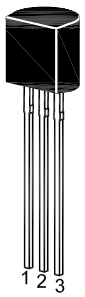
# ST 2N6520

## PNP Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

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 ($T_a$ = 25 °C)**

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Collector Base Voltage | $-V_{CBO}$ | 350 | V |
| Collector Emitter Voltage | $-V_{CEO}$ | 350 | V |
| Emitter Base Voltage | $-V_{EBO}$ | 5 | V |
| Collector Current | $-I_C$ | 500 | mA |
| Power Dissipation | $P_{tot}$ | 625 | mW |
| Junction Temperature | $T_j$ | 150 | °C |
| Storage Temperature Range | $T_{stg}$ | - 55 to + 150 | °C |

**Characteristics at $T_a$ = 25 °C**

| Parameter | Symbol | Min. | Max. | Unit |
|---|---|---|---|---|
| DC Current Gain | | | | |
| at $-V_{CE}$ = 10 V, $-I_C$ = 1 mA | $h_{FE}$ | 20 | - | - |
| at $-V_{CE}$ = 10 V, $-I_C$ = 10 mA | $h_{FE}$ | 30 | - | - |
| at $-V_{CE}$ = 10 V, $-I_C$ = 30 mA | $h_{FE}$ | 30 | 200 | - |
| at $-V_{CE}$ = 10 V, $-I_C$ = 50 mA | $h_{FE}$ | 20 | 200 | - |
| at $-V_{CE}$ = 10 V, $-I_C$ = 100 mA | $h_{FE}$ | 15 | - | - |
| Collector Base Cutoff Current<br>at $-V_{CB}$ = 250 V | $-I_{CBO}$ | - | 50 | nA |
| Emitter Base Cutoff Current<br>at $-V_{EB}$ = 4 V | $-I_{EBO}$ | - | 50 | nA |
| Collector Base Breakdown Voltage<br>at $-I_C$ = 100 µA | $-V_{(BR)CBO}$ | 350 | - | V |
| Collector Emitter Breakdown Voltage<br>at $-I_C$ = 1 mA | $-V_{(BR)CEO}$ | 350 | - | V |
| Emitter Base Breakdown Voltage<br>at $-I_E$ = 10 µA | $-V_{(BR)EBO}$ | 5 | - | V |
| Collector Emitter Saturation Voltage | | | | |
| at $-I_C$ = 10 mA, $-I_B$ = 1 mA | $-V_{CE(sat)}$ | - | 0.3 | V |
| at $-I_C$ = 20 mA, $-I_B$ = 2 mA | $-V_{CE(sat)}$ | - | 0.35 | V |
| at $-I_C$ = 30 mA, $-I_B$ = 3 mA | $-V_{CE(sat)}$ | - | 0.5 | V |
| at $-I_C$ = 50 mA, $-I_B$ = 5 mA | $-V_{CE(sat)}$ | - | 1 | V |
| Base Emitter Saturation Voltage | | | | |
| at $-I_C$ = 10 mA, $-I_B$ = 1 mA | $-V_{BE(sat)}$ | - | 0.75 | V |
| at $-I_C$ = 20 mA, $-I_B$ = 2 mA | $-V_{BE(sat)}$ | - | 0.85 | V |
| at $-I_C$ = 30 mA, $-I_B$ = 3 mA | $-V_{BE(sat)}$ | - | 0.9 | V |
| Base Emitter On Voltage<br>at $-V_{CE}$ = 10 V, $-I_C$ = 100 mA | $-V_{BE(on)}$ | - | 2 | V |
| Gain Bandwidth Product<br>at $-V_{CE}$ = 20 V, $-I_C$ = 10 mA, f = 20 MHz | $f_T$ | 40 | 200 | MHz |
| Collector Base Capacitance<br>at $-V_{CB}$ = 20 V, f = 1 MHz | $C_{cb}$ | - | 6 | pF |