

# 2SA1722, 2SC4498



2059

PNP/NPN Epitaxial Planar  
Silicon TransistorsT-37-13  
T-35-11

## Switching Applications

(with Bias Resistances  $R_1=2.2k\Omega$ ,  $R_2=10k\Omega$ )

©3014

### Features

- Contains bias resistances ( $R_1=2.2k\Omega$ ,  $R_2=10k\Omega$ ).
- Very small-sized package(MCP) permitting the 2SA1722/2SC4498-applied sets to be made small and slim.

( ): 2SA1722

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

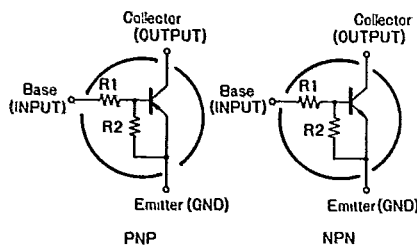
|                              |           |             | unit             |
|------------------------------|-----------|-------------|------------------|
| Collector to Base Voltage    | $V_{CBO}$ | (- )50      | V                |
| Collector to Emitter Voltage | $V_{CEO}$ | (- )50      | V                |
| Emitter to Base Voltage      | $V_{EBO}$ | (- )6       | V                |
| Collector Current            | $I_C$     | (- )100     | mA               |
| Peak Collector Current       | $i_{cp}$  | (- )200     | mA               |
| Collector Dissipation        | $P_C$     | 150         | mW               |
| Junction Temperature         | $T_J$     | 150         | $^\circ\text{C}$ |
| Storage Temperature          | $T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

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

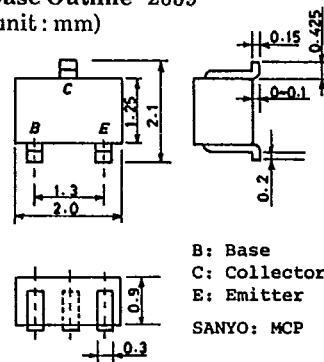
|                          |               |                                              | min     | typ      | max     | unit          |
|--------------------------|---------------|----------------------------------------------|---------|----------|---------|---------------|
| Collector Cutoff Current | $I_{CBO}$     | $V_{CB}=(-)40\text{V}, I_E=0$                |         |          | (- )0.1 | $\mu\text{A}$ |
| Collector Cutoff Current | $I_{CEO}$     | $V_{CB}=(-)40\text{V}, I_B=0$                |         |          | (- )0.5 | $\mu\text{A}$ |
| Emitter Cutoff Current   | $I_{EBO}$     | $V_{EB}=(-)5\text{V}, I_C=0$                 | (- )315 | (- )410  | (- )590 | $\mu\text{A}$ |
| DC Current Gain          | $h_{FE}$      | $V_{CE}=(-)5\text{V}, I_C=(-)10\text{mA}$    | 50      |          |         |               |
| Gain-Bandwidth Product   | $f_T$         | $V_{CE}=(-)10\text{V}, I_C=(-)5\text{mA}$    |         | (200)250 |         | MHz           |
| Output Capacitance       | $c_{ob}$      | $V_{CB}=(-)10\text{V}, f=1\text{MHz}$        |         | (5.3)3.5 |         | pF            |
| C-E Saturation Voltage   | $V_{CE(sat)}$ | $I_C=(-)10\text{mA}, I_E=(-)0.5\text{mA}$    |         | (- )0.1  | (- )0.3 | V             |
| C-B Breakdown Voltage    | $V_{(BR)CBO}$ | $I_C=(-)10\mu\text{A}, I_E=0$                | (- )50  |          |         | V             |
| C-E Breakdown Voltage    | $V_{(BR)CEO}$ | $I_C=(-)100\mu\text{A}, R_{BE}=\infty$       | (- )50  |          |         | V             |
| Input OFF-State Voltage  | $V_{I(off)}$  | $V_{CE}=(-)5\text{V}, I_C=(-)100\mu\text{A}$ | (- )0.5 | (- )0.7  | (- )0.9 | V             |
| Input ON-State Voltage   | $V_{I(on)}$   | $V_{CE}=(-)0.2\text{V}, I_C=(-)10\text{mA}$  | (- )0.7 | (- )1.0  | (- )1.8 | V             |
| Input Resistance         | $R_1$         |                                              | 1.5     | 2.2      | 2.9     | k $\Omega$    |
| Resistance Ratio         | $R_1/R_2$     |                                              | 0.198   | 0.22     | 0.242   |               |

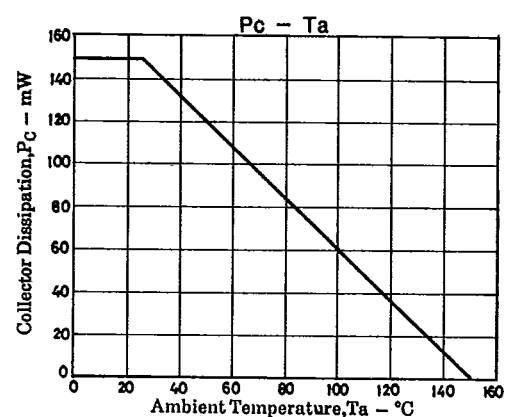
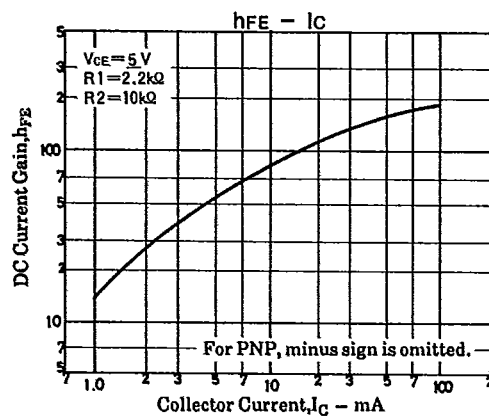
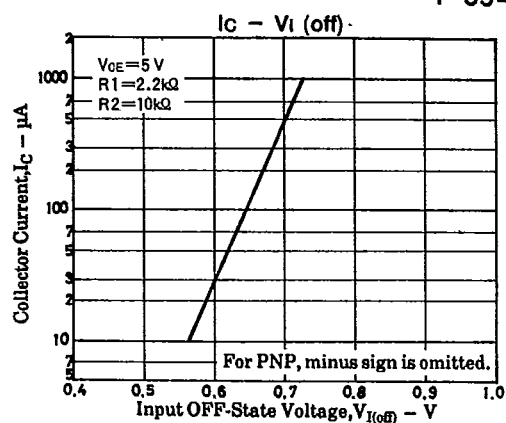
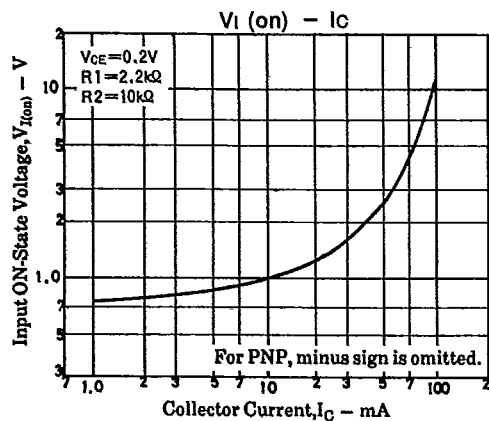
Marking 2SA1722 : HL, 2SC4498 : QY

### Electrical Connection



### Case Outline 2059 (unit : mm)



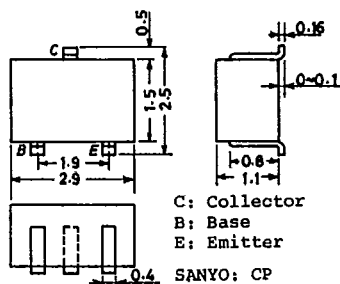


T-91-20

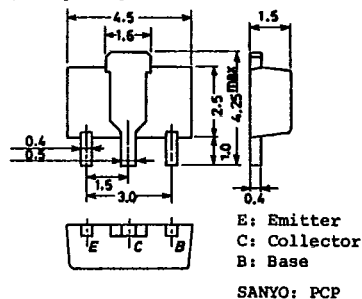
## CASE OUTLINES OF SURFACE MOUNT TRANSISTORS

- All of Sanyo surface mount transistor case outlines are illustrated below.
- All dimensions are in mm, and dimensions which are not followed by min. or max. are represented by typical values.
- No marking is indicated.

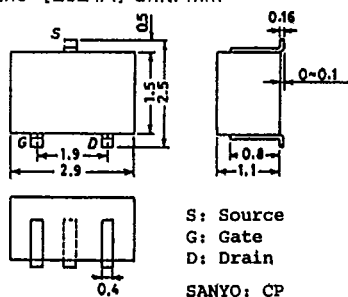
Case Outline—[2018A] unit: mm



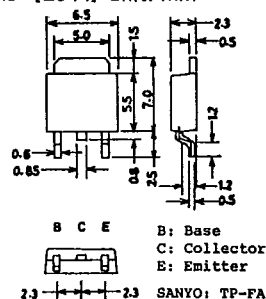
Case Outline—[2038] unit: mm



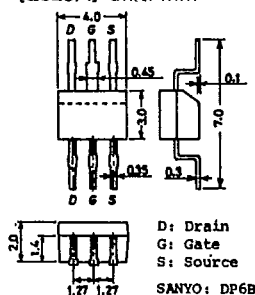
Case Outline—[2024A] unit: mm



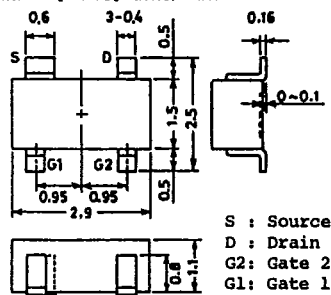
Case Outline—[2044] unit: mm



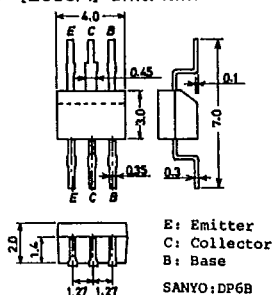
Case Outline—[2028A] unit: mm



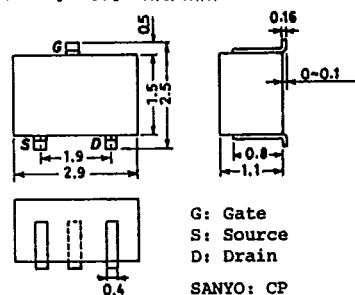
Case Outline—[2046] unit: mm



Case Outline—[2030A] unit: mm

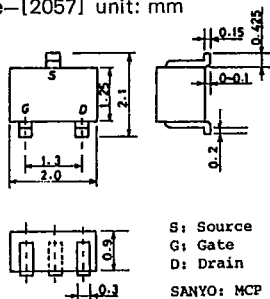


Case Outline—[2050] unit: mm

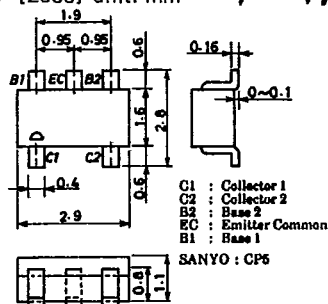


T-91-20

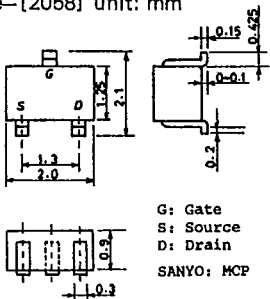
Case Outline—[2057] unit: mm



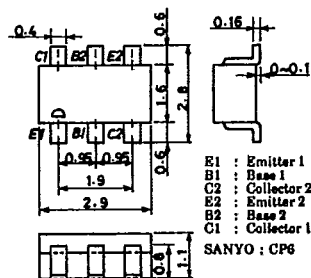
Case Outline—[2066] unit: mm



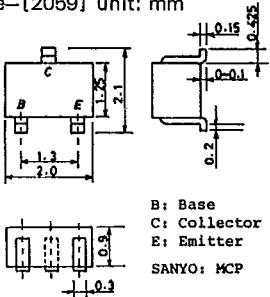
Case Outline—[2058] unit: mm



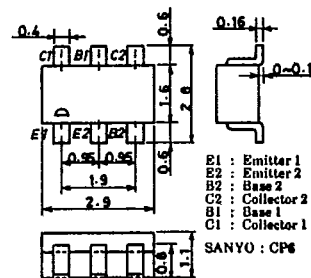
Case Outline—[2067] unit: mm



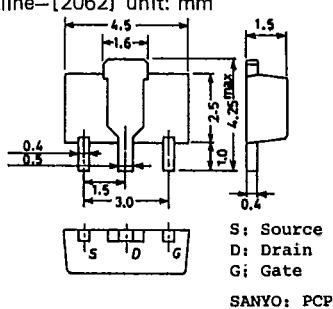
Case Outline—[2059] unit: mm



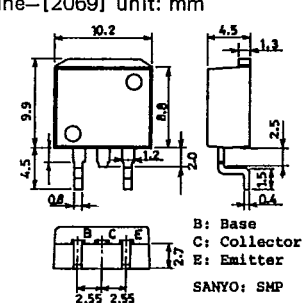
Case Outline—[2068] unit: mm



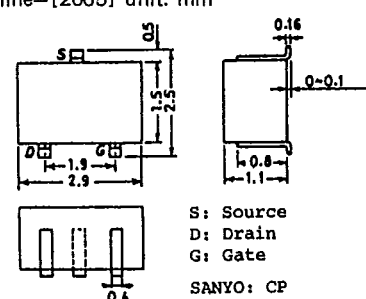
Case Outline—[2062] unit: mm



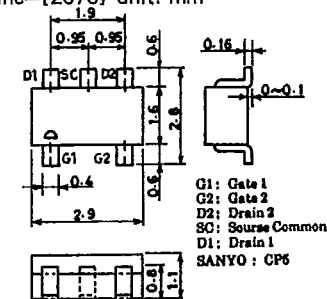
Case Outline—[2069] unit: mm



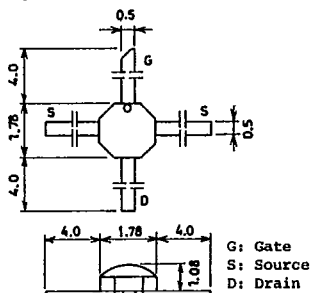
Case Outline—[2065] unit: mm



Case Outline—[2070] unit: mm

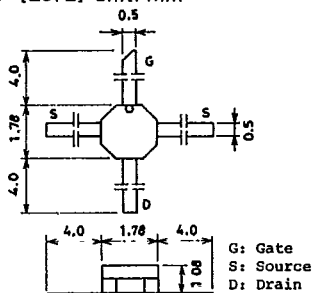


Case Outline—[2071] unit: mm



T-9120

Case Outline—[2072] unit: mm



Case Outline—[2073] unit: mm

