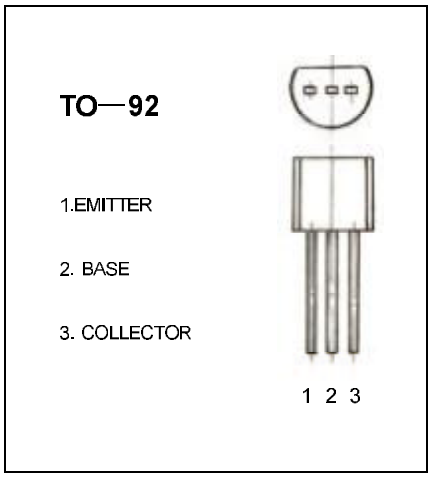
# DONGGUAN NANJING ELECTRONICS LTD.,
# TO-92 Plastic-Encapsulate Transistors

**M8050** TRANSISTOR （ NPN ）




## FEATURES

Power dissipation

$P_{CM}$ : 0.625 W（Tamb=25℃）

Collector current

$I_{CM}$ : 1 A

Collector-base voltage

$V_{(BR)CBO}$ : 40 V

Operating and storage junction temperature range

$T_J$, $T_{stg}$: -55℃ to +150℃

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

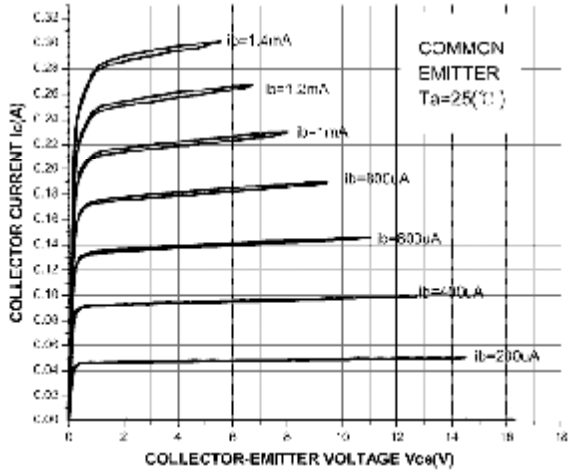
| Parameter | Symbol | Test conditions | MIN | MAX | UNIT |
|---|---|---|---|---|---|
| **Collector-base breakdown voltage** | $V(BR)_{CBO}$ | $I_C$= 100μA， $I_E$=0 | 40 | | V |
| **Collector-emitter breakdown voltage** | $V(BR)_{CEO}$* | $I_C$= 0.1mA， $I_B$=0 | 25 | | V |
| **Emitter-base breakdown voltage** | $V(BR)_{EBO}$ | $I_E$= 100μA， $I_C$=0 | 6 | | V |
| **Collector cut-off current** | $I_{CBO}$ | $V_{CB}$= 35V， $I_E$=0 | | 0.1 | μA |
| **Collector cut-off current** | $I_{CEO}$ | $V_{CE}$= 20V， $I_B$=0 | | 0.1 | μA |
| **DC current gain** | $h_{FE(1)}$ | $V_{CE}$=1V, $I_C$=5mA | 45 | | |
| | $h_{FE(2)}$ | $V_{CE}$=1V, $I_C$=100mA | 80 | 300 | |
| | $h_{FE(3)}$ | $V_{CE}$=1V, $I_C$=800mA | 40 | | |
| **Collector-emitter saturation voltage** | $V_{CE(sat)}$ | $I_C$= 800mA, $I_B$=80mA | | 0.5 | V |
| **Base-emitter saturation voltage** | $V_{BE(sat)}$ | $I_C$=800mA, $I_B$= 80mA | | 1.2 | V |
| **Transition frequency** | $f_T$ | $V_{CE}$=6V, $I_C$= 20mA , f=30MHz | 150 | | MHz |

* Pulse Test ：pulse width ≤ 300μs，duty cycle ≤2%。

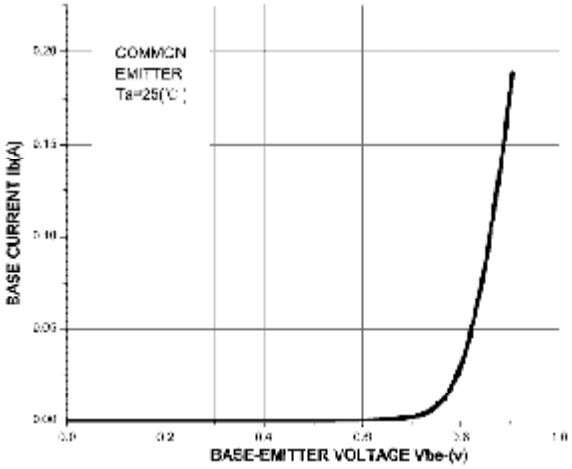
# Typical Characteristics

M8050

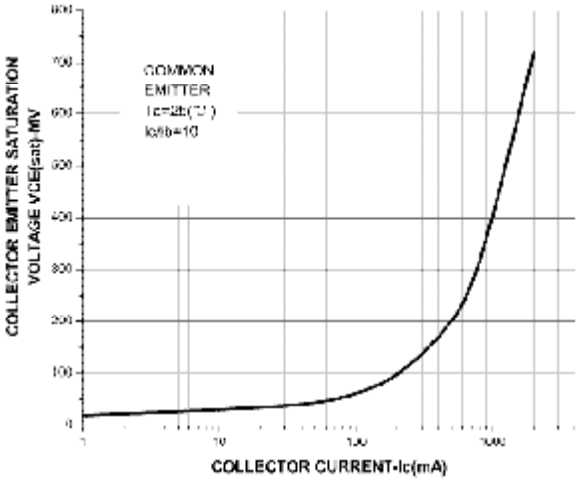
Ic-Vce



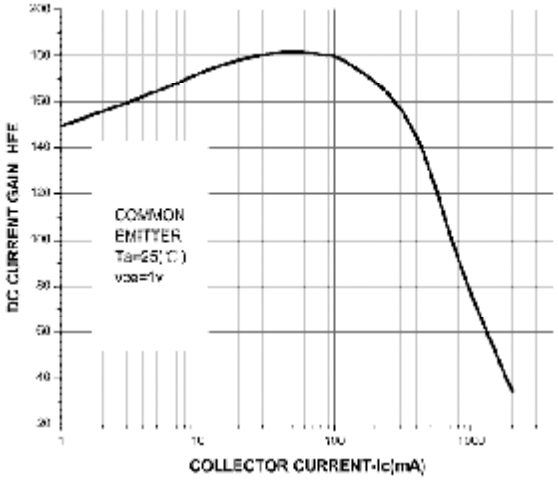

Ib-Vbe




Vcesat-Ic




hFE-Ic




Pc-Ta