

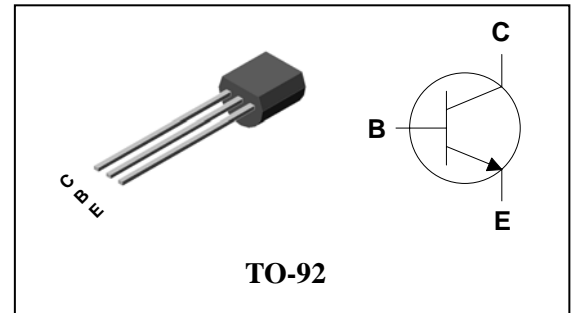
Descriptions

- High current application
- Switching application

Features

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

PIN Connection



Ordering Information

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

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

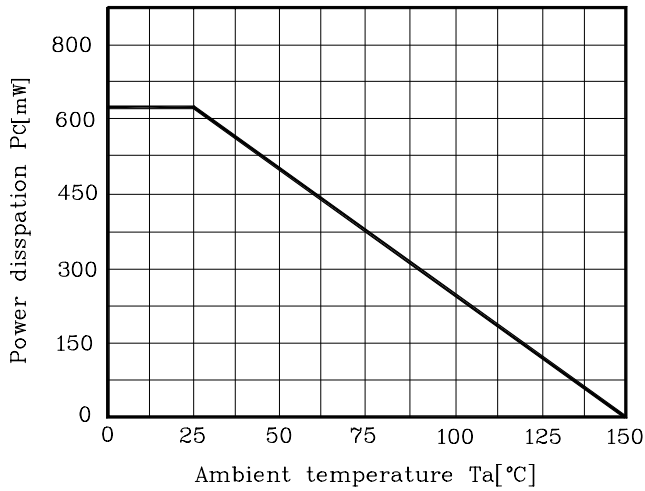


Fig. 2 I_C - V_{BE}

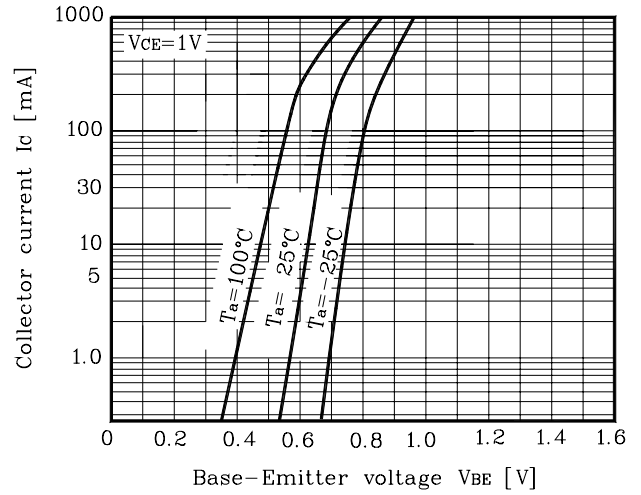


Fig. 3 I_C - V_{CE}

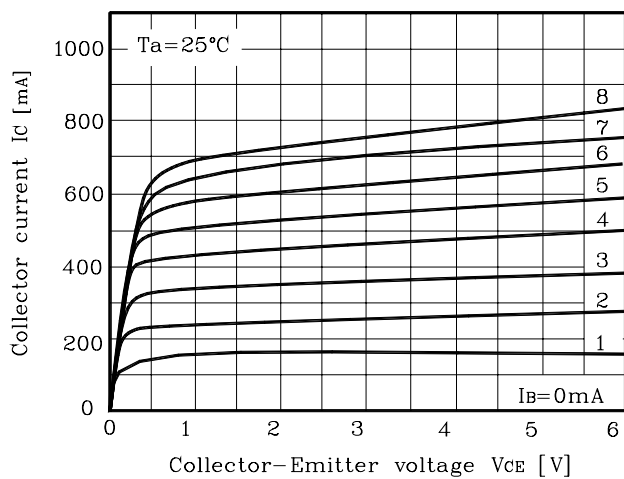


Fig. 4 $V_{CE(sat)}$ - I_C

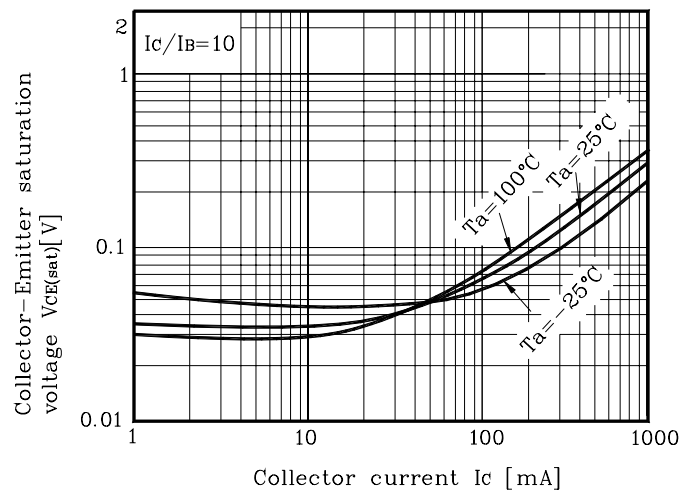
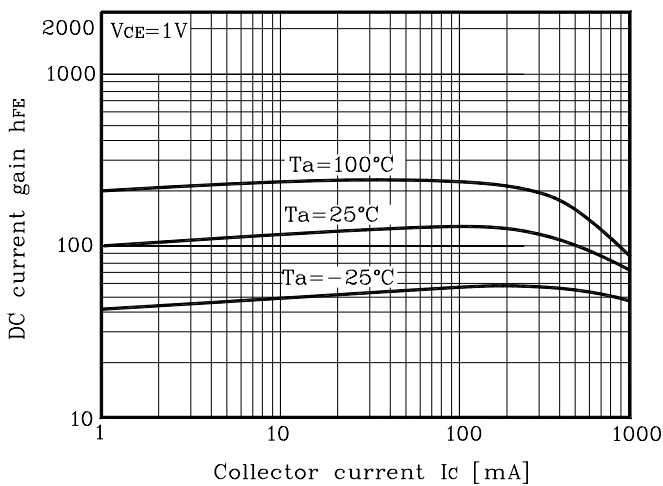
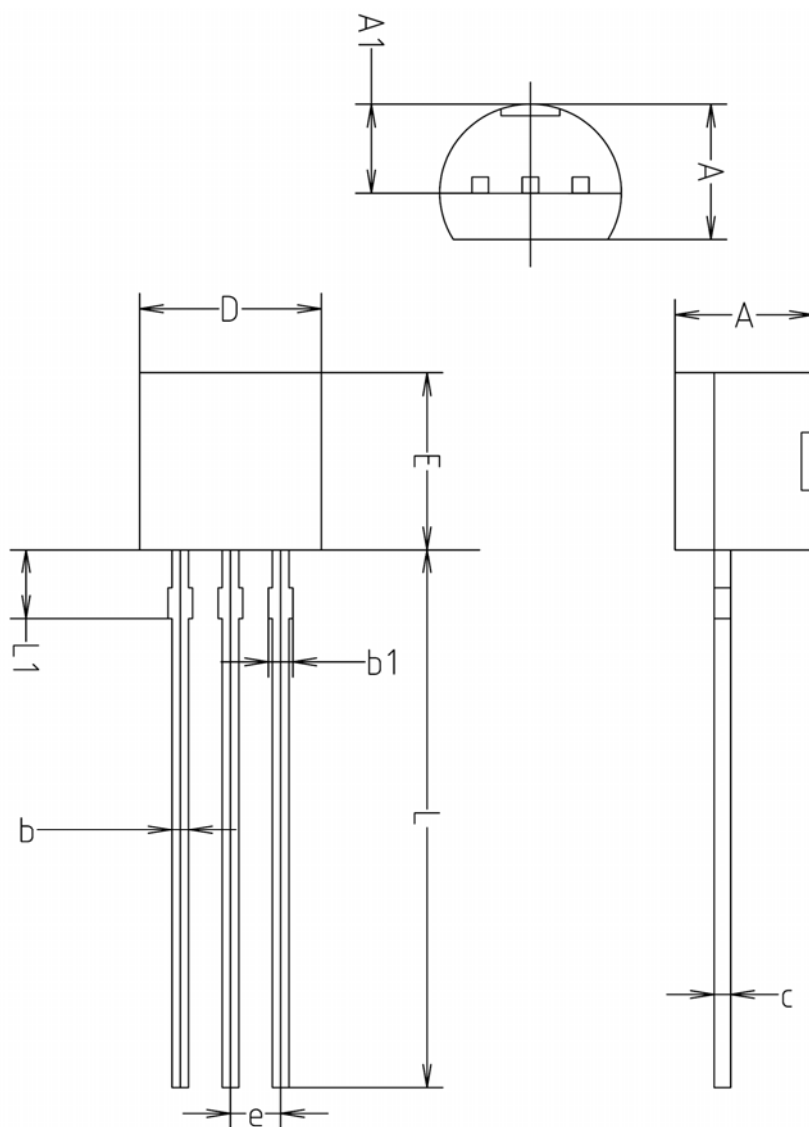


Fig. 5 h_{FE} - I_C



Outline Dimension



| SYMBOL | MILLMETERS(mm) | | |
|--------|----------------|---------|---------|
| | MINIMUM | NOMINAL | MAXIMUM |
| A | 3.40 | 3.50 | 3.66 |
| A1 | 2.46 | 2.51 | 2.59 |
| b | 0.39 | 0.44 | 0.53 |
| b1 | 0.39 | — | 0.63 |
| c | 0.35 | 0.42 | 0.47 |
| D | 4.48 | 4.60 | 4.70 |
| E | 4.48 | 4.60 | 4.70 |
| e | 1.17 | 1.27 | 1.37 |
| L | 13.70 | 14.00 | 14.77 |
| L1 | 1.55 | 1.70 | 2.15 |

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