



**FUKUCOM COMPANY LTD.**

**福 靈 有 限 公 司**

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,  
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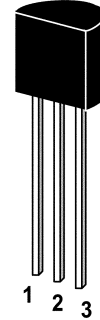
## ST 2SA1048

### PNP Silicon Epitaxial Planar Transistor

for audio frequency amplifier applications.

The transistor is subdivided into three groups, O, Y and G, according to its DC current gain. As complementary type the NPN transistor ST 2SC2458 is recommended.

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



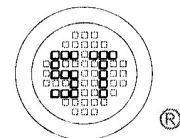
1. Emitter 2. Collector 3. Base

TO-92 Plastic Package

Weight approx. 0.19g

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

|                           | Symbol            | Value       | Unit             |
|---------------------------|-------------------|-------------|------------------|
| Collector Base Voltage    | $-V_{\text{CBO}}$ | 50          | V                |
| Collector Emitter Voltage | $-V_{\text{CEO}}$ | 50          | V                |
| Emitter Base Voltage      | $-V_{\text{EBO}}$ | 5           | V                |
| Collector Current         | $-I_{\text{C}}$   | 150         | mA               |
| Base Current              | $-I_{\text{B}}$   | 50          | mA               |
| Power Dissipation         | $P_{\text{tot}}$  | 200         | mW               |
| Junction Temperature      | $T_{\text{j}}$    | 125         | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{\text{S}}$    | -55 to +125 | $^\circ\text{C}$ |



**SEMTECH**

Dated : 07/12/2002



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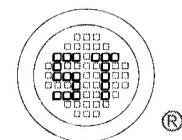
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Characteristics at  $T_{amb}=25\text{ }^{\circ}\text{C}$

|  | Symbol         | Min. | Typ. | Max. | Unit          |
|--|----------------|------|------|------|---------------|
| DC Current Gain<br>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  | -             |
| Collector Cutoff Current<br>at $-V_{CB}=50\text{V}$  | $-I_{CBO}$     | -    | -    | 0.1  | $\mu\text{A}$ |
| Emitter Cutoff Current<br>at $-V_{EB}=5\text{V}$   | $-I_{EBO}$     | -    | -    | 0.1  | $\mu\text{A}$ |
| Collector Saturation Voltage<br>at $-I_C=100\text{mA}$ , $-I_B=10\text{mA}$                              | $-V_{CE(sat)}$ | -    | 0.1  | 0.3  | V             |
| Transition Frequency<br>at $-V_{CE}=10\text{V}$ , $-I_C=1\text{mA}$                                      | $f_T$          | 80   | -    | -    | MHz           |
| Output Capacitance<br>at $-V_{CB}=10\text{V}$ , $f=1\text{MHz}$  | $C_{OB}$       | -    | 4    | 7    | pF            |
| Noise Figure<br>at $-V_{CE}=6\text{V}$ , $-I_C=0.1\text{mA}$<br>$f=1\text{kHz}$ , $R_G=10\text{K}\Omega$ | NF             | -    | 1    | 10   | dB            |



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