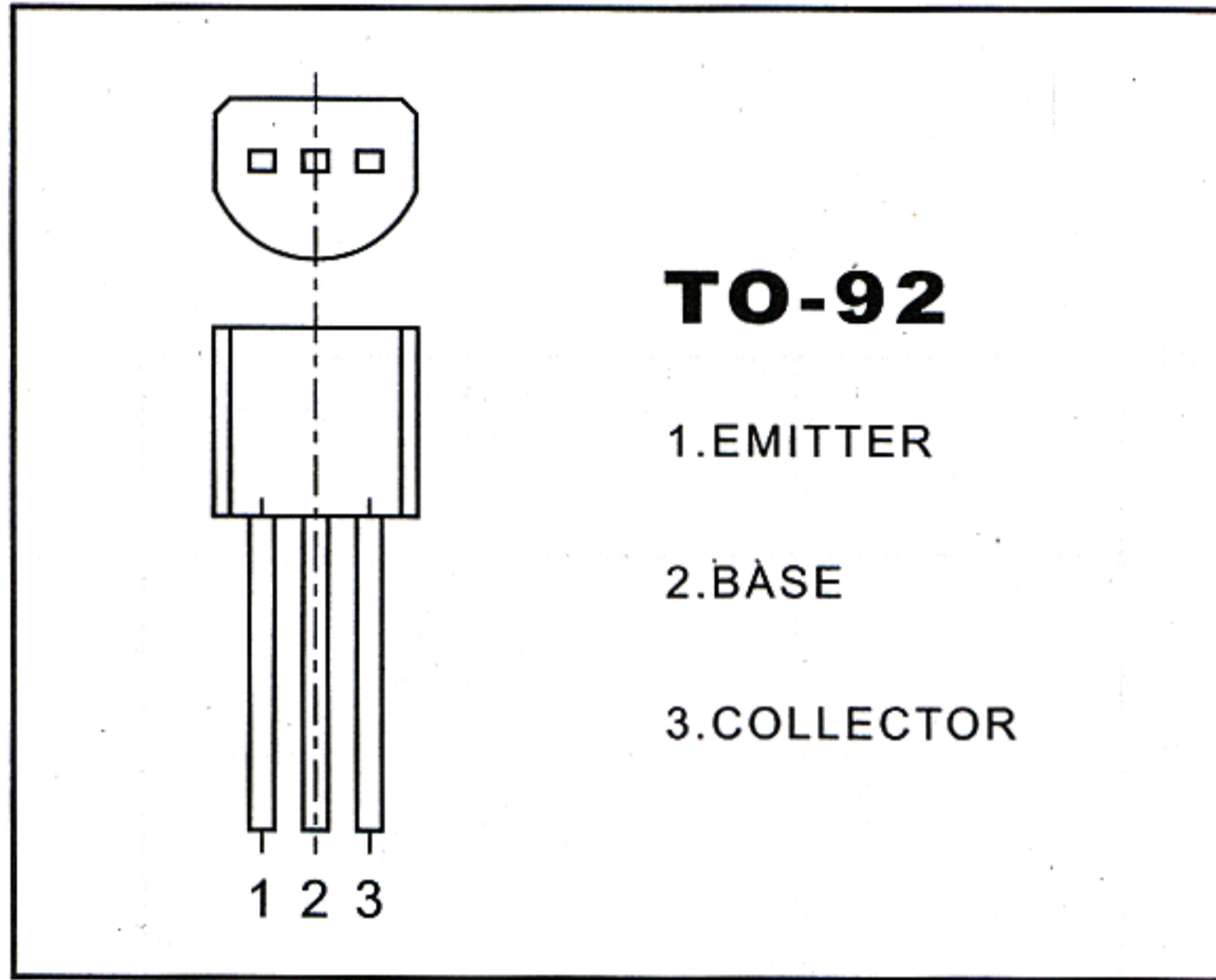


S9014 TRANSISTOR(NPN)



FEATURES

Power dissipation

P_{CM} : 0.4W ($T_{amb}=25^{\circ}C$)

Collector current

I_{CM} : 0.1 A

Collector-base voltage

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

Operating and storage junction temperature range

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

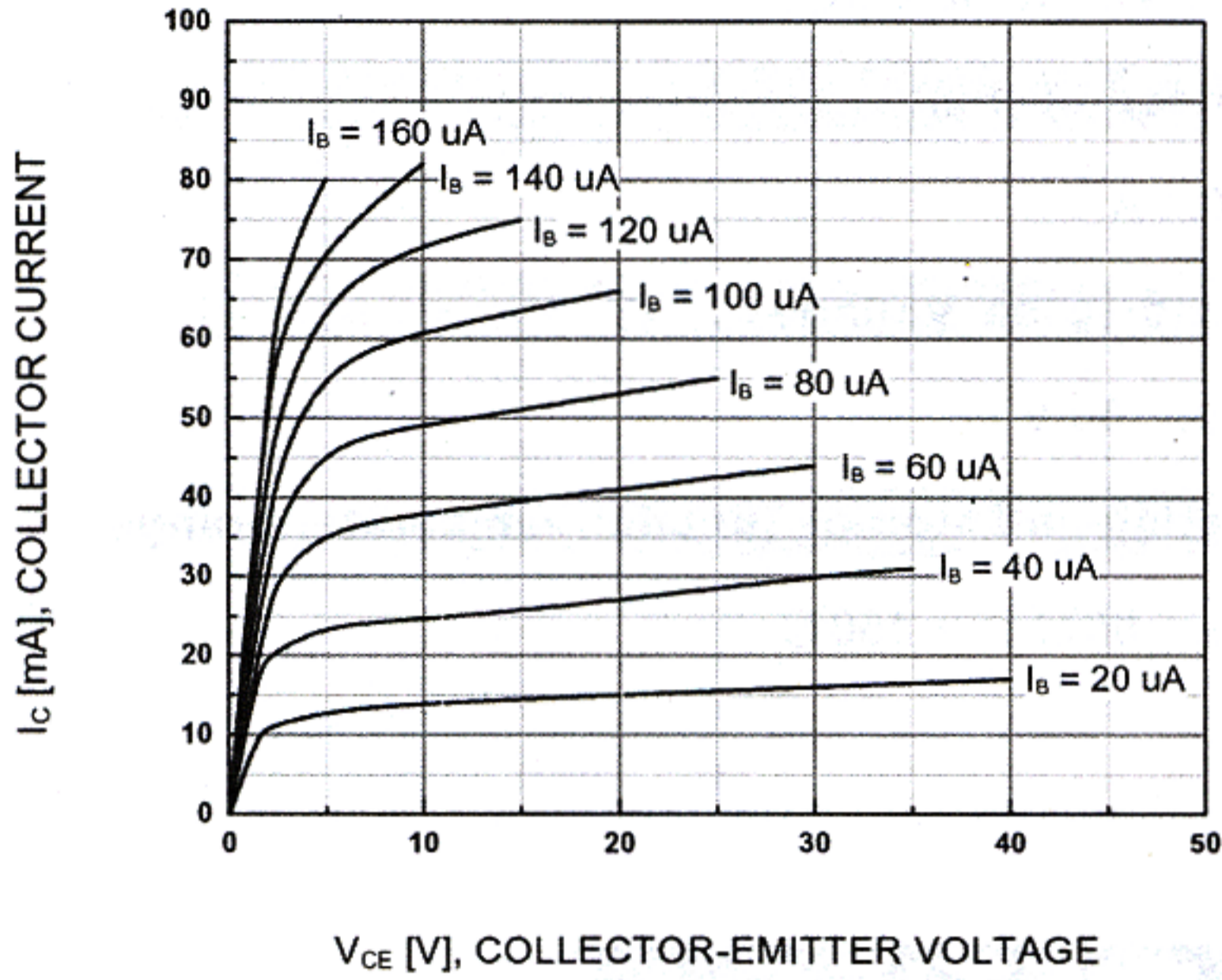
ELECTRICAL CHARACTERISTICS

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

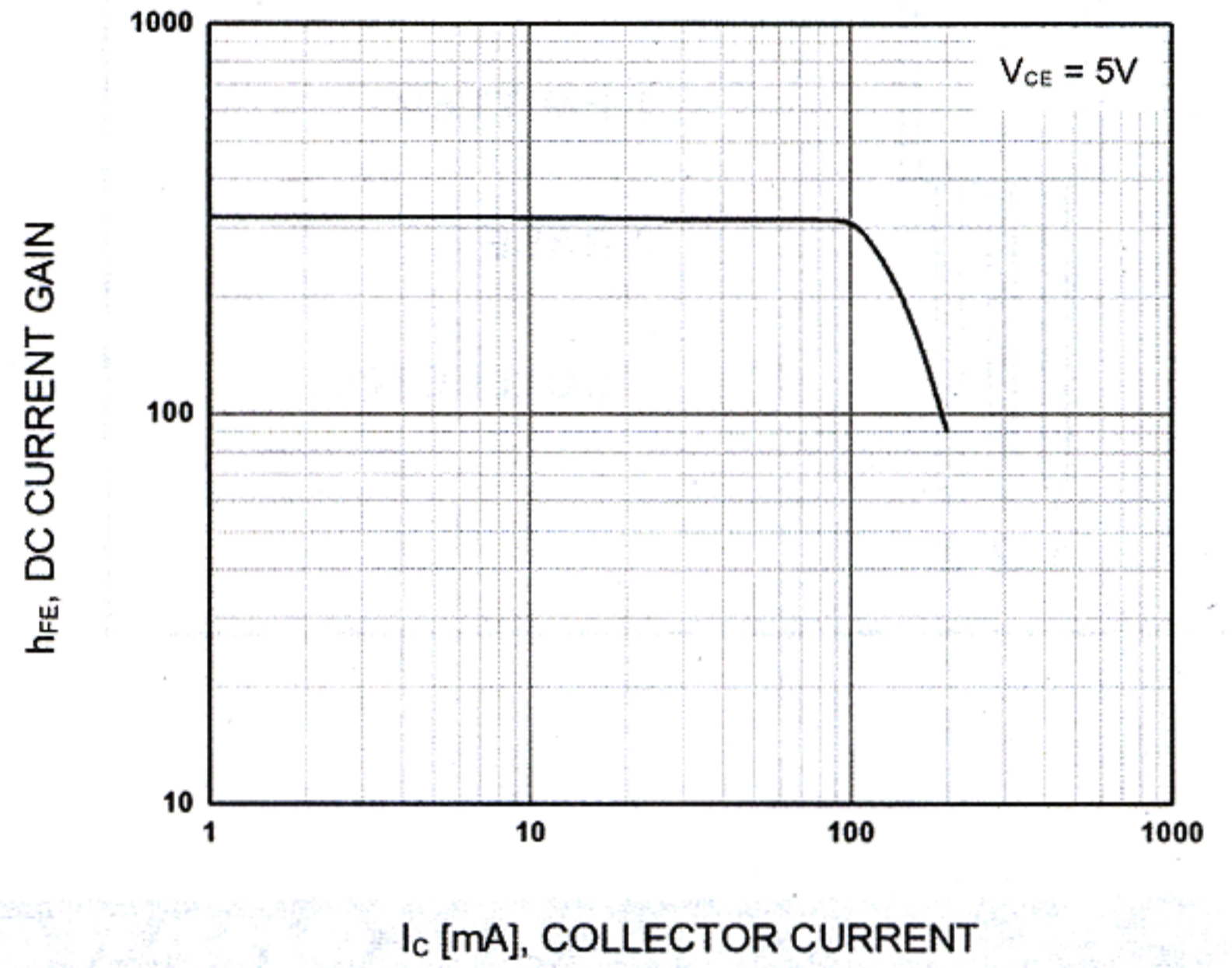
| Parameter | Symbol | Test conditions | MIN | MAX | UNIT |
|--------------------------------------|---------------|---|-----|------|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C = 100 \mu A, I_E = 0$ | 50 | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = 0.1 mA, I_B = 0$ | 45 | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E = 100 \mu A, I_C = 0$ | 5 | | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = 50 V, I_E = 0$ | | 0.1 | μA |
| Collector cut-off current | I_{CEO} | $V_{CE} = 35 V, I_B = 0$ | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = 3 V, I_C = 0$ | | 0.1 | μA |
| DC current gain | $h_{FE(1)}$ | $V_{CE} = 5 V, I_C = 1 mA$ | 60 | 1000 | |
| Collector-emitter saturation voltage | V_{CEsat} | $I_C = 100 mA, I_B = 5 mA$ | | 0.3 | V |
| Base-emitter saturation voltage | V_{BEsat} | $I_C = 100 mA, I_B = 5 mA$ | | 1 | V |
| Transition frequency | f_T | $V_{CE} = 5 V, I_C = 10 mA$ $f = 30 MHz$ | 150 | | MHz |

CLASSIFICATION OF $h_{FE(1)}$

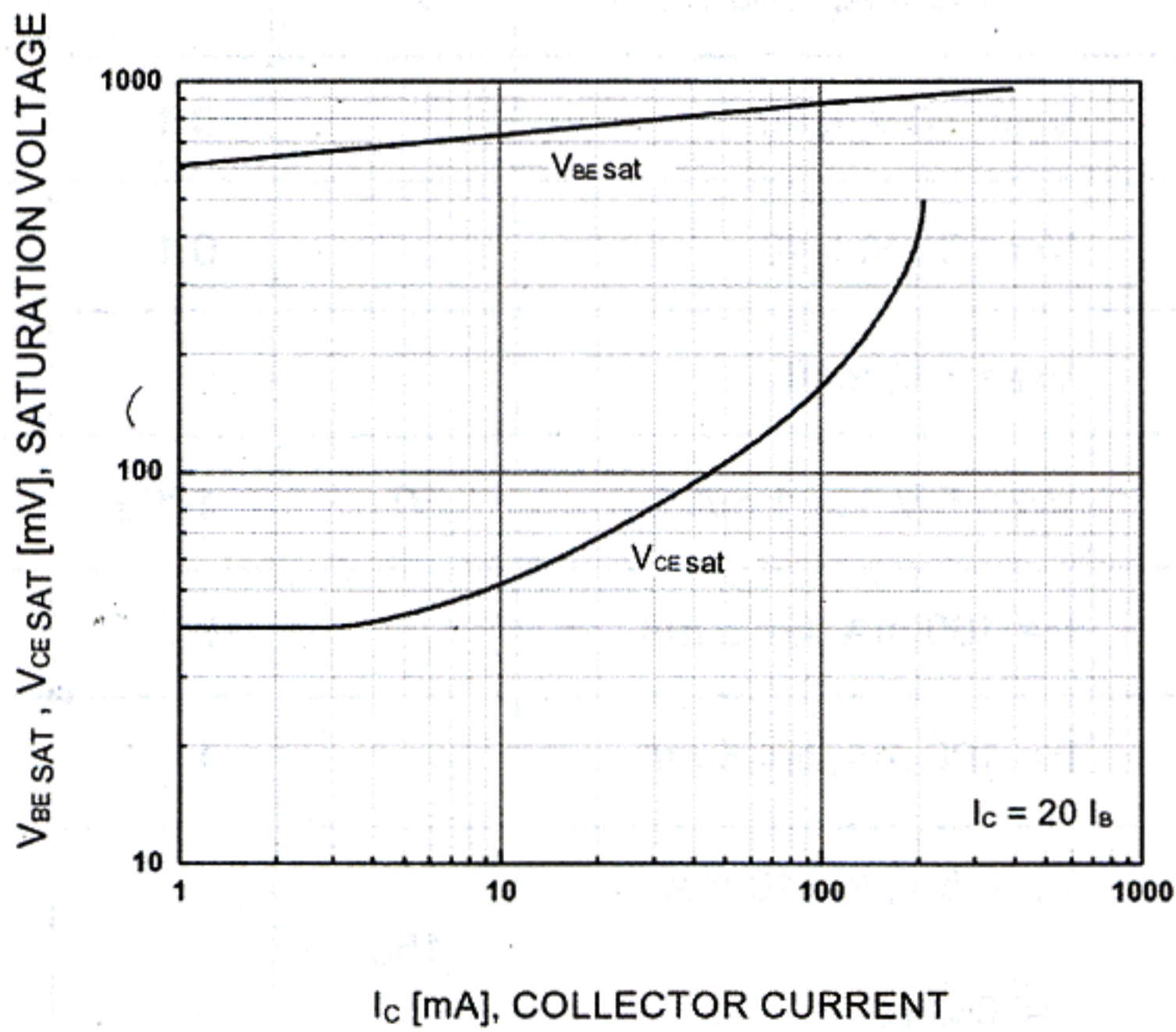
| Rank | A | B | C | D |
|-------|--------|---------|---------|----------|
| Range | 60-150 | 100-300 | 200-600 | 400-1000 |



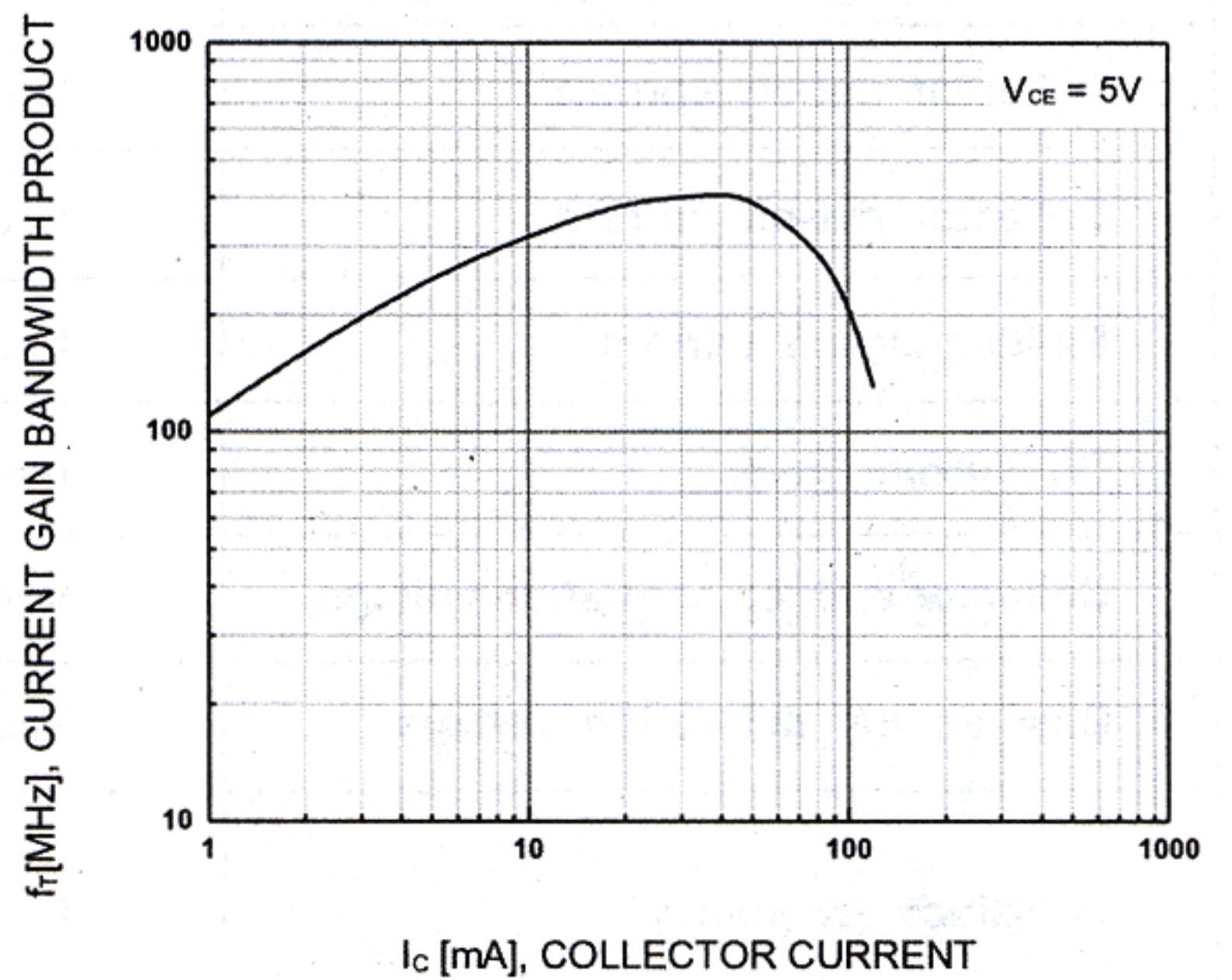
Static Characteristic



DC current Gain



**Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage**



Current Gain Bandwidth Product