

#### **Features**

- Collector Current: I<sub>C</sub>=3A
- Power Dissipation of 500mw

# E C C

#### SUT80-31



## **Package Marking and Ordering Information**

| Product ID | Pack     | Marking | Qty(PCS) |
|------------|----------|---------|----------|
| D882       | SOT89-3L | D882    | 1000     |

Maxmim Ratings (Ta=25 unless otherwise noted)

| Parameter                                   | Symbol           | Limit    | Unit |
|---|------------------|----------|------|
| Collector-Base Voltage                      | V <sub>CBO</sub> | 40       | V    |
| Collector-Emitter Voltage                   | V <sub>CEO</sub> | 30       | V    |
| Emitter-Base Voltage                        | V <sub>EBO</sub> | 5        | V    |
| Collector Current                           | I <sub>c</sub>   | 3        | А    |
| Collector Power Dissipation                 | P <sub>c</sub>   | 500      | mW   |
| Thermal Resistance From Junction To Ambient | R <sub>OJA</sub> | 250      | °C/W |
| Junction Temperature                        | T <sub>j</sub>   | 150      | ℃    |
| Storage Temperature                         | T <sub>stg</sub> | -55∼+150 | °C   |

### Classifiction Of hFE

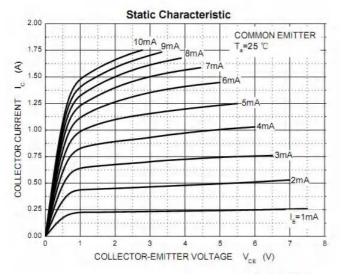
| Rank  | R      | 0       | Υ       | GR      |
|-------|--------|---------|---------|---------|
| Range | 60-120 | 100-200 | 160-320 | 200-400 |

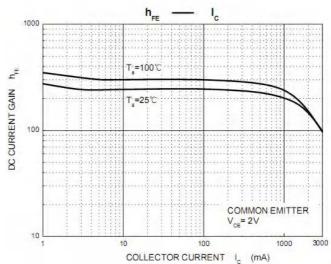


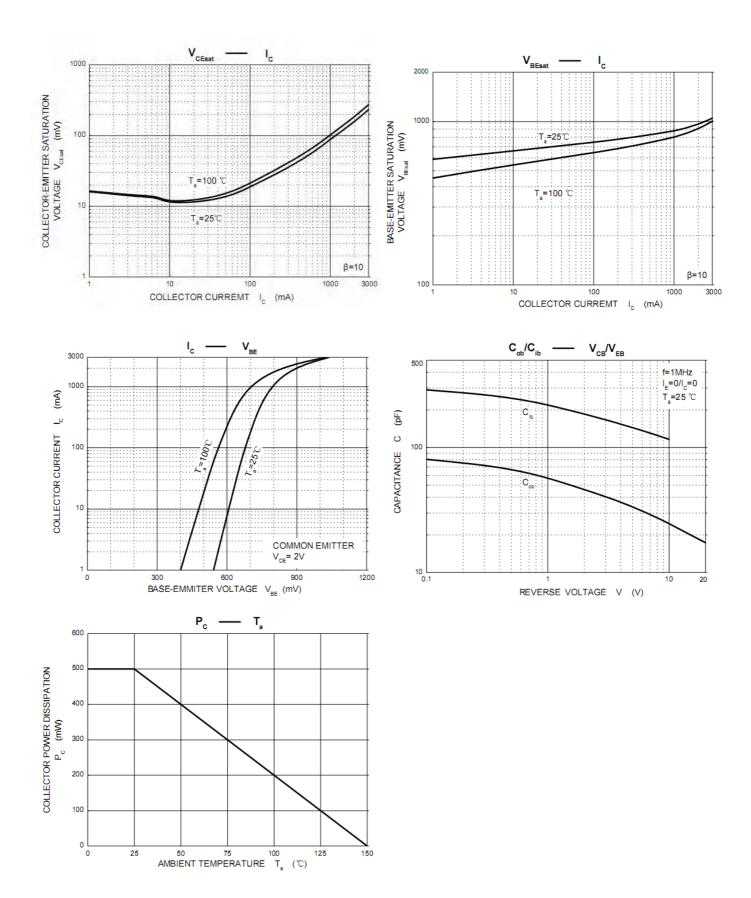
### Electrcal Charcteristics (Ta=25 unless otherwise specified)

| Parameter                            | Symbol               | Test conditions                             | Min | Тур | Max | Unit  |
|--------------------------------------|----------------------|---|-----|-----|-----|-------|
| Collector-base breakdown voltage     | V <sub>(BR)CBO</sub> | I <sub>C</sub> = 100μA, I <sub>E</sub> =0   | 40  |     |     | V     |
| Collector-emitter breakdown voltage  | V <sub>(BR)CEO</sub> | I <sub>C</sub> = 10mA, I <sub>B</sub> =0    | 30  |     |     | V     |
| Emitter-base breakdown voltage       | V <sub>(BR)EBO</sub> | I <sub>E</sub> = 100μA, I <sub>C</sub> =0   | 6   |     |     | V     |
| Collector cut-off current            | I <sub>CBO</sub>     | V <sub>CB</sub> = 40V, I <sub>E</sub> =0    |     |     | 1   | μΑ    |
| Collector cut-off current            | I <sub>CEO</sub>     | V <sub>CE</sub> = 30V, I <sub>B</sub> =0    |     |     | 10  | μΑ    |
| Emitter cut-off current              | I <sub>EBO</sub>     | V <sub>EB</sub> = 6V, I <sub>C</sub> =0     |     |     | 1   | μΑ    |
| DO 1 :                               | h <sub>FE(1)</sub>   | V <sub>CE</sub> =2V, I <sub>C</sub> = 1A    | 160 |     | 320 |       |
| DC current gain                      | h <sub>FE(2)</sub>   | V <sub>CE</sub> =2V, I <sub>C</sub> = 100mA | 32  |     |     |       |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> = 2A, I <sub>B</sub> = 0.2 A |     |     | 0.5 | V     |
| Base-emitter saturation voltage      | V <sub>BE(sat)</sub> | I <sub>C</sub> = 2A, I <sub>B</sub> = 0.2 A |     |     | 1.5 | V     |
| - · · ·                              | f_                   | V <sub>CE</sub> = 5V ,                      | 50  |     |     | MHz   |
| Transition frequency                 | f⊤                   | Ic=0.1A f =10MHz                            | 50  |     |     | IVI⊓∠ |

### **Typical Characteristics**

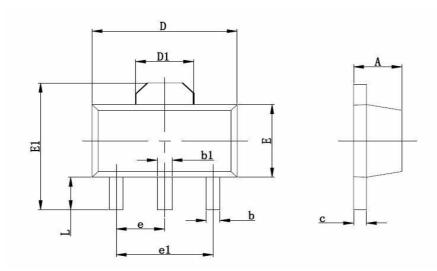








## **SOT89-3L Package Outline Dimensions**



| Symbol | Dimensions | In Millimeters | Dimensions In Inches |       |  |
|--------|------------|----------------|----------------------|-------|--|
|        | Min        | Max            | Min                  | Max   |  |
| Α      | 1.400      | 1.600          | 0.055                | 0.063 |  |
| b      | 0.350      | 0.520          | 0.013                | 0.197 |  |
| b1     | 0.400      | 0.580          | 0.016                | 0.023 |  |
| С      | 0.350      | 0.440          | 0.014                | 0.017 |  |
| D      | 4.400      | 4.600          | 0.173                | 0.181 |  |
| D1     | 1.550 REF  |                | 0.061 REF            |       |  |
| E      | 2.350      | 2.550          | 0.091                | 0.102 |  |
| E1     | 3.940      | 4.250          | 0.155                | 0.167 |  |
| е      | 1.500 TYP  |                | 0.060TYP             |       |  |
| e1     | 3.000 TYP  |                | 0.118                | 8TYP  |  |
| L      | 0.900      | 1.100          | 0.035                | 0.047 |  |

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