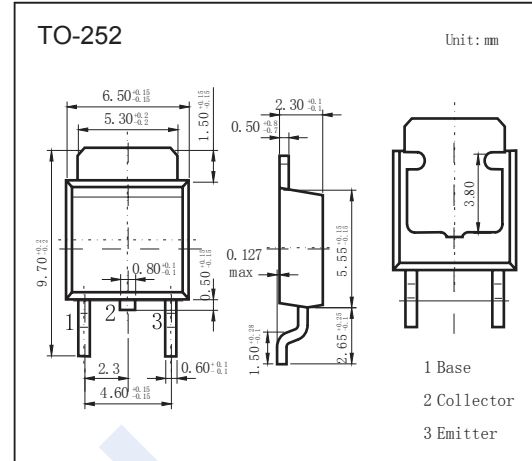


## PNP Transistors

## 2SA1875



### ■ Features

- High  $f_r$  :  $f_r=400\text{MHz}(\text{typ})$ .
- High breakdown voltage
- Large current capacitance.
- Complements to 2SC4976

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter   | Symbol    | Rating     | Unit             |
|---|-----------|------------|------------------|
| Collector - Base Voltage                              | $V_{CB0}$ | -200       | V                |
| Collector - Emitter Voltage                           | $V_{CE0}$ | -200       |                  |
| Emitter - Base Voltage                                | $V_{EB0}$ | -3         |                  |
| Collector Current - Continuous                        | $I_C$     | -300       | mA               |
| Collector Current - Pulse                             | $I_{CP}$  | -600       |                  |
| Base Current  | $I_B$     | -30        | W                |
| Collector Power Dissipation<br>$T_c=25^\circ\text{C}$ | $P_C$     | 0.8        |                  |
|   |           | 12         |                  |
| Junction Temperature                                  | $T_J$     | 150        | $^\circ\text{C}$ |
| Storage Temperature range                             | $T_{stg}$ | -55 to 150 |                  |

### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

| Parameter                            | Symbol               | Test Conditions  | Min  | Typ | Max  | Unit          |
|--------------------------------------|----------------------|--|------|-----|------|---------------|
| Collector-base breakdown voltage     | $V_{CB0}$            | $I_C = -100 \mu\text{A}$ , $I_E = 0$                     | -200 |     |      | V             |
| Collector-emitter breakdown voltage  | $V_{CE0}$            | $I_C = -1 \text{mA}$ , $R_{BE} = \infty$                 | -200 |     |      |               |
| Emitter-base breakdown voltage       | $V_{EB0}$            | $I_E = -100 \mu\text{A}$ , $I_C = 0$                     | -3   |     |      |               |
| Collector-base cut-off current       | $I_{CB0}$            | $V_{CB} = -150 \text{V}$ , $I_E = 0$                     |      |     | -0.1 | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EB0}$            | $V_{EB} = -2 \text{V}$ , $I_C = 0$                       |      |     | -1   |               |
| Collector-emitter saturation voltage | $V_{CE(\text{sat})}$ | $I_C = -50 \text{mA}$ , $I_B = -5 \text{mA}$             |      |     | -1   | V             |
| Base-emitter saturation voltage      | $V_{BE(\text{sat})}$ | $I_C = -50 \text{mA}$ , $I_B = -5 \text{mA}$             |      |     | -1   |               |
| DC current gain                      | $h_{FE}$             | $V_{CE} = -10 \text{V}$ , $I_C = -50 \text{mA}$          | 60   |     | 320  |               |
|                                      |                      | $V_{CE} = -10 \text{V}$ , $I_C = -250 \text{mA}$         | 20   |     |      |               |
| Collector output capacitance         | $C_{ob}$             | $V_{CB} = -30 \text{V}$ , $I_E = 0$ , $f = 1 \text{MHz}$ |      | 5   |      | pF            |
| Reverse Transfer Capacitance         | $C_{ce}$             | $V_{CB} = -30 \text{V}$ , $I_E = 0$ , $f = 1 \text{MHz}$ |      | 4.2 |      |               |
| Transition frequency                 | $f_T$                | $V_{CE} = -10 \text{V}$ , $I_C = -100 \text{mA}$         |      | 400 |      | MHz           |

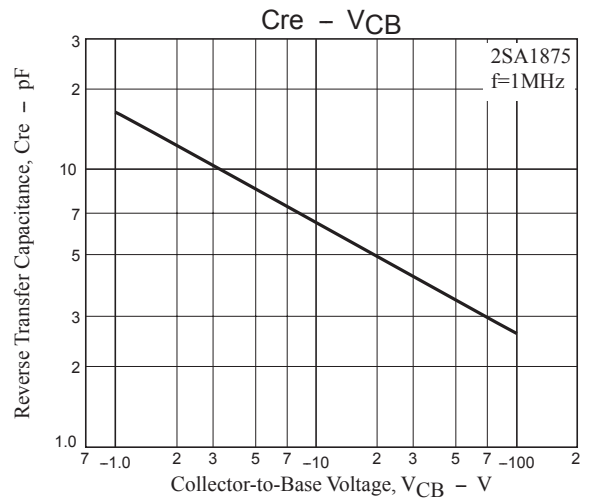
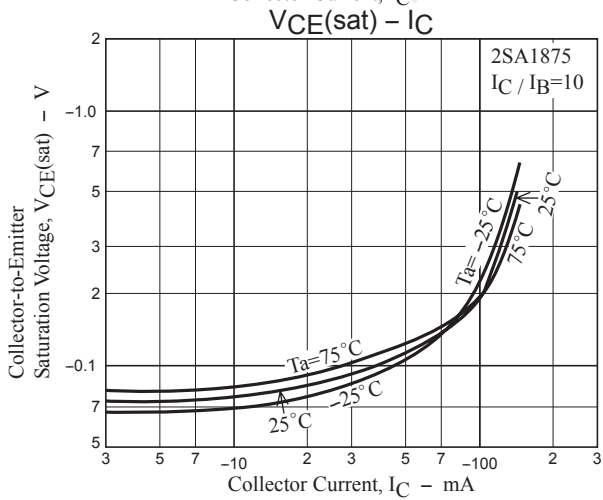
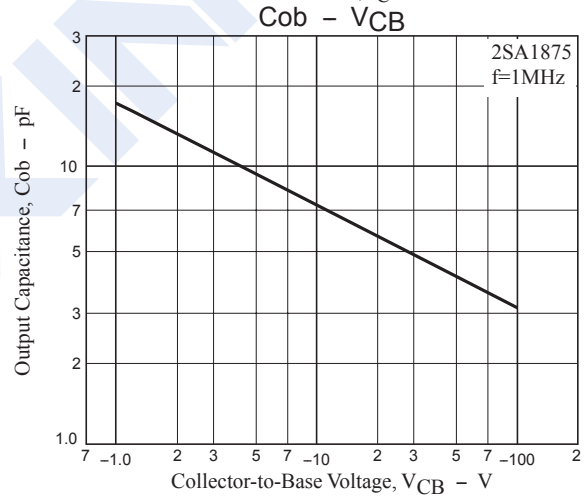
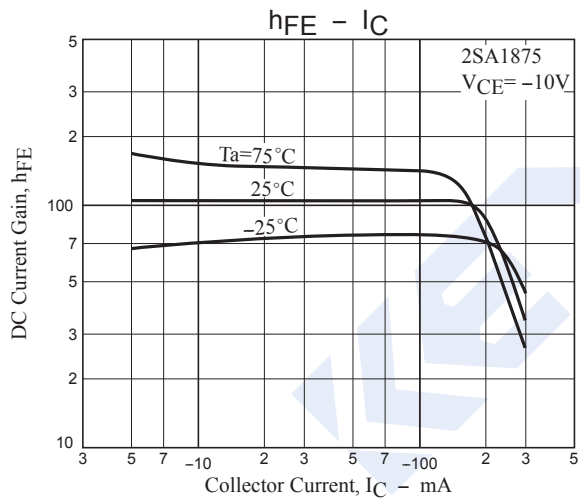
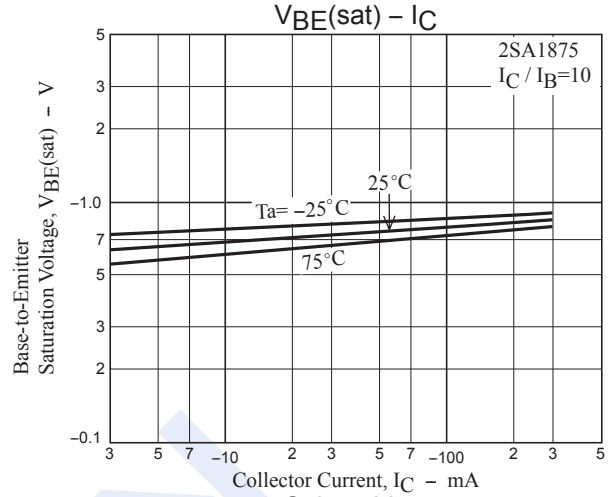
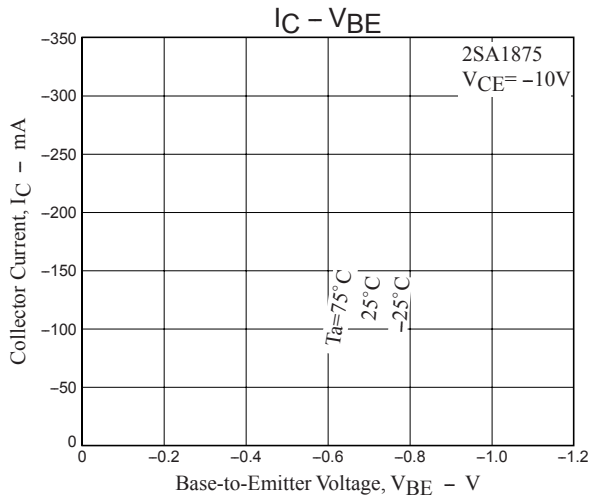
### ■ Classification of $h_{FE}(1)$

| Type  | 2SA1875-D | 2SA1875-E | 2SA1875-F |
|-------|-----------|-----------|-----------|
| Range | 60-120    | 100-200   | 160-320   |

# PNP Transistors

## 2SA1875

■ Typical Characteristics



## PNP Transistors

### 2SA1875

■ Typical Characteristics

