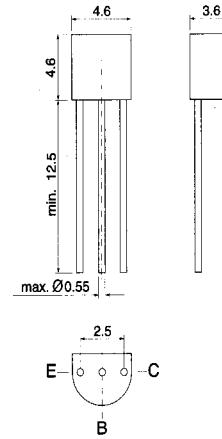


PNP Silicon Epitaxial Planar Transistors
for general purpose, high voltage amplifier applications.

As complementary types the NPN transistors 2N5550 and 2N5551 are recommended.

On special request, these transistors can be manufactured in different pin configurations. Please refer to the "TO-92 TRANSISTOR PACKAGE OUTLINE" on page 80 for the available pin options.



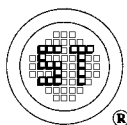
TO-92 Plastic Package
Weight approx. 0.18 g
Dimensions in mm

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

| | | Symbol | Value | Unit |
|--|--------------|-------------------|-------------------|------------------|
| Collector-Emitter Voltage | HN / 2N 5400 | $-V_{\text{CEO}}$ | 120 | V |
| | HN / 2N 5401 | $-V_{\text{CEO}}$ | 150 | V |
| Collector-Base Voltage | HN / 2N 5400 | $-V_{\text{CBO}}$ | 130 | V |
| | HN / 2N 5401 | $-V_{\text{CBO}}$ | 160 | V |
| Emitter Base Voltage | | $-V_{\text{EBO}}$ | 5 | V |
| Collector Current | | $-I_{\text{C}}$ | 600 | mA |
| Power Dissipation at $T_{\text{amb}} = 25^\circ\text{C}$ | | P_{tot} | 625 ¹⁾ | mW |
| Junction Temperature | | T_{J} | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | | T_{S} | -55 to + 150 | $^\circ\text{C}$ |

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case

G S P FORM A AVAILABLE



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

| | | Symbol | Min. | Typ. | Max. | Unit |
|--|--------------|----------------------|------|------|-------------------|------|
| DC Current Gain. at $-V_{CE} = 5\text{V}$, $-I_C = 1\text{mA}$ at $-V_{CE} = 5\text{V}$, $-I_C = 10\text{mA}$ at $-V_{CE} = 5\text{V}$, $-I_C = 50\text{mA}$ | HN / 2N 5400 | h_{FE} | 30 | - | - | - |
| | HN / 2N 5401 | h_{FE} | 50 | - | - | - |
| | HN / 2N 5400 | h_{FE} | 40 | - | 180 | - |
| | HN / 2N 5401 | h_{FE} | 60 | - | 240 | - |
| | HN / 2N 5400 | h_{FE} | 40 | - | - | - |
| | HN / 2N 5401 | h_{FE} | 50 | - | - | - |
| Collector Emitter Breakdown Voltage at $-I_C = 1\text{mA}$ | HN / 2N 5400 | $-V_{(BR)CEO}$ | 120 | - | - | V |
| | HN / 2N 5401 | $-V_{(BR)CEO}$ | 150 | - | - | V |
| Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$ | HN / 2N 5400 | $-V_{(BR)CBO}$ | 130 | - | - | V |
| | HN / 2N 5401 | $-V_{(BR)CBO}$ | 160 | - | - | V |
| Emitter Base Breakdown Voltage at $-I_E = 10\text{ }\mu\text{A}$ | | $-V_{(BR)EBO}$ | 5 | - | - | V |
| Collector Cutoff Current at $-V_{CB} = 100\text{V}$ at $-V_{CB} = 120\text{V}$ | HN / 2N 5400 | $-I_{CBO}$ | - | - | 100 | nA |
| | HN / 2N 5401 | $-I_{CBO}$ | - | - | 50 | nA |
| Emitter Cutoff Current at $-V_{EB} = 3\text{V}$ | | $-I_{EBO}$ | - | - | 50 | nA |
| Collector Saturation Voltage at $-I_C = 10\text{mA}$, $-I_B = 1\text{mA}$ at $-I_C = 50\text{mA}$, $-I_B = 5\text{mA}$ | | $-V_{CE\text{ sat}}$ | - | - | 0.2 | V |
| | | $-V_{CE\text{ sat}}$ | - | - | 0.5 | V |
| Base Saturation Voltage at $-I_C = 10\text{mA}$, $-I_B = 1\text{mA}$ at $-I_C = 50\text{mA}$, $-I_B = 5\text{mA}$ | | $-V_{BE\text{ sat}}$ | - | - | 1 | V |
| | | $-V_{BE\text{ sat}}$ | - | - | 1 | V |
| Gain Bandwidth Product at $-V_{CE} = 10\text{V}$, $-I_C = 10\text{mA}$, $f = 100\text{MHz}$ | HN / 2N 5400 | f_T | 100 | - | 400 | MHz |
| | HN / 2N 5401 | f_T | 100 | - | 400 | MHz |
| Collector Base Capacitance at $-V_{CB} = 10\text{V}$, $f = 1\text{MHz}$ | | C_{CBO} | - | - | 6 | pF |
| Noise Figure at $-V_{CE} = 5\text{V}$, $-I_C = 200\text{ }\mu\text{A}$, $R_G = 2\text{k}\Omega$, $f = 30\text{Hz} \dots 15\text{kHz}$ | | F | - | - | 8 | dB |
| Thermal Resistance Junction to Ambient | | R_{thA} | - | - | 200 ¹⁾ | K/W |

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case.

