

ST 2SA1015

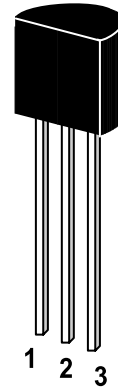
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PNP Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

The transistor is subdivided into three groups, O, Y and G, L, according to its DC current gain. As complementary type the NPN transistor ST 2SC1815 is recommended.

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

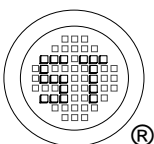


1. Emitter 2. Collector 3. Base

TO-92 Plastic Package
Weight approx. 0.19g

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

| | Symbol | Value | Unit |
|---------------------------|------------|-------------|------------------|
| Collector Base Voltage | $-V_{CBO}$ | 50 | V |
| Collector Emitter Voltage | $-V_{CEO}$ | 50 | V |
| Emitter Base Voltage | $-V_{EBO}$ | 5 | V |
| Collector Current | $-I_C$ | 150 | 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 | -65 to +150 | $^\circ\text{C}$ |



SEMTECH ELECTRONICS LTD.

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ISO/TS 16949 : 2002
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ISO 9001:2000
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Dated : 07/12/2002

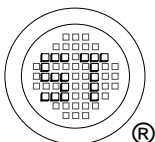
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Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

| | Symbol | Min. | Typ. | Max. | Unit |
|---|----------------|------|------|------|---------------|
| DC Current Gain at $-V_{CE}=6\text{V}$, $-I_C=2\text{mA}$ | | | | | |
| 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 | - | - | - |
| Collector Base Breakdown Voltage at $-I_C=100\mu\text{A}$ | $-V_{(BR)CBO}$ | 50 | - | - | V |
| Collector Emitter Breakdown Voltage at $-I_C=10\text{mA}$ | $-V_{(BR)CEO}$ | 50 | - | - | V |
| Emitter Base Breakdown Voltage at $-I_E=10\mu\text{A}$ | $-V_{(BR)EBO}$ | 5 | - | - | V |
| Collector Cutoff Current at $-V_{CB}=50\text{V}$ | $-I_{CBO}$ | - | - | 0.1 | μA |
| Emitter Cutoff Current at $-V_{EB}=5\text{V}$ | $-I_{EBO}$ | - | - | 0.1 | μA |
| Collector Saturation Voltage at $-I_C=100\text{mA}$, $-I_B=10\text{mA}$ | $-V_{CE(sat)}$ | - | 0.1 | 0.3 | V |
| Base Saturation Voltage at $-I_C=100\text{mA}$, $-I_B=10\text{mA}$ | $-V_{BE(sat)}$ | - | - | 1.1 | V |
| Gain Bandwidth Product at $-V_{CE}=10\text{V}$, $-I_C=1\text{mA}$ | f_T | 80 | - | - | MHz |
| Output Capacitance at $-V_{CB}=10\text{V}$, $f=1\text{MHz}$ | C_{OB} | - | 4 | 7 | pF |
| Noise Figure at $-V_{CE}=6\text{V}$, $-I_C=0.1\text{mA}$ $f=100\text{Hz}$, $R_S=10\text{K}\Omega$ | NF | - | 0.5 | 6 | dB |



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