

# ST 2SA1024

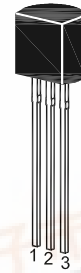
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## PNP Silicon Epitaxial Planar Transistor

for high voltage applications.

The transistor is subdivided into two groups, O and Y according to its DC current gain.

On special request, these transistors can be manufactured in different pin configurations.



1. Emitter 2. Collector 3. Base  
TO-92 Plastic Package

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

| Parameter                 | Symbol     | Value         | Unit             |
|---------------------------|------------|---------------|------------------|
| Collector Base Voltage    | $-V_{CBO}$ | 150           | V                |
| Collector Emitter Voltage | $-V_{CEO}$ | 150           | V                |
| Emitter Base Voltage      | $-V_{EBO}$ | 5             | V                |
| Collector Current         | $-I_C$     | 50            | mA               |
| Emitter Current           | $I_E$      | 50            | mA               |
| Power Dissipation         | $P_{tot}$  | 625           | 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 $-V_{CE} = 5\text{ V}$ , $-I_C = 10\text{ mA}$                    | Current Gain Group O | $h_{FE}$ | 70   | -    | 140           | - |
|   | Y                    | $h_{FE}$ | 120  | -    | 240           | - |
| Collector Base Cutoff Current<br>at $-V_{CB} = 150\text{ V}$                            | $-I_{CBO}$           | -        | -    | 0.1  | $\mu\text{A}$ |   |
| Emitter Base Cutoff Current<br>at $-V_{EB} = 5\text{ V}$                                | $-I_{EBO}$           | -        | -    | 0.1  | $\mu\text{A}$ |   |
| Collector Emitter Saturation Voltage<br>at $-I_C = 10\text{ mA}$ , $-I_B = 1\text{ mA}$ | $-V_{CE(sat)}$       | -        | -    | 0.8  | V             |   |
| Base Emitter Voltage<br>at $-V_{CE} = 5\text{ V}$ , $-I_C = 30\text{ mA}$               | $-V_{BE}$            | -        | -    | 0.9  | V             |   |
| Gain Bandwidth Product<br>at $-V_{CE} = 30\text{ V}$ , $-I_C = 10\text{ mA}$            | $f_T$                | -        | 120  | -    | MHz           |   |
| Output Capacitance<br>at $-V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$                   | $C_{OB}$             | -        | -    | 5    | pF            |   |

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