

2SD874 TRANSISTOR (NPN)

FEATURES

Power dissipation

P_{CM} : 500 mW ($T_{amb}=25^{\circ}C$)

Collector current

I_{CM} : 1 A

Collector-base voltage

$V_{(BR)CBO}$: 30 V

Operating and storage junction temperature range

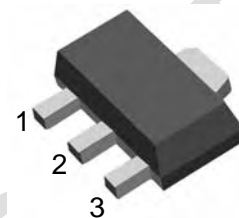
T_J, T_{stg} : $-55^{\circ}C$ to $+150^{\circ}C$

SOT-89

1. BASE

2. COLLECTOR

3. EMITTER



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

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|----------------------------------|-----|-----|-----|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=10\mu A, I_E=0$ | 30 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=2mA, I_B=0$ | 25 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=10\mu A, I_C=0$ | 5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=20V, I_E=0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=4V, I_C=0$ | | | 0.1 | μA |
| DC current gain | $h_{FE(1)}$ | $V_{CE}=10V, I_C=500mA$ | 85 | | 340 | |
| | $h_{FE(2)}$ | $V_{CE}=5V, I_C=1A$ | 50 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=500mA, I_B=50mA$ | | | 0.4 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=500mA, I_B=50mA$ | | | 1.2 | V |
| Transition frequency | f_T | $V_{CE}=10V, I_C=50mA, f=200MHz$ | | 200 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=10V, I_E=0, f=1MHz$ | | 20 | | pF |

CLASSIFICATION OF $h_{FE(1)}$

| Rank | Q | R | S |
|---------|--------|---------|---------|
| Range | 85-170 | 120-240 | 170-340 |
| Marking | ZQ | ZR | ZS |