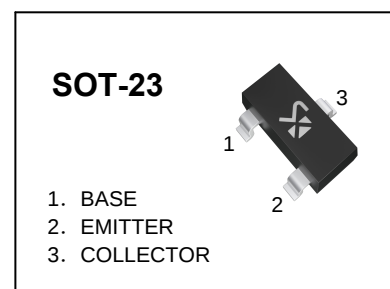


## PNP Silicon Epitaxial Planar Transistor

### Features

- High breakdown voltage
- Low collector-emitter saturation voltage
- Complementary to MMBTA42 (NPN)



MARKING: 2D

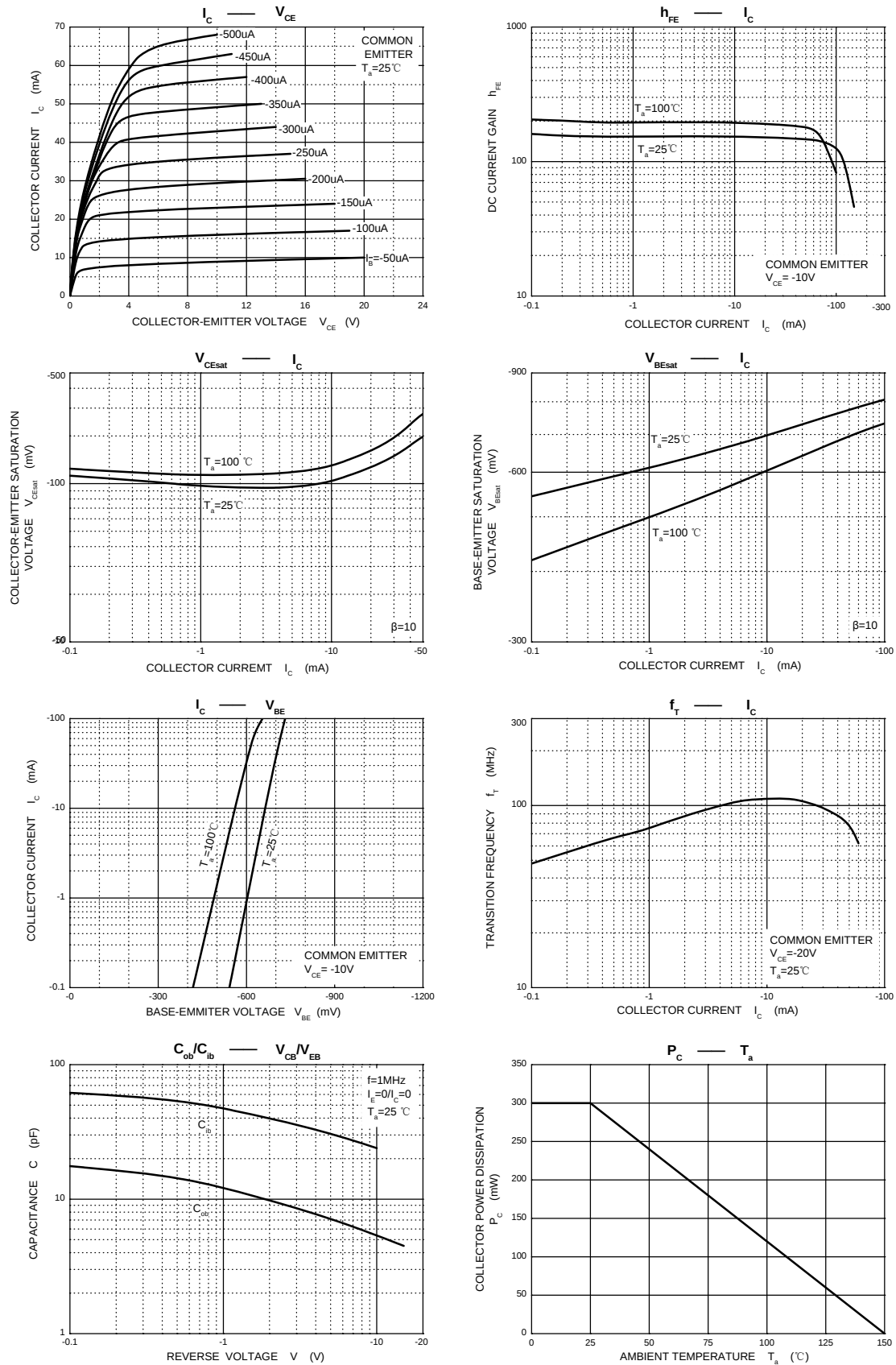
### MAXIMUM RATINGS ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol    | Parameter                     | Value    | Units              |
|-----------|-------------------------------|----------|--------------------|
| $V_{CBO}$ | Collector-Base Voltage        | -300     | V                  |
| $V_{CEO}$ | Collector-Emitter Voltage     | -300     | V                  |
| $V_{EBO}$ | Emitter-Base Voltage          | -5       | V                  |
| $I_C$     | Collector Current -Continuous | -200     | mA                 |
| $P_C$     | Collector Power Dissipation   | 300      | mW                 |
| $T_j$     | Junction Temperature          | 150      | $^{\circ}\text{C}$ |
| $T_{stg}$ | Storage Temperature           | -55-+150 | $^{\circ}\text{C}$ |

### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

| Parameter                            | Symbol        | Test conditions                                                                                                                       | MIN             | TYP | MAX   | UNIT          |
|--------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----|-------|---------------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = -100\mu\text{A}, I_E = 0$                                                                                                      | -300            |     |       | V             |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = -1\text{mA}, I_B = 0$                                                                                                          | -300            |     |       | V             |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = -100\mu\text{A}, I_C = 0$                                                                                                      | -5              |     |       | V             |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = -200\text{V}, I_E = 0$                                                                                                      |                 |     | -0.25 | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -5\text{V}, I_C = 0$                                                                                                        |                 |     | -0.1  | $\mu\text{A}$ |
| DC current gain                      | $h_{FE}$      | $V_{CE} = -10\text{V}, I_C = -1\text{mA}$<br>$V_{CE} = -10\text{V}, I_C = -10\text{mA}$<br>$V_{CE} = -10\text{V}, I_C = -30\text{mA}$ | 60<br>100<br>60 |     | 200   |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -20\text{mA}, I_B = -2\text{mA}$                                                                                               |                 |     | -0.2  | V             |
| Collector-emitter saturation voltage | $V_{BE(sat)}$ | $I_C = -20\text{mA}, I_B = -2\text{mA}$                                                                                               |                 |     | -0.9  | V             |
| Transition frequency                 | $f_T$         | $V_{CE} = -0\text{V}, I_C = -10\text{mA}, f = 30\text{MHz}$                                                                           | 50              |     |       | MHz           |

## Typical Characteristics



## PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23

