

**Features**

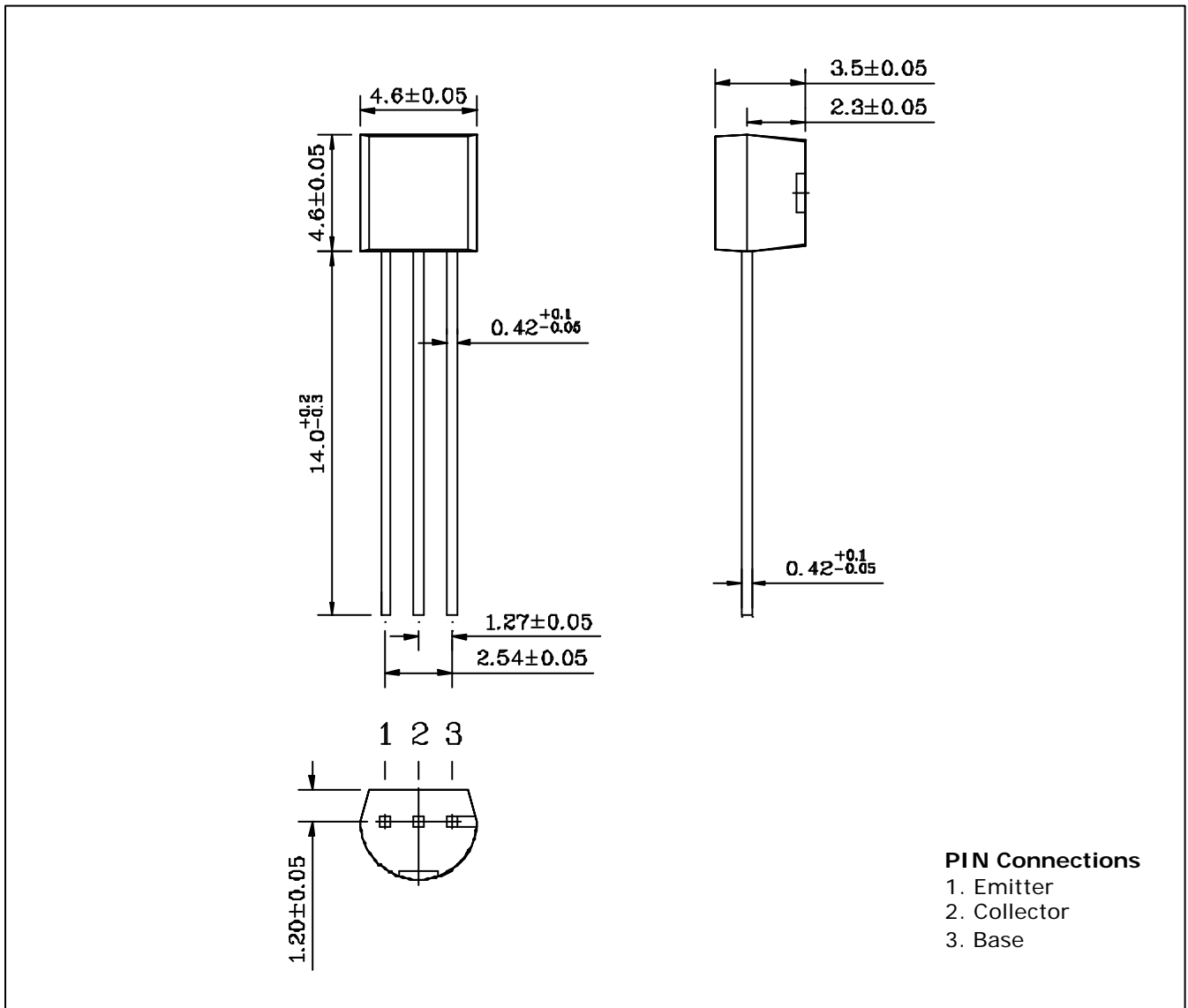
- Extremely low collector-to-emitter saturation voltage  
(  $V_{CE(SAT)} = 0.3V$  Typ. @  $I_C/I_B = 1A/50mA$  )
- Suitable for low voltage large current drivers
- Complementary pair with DP200
- Switching Application

**Ordering Information**

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| DN200    | DN200   | TO-92        |

**Outline Dimensions**

unit : mm



## Absolute maximum ratings

(Ta=25° C)

| Characteristic            | Symbol    | Ratings   | Unit |
|---------------------------|-----------|-----------|------|
| Collector-Base voltage    | $V_{CBO}$ | 15        | V    |
| Collector-Emitter voltage | $V_{CEO}$ | 12        | V    |
| Emitter-Base voltage      | $V_{EBO}$ | 5         | V    |
| Collector current         | $I_C$     | 2         | A    |
| 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-Base breakdown voltage     | $BV_{CBO}$     | $I_C=50\mu A, I_E=0$        | 15   | -    | -    | V       |
| Collector-Emitter breakdown voltage  | $BV_{CEO}$     | $I_C=1mA, I_B=0$            | 12   | -    | -    | V       |
| Emitter-Base breakdown voltage       | $BV_{EBO}$     | $I_E=50\mu A, I_C=0$        | 5    | -    | -    | V       |
| Collector cut-off current            | $I_{CBO}$      | $V_{CB}=12V, I_E=0$         | -    | -    | 0.1  | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$      | $V_{EB}=5V, I_C=0$          | -    | -    | 0.1  | $\mu A$ |
| DC current gain                      | $h_{FE1}$      | $V_{CE}=1V, I_C=100mA$      | 200  | -    | 450  | -       |
|                                      | $h_{FE2}$      | $V_{CE}=1V, I_C=2A$         | 40   | -    | -    | -       |
| Collector-Emitter saturation voltage | $V_{CE(sat)1}$ | $I_C=1A, I_B=50mA$          | -    | -    | 0.3  | V       |
|                                      | $V_{CE(sat)2}$ | $I_C=2A, I_B=50mA$          | -    | -    | 0.5  |         |
| Base-Emitter saturation voltage      | $V_{BE(sat)}$  | $I_C=1A, I_B=50mA$          | -    | -    | 1.2  | V       |
| Transition frequency                 | $f_T$          | $V_{CE}=5V, I_C=50mA$       | -    | 260  | -    | MHz     |
| Collector output capacitance         | $C_{ob}$       | $V_{CB}=10V, I_E=0, f=1MHz$ | -    | 5    | -    | pF      |

Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

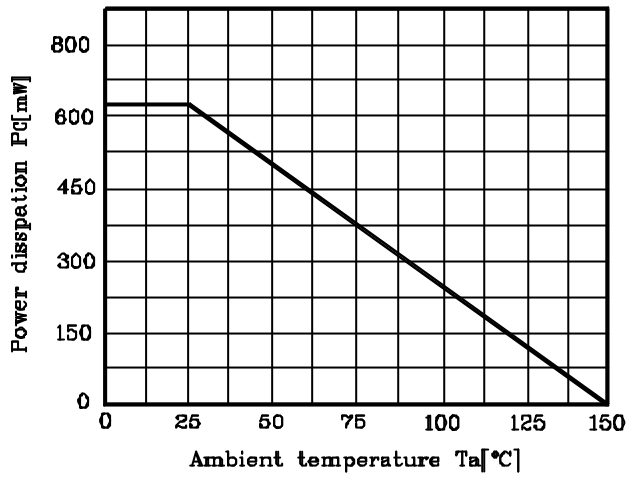


Fig. 2  $I_C - V_{BE}$

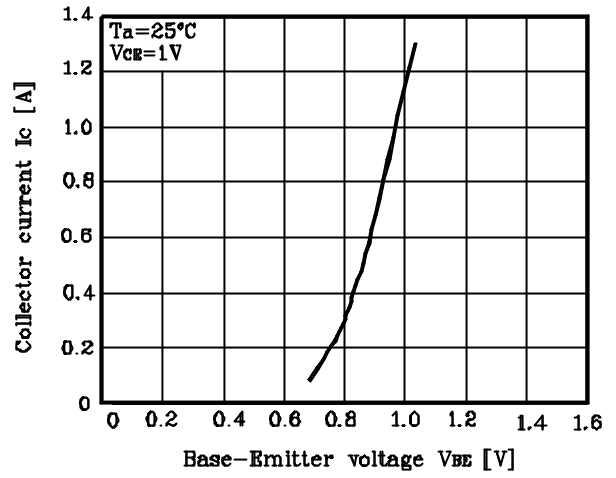


Fig. 3  $h_{FE} - I_C$

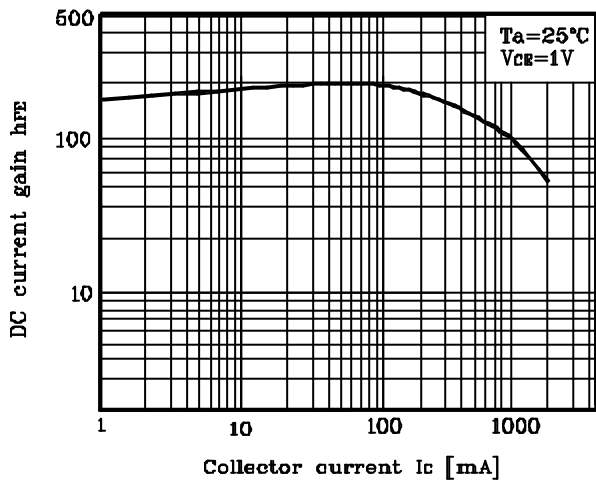


Fig. 4  $V_{CE(sat)} - I_C$

