

Descriptions

- High current application
- Switching application

Features

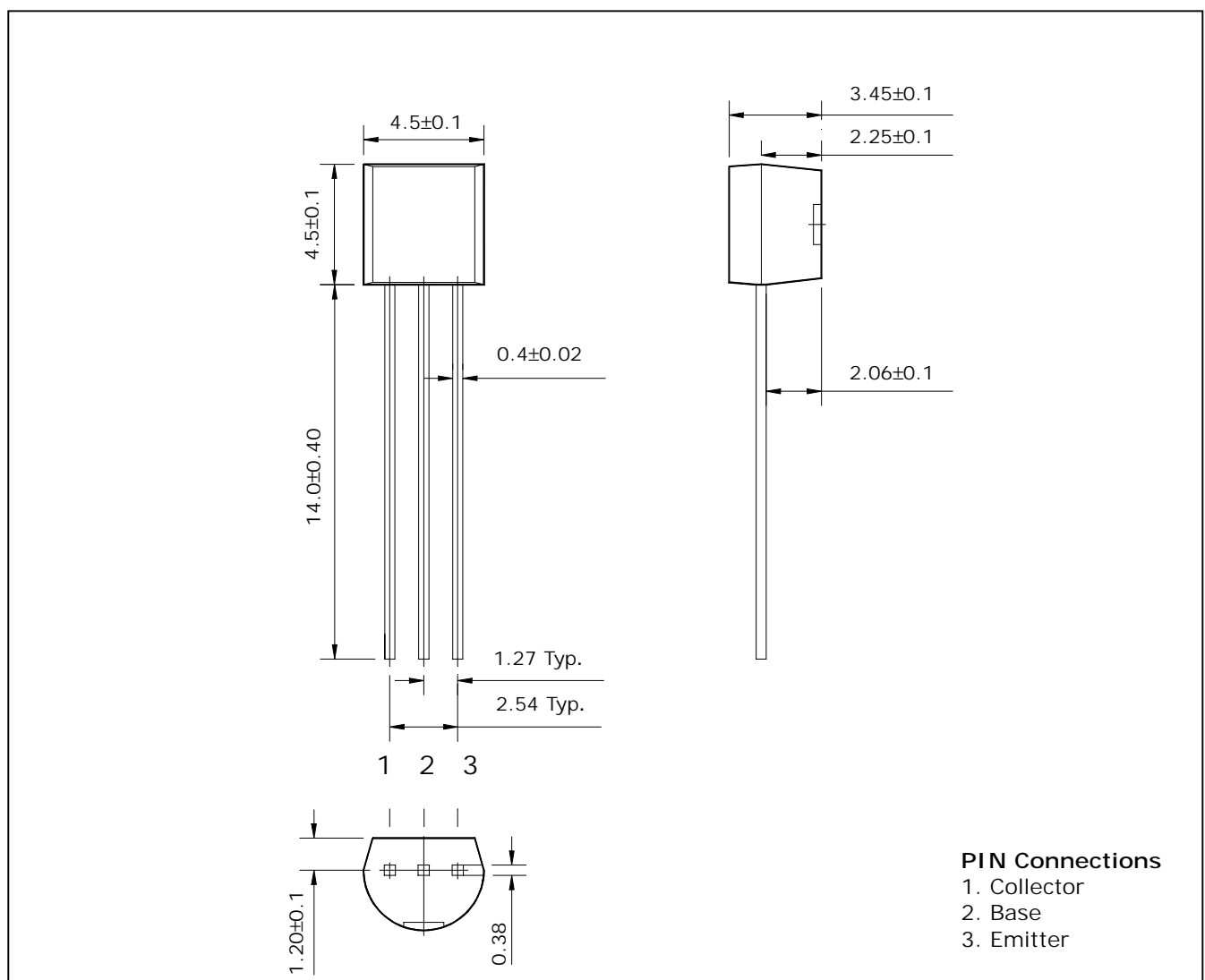
- Suitable for AF-Driver stage and low power output stages
- Complementary pair with SBC328

Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| SBC338 | SBC338 | TO-92 |

Outline Dimensions

unit : mm



Absolute maximum ratings

(Ta=25°C)

| Characteristic | Symbol | Ratings | Unit |
|---------------------------|-----------|-----------|------|
| Collector-Base voltage | V_{CBO} | 30 | V |
| Collector-Emitter voltage | V_{CEO} | 25 | V |
| Emitter-Base voltage | V_{EBO} | 5 | V |
| Collector current | I_C | 800 | mA |
| Collector dissipation | P_C | 625 | mW |
| Junction temperature | T_J | 150 | °C |
| Storage temperature | T_{stg} | -55 ~ 150 | °C |

Electrical Characteristics

(Ta=25°C)

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|--------------------------------------|---------------|---|------|------|------|------|
| Collector-Emitter breakdown voltage | BV_{CEO} | $I_C=1\text{mA}, I_B=0$ | 25 | - | - | V |
| Base-Emitter turn on voltage | $V_{BE(ON)}$ | $V_{CE}=1\text{V}, I_C=300\text{mA}$ | - | - | 1.2 | V |
| Collector-Emitter saturation voltage | $V_{CE(sat)}$ | $I_C=500\text{mA}, I_B=50\text{mA}$ | - | - | 700 | mV |
| Collector cut-off current | I_{CBO} | $V_{CB}=30\text{V}, I_E=0$ | - | - | 100 | nA |
| DC current gain | h_{FE}^* | $V_{CE}=1\text{V}, I_C=100\text{mA}$ | 100 | - | 630 | - |
| Transition frequency | f_T | $V_{CB}=5\text{V}, I_C=10\text{mA}$ | - | 100 | - | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ | - | 16 | - | pF |

* : h_{FE} rank / 16(A) : 100 ~ 250, 25(B) : 160 ~ 400, 40(C) : 250 ~ 630

Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

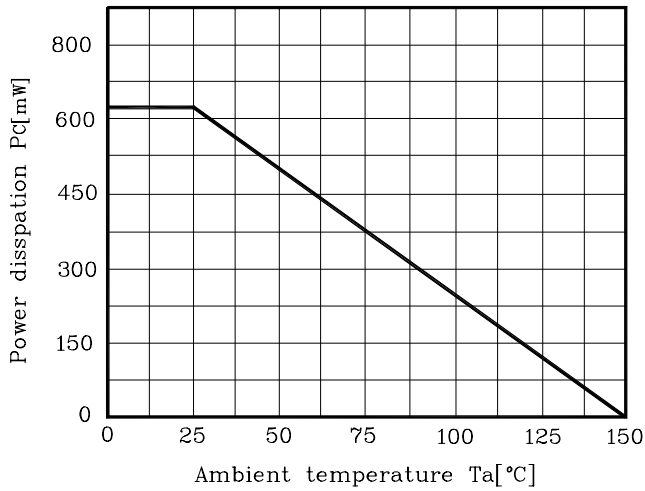


Fig. 2 $I_C - V_{BE}$

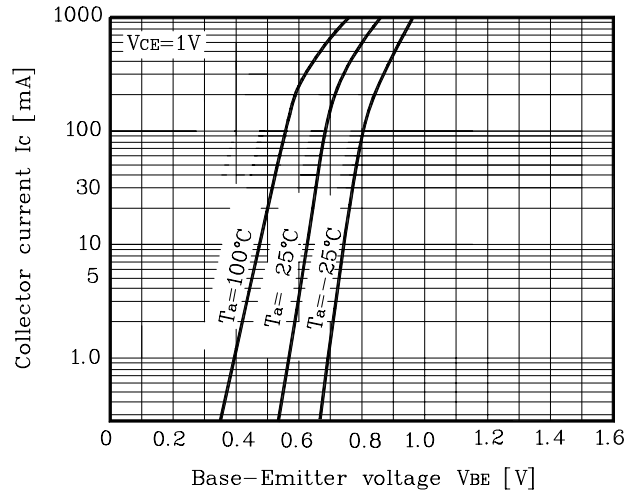


Fig. 3 $I_C - V_{CE}$

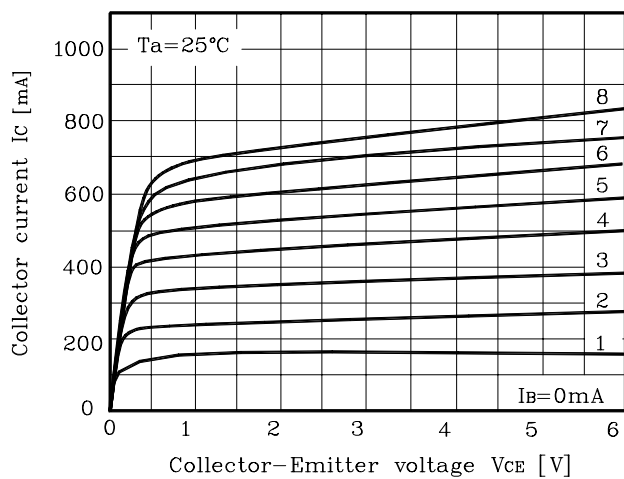


Fig. 4 $V_{CE(sat)} - I_C$

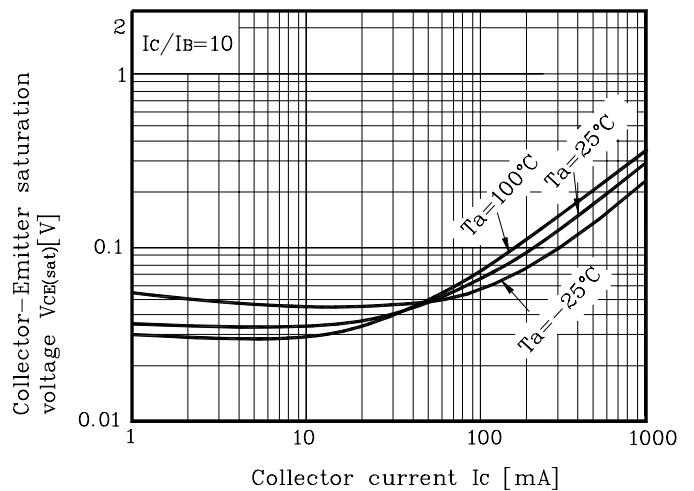


Fig. 5 $h_{FE} - I_C$

