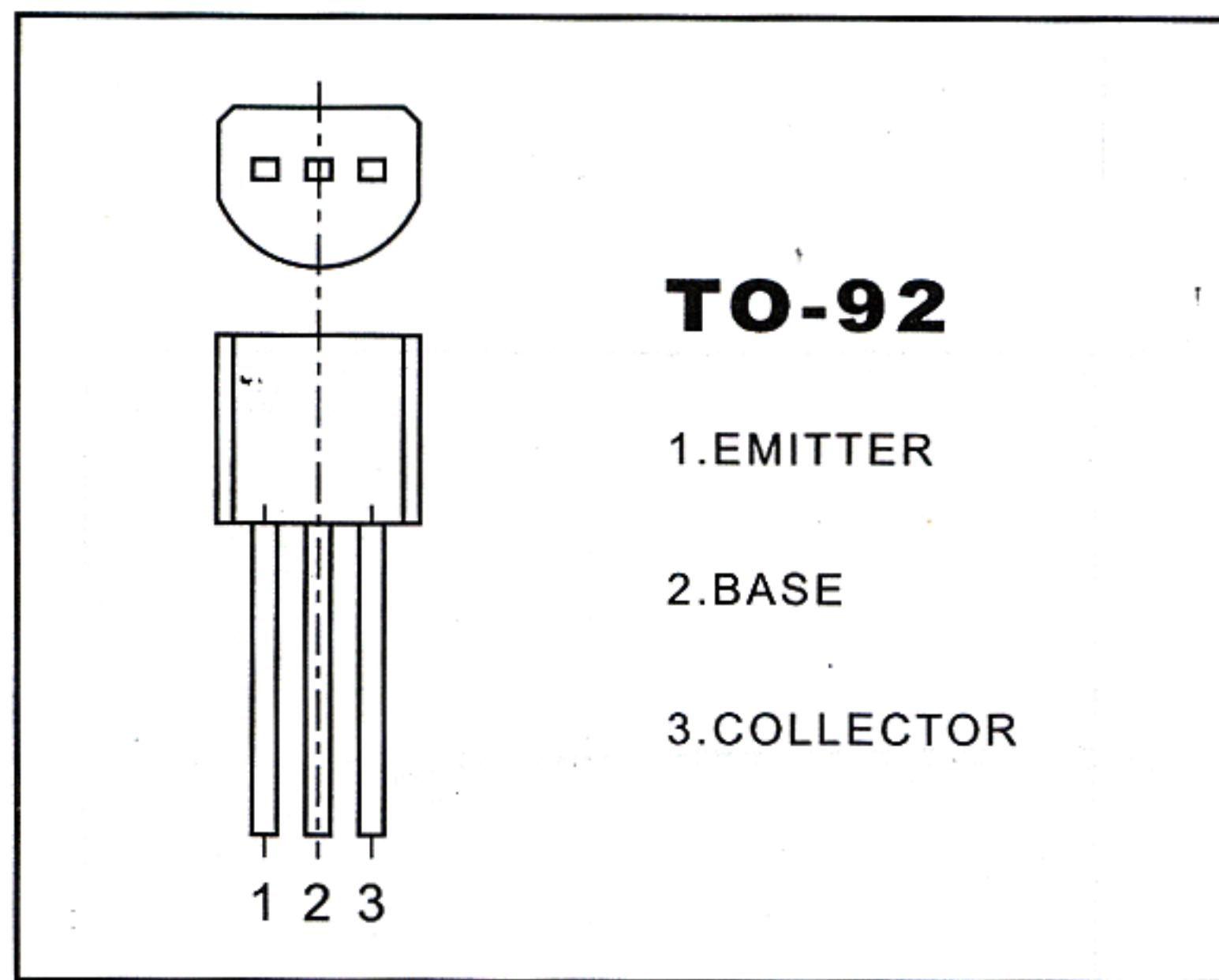


## S9012 TRANSISTOR(PNP)



### FEATURES

#### Power dissipation

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

#### Collector current

$I_{CM}$ : -0.5 A

#### Collector-base voltage

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

#### Operating and storage junction temperature range

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

### ELECTRICAL CHARACTERISTICS

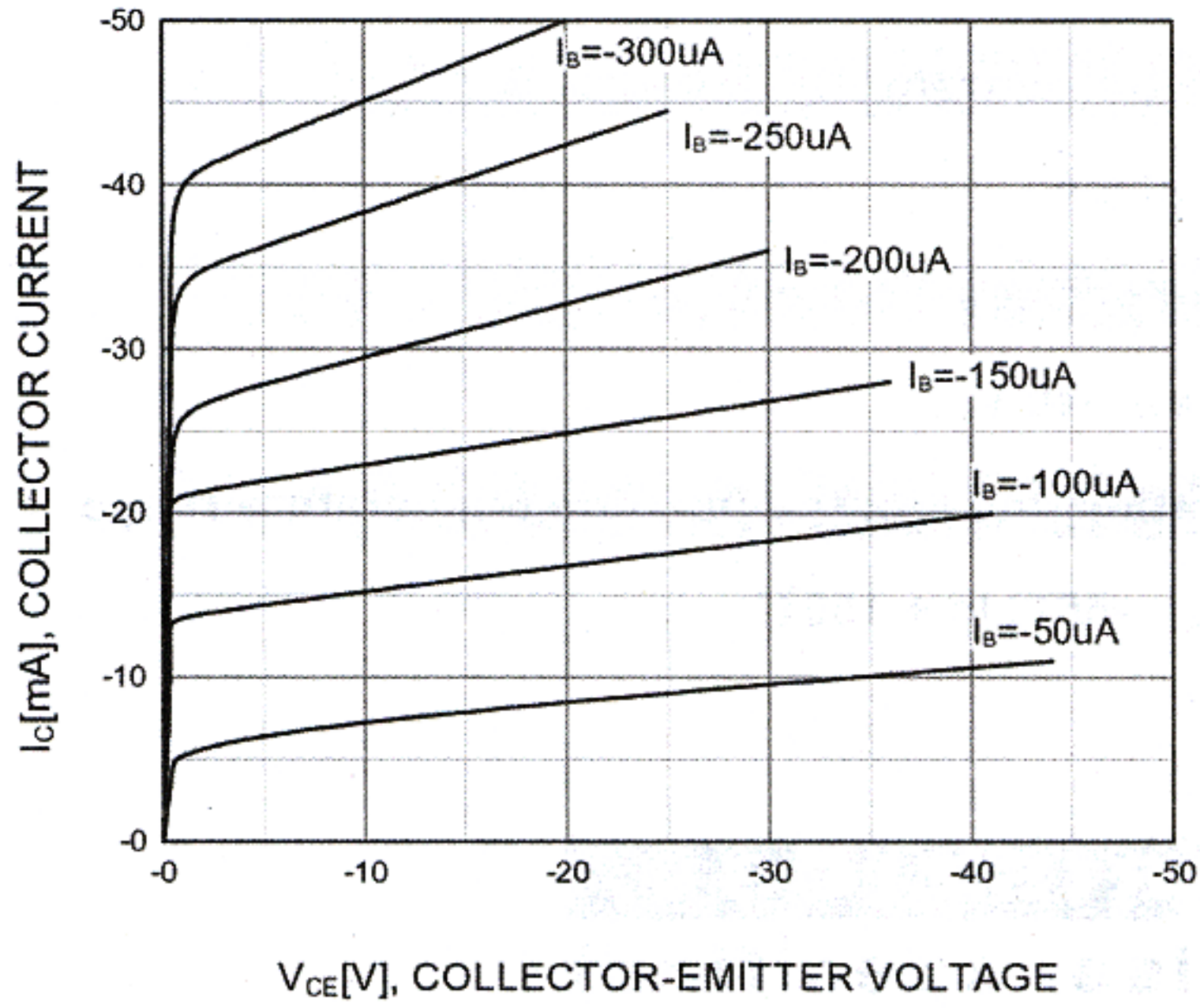
( $T_{amb}=25^{\circ}C$  unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100 \mu A, I_E = 0$	-40		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -0.1 mA, I_B = 0$	-25		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100 \mu A, I_C = 0$	-5		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -40 V, I_E = 0$		-0.1	$\mu A$
Collector cut-off current	$I_{CEO}$	$V_{CE} = -20 V, I_B = 0$		-0.2	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -5 V, I_C = 0$		-0.1	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE} = -1 V, I_C = -50 mA$	64	300	
	$h_{FE(2)}$	$V_{CE} = -1 V, I_C = -500 mA$	40		
Collector-emitter saturation voltage	$V_{CEsat}$	$I_C = -500 mA, I_B = -50 mA$		-0.6	V
Base-emitter saturation voltage	$V_{BEsat}$	$I_C = -500 mA, I_B = -50 mA$		-1.2	V
Base-emitter voltage	$V_{EB}$	$I_E = -100 mA$		-1.4	V
Transition frequency	$f_T$	$V_{CE} = -6 V, I_C = -20 mA$ $f = 30 MHz$	150		MHz

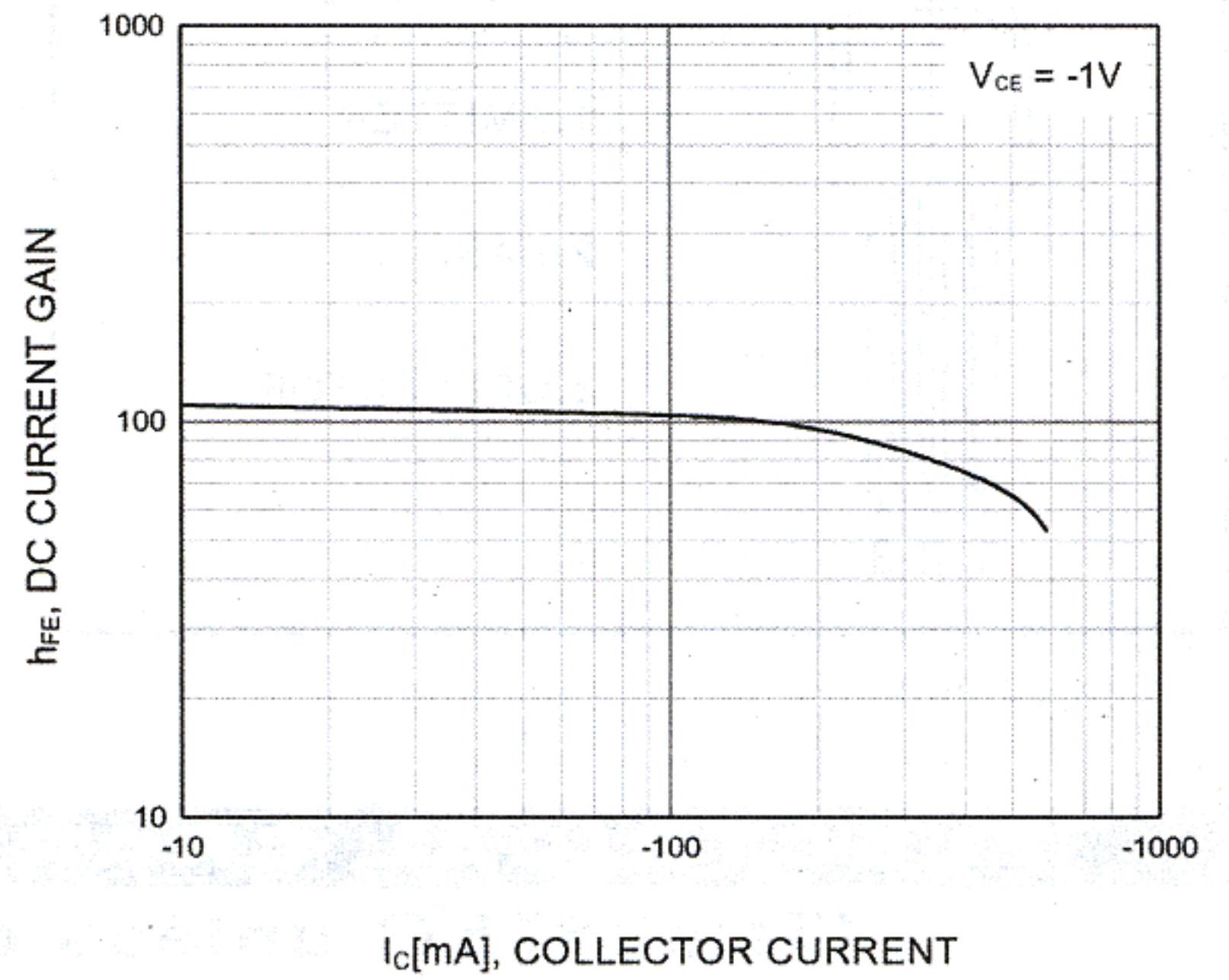
### CLASSIFICATION OF $h_{FE(1)}$

Rank	D	E	F	G	H	I
Range	64-91	78-112	96-135	112-166	144-202	190-300

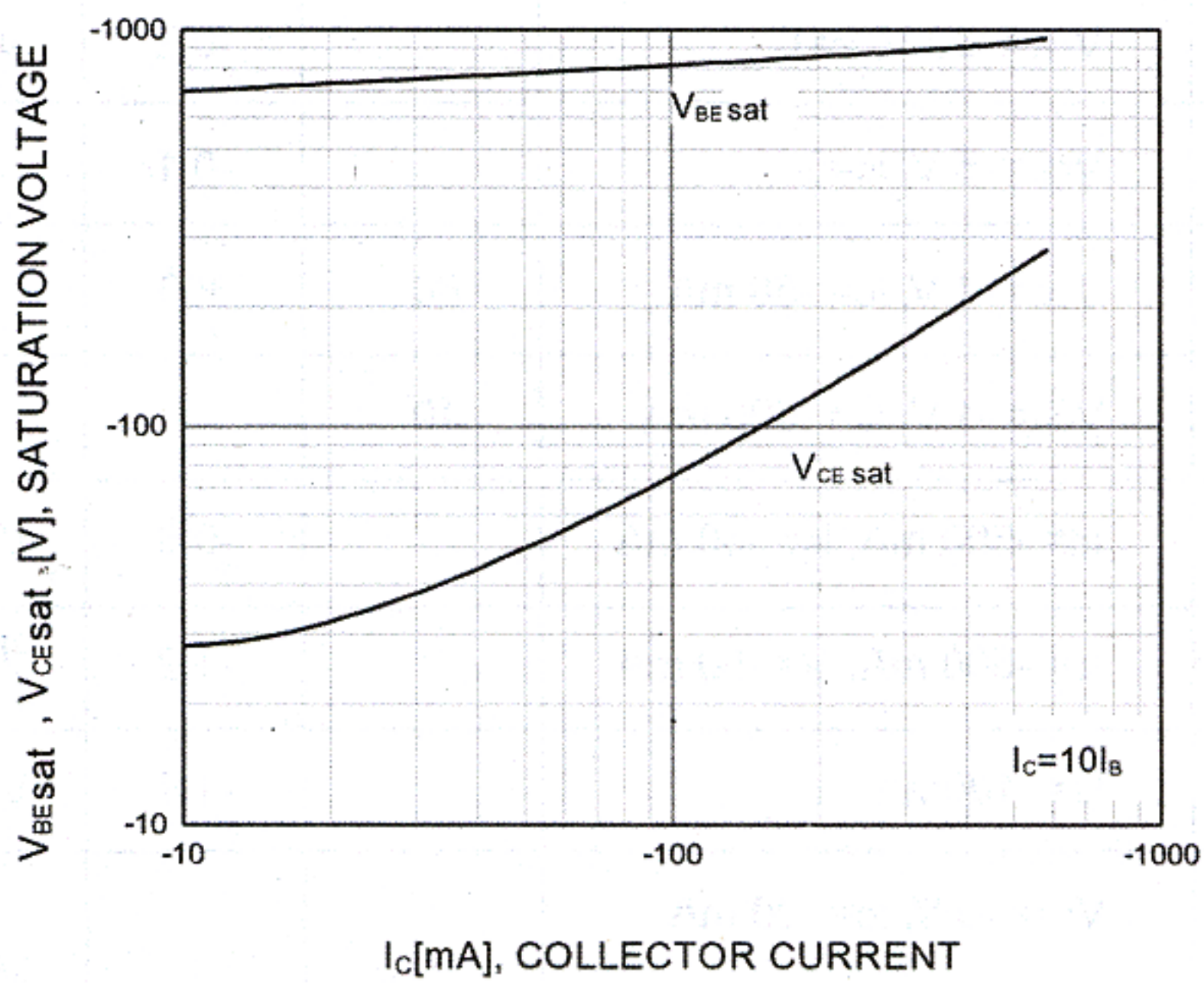




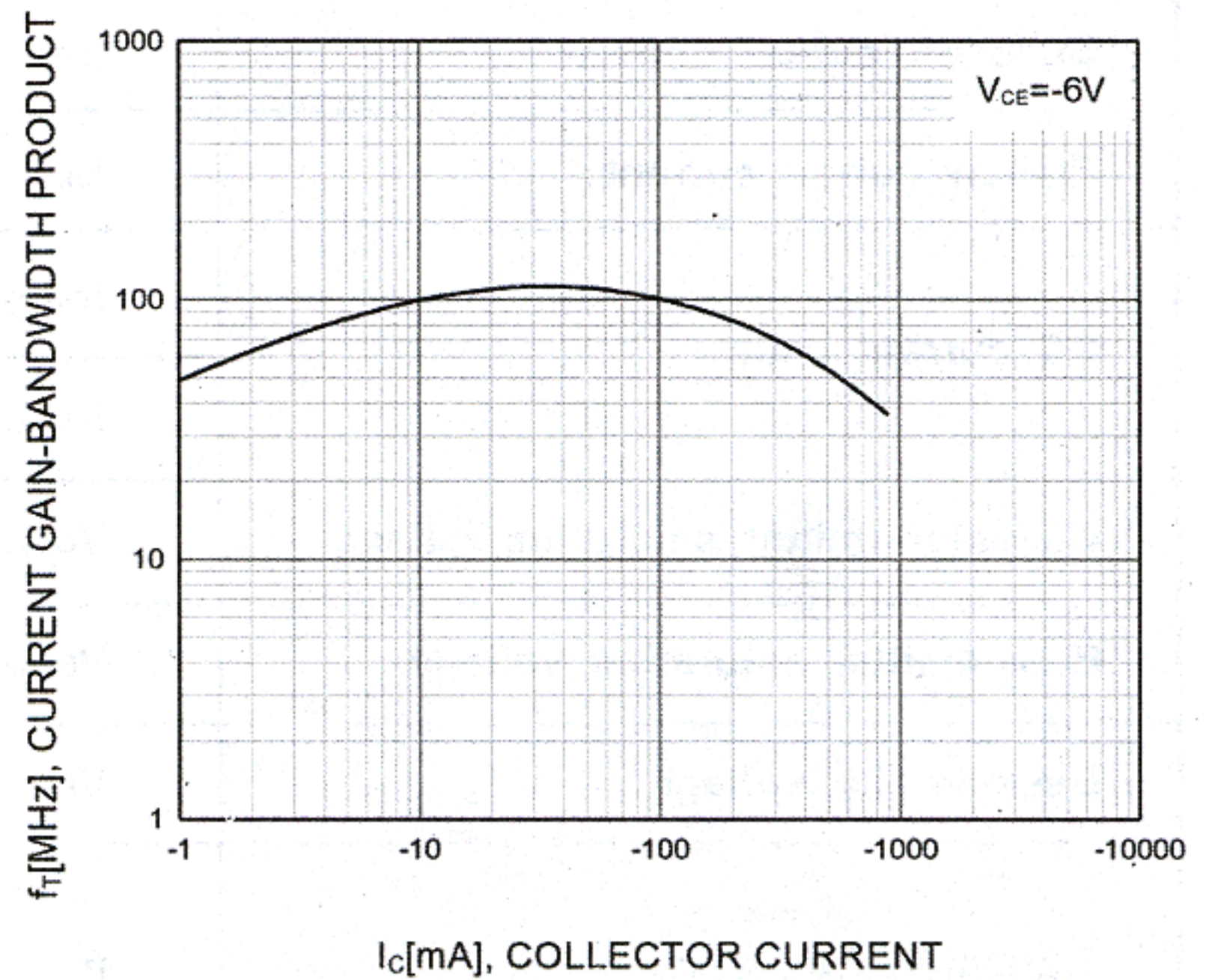
**Static Characteristic**



**DC current Gain**



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



**Current Gain Bandwidth Product**