

## Descriptions

- General small signal application
- Switching application

## Features

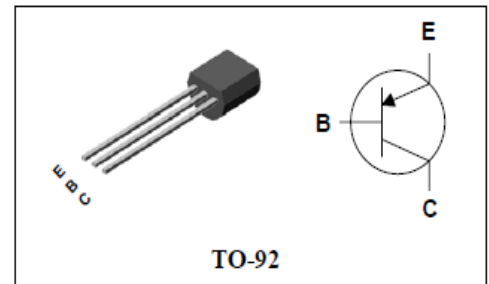
- Low collector saturation voltage
- Collector output capacitance
- Complementary pair with K2N3904

## Ordering Information

| Type NO. | Marking  | Package Code |
|----------|----------|--------------|
| K2N3906  | K2N3906• | TO-92        |

• Dalian

## PIN Connection



## Absolute Maximum Ratings

(Ta=25°C)

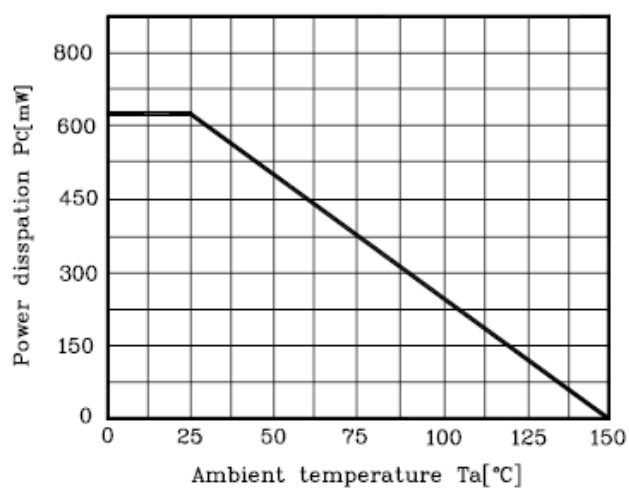
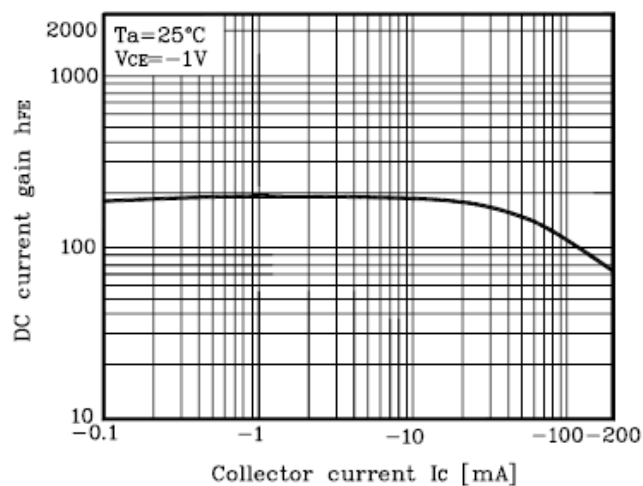
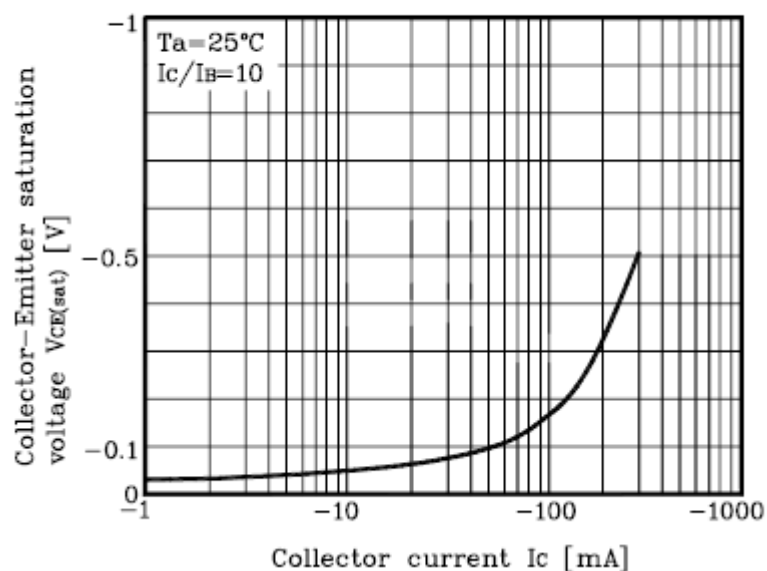
| Characteristic            | Symbol    | Ratings | Unit |
|---------------------------|-----------|---------|------|
| Collector-Base voltage    | $V_{CBO}$ | -40     | V    |
| Collector-Emitter voltage | $V_{CEO}$ | -40     | V    |
| Emitter-base voltage      | $V_{EBO}$ | -5      | V    |
| Collector current         | $I_C$     | -200    | mA   |
| Collector dissipation     | $P_C$     | 625     | mW   |
| Junction temperature      | $T_j$     | 150     | °C   |
| Storage temperature range | $T_{stg}$ | -55~150 | °C   |

## Electrical Characteristics

(Ta=25°C)

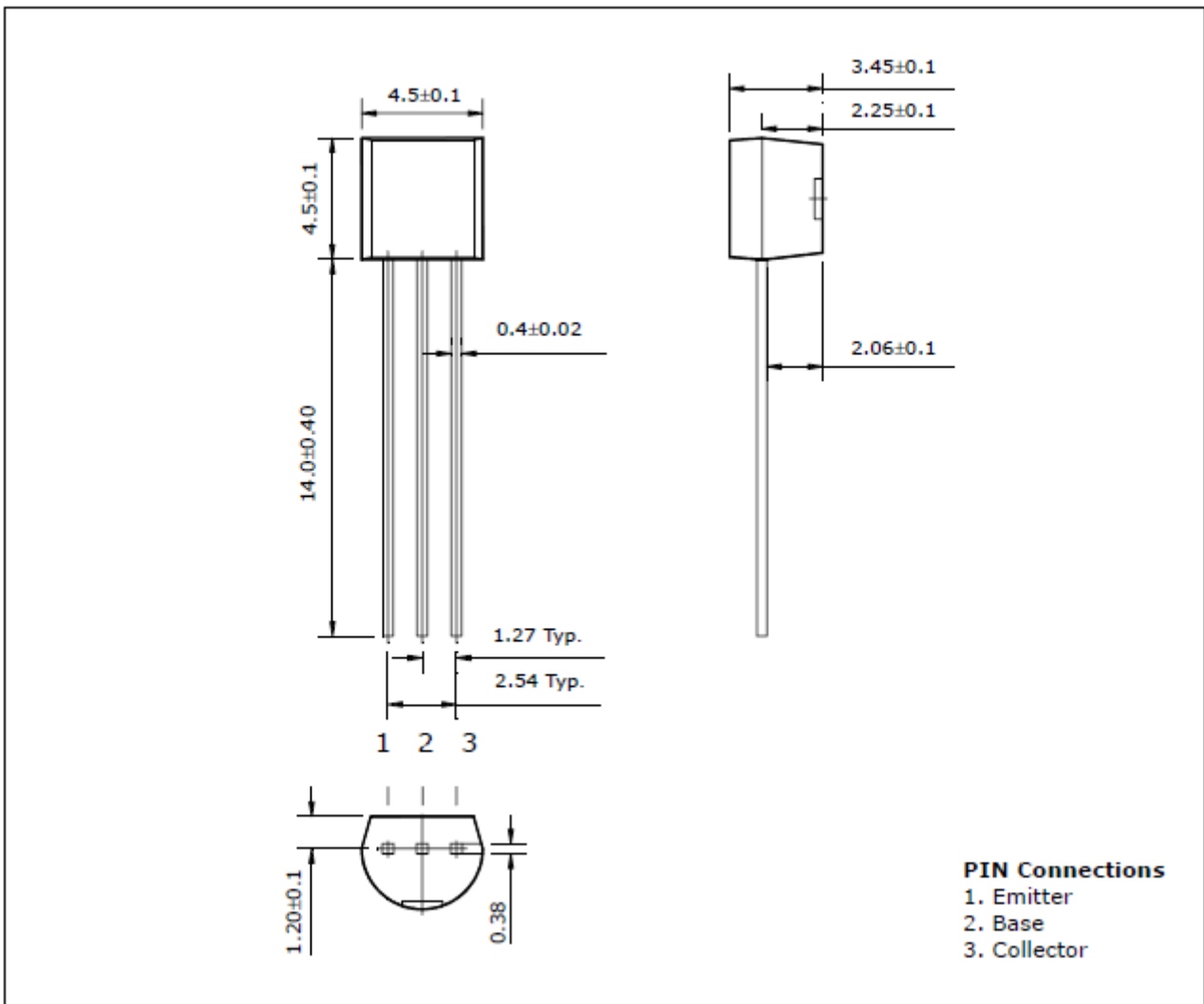
| Characteristic                       | Symbol        | Test Condition  | Min. | Typ. | Max. | Unit |
|--------------------------------------|---------------|---|------|------|------|------|
| Collector-Base breakdown voltage     | $BV_{CBO}$    | $I_C = -10\mu A, I_E = 0$   | -40  | -    | -    | V    |
| Collector-Emitter breakdown voltage  | $BV_{CEO}$    | $I_C = -1mA, I_B = 0$   | -40  | -    | -    | V    |
| Emitter-Base breakdown voltage       | $BV_{EBO}$    | $I_E = -10\mu A, I_C = 0$   | -5   | -    | -    | V    |
| Collector cut-off current            | $I_{CEX}$     | $V_{CE} = -30V, V_{EB} = -3V$   | -    | -    | -50  | nA   |
| DC current gain                      | $h_{FE}$      | $V_{CE} = -1V, I_C = -10mA$   | 100  | -    | 300  | -    |
| Collector-Emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -50mA, I_B = -5mA$   | -    | -    | -0.4 | V    |
| Transition frequency                 | $f_T$         | $V_{CE} = -20V, I_C = -10mA, f = 100MHz$  | 250  | -    | -    | MHz  |
| Collector output capacitance         | $C_{ob}$      | $V_{CB} = -5V, I_E = 0, f = 1MHz$   | -    | -    | 4.5  | pF   |
| Delay time                           | $t_d$         | $V_{CC} = -3V_{dc}, V_{BE(off)} = -0.5V_{dc}, I_C = -10mA_{dc}, I_{B1} = -1mA_{dc}$ | -    | -    | 35   | ns   |
| Rise time                            | $t_r$         |   | -    | -    | 35   | ns   |
| Storage time                         | $t_s$         | $V_{CC} = -3V_{dc}, I_C = -10mA_{dc}, I_{B1} = I_{B2} = -1mA_{dc}$                  | -    | -    | 225  | ns   |
| Fall Time                            | $t_f$         |   | -    | -    | 75   | ns   |

## Electrical Characteristic Curves

Fig. 1  $P_C$ - $T_a$ Fig. 2  $h_{FE}$ - $I_C$ Fig. 3  $V_{CE(sat)}$ - $I_C$ 

Outline Dimensions

unit : mm



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