

XN04110 (XN4110)

Silicon PNP epitaxial planar transistor

For digital circuits/switching

■ Features

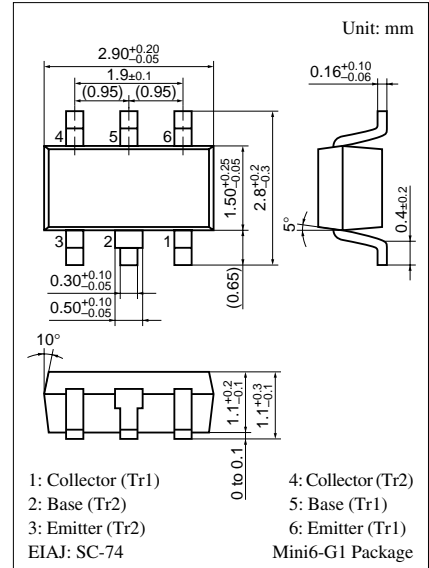
- Two elements incorporated into one package (Transistors with built-in resistor)
- Reduction of the mounting area and assembly cost by one half

■ Basic Part Number of Element

- UNR1110 (UN1110) × 2 elements

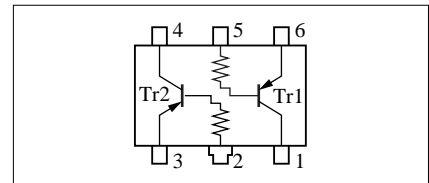
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| | Parameter | Symbol | Rating | Unit |
|-------------------|------------------------------|-----------|-------------|------------------|
| Rating of element | Collector to base voltage | V_{CBO} | -50 | V |
| | Collector to emitter voltage | V_{CEO} | -50 | V |
| | Collector current | I_C | -100 | mA |
| Total | Total power dissipation | P_T | 300 | mW |
| | Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| | Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |



Marking Symbol: BI

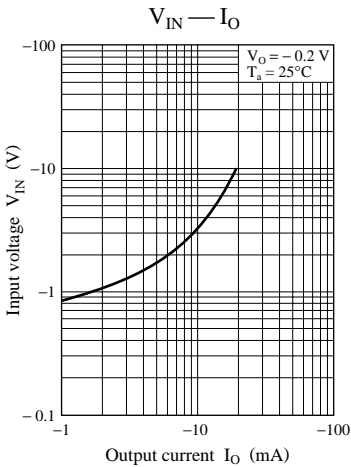
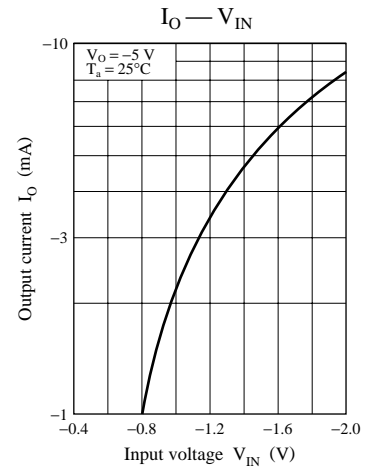
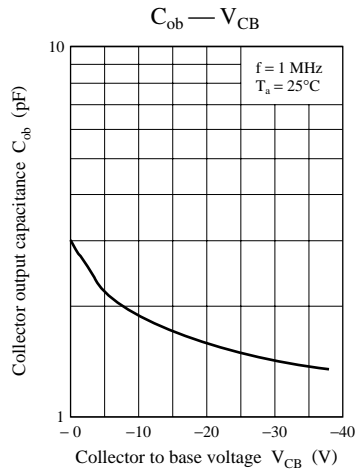
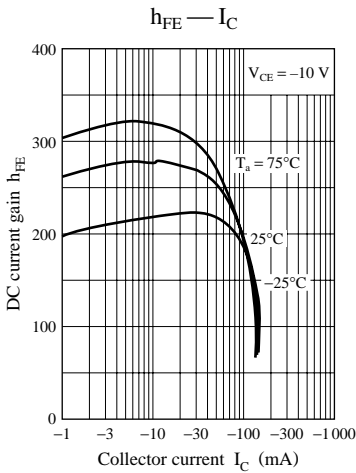
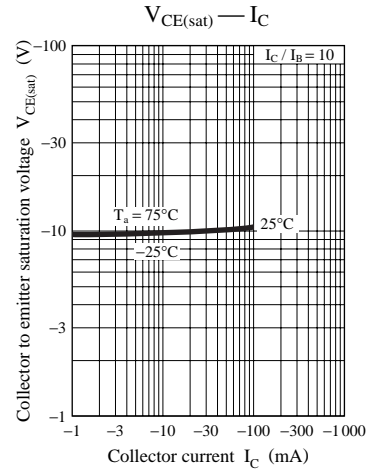
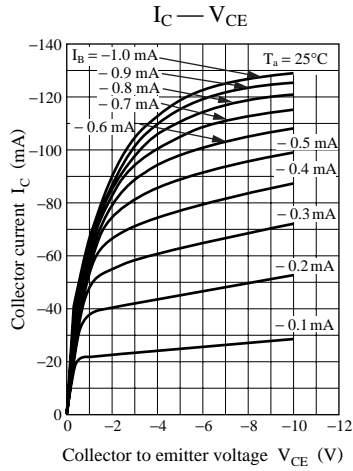
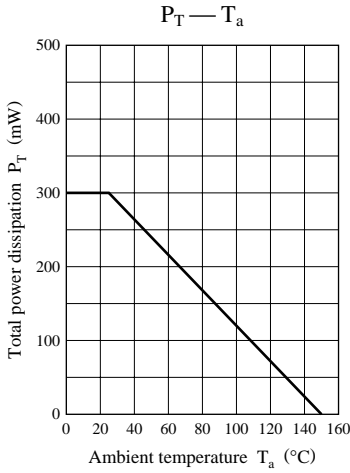
Internal Connection



■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---|---------------|--|------|-----|-------|---------------|
| Collector to base voltage | V_{CBO} | $I_C = -10 \mu\text{A}, I_E = 0$ | -50 | | | V |
| Collector to emitter voltage | V_{CEO} | $I_C = -2 \text{ mA}, I_B = 0$ | -50 | | | V |
| Collector cutoff current | I_{CBO} | $V_{CB} = -50 \text{ V}, I_E = 0$ | | | -0.1 | μA |
| | I_{CEO} | $V_{CE} = -50 \text{ V}, I_B = 0$ | | | -0.5 | |
| Emitter cutoff current | I_{EBO} | $V_{EB} = -6 \text{ V}, I_C = 0$ | | | -0.01 | mA |
| DC current gain | h_{FE} | $V_{CE} = -10 \text{ V}, I_C = -5 \text{ mA}$ | 160 | | 460 | |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -10 \text{ mA}, I_B = -0.3 \text{ mA}$ | | | -0.25 | V |
| High level output voltage | V_{OH} | $V_{CC} = -5 \text{ V}, V_B = -0.5 \text{ V}, R_L = 1 \text{ k}\Omega$ | -4.9 | | | V |
| Low level output voltage | V_{OL} | $V_{CC} = -5 \text{ V}, V_B = -2.5 \text{ V}, R_L = 1 \text{ k}\Omega$ | | | -0.2 | V |
| Input resistance | R_I | | -30% | 47 | +30% | k Ω |
| Gain bandwidth product | f_T | $V_{CB} = -10 \text{ V}, I_E = 1 \text{ mA}, f = 200 \text{ MHz}$ | | 80 | | MHz |

Note) The part number in the parenthesis shows conventional part number.



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