

2SA748

Silicon PNP Epitaxial Planar Type

Medium Power Amplifier
Complementary Pair with 2SC1398

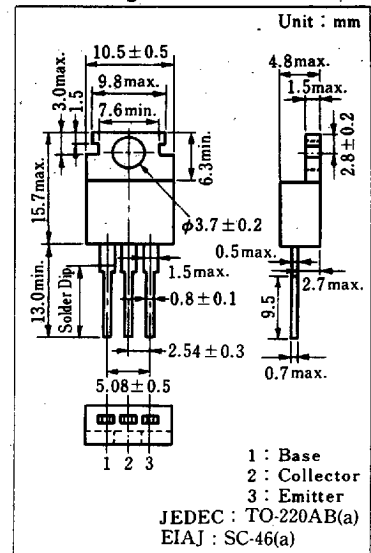
■ Features

- Large collector power dissipation (P_C)
- 10W output in complementary pair with 2SC1398

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

| Item | Symbol | Value | Unit |
|--|-----------|------------|------------------|
| Collector-base voltage | V_{CB0} | -70 | V |
| Collector-emitter voltage | V_{CEO} | -50 | V |
| Emitter-base voltage | V_{EBO} | -5 | V |
| Peak collector current | I_{CP} | -3 | A |
| Collector current | I_C | -2 | A |
| Collector power dissipation ($T_c=25^\circ\text{C}$) | P_C | 15 | 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 cutoff current | I_{CB0} | $V_{CB} = -40\text{V}, I_E = 0$ | | | -1 | μA |
| | I_{CEO} | $V_{CE} = -20\text{V}, I_B = 0$ | | | -100 | |
| Collector-base voltage | V_{CB0} | $I_C = -1\text{mA}, I_E = 0$ | -70 | | | V |
| Collector-emitter voltage | V_{CEO} | $I_C = -10\text{mA}, I_B = 0$ | -50 | | | V |
| Emitter cutoff current | I_{EBO} | $V_{EB} = -5\text{V}, I_C = 0$ | | | -100 | μA |
| DC current gain | h_{FE1} | $V_{CE} = -5\text{V}, I_C = -100\text{mA}$ | 30 | | | |
| | h_{FE2}^* | $V_{CE} = -5\text{V}, I_C = -1\text{A}$ | 30 | 130 | 220 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -2\text{A}, I_B = -0.2\text{A}$ | | -0.6 | -1.0 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -2\text{A}, I_B = -0.2\text{A}$ | | -1.0 | -1.5 | V |
| Transition frequency | f_T | $V_{CB} = -5\text{V}, I_E = 0.5\text{A}, f = 10\text{MHz}$ | | 120 | | MHz |

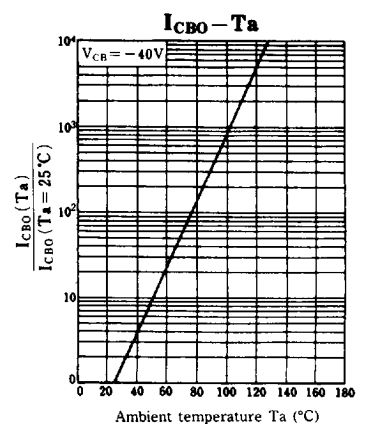
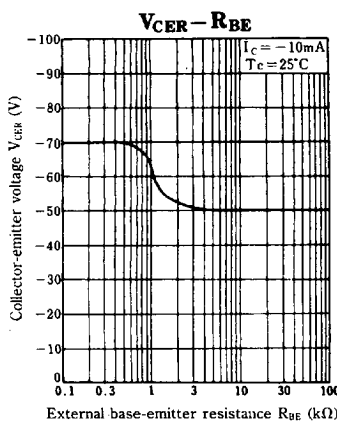
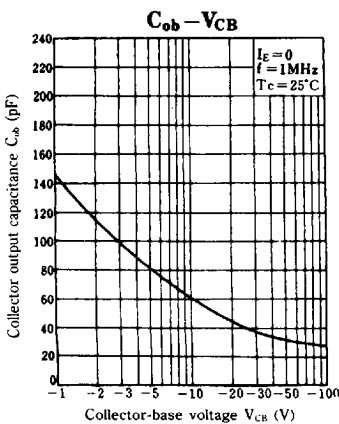
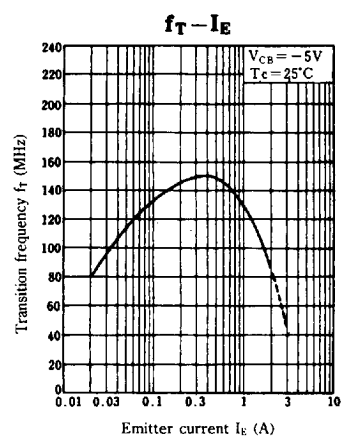
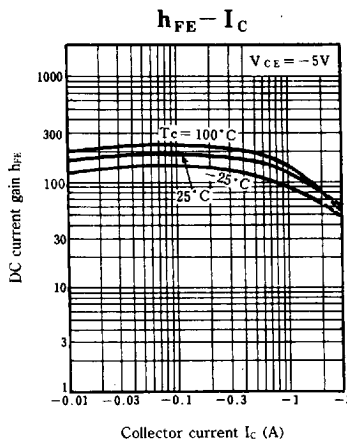
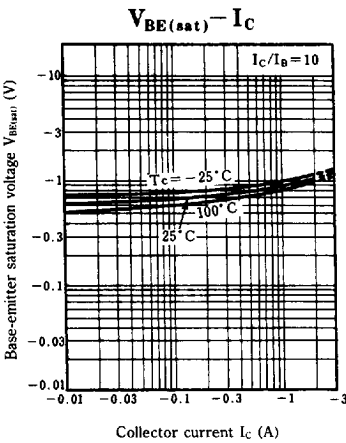
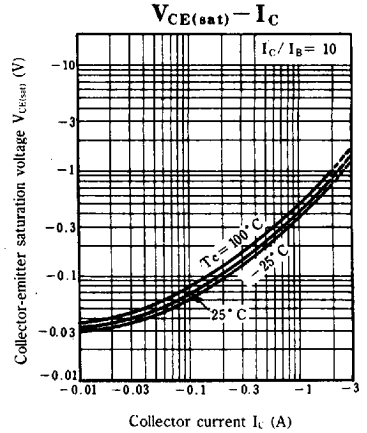
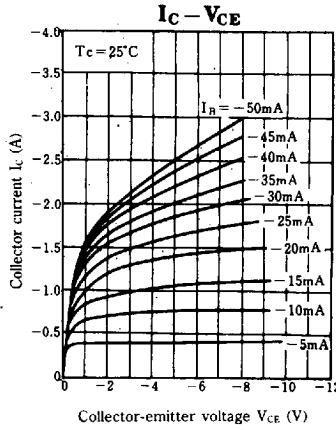
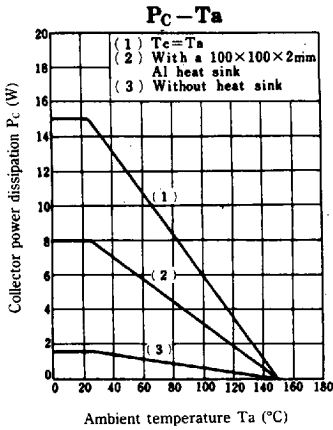
* h_{FE2} Classifications

| Class | P | Q | R |
|-----------|----------|----------|-----------|
| h_{FE2} | 50 ~ 100 | 80 ~ 160 | 120 ~ 220 |

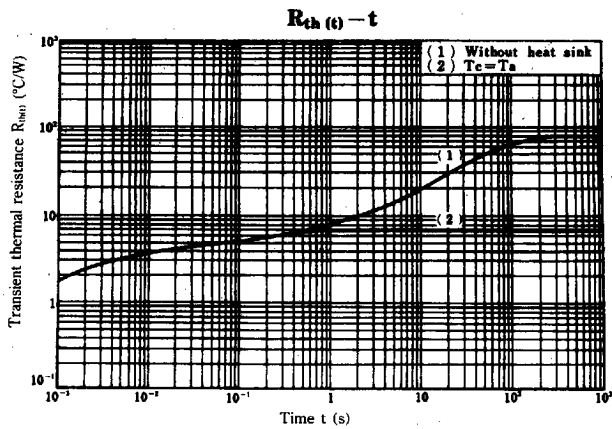
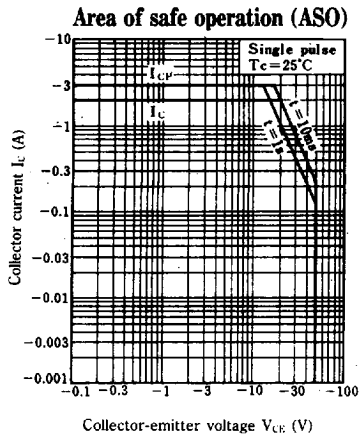
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