

2SA1110

Silicon PNP Epitaxial Planar Type

AF Power Amplifier

Complementary Pair with 2SC2590

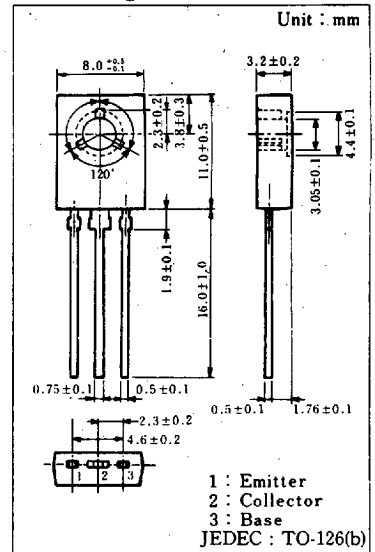
■ Features

- Good linearity of DC current gain (h_{FE})
- High transition frequency (f_T)
- 40~60W output driver in complementary pair with 2SC2590

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

| Item | Symbol | Value | Unit |
|-----------------------------|-----------|----------|------------------|
| Collector-base voltage | V_{CBO} | -120 | V |
| Collector-emitter voltage | V_{CEO} | -120 | V |
| Emitter-base voltage | V_{EBO} | -5 | V |
| Peak collector current | I_{CP} | -1 | A |
| Collector current | I_C | -0.5 | A |
| Collector power dissipation | P_C | 1.2 | W |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55~+150 | $^\circ\text{C}$ |

■ Package Dimensions



■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

| Item | Symbol | Condition | min. | typ. | max. | Unit |
|--------------------------------------|---------------|--|------|------|------|------|
| Collector-emitter voltage | V_{CEO} | $I_C = -100\mu\text{A}$, $I_B = 0$ | -120 | | | V |
| Emitter-base voltage | V_{EBO} | $I_E = -10\mu\text{A}$, $I_C = 0$ | -5 | | | V |
| DC current gain | h_{FE1}^* | $V_{CE} = -10\text{V}$, $I_C = -150\text{mA}$ | 65 | | 330 | |
| | h_{FE2} | $V_{CE} = -5\text{V}$, $I_C = -500\text{mA}$ | 50 | 100 | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -300\text{mA}$, $I_B = -30\text{mA}$ | | | -1.0 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -300\text{mA}$, $I_B = -30\text{mA}$ | | | -1.2 | V |
| Transition frequency | f_T | $V_{CB} = -10\text{V}$, $I_E = 50\text{mA}$, $f = 200\text{MHz}$ | | 200 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$ | | 20 | 30 | pF |

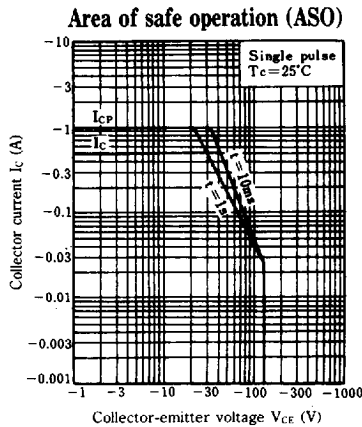
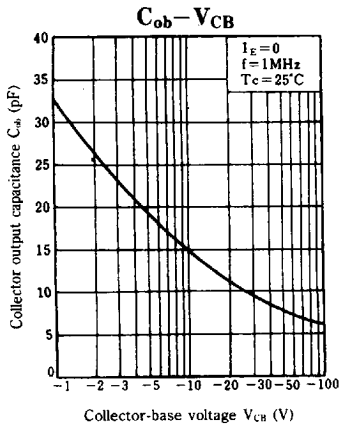
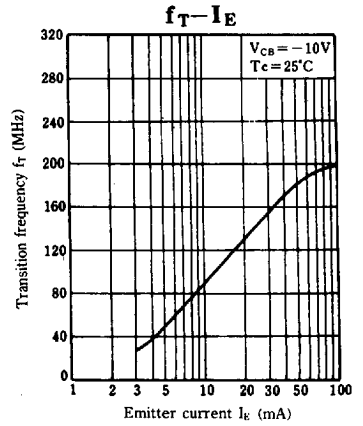
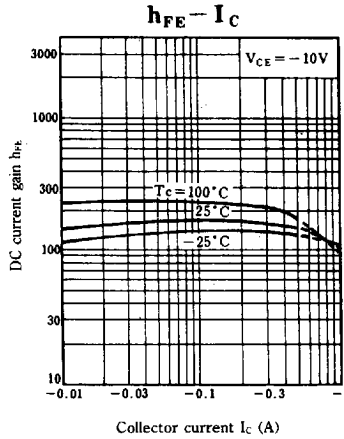
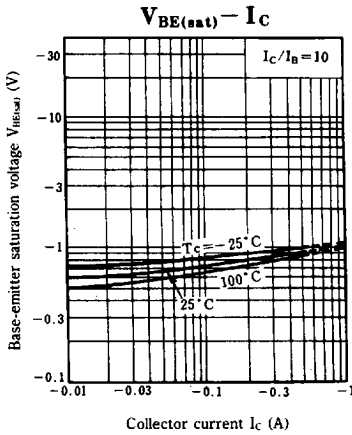
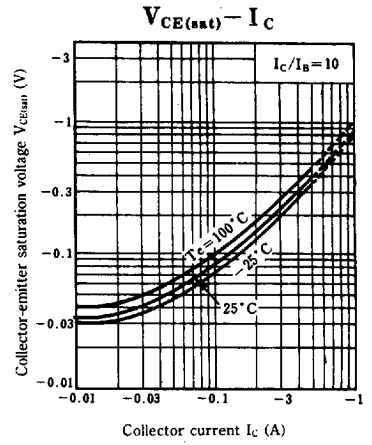
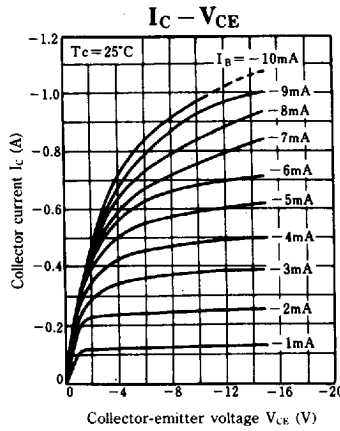
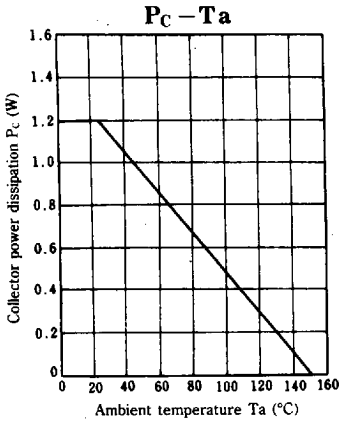
* h_{FE1} Classifications

| Class | P | Q | R | S |
|-----------|--------|--------|---------|---------|
| h_{FE1} | 65~110 | 90~155 | 130~220 | 185~330 |

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