

XP04506 (XP4506)

Silicon NPN epitaxial planer transistor

For amplification of low frequency output

■ Features

- High emitter to base voltage V_{EBO} .
- High forward current transfer ratio h_{FE} .
- Low ON resistor R_{on} .

■ Basic Part Number of Element

- 2SD1915F × 2 elements

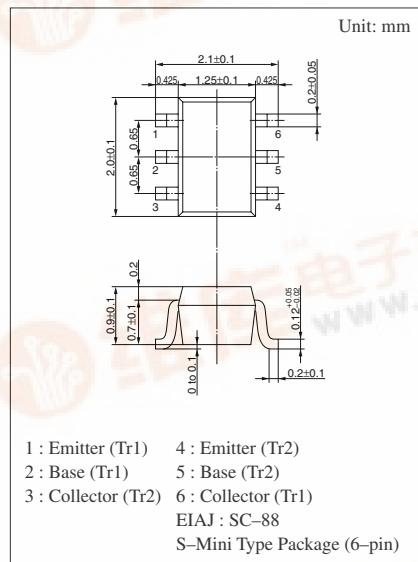
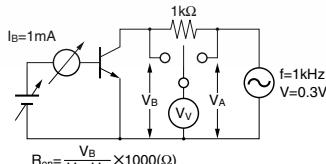
■ Absolute Maximum Ratings (Ta=25°C)

| | Parameter | Symbol | Ratings | Unit |
|-------------------|------------------------------|-----------|-------------|------|
| Rating of element | Collector to base voltage | V_{CBO} | 50 | V |
| | Collector to emitter voltage | V_{CEO} | 20 | V |
| | Emitter to base voltage | V_{EBO} | 25 | V |
| | Collector current | I_C | 300 | mA |
| Overall | Peak collector current | I_{CP} | 500 | mA |
| | Total power dissipation | P_T | 150 | mW |
| | Junction temperature | T_j | 150 | °C |
| | Storage temperature | T_{stg} | -55 to +150 | °C |

■ Electrical Characteristics (Ta=25°C)

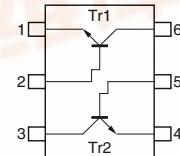
| Parameter | Symbol | Conditions | min | typ | max | Unit |
|---|---------------|--|-----|-----|------|---------------|
| Collector to emitter voltage | V_{CEO} | $I_C = 1\text{mA}$, $I_B = 0$ | 20 | | | V |
| Collector cutoff current | I_{CBO} | $V_{CB} = 50\text{V}$, $I_E = 0$ | | | 0.1 | μA |
| Emitter cutoff current | I_{EBO} | $V_{EB} = 25\text{V}$, $I_C = 0$ | | | 0.1 | μA |
| Forward current transfer ratio | h_{FE} | $V_{CE} = 2\text{V}$, $I_C = 4\text{mA}$ | 500 | | 2500 | |
| Base to emitter voltage | V_{BE} | $V_{CE} = 2\text{V}$, $I_C = 4\text{mA}$ | | 0.6 | | V |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 30\text{mA}$, $I_B = 3\text{mA}$ | | | 0.1 | V |
| Transition frequency | f_T | $V_{CB} = 6\text{V}$, $I_E = -4\text{mA}$, $f = 200\text{MHz}$ | 80 | | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = 10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$ | | | 7 | pF |
| ON Resistance | R_{on}^{*1} | | | | 1 | Ω |

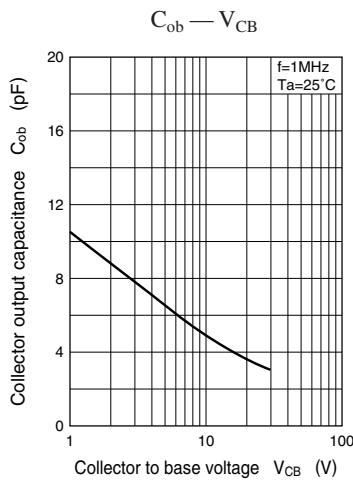
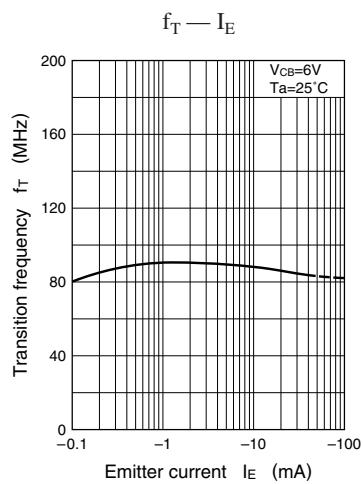
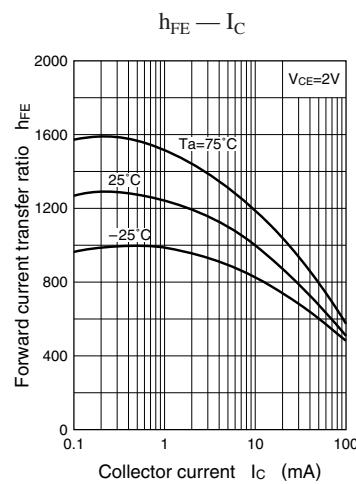
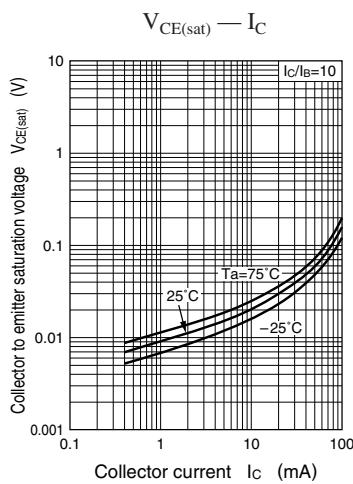
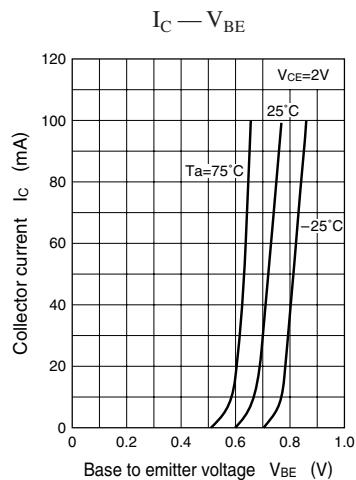
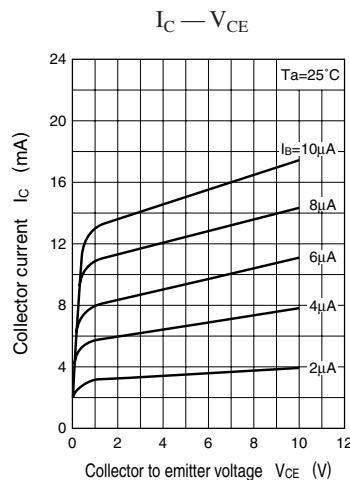
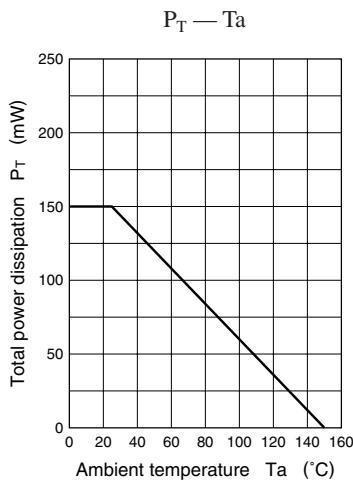
*1 R_{on} measuring circuit



Marking Symbol: EN

Internal Connection





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