

2SB1011

Silicon PNP triple diffusion planar type

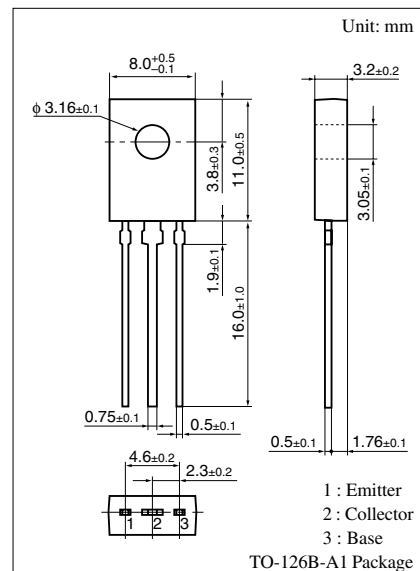
For low-frequency amplification

■ Features

- High collector to base voltage V_{CBO}
- High collector to emitter V_{CEO}
- Large collector power dissipation P_C
- Low collector to emitter saturation voltage $V_{CE(sat)}$

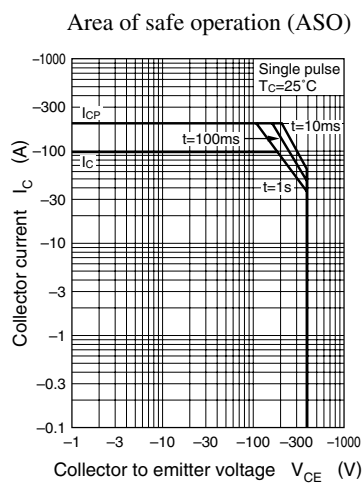
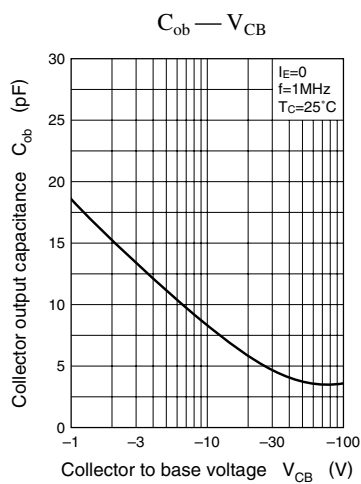
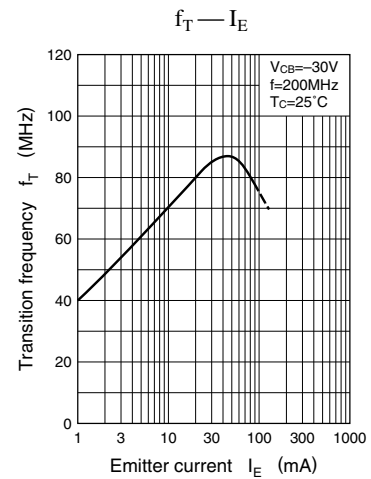
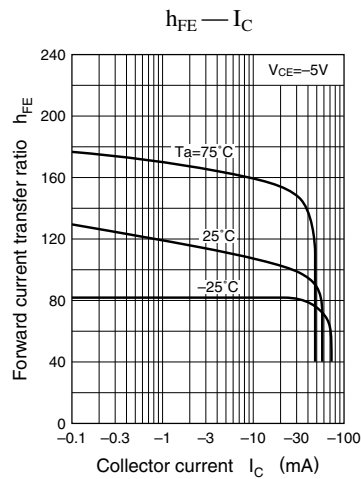
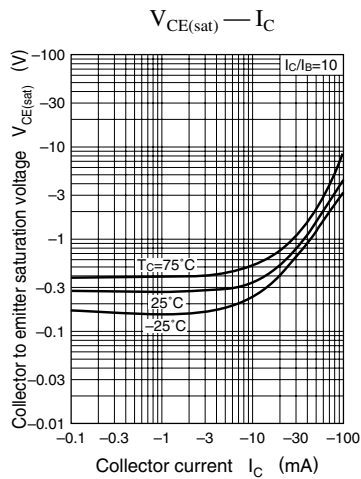
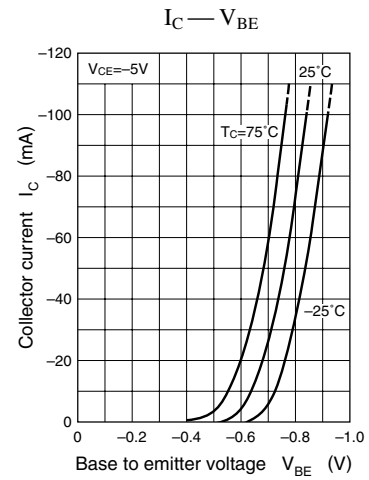
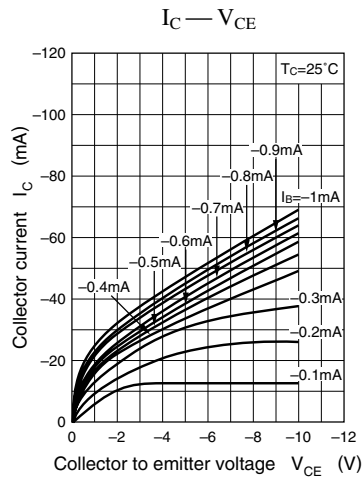
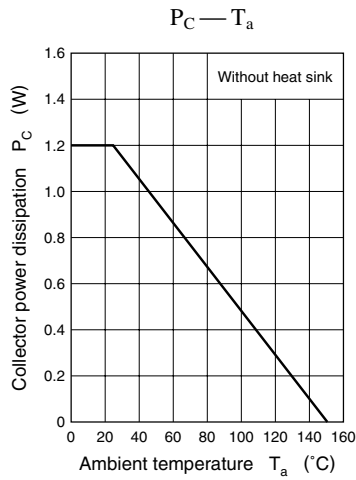
■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

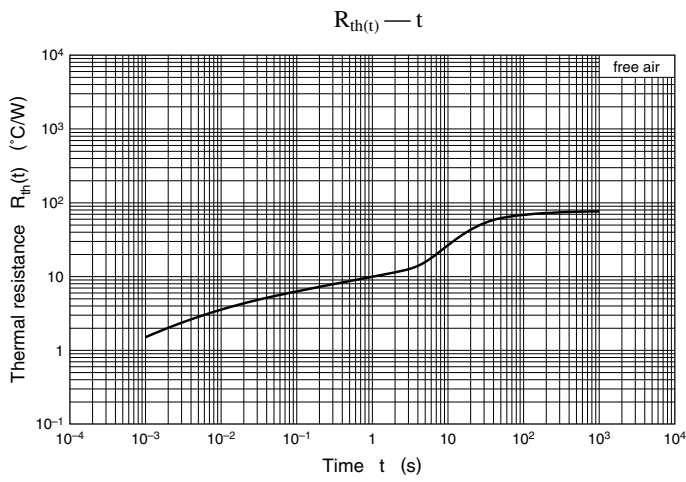
| Parameter | Symbol | Rating | Unit |
|------------------------------|-----------|-------------|------------------|
| Collector to base voltage | V_{CBO} | -400 | V |
| Collector to emitter voltage | V_{CEO} | -400 | V |
| Emitter to base voltage | V_{EBO} | -5 | V |
| Peak collector current | I_{CP} | -200 | mA |
| Collector current | I_C | -100 | mA |
| Collector power dissipation | P_C | 1.2 | W |
| Junction temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |



■ Electrical Characteristics $T_C = 25^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|--|------|-----|------|------|
| Collector to base voltage | V_{CBO} | $I_C = -100\ \mu\text{A}$, $I_E = 0$ | -400 | | | V |
| Collector to emitter voltage | V_{CEO} | $I_C = -500\ \mu\text{A}$, $I_B = 0$ | -400 | | | V |
| Emitter to base voltage | V_{EBO} | $I_E = -100\ \mu\text{A}$, $I_C = 0$ | -5 | | | V |
| Forward current transfer ratio | h_{FE} | $V_{CE} = -5\ \text{V}$, $I_C = -30\ \text{mA}$ | 30 | | | |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -50\ \text{mA}$, $I_B = -5\ \text{mA}$ | | | -2.5 | V |
| Base to emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -50\ \text{mA}$, $I_B = -5\ \text{mA}$ | | | -1.5 | V |
| Transition frequency | f_T | $V_{CB} = -30\ \text{V}$, $I_E = 20\ \text{mA}$, $f = 200\ \text{MHz}$ | | 70 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = -30\ \text{V}$, $I_E = 0$, $f = 1\ \text{MHz}$ | | | 9 | pF |





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