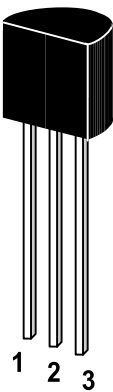


# ST 2SA1270

**PNP Silicon Epitaxial Planar Transistor**  
for switching and general purpose 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.

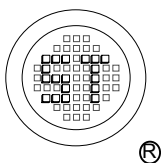


1. Emitter 2. Collector 3. Base

TO-92 Plastic Package  
Weight approx. 0.19g

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

|                           | Symbol            | Value       | Unit               |
|---------------------------|-------------------|-------------|--------------------|
| Collector Base Voltage    | $-V_{\text{CBO}}$ | 35          | V                  |
| Collector Emitter Voltage | $-V_{\text{CEO}}$ | 30          | V                  |
| Emitter Base Voltage      | $-V_{\text{EBO}}$ | 5           | V                  |
| Collector Current         | $-I_{\text{C}}$   | 500         | mA                 |
| Base Current              | $-I_{\text{B}}$   | 100         | mA                 |
| Power Dissipation         | $P_{\text{tot}}$  | 500         | mW                 |
| Junction Temperature      | $T_{\text{j}}$    | 150         | $^{\circ}\text{C}$ |
| Storage Temperature Range | $T_{\text{s}}$    | -55 to +150 | $^{\circ}\text{C}$ |



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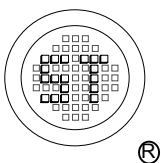


Dated : 07/12/2002

# ST 2SA1270

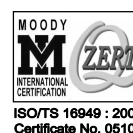
## Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

|                                      | Symbol       | Min. | Typ. | Max. | Unit    |
|--------------------------------------|--------------|------|------|------|---------|
| DC Current Gain                      |              |      |      |      |         |
| at $-V_{CE}=1V, -I_C=100mA$          |              |      |      |      |         |
| Current Gain Group O                 | $h_{FE}$     | 70   | -    | 140  | -       |
| Y                                    | $h_{FE}$     | 120  | -    | 240  | -       |
| at $-V_{CE}=6V, -I_C=400mA$          |              |      |      |      |         |
| O                                    | $h_{FE}$     | 25   | -    | -    | -       |
| Y                                    | $h_{FE}$     | 40   | -    | -    | -       |
| Collector Cutoff Current             |              |      |      |      |         |
| at $-V_{CB}=35V$                     | $-I_{CBO}$   | -    | -    | 0.1  | $\mu A$ |
| Emitter Cutoff Current               |              |      |      |      |         |
| at $-V_{EB}=5V$                      | $-I_{EBO}$   | -    | -    | 0.1  | $\mu A$ |
| Collector Emitter Saturation Voltage |              |      |      |      |         |
| at $-I_C=100mA, -I_B=10mA$           | $-V_{CEsat}$ | -    | 0.1  | 0.25 | V       |
| Base Emitter Voltage                 |              |      |      |      |         |
| at $-V_{CE}=1V, -I_C=100mA$          | $-V_{BE}$    | -    | 0.8  | 1.0  | V       |
| Transition Frequency                 |              |      |      |      |         |
| at $-V_{CE}=6V, -I_C=20mA$           | $f_T$        | -    | 200  | -    | MHz     |
| Collector Output Capacitance         |              |      |      |      |         |
| at $-V_{CB}=6V, f=1MHz$              | $C_{OB}$     | -    | 13   | -    | pF      |



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