

XN6435

Silicon PNP epitaxial planer transistor

For high-frequency amplification

■ Features

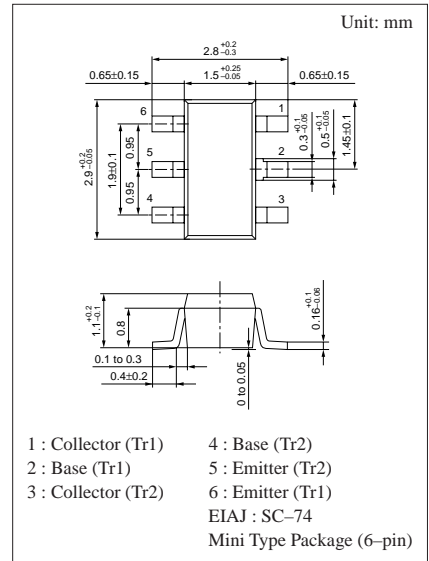
- Two elements incorporated into one package.
- Reduction of the mounting area and assembly cost by one half.

■ Basic Part Number of Element

- 2SA1022 × 2 elements

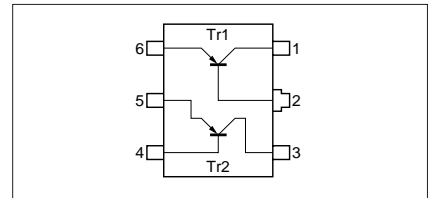
■ Absolute Maximum Ratings (Ta=25°C)

| | Parameter | Symbol | Rated | Unit |
|-------------------|------------------------------|-----------|-------------|------|
| Rating of element | Collector to base voltage | V_{CBO} | -30 | V |
| | Collector to emitter voltage | V_{CEO} | -20 | V |
| | Emitter to base voltage | V_{EBO} | -5 | V |
| | Collector current | I_C | -30 | mA |
| Overall | Total power dissipation | P_T | 300 | mW |
| | Junction temperature | T_j | 150 | °C |
| | Storage temperature | T_{stg} | -55 to +150 | °C |



Marking Symbol: 7W

Internal Connection

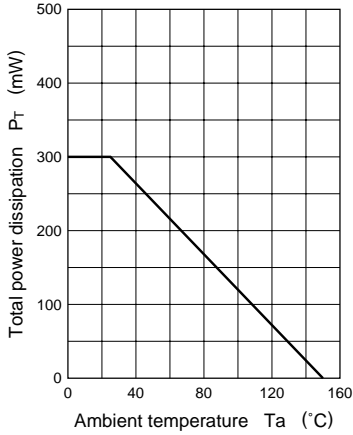


■ Electrical Characteristics (Ta=25°C)

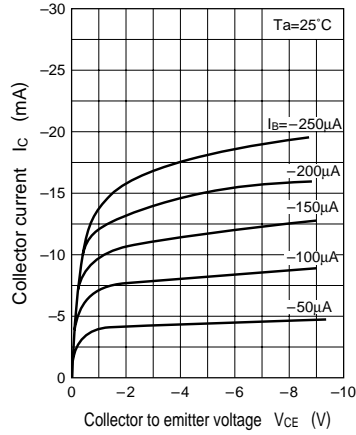
| Parameter | Symbol | Conditions | min | typ | max | Unit |
|---|-----------------------------------|---|-----|------|------|----------|
| Collector cutoff current | I_{CBO} | $V_{CB} = -10V, I_E = 0$ | | | -0.1 | μA |
| | I_{CEO} | $V_{CE} = -20V, I_B = 0$ | | | -100 | μA |
| Emitter cutoff current | I_{EBO} | $V_{EB} = -5V, I_C = 0$ | | | -10 | μA |
| Forward current transfer ratio | h_{FE} | $V_{CE} = -10V, I_C = -1mA$ | 50 | | 220 | |
| Forward current transfer h_{FE} ratio | $h_{FE}(\text{small/large})^{*1}$ | $V_{CE} = -10V, I_C = -1mA$ | 0.5 | 0.99 | | |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -10mA, I_B = -1mA$ | | -0.1 | | V |
| Base to emitter voltage | V_{BE} | $V_{CE} = -10V, I_C = -1mA$ | | -0.7 | | V |
| Transition frequency | f_T | $V_{CB} = -10V, I_E = 1mA, f = 200MHz$ | 150 | | | MHz |
| Noise figure | NF | $V_{CB} = -10V, I_E = 1mA, f = 5MHz$ | | 2.8 | | dB |
| Reverse transfer impedance | Z_{rb} | $V_{CB} = -10V, I_E = 1mA, f = 2MHz$ | | 22 | | Ω |
| Common emitter reverse transfer capacitance | C_{re} | $V_{CB} = -10V, I_E = 1mA, f = 10.7MHz$ | | 1.2 | | pF |

*1 Ratio between 2 elements

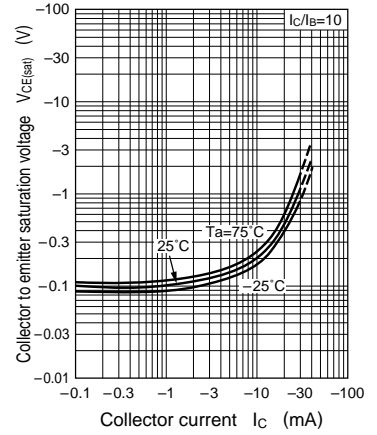
$P_T - T_a$



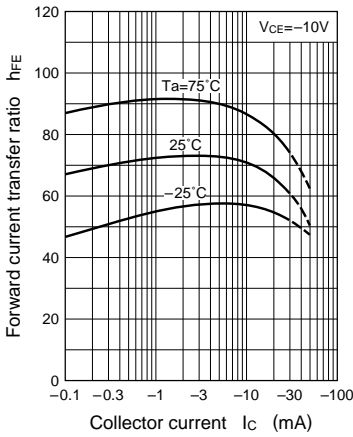
$I_C - V_{CE}$



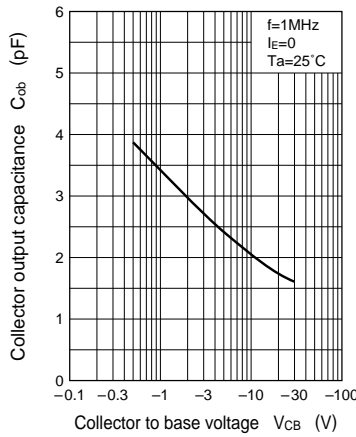
$V_{CE(sat)} - I_C$



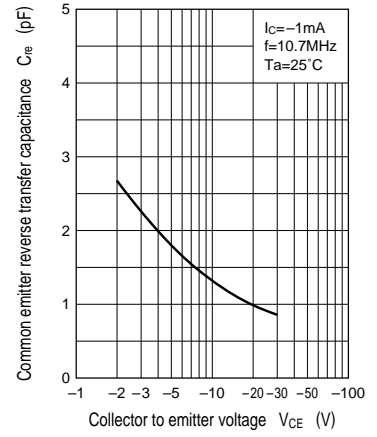
$h_{FE} - I_C$



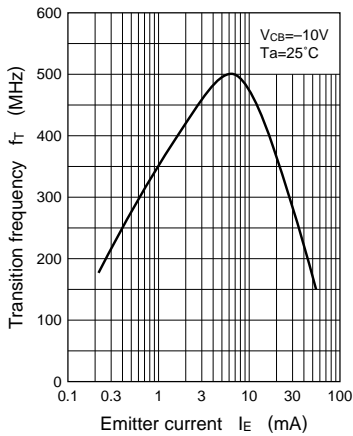
$C_{ob} - V_{CB}$



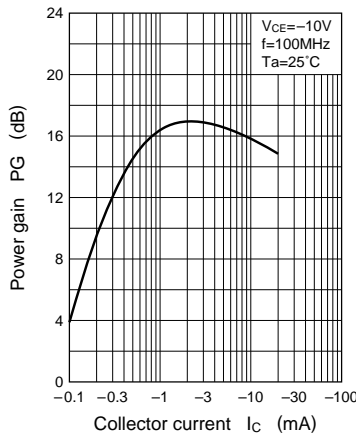
$C_{re} - V_{CE}$



$f_T - I_E$



$PG - I_C$



$NF - I_E$

