

# 2SB834 TRANSISTOR (PNP)

### **FEATURES**

- Low Collector -Emitter Saturation Voltage  $V_{CE(sat)}$ =1.0V(Max)<sub>@</sub>  $I_C$ =-3A, $I_B$ =-0.3A
- DC current Gain
   h<sub>FE</sub> =60-200<sub>@</sub> I<sub>C</sub>=0.5A
- Complementary to NPN 2SD880

# 1.BASE 2.COLLECTOR 3.EMITTER

## MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

| Symbol           | Parameter   | Value   | Unit |  |
|------------------|---|---------|------|--|
| V <sub>CBO</sub> | Collector- Base Voltage                             | -60 V   |      |  |
| V <sub>CEO</sub> | Collector-Emitter Voltage                           | -60 V   |      |  |
| V <sub>EBO</sub> | Emitter-Base Voltage                                | -7      | V    |  |
| Ic               | Collector Current -Continuous                       | -3      | Α    |  |
| Pc               | Collector Power Dissipation                         | 1.5     | W    |  |
| $T_J,T_stg$      | Operation Junction and<br>Storage Temperature Range | -55-150 | °C   |  |

## **ELECTRICAL** CHARACTERISTICS (T<sub>a</sub>=25 °C unless otherwise specified)

| Parameter                            | Symbol                | Test conditions   | Min | Тур | Max  | Unit |
|--------------------------------------|-----------------------|---|-----|-----|------|------|
| Collector-base breakdown voltage     | V <sub>(BR)CBO</sub>  | I <sub>C</sub> =-1mA,I <sub>E</sub> =0                              | -60 |     |      | V    |
| Collector-emitter breakdown voltage  | V <sub>(BR)CEO</sub>  | I <sub>C</sub> =-50mA,I <sub>B</sub> =0                             | -60 |     |      | V    |
| Emitter-base breakdown voltage       | V <sub>(BR)EBO</sub>  | I <sub>E</sub> =-1mA,I <sub>C</sub> =0                              | -7  |     |      | V    |
| Collector cut-off current            | I <sub>CBO</sub>      | V <sub>CB</sub> =-60V,I <sub>E</sub> =0                             |     |     | -100 | μA   |
| Emitter cut-off current              | I <sub>EBO</sub>      | V <sub>EB</sub> =-7V,I <sub>C</sub> =0                              |     |     | -100 | μA   |
| DC ourrent sein                      | h <sub>FE(1)*</sub>   | V <sub>CE</sub> =-5V,I <sub>C</sub> =-500mA                         | 60  |     | 200  |      |
| DC current gain                      | h <sub>FE(2)*</sub>   | $V_{CE}$ =-5 $V$ , $I_{C}$ =-3 $A$                                  | 20  |     |      |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)*</sub> | I <sub>C</sub> =-3A,I <sub>B</sub> =-0.3A                           |     |     | -1   | ٧    |
| Base-emitter voltage                 | V <sub>BE*</sub>      | V <sub>CE</sub> =-5V,I <sub>C</sub> =-500mA                         |     |     | -1   | V    |
| Transition frequency                 | f <sub>T</sub>        | V <sub>CE</sub> =-5V,I <sub>C</sub> =-500mA, f=1MHz                 |     | 9   |      | MHz  |
| Turn-on Time t <sub>on</sub>         |                       | V 20VI 0A   |     | 0.4 |      | μs   |
| Storage Time                         | t <sub>stg</sub>      | $V_{CC}$ =-30V,I <sub>c</sub> =-2A,<br>- $I_{BI}$ = $I_{B2}$ =-0.2A |     | 1.7 |      | μs   |
| Turn-off Time                        | t <sub>off</sub>      | IBI-1R50.5V   |     | 0.5 |      | μs   |

<sup>\*</sup>Pulse test.

## CLASSIFICATION OF h<sub>FE(1)</sub>

| Rank  | 0      | Y       |
|-------|--------|---------|
| Range | 60-120 | 100-200 |



