

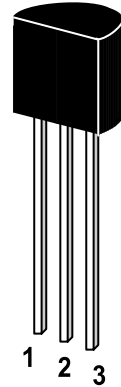
ST 2SA1175

PNP Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

The transistor is subdivided into six groups, R, J, H, F, E and K according to its DC current gain.

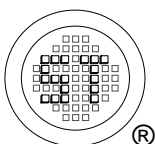
On special request, these transistors can be manufactured in different pin configurations.



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 | $-V_{\text{CBO}}$ | 60 | V |
| Collector Emitter Voltage | $-V_{\text{CEO}}$ | 50 | V |
| Emitter Base Voltage | $-V_{\text{EBO}}$ | 5 | V |
| Collector Current | $-I_{\text{C}}$ | 100 | mA |
| Base Current | $-I_{\text{B}}$ | 20 | mA |
| Power Dissipation | P_{tot} | 250 | mW |
| Junction Temperature | T_{j} | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{s} | -55 to +150 | $^\circ\text{C}$ |



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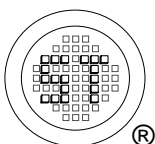


Dated : 07/12/2002

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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 R | h_{FE} | 110 | - | 180 | - |
| J | h_{FE} | 135 | - | 220 | - |
| H | h_{FE} | 170 | - | 270 | - |
| F | h_{FE} | 200 | - | 320 | - |
| E | h_{FE} | 250 | - | 400 | - |
| K | h_{FE} | 300 | - | 600 | - |
| Collector Cutoff Current at $-V_{CB}=60\text{V}$ | $-I_{CBO}$ | - | - | 0.1 | μA |
| Emitter Cutoff Current at $-V_{EB}=5\text{V}$ | $-I_{EBO}$ | - | - | 0.1 | μA |
| Collector Saturation Voltage at $-I_C=100\text{mA}$, $-I_B=10\text{mA}$ | $-V_{CE(sat)}$ | - | 0.18 | 0.3 | V |
| Gain Bandwidth Product at $-V_{CE}=6\text{V}$, $-I_E=1\text{mA}$ | f_T | 50 | 80 | - | MHz |
| Noise Figure at $-V_{CE}=6\text{V}$, $-I_C=1\text{V}$, $R_G=10\text{k}\Omega$, $f=100\text{Hz}$ | NF | - | 6 | 20 | dB |
| Output Capacitance at $-V_{CB}=10\text{V}$, $f=1\text{MHz}$ | C_{OB} | - | 4.5 | 6 | pF |



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