

2SA1748

Silicon PNP epitaxial planer type

For high-frequency amplification

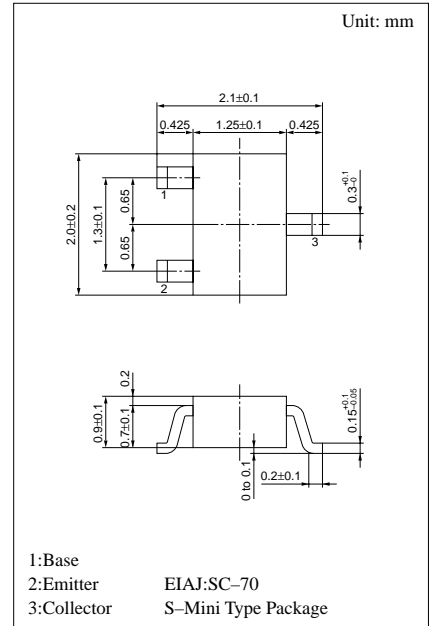
Complementary to 2SC4562

Features

- High transition frequency f_T .
- Small collector output capacitance C_{ob} .
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Rated | Unit |
|------------------------------|-----------|------------|------|
| Collector to base voltage | V_{CBO} | -50 | V |
| Collector to emitter voltage | V_{CEO} | -50 | V |
| Emitter to base voltage | V_{EBO} | -5 | V |
| Collector current | I_C | -50 | mA |
| Collector power dissipation | P_C | 150 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 ~ +150 | °C |



Marking symbol : AL

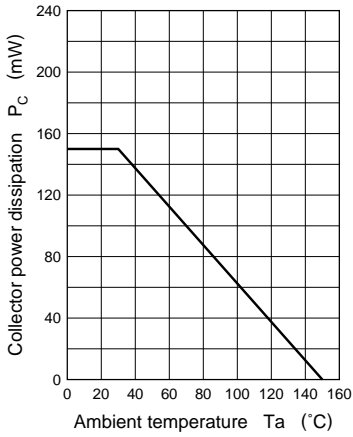
Electrical Characteristics (Ta=25°C)

| Parameter | Symbol | Conditions | min | typ | max | Unit |
|---|---------------|--|-----|------|------|---------|
| Collector cutoff current | I_{CBO} | $V_{CB} = -10V, I_E = 0$ | | | -0.1 | μA |
| | I_{CEO} | $V_{CE} = -10V, I_B = 0$ | | | -100 | μA |
| Collector to base voltage | V_{CBO} | $I_C = -10\mu A, I_E = 0$ | -50 | | | V |
| Collector to emitter voltage | V_{CEO} | $I_C = -1mA, I_B = 0$ | -50 | | | V |
| Emitter to base voltage | V_{EBO} | $I_E = -10\mu A, I_C = 0$ | -5 | | | V |
| Forward current transfer ratio | h_{FE} | $V_{CE} = -10V, I_C = -2mA$ | 200 | | 500 | |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -10mA, I_B = -1mA$ | | -0.1 | -0.3 | V |
| Transition frequency | f_T | $V_{CB} = -10V, I_E = 2mA, f = 200MHz$ | | 250 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = -10V, I_E = 0, f = 1MHz$ | | 1.5 | | pF |

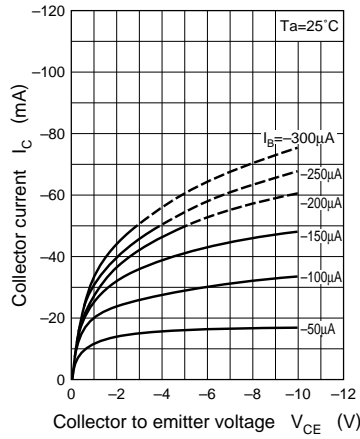
* h_{FE} Rank classification

| Rank | Q | R |
|----------------|-----------|-----------|
| h_{FE} | 200 ~ 400 | 250 ~ 500 |
| Marking Symbol | ALQ | ALR |

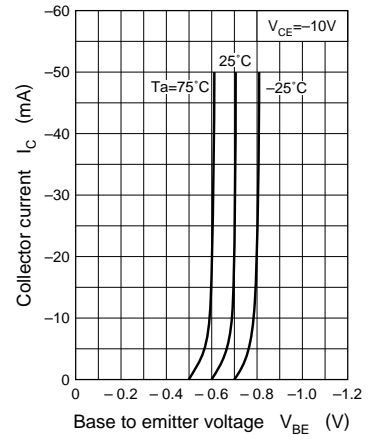
$P_C - T_a$



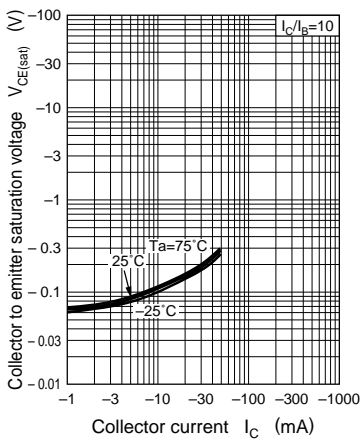
$I_C - V_{CE}$



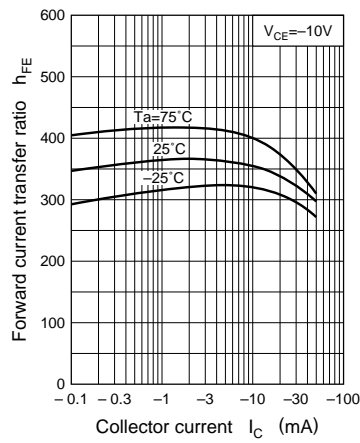
$I_C - V_{BE}$



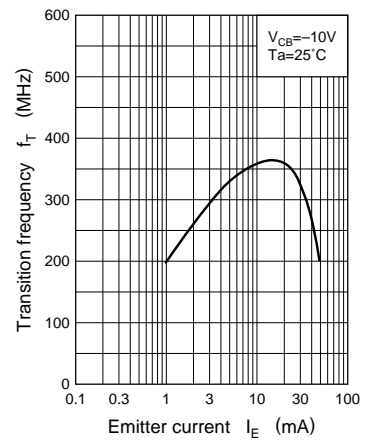
$V_{CE(sat)} - I_C$



$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$

