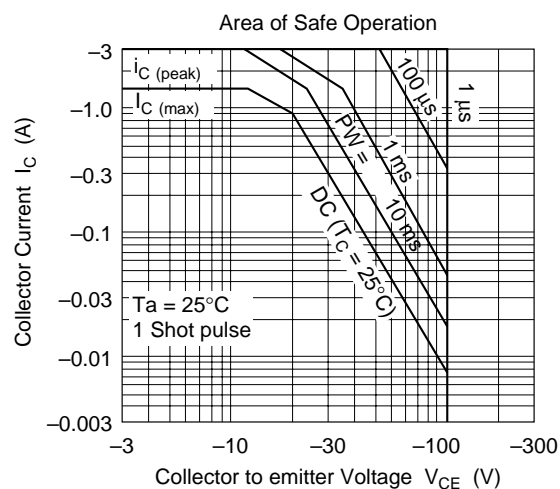
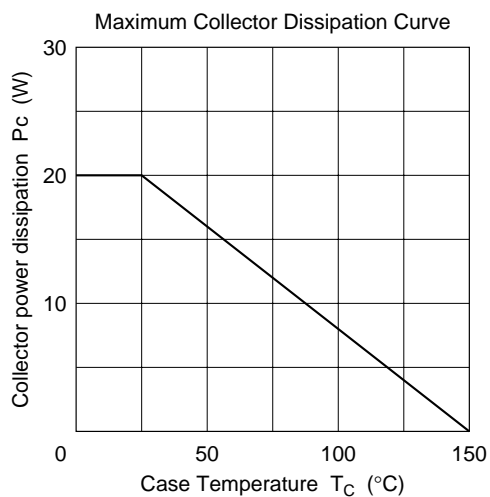
| Item | Symbol | Rating | Unit |
|------------------------------|---------------|-------------|------|
| Collector to base voltage | V_{CBO} | -120 | V |
| Collector to emitter voltage | V_{CEO} | -120 | V |
| Emitter to base voltage | V_{EBO} | -7 | V |
| Collector current | I_C | -1.5 | A |
| Collector peak current | $I_{C(peak)}$ | -3.0 | A |
| Collector power dissipation | P_C^{*1} | 20 | W |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |
| C to E diode forward current | I_D^{*1} | 1.5 | A |

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

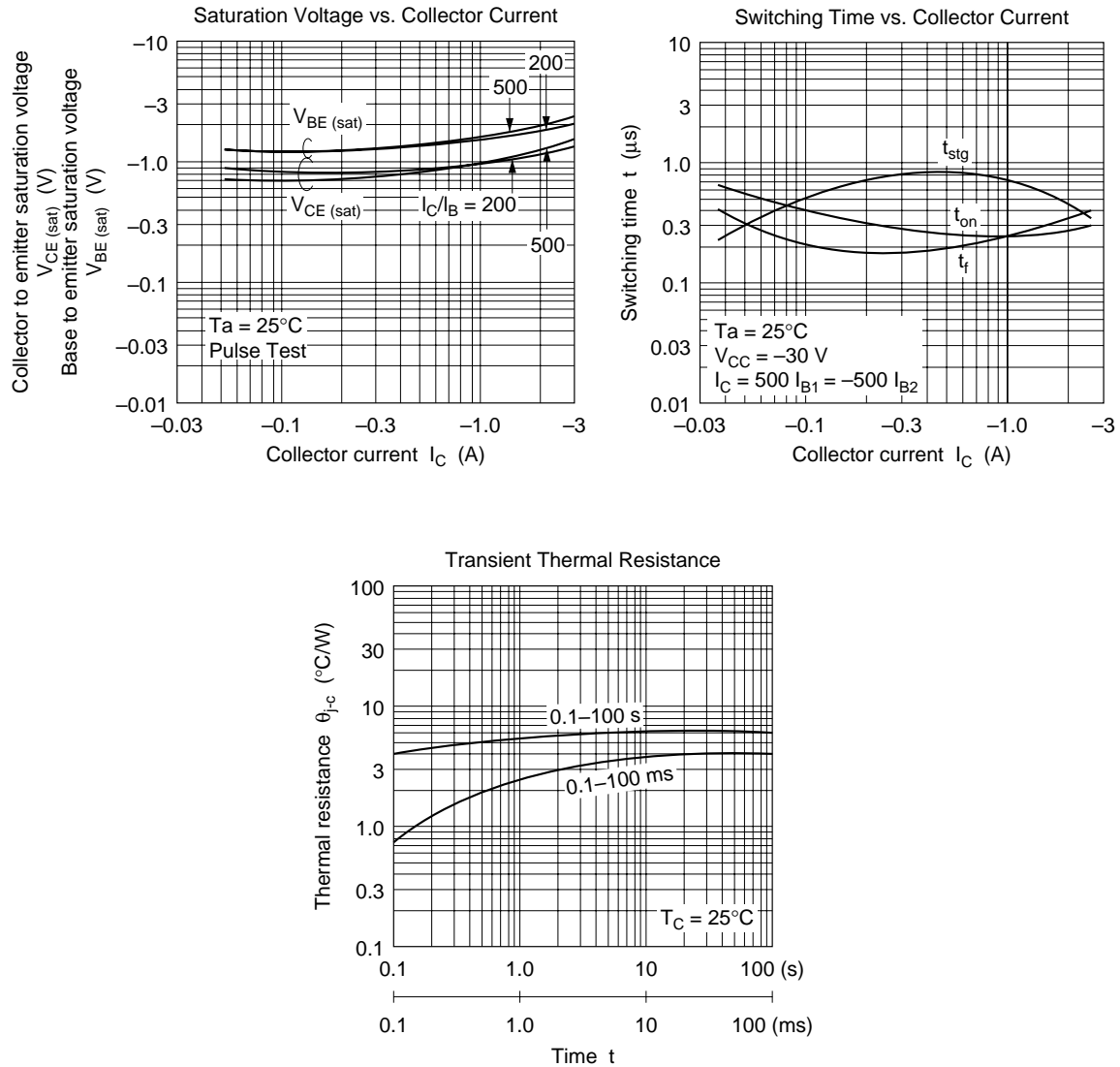
Electrical Characteristics (Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|----------------|------|-----|-------|---------------|---|
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | -120 | — | — | V | $I_C = -10\text{ mA}$, $R_{BE} =$ |
| 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 | $V_{CE} = -100\text{ V}$, $R_{BE} =$ |
| DC current transfer ratio | h_{FE} | 2000 | — | 30000 | | $V_{CE} = -3\text{ V}$, $I_C = -1\text{ A}^{*1}$ |
| Collector to emitter saturation voltage | $V_{CE(sat)1}$ | — | — | -1.5 | V | $I_C = -1\text{ A}$, $I_B = -1\text{ mA}^{*1}$ |
| | $V_{CE(sat)2}$ | — | — | -2.0 | V | $I_C = -1.5\text{ A}$, $I_B = -1.5\text{ mA}^{*1}$ |
| Base to emitter saturation voltage | $V_{BE(sat)1}$ | — | — | -2.0 | V | $I_C = -1\text{ A}$, $I_B = -1\text{ mA}^{*1}$ |
| | $V_{BE(sat)2}$ | — | — | -2.5 | V | $I_C = -1.5\text{ A}$, $I_B = -1.5\text{ mA}^{*1}$ |
| C to E diode forward voltage | V_D | — | — | 3.0 | V | $I_D = 1.5\text{ A}^{*1}$ |
| Turn on time | t_{on} | — | 0.5 | — | μs | $I_C = -1\text{ A}$, $I_{B1} = -I_{B2} = -1\text{ mA}$ |
| Turn off time | t_{off} | — | 2.0 | — | μs | |

Note: 1. Pulse test



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