

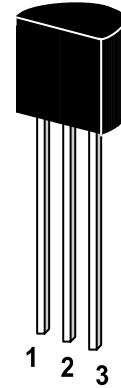
2SC536

NPN Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

The transistor is subdivided into four groups, O, Y, G and L, 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 ($T_a = 25^\circ\text{C}$)

| | 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 | 100 | mA |
| Base Current | I_B | 50 | mA |
| Power Dissipation | P_{tot} | 400 | mW |
| Junction Temperature | T_j | 125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_s | -55 to +125 | $^\circ\text{C}$ |

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

| | Symbol | Min. | Typ. | Max. | Unit |
|--|---------------|------|------|------|---------------|
| DC Current Gain at $V_{CE}=6\text{V}$, $I_C=1\text{mA}$ | | | | | |
| Current Gain Group O | h_{FE} | 70 | - | 140 | - |
| Y | h_{FE} | 120 | - | 240 | - |
| G | h_{FE} | 200 | - | 400 | - |
| L | h_{FE} | 350 | - | 700 | - |
| at $V_{CE}=6\text{V}$, $I_C=150\text{mA}$ | h_{FE} | 25 | 100 | - | - |
| Collector Emitter Saturation Voltage at $I_C=50\text{mA}$, $I_B=5\text{mA}$ | $V_{CE(sat)}$ | - | - | 0.5 | V |
| Base Emitter Saturation Voltage at $I_C=50\text{mA}$, $I_B=5\text{mA}$ | $V_{BE(sat)}$ | - | - | 1.2 | V |
| Collector Cutoff Current at $V_{CB}=35\text{V}$ | I_{CBO} | - | - | 0.1 | μA |
| Emitter Cutoff Current at $V_{EB}=5\text{V}$ | I_{EBO} | - | - | 0.1 | μA |
| Transition Frequency at $V_{CE}=10\text{V}$, $I_E=1\text{mA}$ | f_T | 100 | - | - | MHz |
| Collector Output Capacitance at $V_{CB}=10\text{V}$, $f=1\text{MHz}$ | C_{OB} | - | 2 | 3.5 | pF |
| Base Intrinsic Resistance at $V_{CB}=10\text{V}$, $I_C=1\text{mA}$, $f=30\text{MHz}$ | $R_{bb'}$ | - | 50 | - | Ω |
| Noise Figure at $V_{CE}=6\text{V}$, $I_C=0.1\text{Ma}$ $f=1\text{KHz}$, $R_G=10\text{K}\Omega$ | NF | - | 1 | 10 | dB |