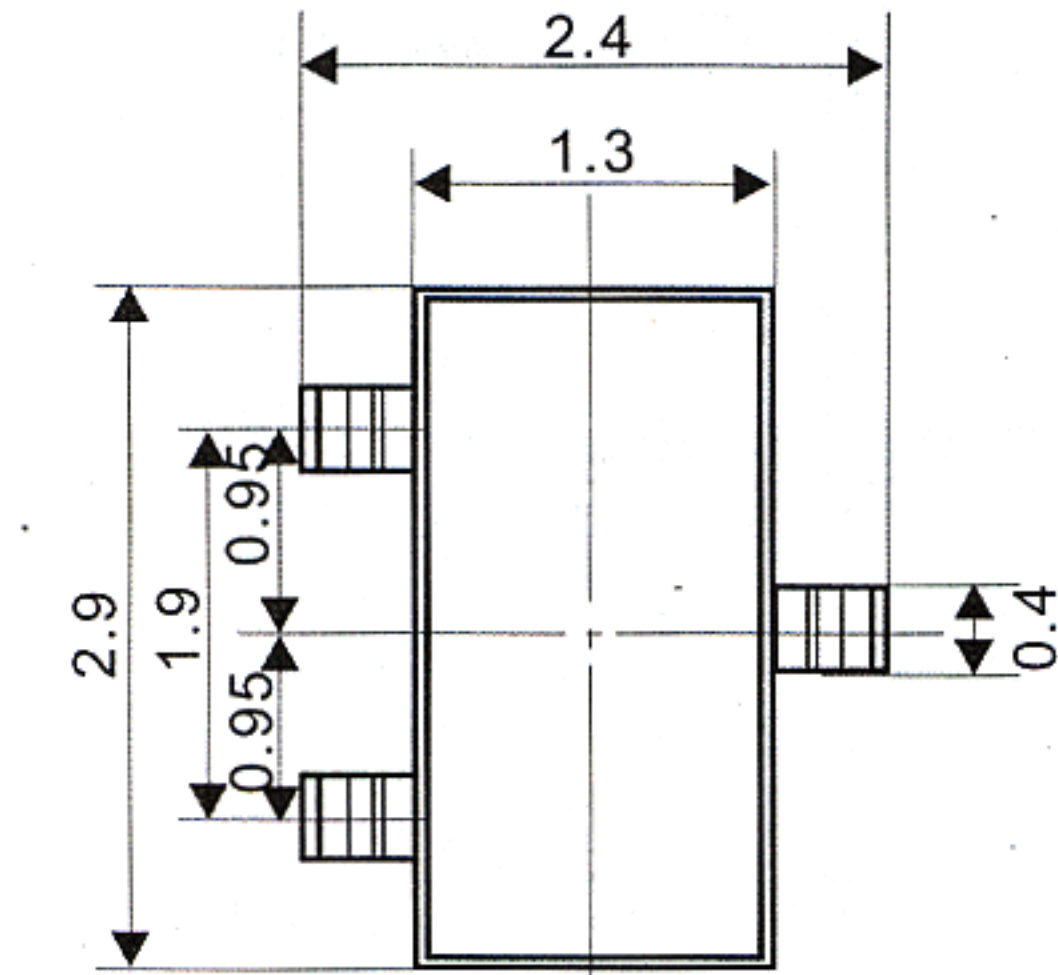
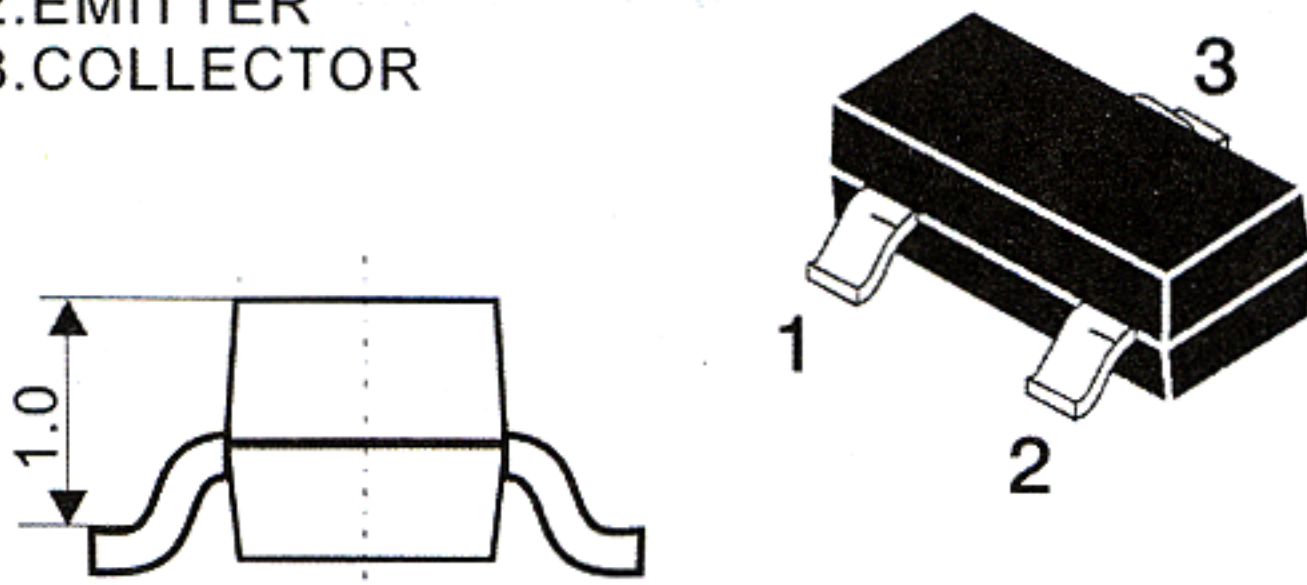


SOT-23 Plastic-Encapsulate Transistors

S9012LT1 TRANSISTOR (PNP)

- 1.BASE
- 2.EMITTER
- 3.COLLECTOR



UNIT: mm

FEATURES

Power dissipation

$P_{CM} : 0.3 \text{ W (} T_{amb}=25^{\circ}\text{C)}$

Collector current

$I_{CM} : -0.5 \text{ A}$

Collector-base voltage

$V_{(BR)CBO} : -40\text{V}$

Operating and storage junction temperature range

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

ELECTRICAL CHARACTERISTICS

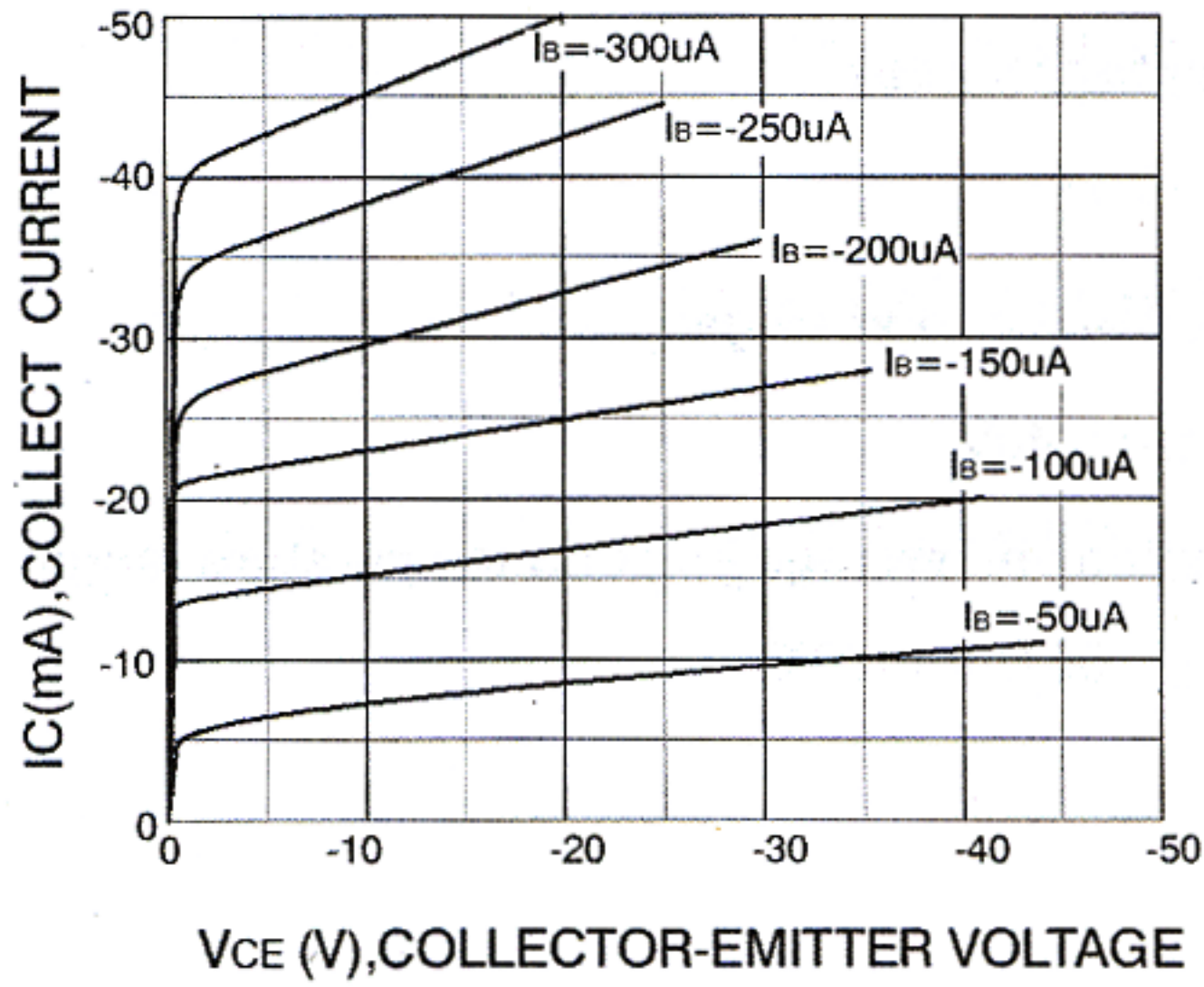
($T_{amp}=25^{\circ}\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test conditions | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|---|-----|-----|------|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=-100 \mu\text{A}, I_E=0$ | -40 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=-0.1\text{mA}, I_B=0$ | -25 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=-100 \mu\text{A}, I_C=0$ | -5 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=-40\text{V}, I_E=0$ | | | -0.1 | μA |
| | I_{CEO} | $V_{CE}=-20\text{V}, I_B=0$ | | | -0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=-5\text{V}, I_C=0$ | | | -0.1 | μA |
| DC current gain | $h_{FE(1)}$ | $V_{CE}=-1\text{V}, I_C=-50\text{mA}$ | 120 | | 350 | |
| | $h_{FE(2)}$ | $V_{CE}=-1\text{V}, I_C=-500\text{mA}$ | 40 | | | |
| Collector-emitter saturation voltage | V_{CEsat} | $I_C=-500\text{mA}, I_B=-50\text{mA}$ | | | -0.6 | V |
| Base-emitter saturation voltage | V_{BEsat} | $I_C=-500\text{mA}, I_B=-50\text{mA}$ | | | -1.2 | V |
| Base-emitter voltage | V_{BEF} | $I_E=-100\text{mA}$ | | | -1.4 | V |
| Transition frequency | f_T | $V_{CE}=-6\text{V}, I_C=-20\text{mA}$ $f=30\text{MHz}$ | 150 | | | MHz |

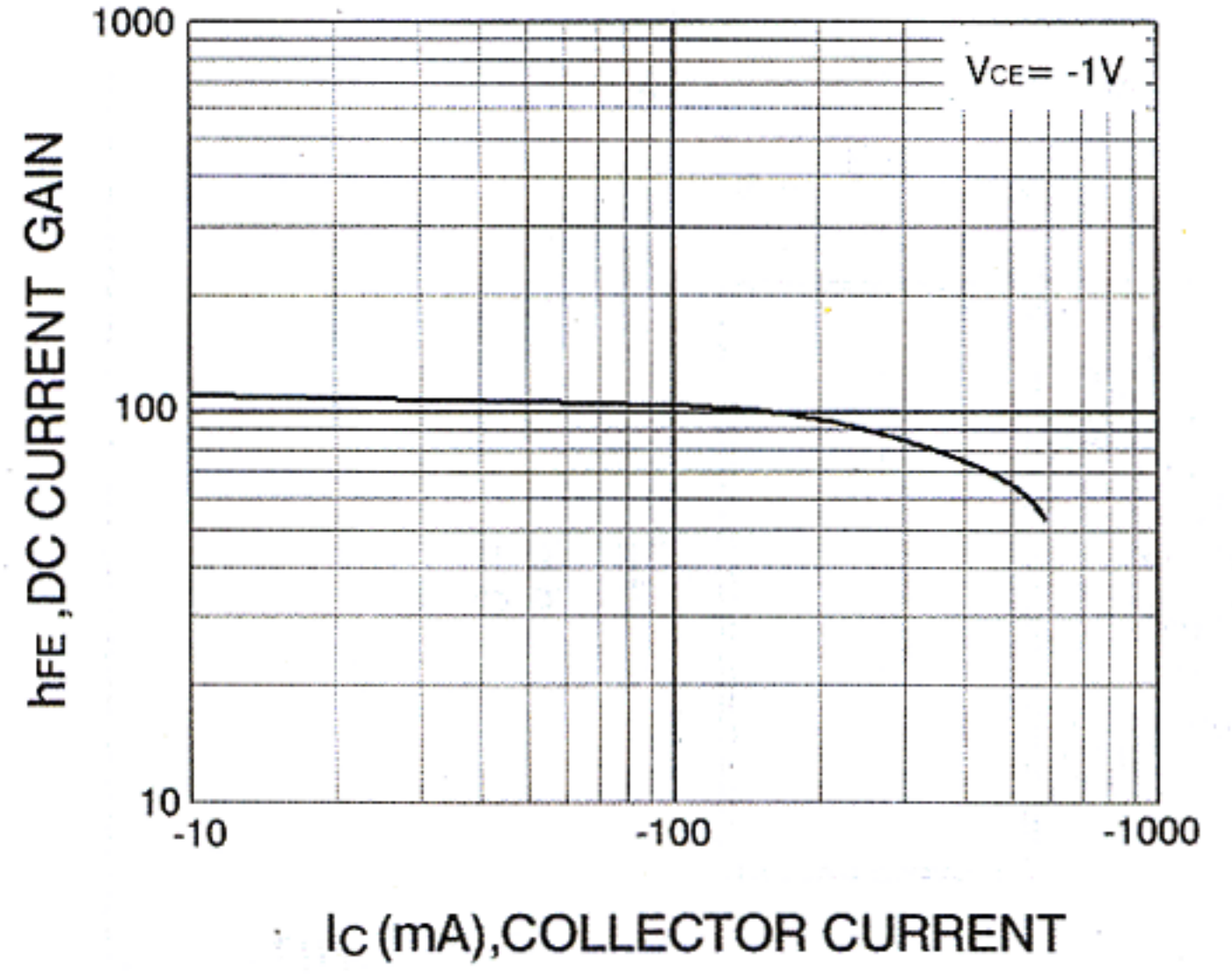
CLASSIFICATION OF $h_{FE(1)}$

| Rank | L | H |
|-------|---------|---------|
| Range | 120-200 | 200-350 |

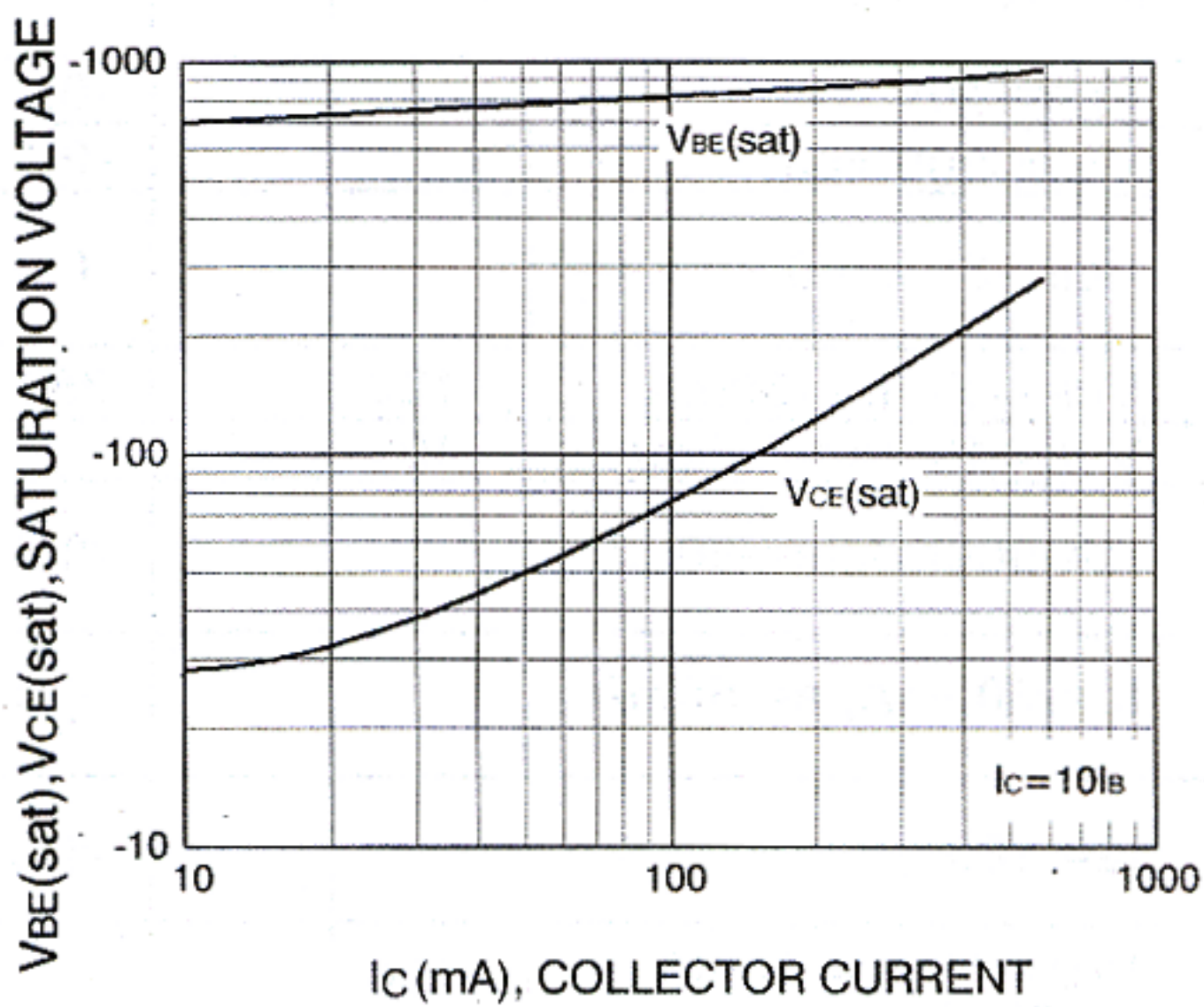
DEVICE MARKING : S9012LT1=2T1



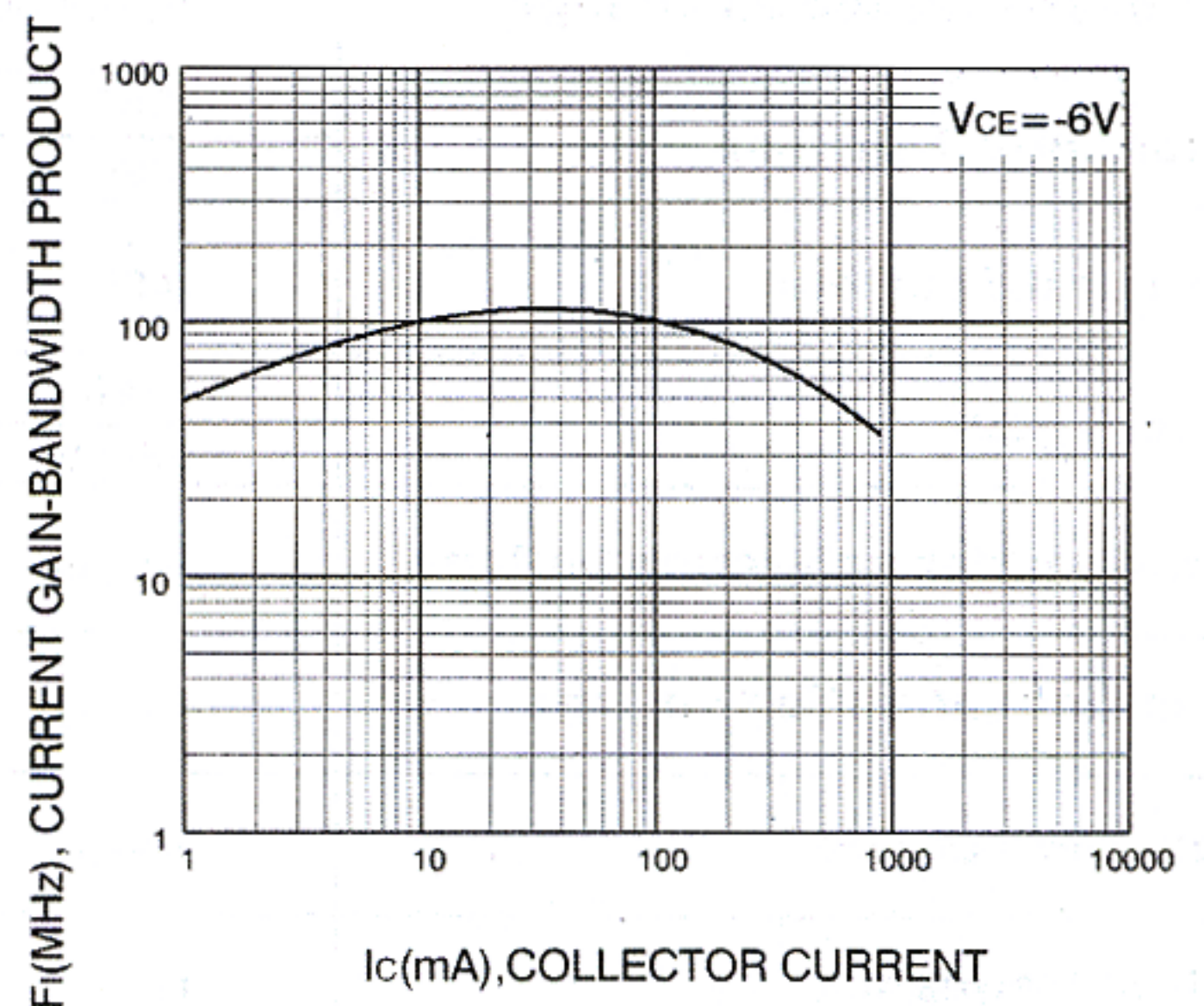
Static Characteristic



DC current Gain



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



Current Gain Bandwidth Product