

**SANYO**

No.2460

**2SA1574/2SC4070**

PNP/NPN Epitaxial Planar Silicon Transistors

Switching Applications  
(with Bias Resistance)

**Applications**

- . Switching circuit, inverter circuit, interface circuit, driver circuit

**Features**

- . On-chip bias resistance: R1=0, R2=22kΩ
- . Small-sized package: SPA

( ): PNP

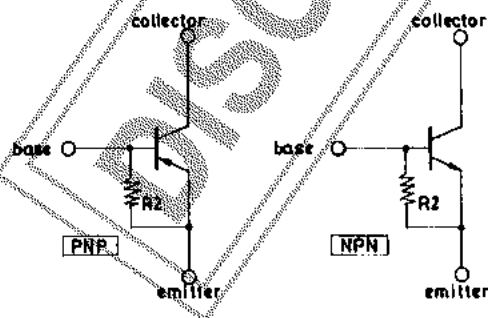
**Absolute Maximum Ratings at Ta=25°C**

|                              |                  |             | unit |
|------------------------------|------------------|-------------|------|
| Collector to Base Voltage    | V <sub>CBO</sub> | (-)50       | V    |
| Collector to Emitter Voltage | V <sub>CEO</sub> | (-)50       | V    |
| Emitter to Base Voltage      | V <sub>EBO</sub> | (-)5        | V    |
| Collector Current            | I <sub>C</sub>   | (-)100      | mA   |
| Collector Current(Pulse)     | I <sub>CP</sub>  | (-)200      | mA   |
| Collector Dissipation        | P <sub>C</sub>   | 300         | mW   |
| Junction Temperature         | T <sub>j</sub>   | 150         | °C   |
| Storage Temperature          | T <sub>stg</sub> | -55 to +150 | °C   |

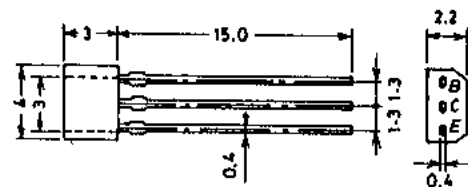
**Electrical Characteristics at Ta=25°C**

|                          |                      |   | min    | typ          | max    | unit |
|--------------------------|----------------------|---|--------|--------------|--------|------|
| Collector Cutoff Current | I <sub>CBO</sub>     | V <sub>CB</sub> =(-)40V, I <sub>E</sub> =0        |        |              | (-)0.1 | μA   |
|                          | I <sub>CEO</sub>     | V <sub>CE</sub> =(-)40V, I <sub>B</sub> =0        |        |              | (-)0.5 | μA   |
| Emitter Cutoff Current   | I <sub>EBO</sub>     | V <sub>EB</sub> =(-)5V, I <sub>C</sub> =0         | (-)174 | (-)227       | (-)324 | μA   |
| DC Current Gain          | h <sub>FE</sub>      | V <sub>CE</sub> =(-)5V, I <sub>C</sub> =(-)10mA   | 70     |              |        |      |
| Gain-Bandwidth Product   | f <sub>T</sub>       | V <sub>CE</sub> =(-)10V, I <sub>C</sub> =(-)5mA   |        | 250<br>(200) |        | MHz  |
| Output Capacitance       | C <sub>ob</sub>      | V <sub>CB</sub> =(-)10V, f=1MHz                   |        | 3.7<br>(5.5) |        | pF   |
| C-E Saturation Voltage   | V <sub>CE(sat)</sub> | I <sub>C</sub> =(-)10mA, I <sub>B</sub> =(-)0.5mA | (-)0.1 | (-)0.3       |        | V    |
| C-B Breakdown Voltage    | V <sub>(BR)CBO</sub> | I <sub>C</sub> =(-)10μA, I <sub>E</sub> =0        | (-)50  |              |        | V    |
| C-E Breakdown Voltage    | V <sub>(BR)CEO</sub> | I <sub>C</sub> =(-)100μA, R <sub>BE</sub> =∞      | (-)50  |              |        | V    |
| Resistance               | R2                   |   | 15     | 22           | 29     | kΩ   |

**Electrical Connection**



**Case Outline 2033**  
(unit:mm)



B: Base  
C: Collector  
E: Emitter

SANYO: SPA

Specifications and information herein are subject to change without notice.

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