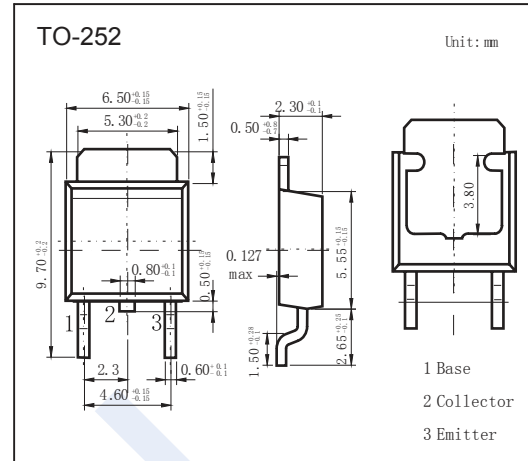


PNP Transistors

2SB935A

■ Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$
- High-speed switching



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

| Parameter | Symbol | Rating | Unit | |
|--------------------------------|-----------|--------------------------|------------------|---|
| Collector - Base Voltage | V_{CBO} | -50 | V | |
| Collector - Emitter Voltage | V_{CEO} | -40 | | |
| Emitter - Base Voltage | V_{EBO} | -5 | | |
| Collector Current - Continuous | I_C | -10 | A | |
| Collector current - Pulse | I_{CP} | -15 | | |
| Collector Power Dissipation | P_C | $T_c = 25^\circ\text{C}$ | 35 | W |
| | | $T_a = 25^\circ\text{C}$ | 1.3 | |
| 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_{CBO} | $I_C = -100 \mu\text{A}$, $I_E = 0$ | -50 | | | V |
| Collector-emitter breakdown voltage | V_{CEO} | $I_C = -10 \text{ mA}$, $I_B = 0$ | -40 | | | |
| Emitter - base breakdown voltage | V_{EBO} | $I_E = -100 \mu\text{A}$, $I_C = 0$ | -5 | | | |
| Collector-base cut-off current | I_{CBO} | $V_{CB} = -50\text{V}$, $I_E = 0$ | | | -50 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = -5\text{V}$, $I_C = 0$ | | | -50 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -7 \text{ A}$, $I_B = -230\text{mA}$ | | | -0.6 | V |
| Base - emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -7 \text{ A}$, $I_B = -230\text{mA}$ | | | -1.5 | |
| DC current gain | $h_{FE(1)}$ | $V_{CE} = -2\text{V}$, $I_C = -100\text{mA}$ | 45 | | | us |
| | $h_{FE(2)}$ | $V_{CE} = -2\text{V}$, $I_C = -2 \text{ A}$ | 90 | | 260 | |
| Turn-on time | t_{on} | $I_C = -2 \text{ A}$, $I_{B1} = -66\text{mA}$, $I_{B2} = 66\text{mA}$ | | 0.1 | | |
| Storage time | t_{stg} | | | 0.5 | | |
| Fall time | t_f | | | 0.1 | | |
| Collector output capacitance | C_{ob} | $V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$ | | 200 | | μF |
| Transition frequency | f_T | $V_{CE} = -10\text{V}$, $I_C = -500\text{mA}$, $f = 10\text{MHz}$ | | 150 | | MHz |

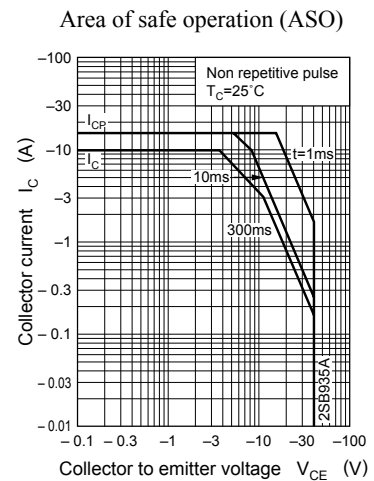
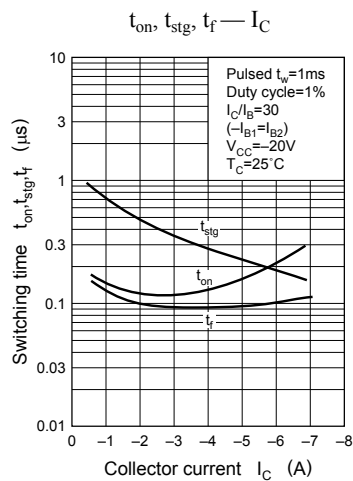
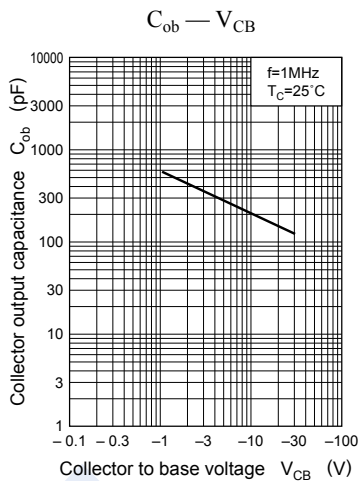
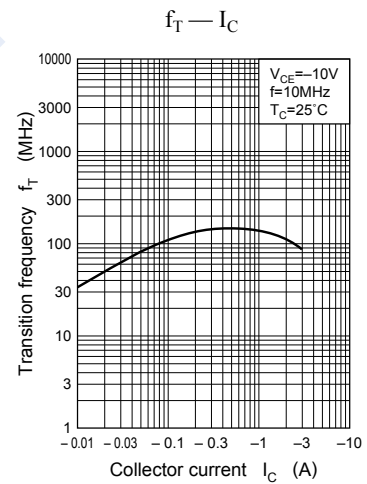
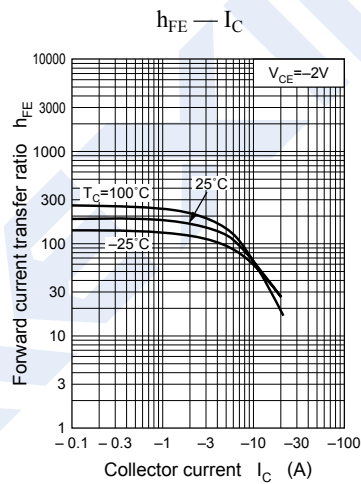
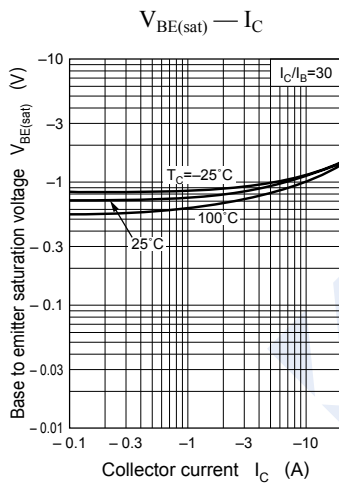
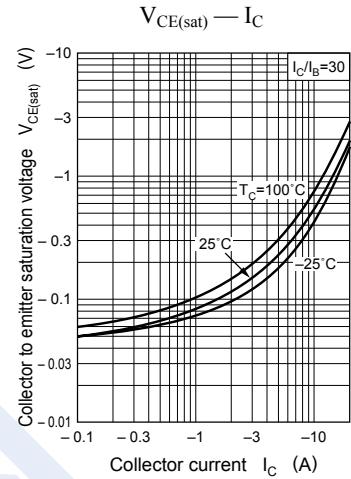
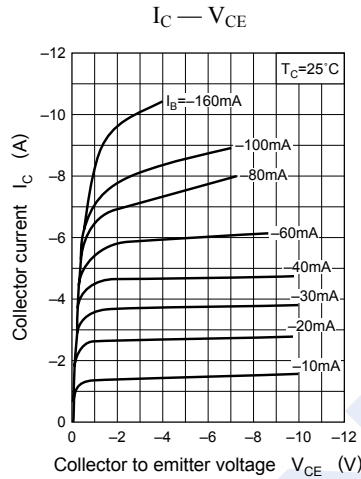
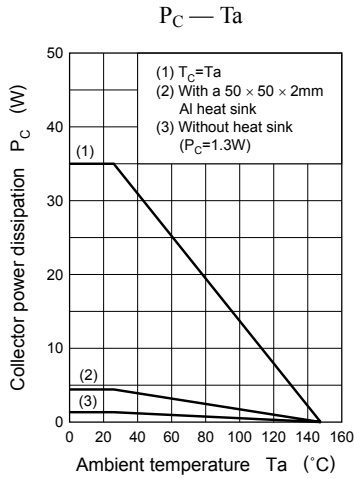
■ Classification of $h_{FE(2)}$

| Type | 2SB935A-Q | 2SB935A-P |
|-------|-----------|-----------|
| Range | 90-180 | 130-260 |

PNP Transistors

2SB935A

Typical Characteristics



PNP Transistors

2SB935A

■ Typical Characteristics

