

Descriptions

- General purpose application
- Switching application

Features

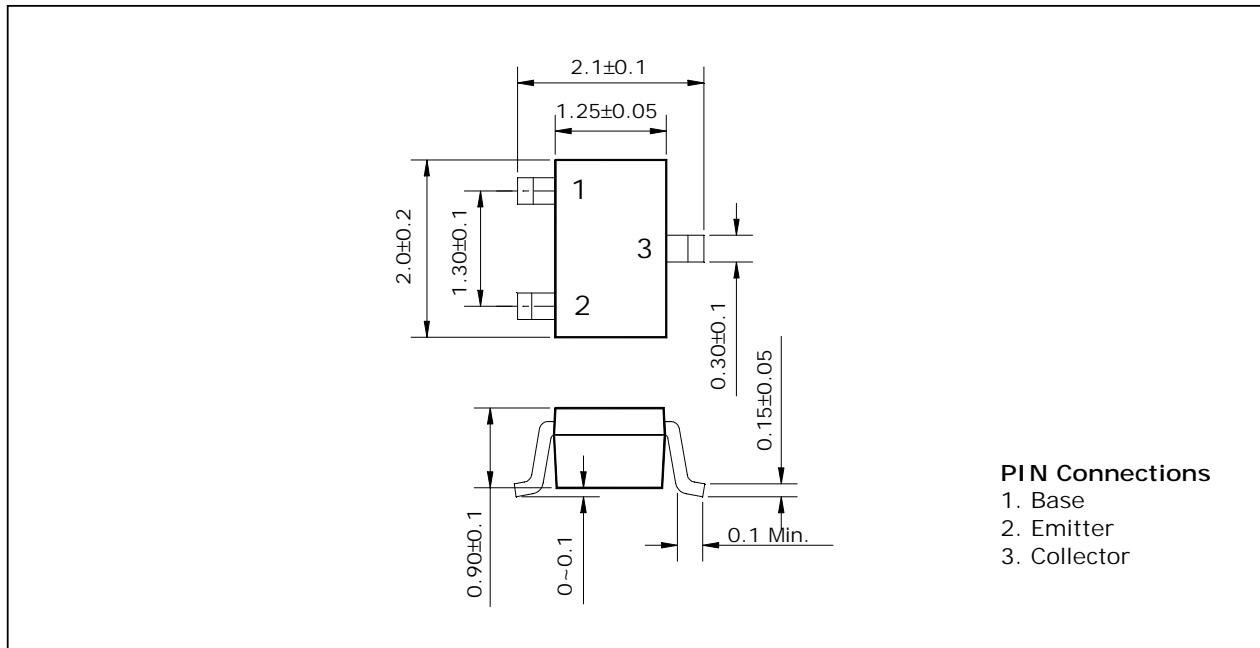
- Low Leakage current
- Low collector saturation voltage enabling low voltage operation
- Complementary pair with SBT2222AU

Ordering Information

| Type NO. | Marking | Package Code |
|-----------|---------|--------------|
| SBT2907AU | F2 | SOT-323 |

Outline Dimensions

unit : mm



Absolute maximum ratings

Ta=25°C

| Characteristic | Symbol | Ratings | Unit |
|---------------------------|-----------|-----------|------|
| Collector-Base voltage | V_{CBO} | -60 | V |
| Collector-Emitter voltage | V_{CEO} | -60 | V |
| Emitter-base voltage | V_{EBO} | -5 | V |
| Collector current | I_C | -600 | mA |
| Collector dissipation | P_C^* | 350 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature range | T_{stg} | -55 ~ 150 | °C |

* : Package mounted on 99.5% alumina 10×8×0.6mm

Electrical Characteristics

Ta=25°C

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|--------------------------------------|---------------|--|------|------|------|------|
| Collector-Base breakdown voltage | BV_{CBO} | $I_C = -10\mu A, I_E = 0$ | -60 | - | - | V |
| Collector-Emitter breakdown voltage | BV_{CEO} | $I_C = -10mA, I_B = 0$ | -60 | - | - | V |
| Emitter-Base breakdown voltage | BV_{EBO} | $I_E = -10\mu A, I_C = 0$ | -5 | - | - | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = -60V, I_E = 0$ | - | - | -20 | nA |
| DC current gain | h_{FE} | $V_{CE} = -10V, I_C = -10mA$ | 100 | - | - | - |
| Collector-Emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -150mA, I_B = -15mA$ | - | - | -0.4 | V |
| Transition frequency | f_T | $V_{CE} = -5.0V, I_C = -20mA, f = 100MHz$ | 200 | - | - | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = -10V, I_E = 0, f = 1MHz$ | - | - | 8 | pF |
| Turn-on time | t_{on} | $V_{CC} = -30V_{dc}, I_C = -150mA_{dc}, I_{B1} = -15mA_{dc}$ | - | - | 45 | ns |
| Delay time | t_d | | - | - | 10 | ns |
| Rise time | t_r | | - | - | 40 | ns |
| Turn-off time | t_{off} | $V_{CC} = -6.0V_{dc}, I_C = -150mA_{dc}, I_{B1} = I_{B2} = -15mA_{dc}$ | - | - | 100 | ns |
| Storage time | t_s | | - | - | 80 | ns |
| Fall time | t_f | | - | - | 30 | ns |

Electrical Characteristic Curves

Fig. 1 P_C - T_a

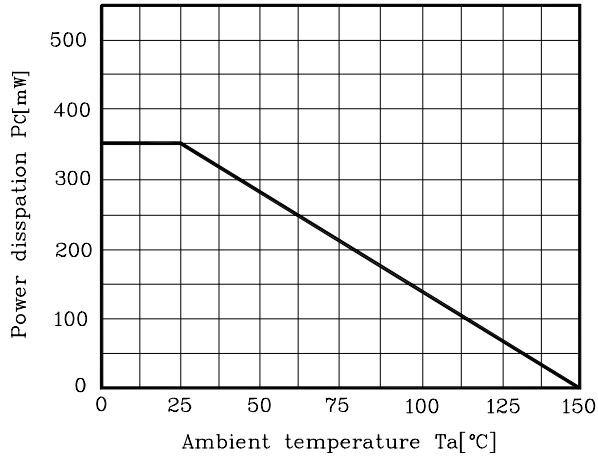


Fig. 2 h_{FE} - I_C

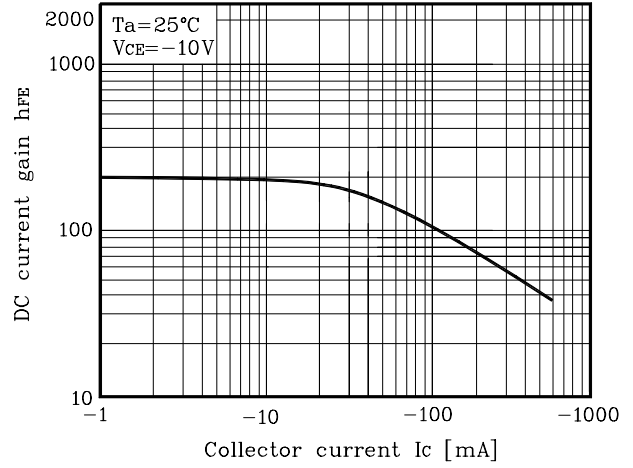


Fig. 3 $V_{CE(sat)}$ - I_C

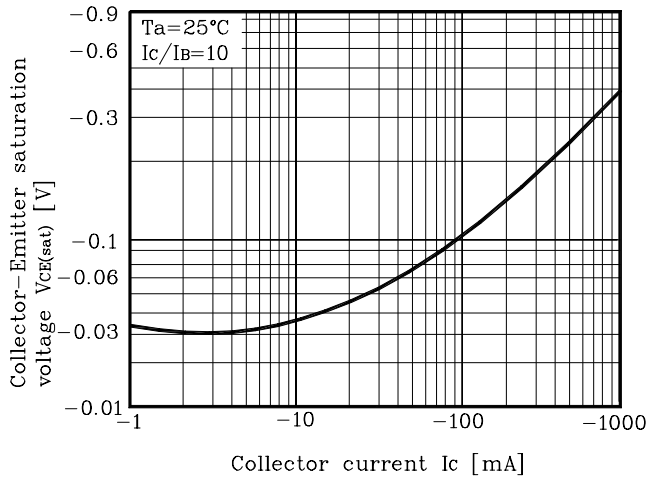


Fig. 4 C_{ob} - V_{CB}

