## **NPN Silicon Epitaxial Planar Transistor**

for switching and amplifier applications. Especially suitable for AF-driver stages and low power output stages.

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



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

## Absolute Maximum Ratings (T<sub>a</sub> = 25°C)

| Parameter                 | Symbol           | Value         | Unit |
|---------------------------|------------------|---------------|------|
| Collector Base Voltage    | V <sub>CBO</sub> | 40            | V    |
| Collector Emitter Voltage | V <sub>CEO</sub> | 25            | V    |
| Emitter Base Voltage      | $V_{EBO}$        | 6             | V    |
| Collector Current         | Ic               | 1.5           | А    |
| Power Dissipation         | P <sub>tot</sub> | 1             | W    |
| Junction Temperature      | T <sub>j</sub>   | 150           | °C   |
| Storage Temperature Range | T <sub>Stg</sub> | - 55 to + 150 | °C   |

## Characteristics at T₂ = 25°C

| Characteristics at T <sub>a</sub> = 25 C   |   |                        |             |            |             |
|--|---|------------------------|-------------|------------|-------------|
| Parameter  | Symbol  | Min.                   | Тур.        | Max.       | Unit        |
| DC Current Gain at $V_{CE}$ = 1 V, $I_C$ = 5 mA at $V_{CE}$ = 1 V, $I_C$ = 100 mA Current Gain Group C at $V_{CE}$ = 1 V, $I_C$ = 800 mA | h <sub>FE</sub><br>h <sub>FE</sub><br>h <sub>FE</sub> | 45<br>120<br>160<br>40 | -<br>-<br>- | 200<br>300 | -<br>-<br>- |
| Collector Cutoff Current at V <sub>CB</sub> = 35 V   | I <sub>CBO</sub>                                      | -                      | -           | 100        | nA          |
| Emitter Cutoff Current at $V_{EB} = 6 \text{ V}$   | I <sub>EBO</sub>                                      | -                      | -           | 100        | nA          |
| Collector Base Breakdown Voltage at $I_C = 100 \mu A$  | V <sub>(BR)CBO</sub>                                  | 40                     | -           | -          | >           |
| Collector Emitter Breakdown Voltage at I <sub>C</sub> = 2 mA   | $V_{(BR)CEO}$   | 25                     | -           | -          | ٧           |
| Emitter Base Breakdown Voltage at $I_E = 100 \mu A$  | $V_{(BR)EBO}$   | 6                      | -           | -          | ٧           |
| Collector Emitter Saturation Voltage at $I_C = 800$ mA, $I_B = 80$ mA  | V <sub>CE(sat)</sub>                                  | -                      | -           | 0.5        | >           |
| Base Emitter Saturation Voltage at $I_C = 800$ mA, $I_B = 80$ mA   | V <sub>BE(sat)</sub>                                  | -                      | -           | 1.2        | <b>V</b>    |
| Base Emitter Voltage at $I_C = 10$ mA, $V_{CE} = 1$ V  | $V_{BE}$  | -                      | -           | 1          | ٧           |
| Gain Bandwidth Product at $V_{CE} = 10 \text{ V}$ , $I_C = 50 \text{ mA}$  | f <sub>T</sub>  | 100                    | -           | -          | MHz         |
| Collector Base Capacitance at $V_{CB} = 10 \text{ V}$ , $f = 1 \text{ MHz}$  | СОВ   | -                      | 9           | -          | pF          |

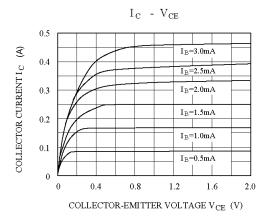


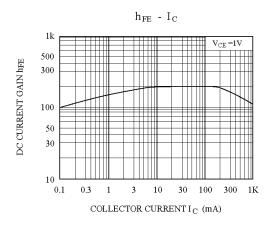


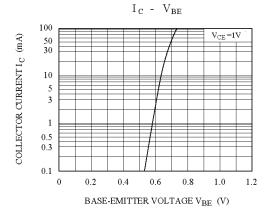


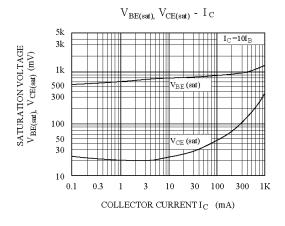


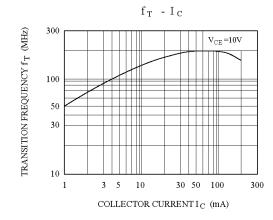


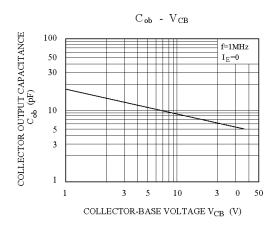






















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