

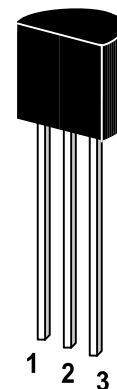
# ST 2SD471

## NPN Silicon Epitaxial Planar Transistor

Audio Frequency Power amplifier applications.

The transistor is subdivided into three group, O, Y and G according to its DC current gain.

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



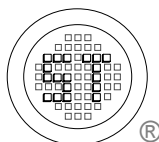
1. Emitter 2. Collector 3. Base

TO-92 Plastic Package  
Weight approx. 0.19g

### Absolute Maximum Ratings (Ta=25°C)

|                           | Symbol    | Value       | Unit |
|---------------------------|-----------|-------------|------|
| Collector Base Voltage    | $V_{CBO}$ | 40          | V    |
| Collector Emitter Voltage | $V_{CEO}$ | 30          | V    |
| Emitter Base Voltage      | $V_{EBO}$ | 5           | V    |
| Collector Current         | $I_C$     | 1           | A    |
| Power Dissipation         | $P_{tot}$ | 1           | W    |
| Junction Temperature      | $T_j$     | 150         | °C   |
| Storage Temperature Range | $T_s$     | -55 to +150 | °C   |

G S P FORM A IS AVAILABLE



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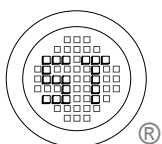
Dated : 07/12/2002

# ST 2SD471

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

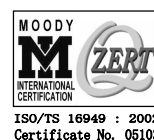
|                                                             | Symbol        | Min. | Typ. | Max. | Unit    |
|-------------------------------------------------------------|---------------|------|------|------|---------|
| DC Current Gain<br>at $V_{CE}=1V$ , $I_C=100mA$             |               |      |      |      |         |
| Current Gain Group O                                        | $h_{FE}$      | 70   | -    | 140  | -       |
| Y                                                           | $h_{FE}$      | 120  | -    | 240  | -       |
| G                                                           | $h_{FE}$      | 200  | -    | 400  | -       |
| Collector Emitter Breakdown Voltage<br>at $I_C=10mA$        | $V_{(BR)CEO}$ | 30   | -    | -    | V       |
| Collector Base Breakdown Voltage<br>at $I_C=100\mu A$       | $V_{(BR)CBO}$ | 40   | -    | -    | V       |
| Emitter Base Breakdown Voltage<br>at $I_E=100\mu A$         | $V_{(BR)EBO}$ | 5    | -    | -    | V       |
| Collector Cutoff Current<br>at $V_{CB}=30V$                 | $I_{CBO}$     | -    | -    | 0.1  | $\mu A$ |
| Collector Saturation Voltage<br>at $I_C=1.0A$ , $I_B=100mA$ | $V_{CE(sat)}$ | -    | -    | 0.5  | V       |
| Base Saturation Voltage<br>at $I_C=1.0A$ , $I_B=100mA$      | $V_{BE(sat)}$ | -    | -    | 1.2  | V       |
| Collector Output Capacitance<br>at $V_{CB}=6V$ , $f=1MHz$   | $C_{OB}$      | -    | 18   | -    | pF      |
| Transition Frequency<br>at $V_{CE}=6V$ , $I_C=10mA$         | $f_T$         | -    | 130  | -    | MHz     |

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