



**FUKUCOM COMPANY LTD.**

**福 靈 有 限 公 司**

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,  
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

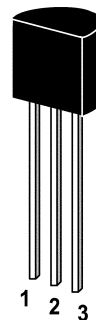
## ST BC369

### PNP Medium Power Transistor

General purpose switching and amplification

Power application such as audio output stages.

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

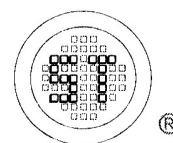
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

|                                                         | Symbol     | Value       | Unit             |
|---------------------------------------------------------|------------|-------------|------------------|
| Collector Base Voltage                                  | $-V_{CBO}$ | 32          | V                |
| Collector Emitter Voltage                               | $-V_{CEO}$ | 20          | V                |
| Emitter Base Voltage                                    | $-V_{EBO}$ | 5           | V                |
| Collector Current (DC)                                  | $-I_C$     | 1           | A                |
| Peak Collector Current                                  | $-I_{CM}$  | 2           | A                |
| Peak Base Current                                       | $-I_{BM}$  | 200         | mA               |
| Total Power Dissipation $T_{amb} \leq 25^\circ\text{C}$ | $P_{tot}$  | 0.83        | W                |
| Junction Temperature                                    | $T_j$      | 150         | $^\circ\text{C}$ |
| Storage Temperature Range                               | $T_s$      | -65 to +150 | $^\circ\text{C}$ |
| Operating Ambient Temperature                           | $T_{amb}$  | -65 to +150 | $^\circ\text{C}$ |

### Thermal Characteristics

|                                             | Symbol        | Value | Unit |
|---------------------------------------------|---------------|-------|------|
| Thermal Resistance From Junction to Ambient | $R_{th\ j-a}$ | 150   | K/W  |

**G S P FORM A IS AVAILABLE**



**SEMTECH**

Dated : 19/03/2005



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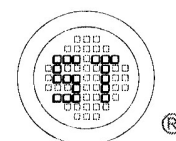
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### Characteristics at $T_{amb}=25^{\circ}\text{C}$

|                                                                 | Symbol                    | Min. | Typ. | Max. | Unit          |
|-----------------------------------------------------------------|---------------------------|------|------|------|---------------|
| DC Current Gain                                                 |                           |      |      |      |               |
| at $-V_{CE}=10\text{V}$ , $-I_C=5\text{mA}$                     | $h_{FE}$                  | 50   | -    | -    | -             |
| at $-V_{CE}=1\text{V}$ , $-I_C=500\text{mA}$                    | $h_{FE}$                  | 85   | -    | 375  | -             |
| at $-V_{CE}=1\text{V}$ , $-I_C=1\text{A}$                       | $h_{FE}$                  | 60   | -    | -    | -             |
| DC Current Gain                                                 |                           |      |      |      |               |
| at $-V_{CE}=1\text{V}$ , $-I_C=500\text{mA}$ BC369-16           | $h_{FE}$                  | 100  | -    | 250  | -             |
| BC369-25                                                        | $h_{FE}$                  | 160  | -    | 375  | -             |
| Collector Cutoff Current                                        |                           |      |      |      |               |
| at $-V_{CB}=25\text{V}$                                         | $-I_{CBO}$                | -    | -    | 100  | nA            |
| at $-V_{CB}=25\text{V}$ , $T_J=150^{\circ}\text{C}$             | $-I_{CBO}$                | -    | -    | 10   | $\mu\text{A}$ |
| Emitter Cutoff Current                                          |                           |      |      |      |               |
| at $-V_{EB}=5\text{V}$                                          | $-I_{EBO}$                | -    | -    | 0.1  | $\mu\text{A}$ |
| Collector-Emitter Saturation Voltage                            |                           |      |      |      |               |
| at $-I_C=1\text{A}$ , $-I_B=100\text{mA}$                       | $-V_{CE(sat)}$            | -    | -    | 0.5  | V             |
| Base-Emitter Voltage                                            |                           |      |      |      |               |
| at $-I_C=5\text{mA}$ , $-V_{CE}=10\text{V}$                     | $-V_{BE}$                 | -    | -    | 0.7  | V             |
| at $-I_C=1\text{A}$ , $-V_{CE}=1\text{V}$                       | $-V_{BE}$                 | -    | -    | 1    | V             |
| Transition Frequency                                            |                           |      |      |      |               |
| at $-V_{CE}=5\text{V}$ , $-I_C=10\text{mA}$ , $f=100\text{MHz}$ | $f_T$                     | 40   | -    | -    | MHz           |
| DC Current Gain Ratio of the Complementary Pairs                |                           |      |      |      |               |
| at $ V_{CE} =1\text{V}$ , $ I_C =500\text{mA}$                  | $\frac{h_{FE1}}{h_{FE2}}$ | -    | -    | 1.6  | -             |

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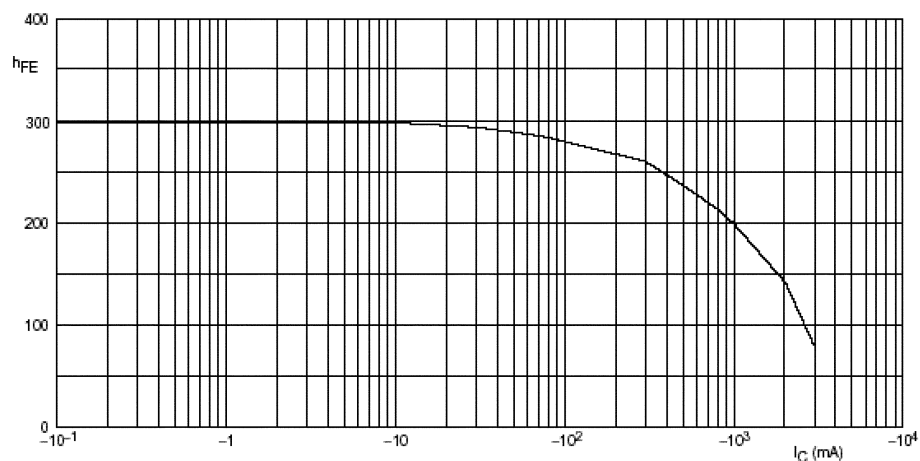
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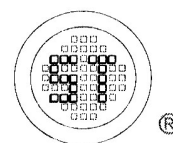
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$V_{CE} = -1V.$

Fig.1 DC current gain; typical values.



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