



TO-92 Plastic-Encapsulate Transistors

BC328 TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM}: 0.625 \text{ W (Tamb=25}^{\circ}\text{C)}$$

Collector current

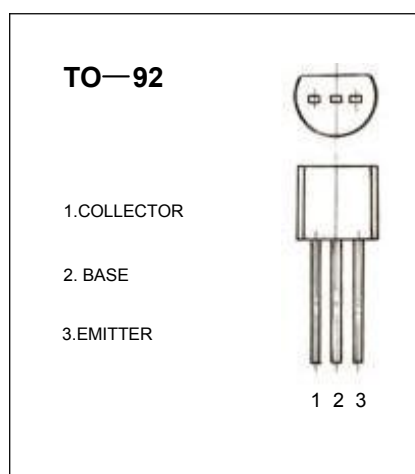
$$I_{CM}: 0.8 \text{ A}$$

Collector-base voltage

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

Operating and storage junction temperature range

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



ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|--|-----|-----|------|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=100\mu\text{A}, I_E=0$ | -30 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=10\text{mA}, I_B=0$ | -25 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=10\mu\text{A}, I_C=0$ | -5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=-25 \text{ V}, I_E=0$ | | | -0.1 | μA |
| Collector cut-off current | I_{CEO} | $V_{CE}=-20 \text{ V}, I_B=0$ | | | -0.2 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=-4 \text{ V}, I_C=0$ | | | -0.1 | μA |
| DC current gain(note) | $H_{FE(1)}$ | $V_{CE}=1 \text{ V}, I_C=100\text{mA}$ | 100 | | 630 | |
| | $H_{FE(2)}$ | $V_{CE}=1 \text{ V}, I_C=300\text{mA}$ | 40 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=500\text{mA}, I_B=50 \text{ mA}$ | | | -0.7 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=500\text{mA}, I_B=50 \text{ mA}$ | | | -1.2 | V |
| Base-emitter voltage | V_{BE} | $V_{CE}=1 \text{ V}, I_C=300\text{mA}$ | | | -1.2 | V |
| Transition frequency | f_T | $V_{CE}=5 \text{ V}, I_C=10\text{mA}$ $f=100\text{MHz}$ | 260 | | | MHz |

CLASSIFICATION OF HFE

| | | | |
|--------------|---------|---------|---------|
| Rank | 1 | 2 | 3 |
| Range | 100-250 | 160-400 | 250-630 |