



TO-92 Plastic-Encapsulate Transistors

2SA844 TRANSISTOR (PNP)

FEATURES

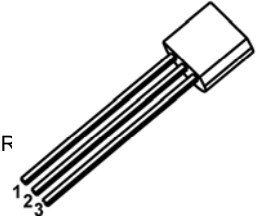
- High DC Current Gain
- Low Frequency Amplifier

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|-----------------|---|----------|-----------------------------|
| V_{CBO} | Collector-Base Voltage | -55 | V |
| V_{CEO} | Collector-Emitter Voltage | -55 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current | -0.1 | A |
| P_C | Collector Power Dissipation | 300 | mW |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient | 416 | $^{\circ}\text{C}/\text{W}$ |
| T_j | Junction Temperature | 150 | $^{\circ}\text{C}$ |
| T_{stg} | Storage Temperature | -55~+150 | $^{\circ}\text{C}$ |

TO - 92

1. EMITTER
2. COLLECTOR
3. BASE



ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--|-----|-----|-------|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=-0.01\text{mA}, I_E=0$ | -55 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=-1\text{mA}, I_B=0$ | -55 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=-0.01\text{mA}, I_C=0$ | -5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=-18\text{V}, I_E=0$ | | | -0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=-2\text{V}, I_C=0$ | | | -0.05 | μA |
| DC current gain | h_{FE} | $V_{CE}=-12\text{V}, I_C=-2\text{mA}$ | 160 | | 800 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=-10\text{mA}, I_B=-1\text{mA}$ | | | -0.5 | V |
| Base-emitter voltage | V_{BE} | $V_{CE}=-12\text{V}, I_C=-2\text{mA}$ | | | -0.75 | V |
| Collector output capacitance | C_{ob} | $V_{CE}=-10\text{V}, I_C=0, f=1\text{MHz}$ | | 2 | | pF |
| Transition frequency | f_T | $V_{CE}=-12\text{V}, I_C=-2\text{mA}$ | | 200 | | MHz |

CLASSIFICATION OF h_{FE}

| RANK | C | D | E |
|-------|---------|---------|---------|
| RANGE | 160-320 | 250-500 | 400-800 |