

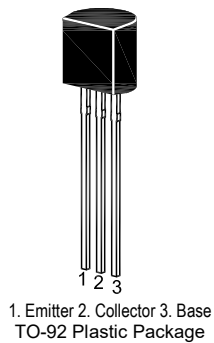
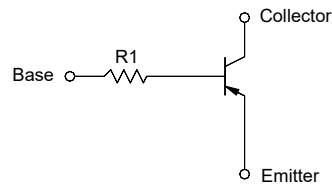
# RA110S...RA114S

## PNP Silicon Epitaxial Planar Transistor

for switching and interface circuit and drive circuit applications

### Features

- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process



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

| Parameter                 | Symbol     | Value         | Unit               |
|---------------------------|------------|---------------|--------------------|
| Collector Base Voltage    | $-V_{CBO}$ | 50            | V                  |
| Collector Emitter Voltage | $-V_{CEO}$ | 50            | V                  |
| Emitter Base Voltage      | $-V_{EBO}$ | 5             | V                  |
| Collector Current         | $-I_C$     | 100           | mA                 |
| Power Dissipation         | $P_{tot}$  | 200           | mW                 |
| Junction Temperature      | $T_j$      | 150           | $^{\circ}\text{C}$ |
| Storage Temperature Range | $T_{stg}$  | - 55 to + 150 | $^{\circ}\text{C}$ |

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

| Parameter                                                                                 | Symbol         | Min. | Typ. | Max. | Unit       |
|-------------------------------------------------------------------------------------------|----------------|------|------|------|------------|
| DC Current Gain<br>at $-V_{CE} = 5\text{ V}$ , $-I_C = 1\text{ mA}$                       | $h_{FE}$       | 120  | -    | -    | -          |
| Collector Base Cutoff Current<br>at $-V_{CB} = 50\text{ V}$                               | $-I_{CBO}$     | -    | -    | 100  | nA         |
| Emitter Base Cutoff Current<br>at $-V_{EB} = 5\text{ V}$                                  | $-I_{EBO}$     | -    | -    | 100  | nA         |
| Collector Emitter Saturation Voltage<br>at $-I_C = 10\text{ mA}$ , $-I_B = 0.5\text{ mA}$ | $-V_{CE(sat)}$ | -    | -    | 0.3  | V          |
| Transition Frequency<br>at $-V_{CE} = 10\text{ V}$ , $-I_C = 5\text{ mA}$                 | $f_T$          | -    | 250  | -    | MHz        |
| Input Resistor                                                                            | RA110S         | -    | 4.7  | -    | K $\Omega$ |
|                                                                                           | RA111S         | -    | 10   | -    |            |
|                                                                                           | RA112S         | -    | 100  | -    |            |
|                                                                                           | RA113S         | -    | 22   | -    |            |
|                                                                                           | RA114S         | -    | 47   | -    |            |

