

# 2SA1018

## Silicon PNP epitaxial planar type

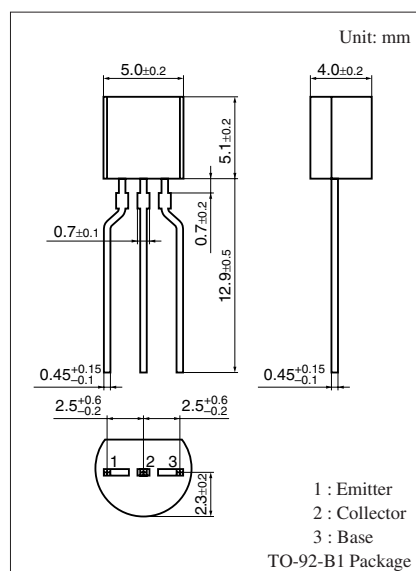
For general amplification  
Complementary to 2SC1473

### ■ Features

- High collector-emitter voltage (Base open)  $V_{CEO}$

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

| Parameter                             | Symbol    | Rating      | Unit             |
|---------------------------------------|-----------|-------------|------------------|
| Collector-base voltage (Emitter open) | $V_{CBO}$ | -250        | V                |
| Collector-emitter voltage (Base open) | $V_{CEO}$ | -200        | V                |
| Emitter-base voltage (Collector open) | $V_{EBO}$ | -5          | V                |
| Collector current                     | $I_C$     | -70         | mA               |
| Peak collector current                | $I_{CP}$  | -100        | mA               |
| Collector power dissipation           | $P_C$     | 750         | mW               |
| Junction temperature                  | $T_j$     | 150         | $^\circ\text{C}$ |
| Storage temperature                   | $T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |



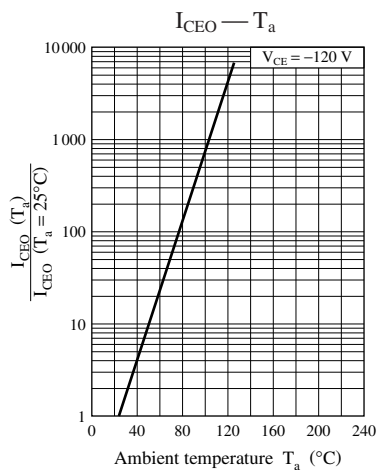
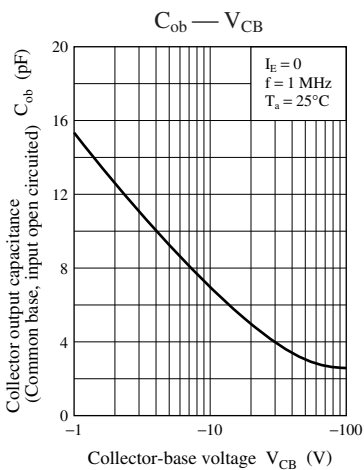
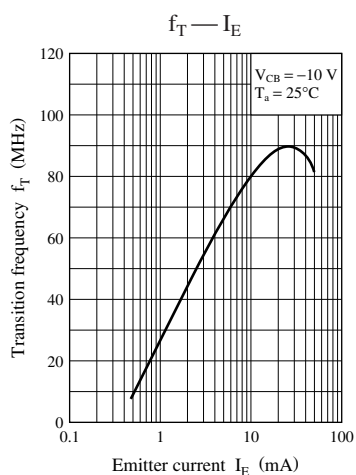
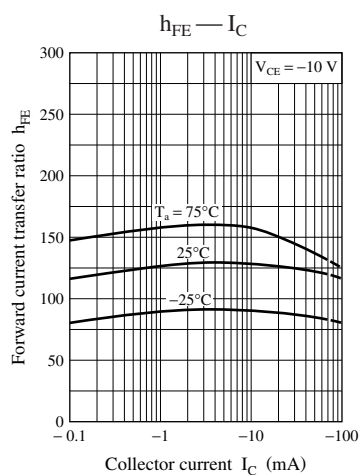
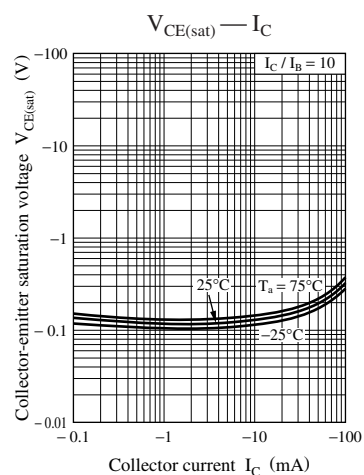
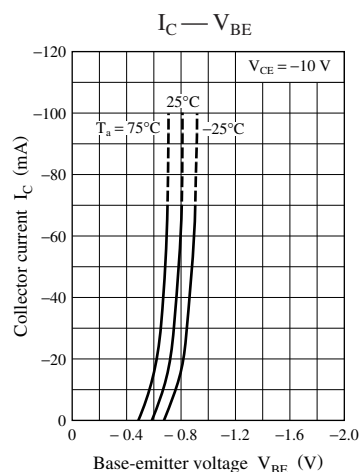
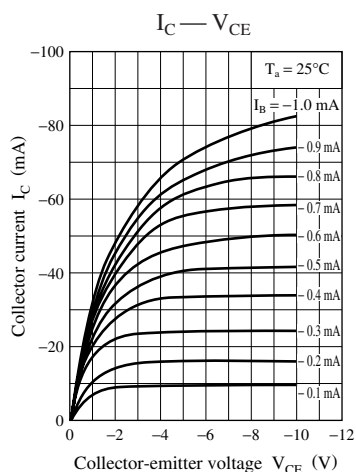
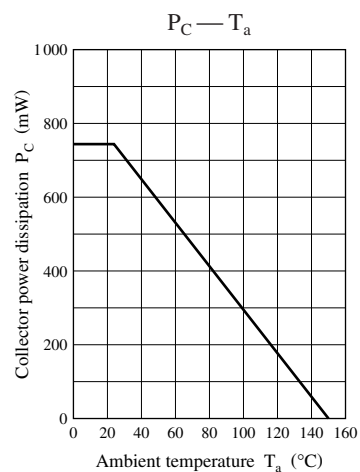
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter                                                           | Symbol        | Conditions                                                               | Min  | Typ | Max  | Unit          |
|---------------------------------------------------------------------|---------------|--------------------------------------------------------------------------|------|-----|------|---------------|
| Collector-emitter voltage (Base open)                               | $V_{CEO}$     | $I_C = -100\ \mu\text{A}$ , $I_B = 0$                                    | -200 |     |      | V             |
| Emitter-base voltage (Collector open)                               | $V_{EBO}$     | $I_E = -1\ \mu\text{A}$ , $I_C = 0$                                      | -5   |     |      | V             |
| Collector-emitter cut-off current (Base open)                       | $I_{CEO}$     | $V_{CE} = -120\ \text{V}$ , $I_B = 0$                                    |      |     | -1   | $\mu\text{A}$ |
| Forward current transfer ratio *                                    | $h_{FE}$      | $V_{CE} = -10\ \text{V}$ , $I_C = -5\ \text{mA}$                         | 60   |     | 220  | —             |
| Collector-emitter saturation voltage                                | $V_{CE(sat)}$ | $I_C = -50\ \text{mA}$ , $I_B = -5\ \text{mA}$                           |      |     | -1.5 | V             |
| Transition frequency                                                | $f_T$         | $V_{CB} = -10\ \text{V}$ , $I_E = 10\ \text{mA}$ , $f = 200\ \text{MHz}$ | 50   |     |      | MHz           |
| Collector output capacitance<br>(Common base, input open circuited) | $C_{ob}$      | $V_{CB} = -10\ \text{V}$ , $I_E = 0$ , $f = 1\ \text{MHz}$               |      |     | 10   | pF            |

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*: Rank classification

| Rank     | Q         | R          |
|----------|-----------|------------|
| $h_{FE}$ | 60 to 150 | 100 to 220 |



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