

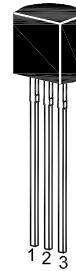
# 2SA1271

## PNP Silicon Epitaxial Planar Transistor

for switching and AF amplifier 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.



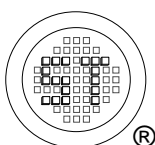
1. Emitter 2. Collector 3. Base  
TO-92 Plastic Package

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

| Parameter                 | Symbol     | Value         | Unit             |
|---------------------------|------------|---------------|------------------|
| Collector Base Voltage    | $-V_{CB0}$ | 35            | V                |
| Collector Emitter Voltage | $-V_{CEO}$ | 30            | V                |
| Emitter Base Voltage      | $-V_{EBO}$ | 5             | V                |
| Collector Current         | $-I_C$     | 800           | mA               |
| Emitter Current           | $I_E$      | 800           | mA               |
| Power Dissipation         | $P_{tot}$  | 600           | mW               |
| Junction Temperature      | $T_j$      | 150           | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{stg}$  | - 55 to + 150 | $^\circ\text{C}$ |

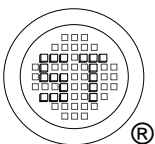
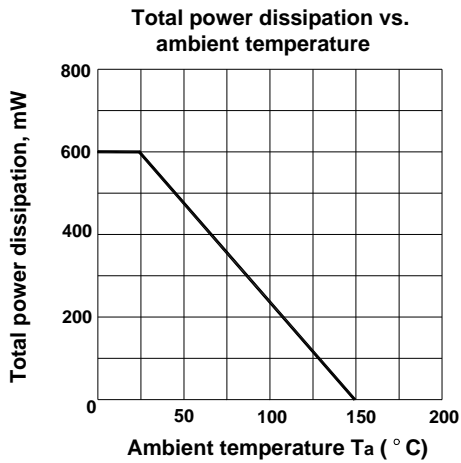
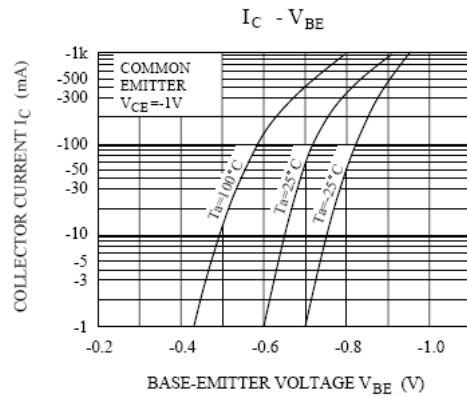
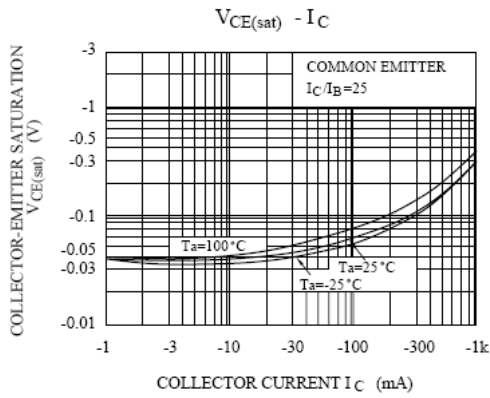
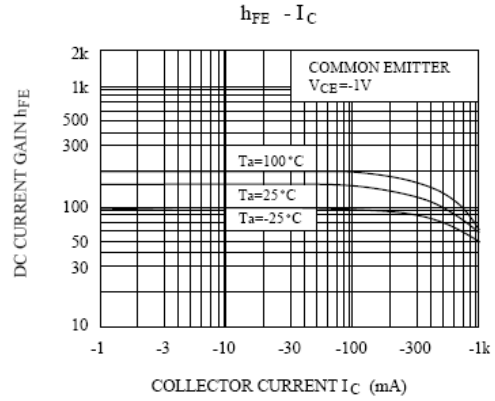
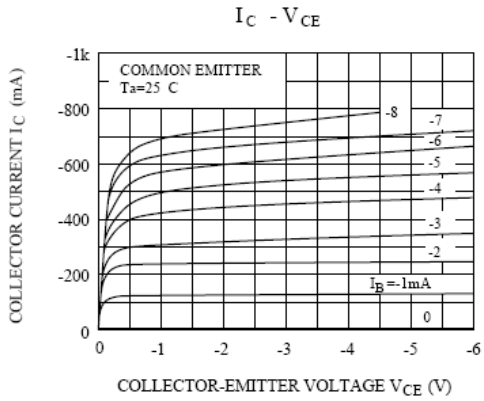
### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

| Parameter   | Symbol                       | Min.     | Typ. | Max. | Unit          |   |
|---|------------------------------|----------|------|------|---------------|---|
| DC Current Gain<br>at $-V_{CE} = 1\text{ V}$ , $-I_C = 100\text{ mA}$<br>at $-V_{CE} = 1\text{ V}$ , $-I_C = 700\text{ mA}$ | Current Gain Group<br>O<br>Y | $h_{FE}$ | 100  | -    | 200           | - |
|   |                              | $h_{FE}$ | 160  | -    | 320           | - |
|   |                              | $h_{FE}$ | 35   | -    | -             | - |
| Collector Base Cutoff Current<br>at $-V_{CB} = 35\text{ V}$   | $-I_{CB0}$                   | -        | -    | 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 Breakdown Voltage<br>at $-I_C = 10\text{ mA}$   | $-V_{CEO}$                   | 30       | -    | -    | V             |   |
| Collector Emitter Saturation Voltage<br>at $-I_C = 500\text{ mA}$ , $-I_B = 20\text{ mA}$                                   | $-V_{CE(sat)}$               | -        | -    | 0.7  | V             |   |
| Base Emitter Voltage<br>at $-I_C = 10\text{ mA}$ , $-V_{CE} = 1\text{ V}$   | $-V_{BE}$                    | 0.5      | -    | 0.8  | V             |   |
| Transition Frequency<br>at $-V_{CE} = 5\text{ V}$ , $-I_C = 10\text{ mA}$   | $f_T$                        | -        | 120  | -    | MHz           |   |
| Collector Output Capacitance<br>at $-V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$   | $C_{ob}$                     | -        | 19   | -    | pF            |   |



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