# TO-92 Plastic-Encapsulate Transistors

**2N3704** TRANSISTOR（ NPN ）

**FEATURES**

Power dissipation

$P_{CM}$: 0.625 W（Tamb=25℃）

Collector current

$I_{CM}$: 0.5 A

Collector-base voltage

$V_{(BR)CBO}$: 50 V

Operating and storage junction temperature range

$T_J$，$T_{stg}$: -55℃ to +150℃

**TO—92**

**ELECTRICAL CHARACTERISTICS（Tamb=25℃ unless otherwise specified）**

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| **Collector-base breakdown voltage** | $V(BR)_{CBO}$ | $I_C$= 100μA, $I_E$=0 | 50 | | | V |
| **Collector-emitter breakdown voltage** | $V(BR)_{CEO}$ | $I_C$=10mA，$I_B$=0 | 30 | | | V |
| **Emitter-base breakdown voltage** | $V(BR)_{EBO}$ | $I_E$=100μA，$I_C$=0 | 5 | | | V |
| **Collector cut-off current** | $I_{CBO}$ | $V_{CB}$=20 V , $I_E$=0 | | | 100 | μA |
| **Emitter cut-off current** | $I_{EBO}$ | $V_{EB}$=3V，$I_C$=0 | | | 100 | μA |
| **DC current gain** | $H_{FE}$（1） | $V_{CE}$=2V, $I_C$=50mA | 100 | | 300 | |
| **Collector-emitter saturation voltage** | $V_{CE}$(sat) | $I_C$=100mA, $I_B$=5mA | | | 0.6 | V |
| **Base-emitter voltage** | $V_{BE}$(sat) | $I_C$=100mA,$V_{CE}$=2V | 0.5 | | 1.0 | V |
| Current Gain-Bandwidth Product | fr | $V_{CE}$=2V, $I_C$=50mA | 100 | | | MHz |

**CLASSIFICATION OF HFE**

| **Rank** | 1 | 2 | 3 |
|---|---|---|---|
| **Range** | 100-150 | 150-200 | 200-300 |