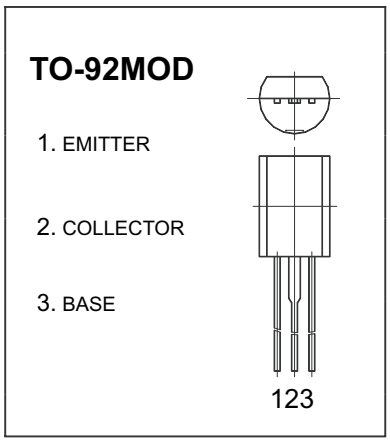
# 2SD400

TRANSISTOR (NPN)




## FEATURES

Power dissipation

$P_{CM}$: 900 mW ($T_A$=25℃)

Collector current

$I_{CM}$: 1 A

Collector-base voltage

$V_{(BR)CBO}$: 25 V

Operating and storage junction temperature range

$T_J$, $T_{stg}$: -55℃ to +150℃

## ELECTRICAL CHARACTERISTICS ($T_{amb}$=25℃ unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| **Collector-base breakdown voltage** | $V_{(BR)CBO}$ | $I_C$=10μA, $I_E$=0 | 25 | | | V |
| **Collector-emitter breakdown voltage** | $V_{(BR)CEO}$ | $I_C$=1mA, $I_B$=0 | 25 | | | V |
| **Emitter-base breakdown voltage** | $V_{(BR)EBO}$ | $I_E$=10μA, $I_C$=0 | 5 | | | V |
| **Collector cut-off current** | $I_{CBO}$ | $V_{CB}$=20V, $I_E$=0 | | | 1 | μA |
| **Emitter cut-off current** | $I_{EBO}$ | $V_{EB}$=4V, $I_C$=0 | | | 1 | μA |
| **DC current gain** | $h_{FE(1)}$ | $V_{CE}$=2V, $I_C$=50mA | 60 | | 560 | |
| | $h_{FE(2)}$ | $V_{CE}$=2V, $I_C$=1A | 30 | | | |
| **Collector-emitter saturation voltage** | $V_{CE(sat)}$ | $I_C$=500mA, $I_B$=50mA | | | 0.3 | 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 | | 180 | | MHz |
| **Output Capactlance** | $C_{ob}$ | $V_{CB}$=10V, f=1MHz | | 15 | | pF |

## CLASSIFICATION OF $h_{FE(1)}$

| Rank | D | E | F | G |
|---|---|---|---|---|
| **Range** | 60-120 | 100-200 | 160-320 | 280-560 |