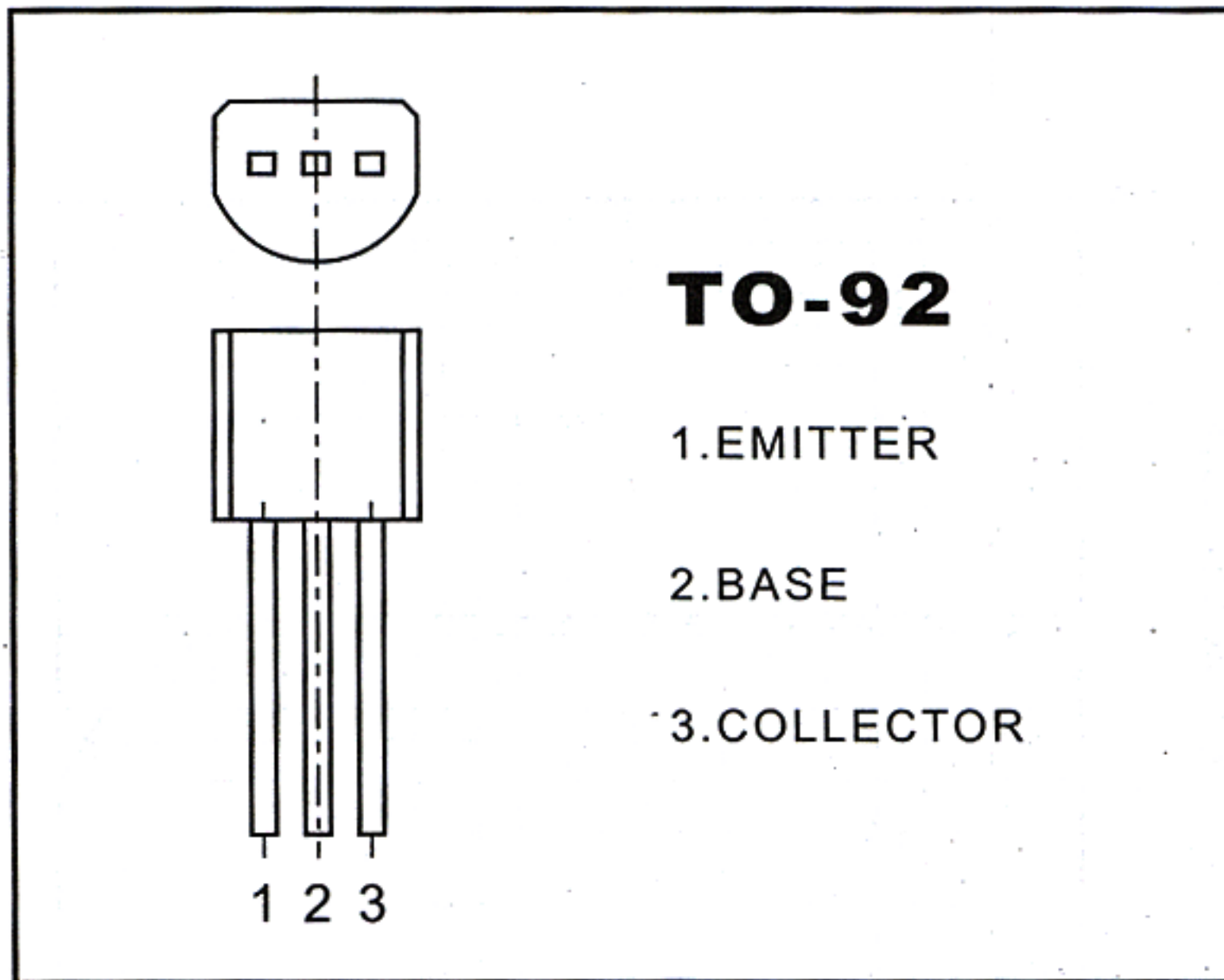


TO-92 Plastic-Encapsulate Transistors

S9018 TRANSISTOR(NPN)



FEATURES

Power dissipation

P_{CM} : 0.31W ($T_{amb}=25^{\circ}C$)

Collector current

I_{CM} : 0.05 A

Collector-base voltage

$V_{(BR)CBO}$: 25 V

Operating and storage junction temperature range

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

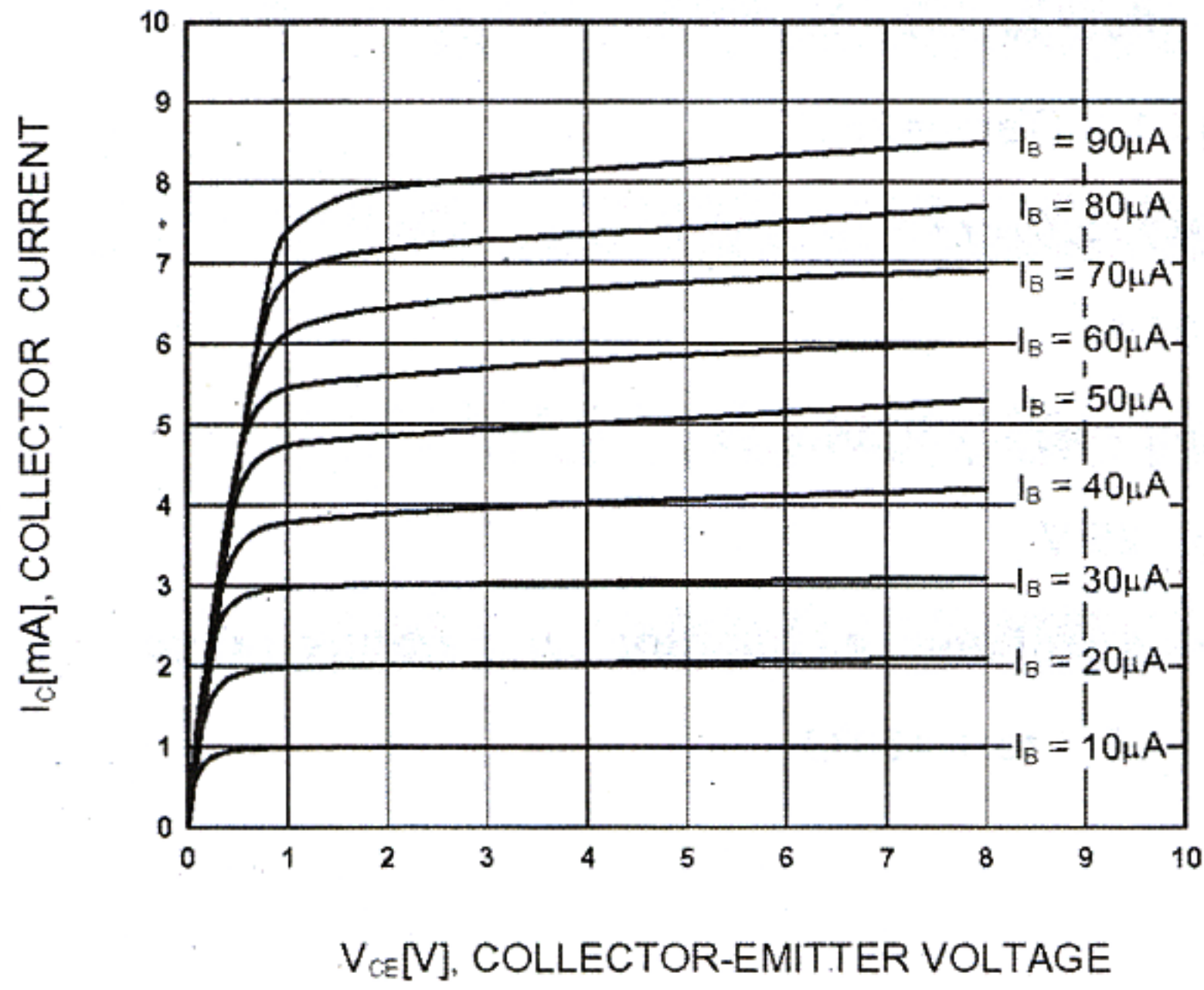
ELECTRICAL CHARACTERISTICS

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

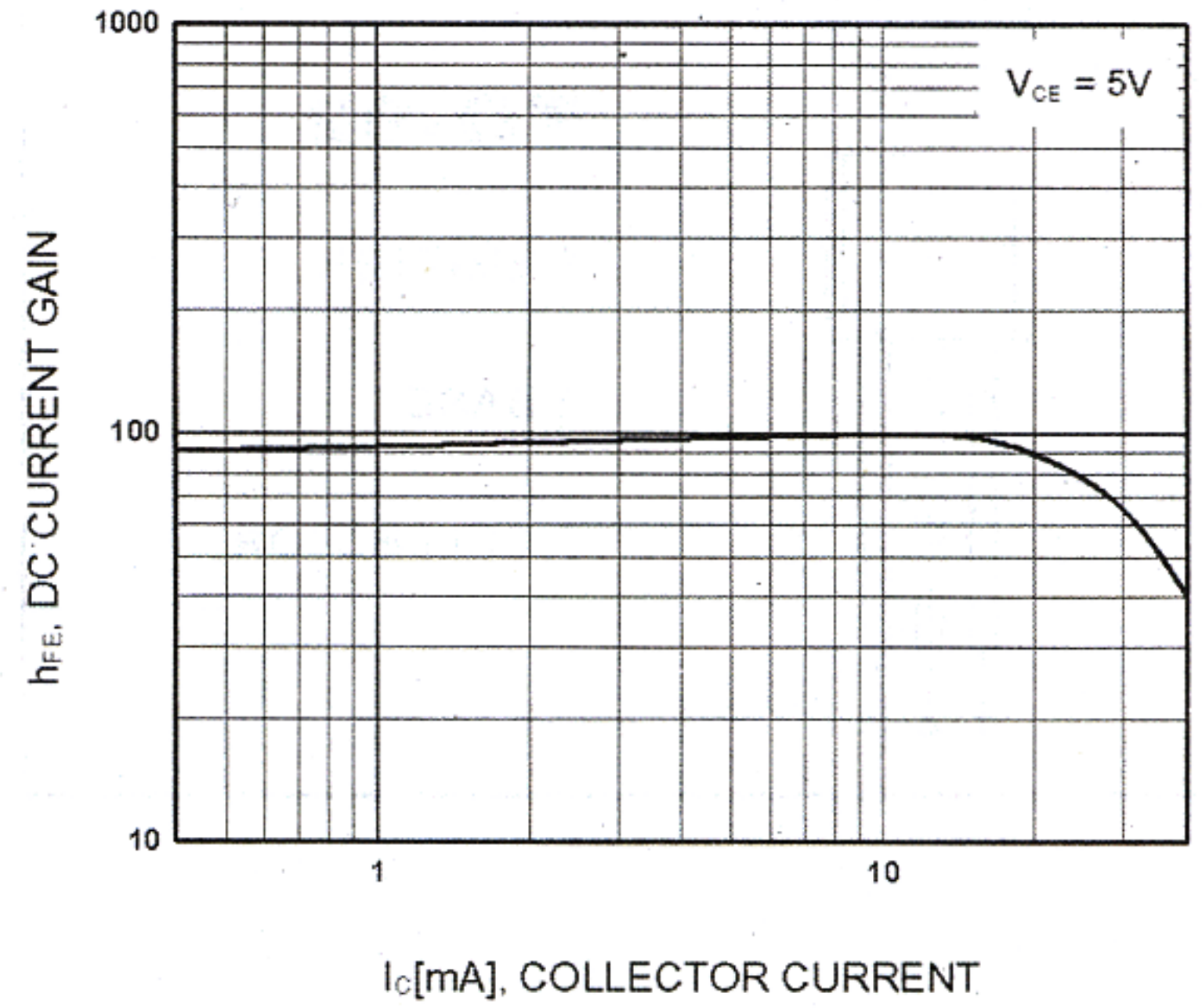
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100 \mu A, I_E = 0$	25		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 0.1 mA, I_B = 0$	18		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100 \mu A, I_C = 0$	4		V
Collector cut-off current	I_{CBO}	$V_{CB} = 20 V, I_E = 0$		0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 15 V, I_B = 0$		0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 3 V, I_C = 0$		0.1	μA
DC current gain	H_{FE}	$V_{CE} = 5 V, I_C = 1 mA$	28	270	
Collector-emitter saturation voltage	V_{CEsat}	$I_C = 10 mA, I_B = 1 mA$		0.5	V
Base-emitter saturation voltage	V_{BEsat}	$I_C = 10 mA, I_B = 1 mA$		1.4	V
Transition frequency	f_T	$V_{CE} = 5 V, I_C = 5 mA$ $f = 400 MHz$	600		MHz

CLASSIFICATION OF H_{FE}

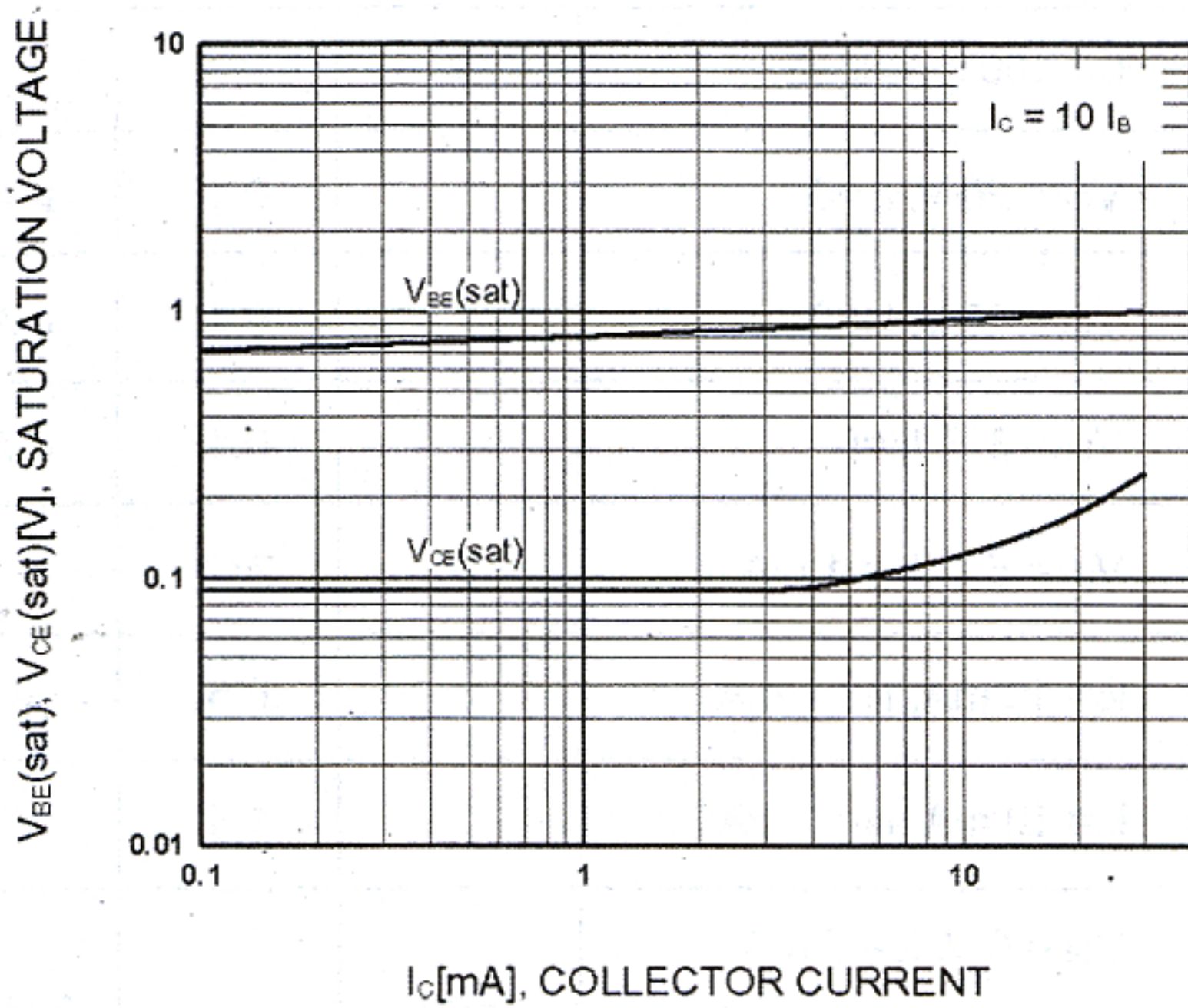
Rank	D	E	F	G	H	I	J
Range	28-45	39-60	54-80	72-108	97-146	132-198	180-270



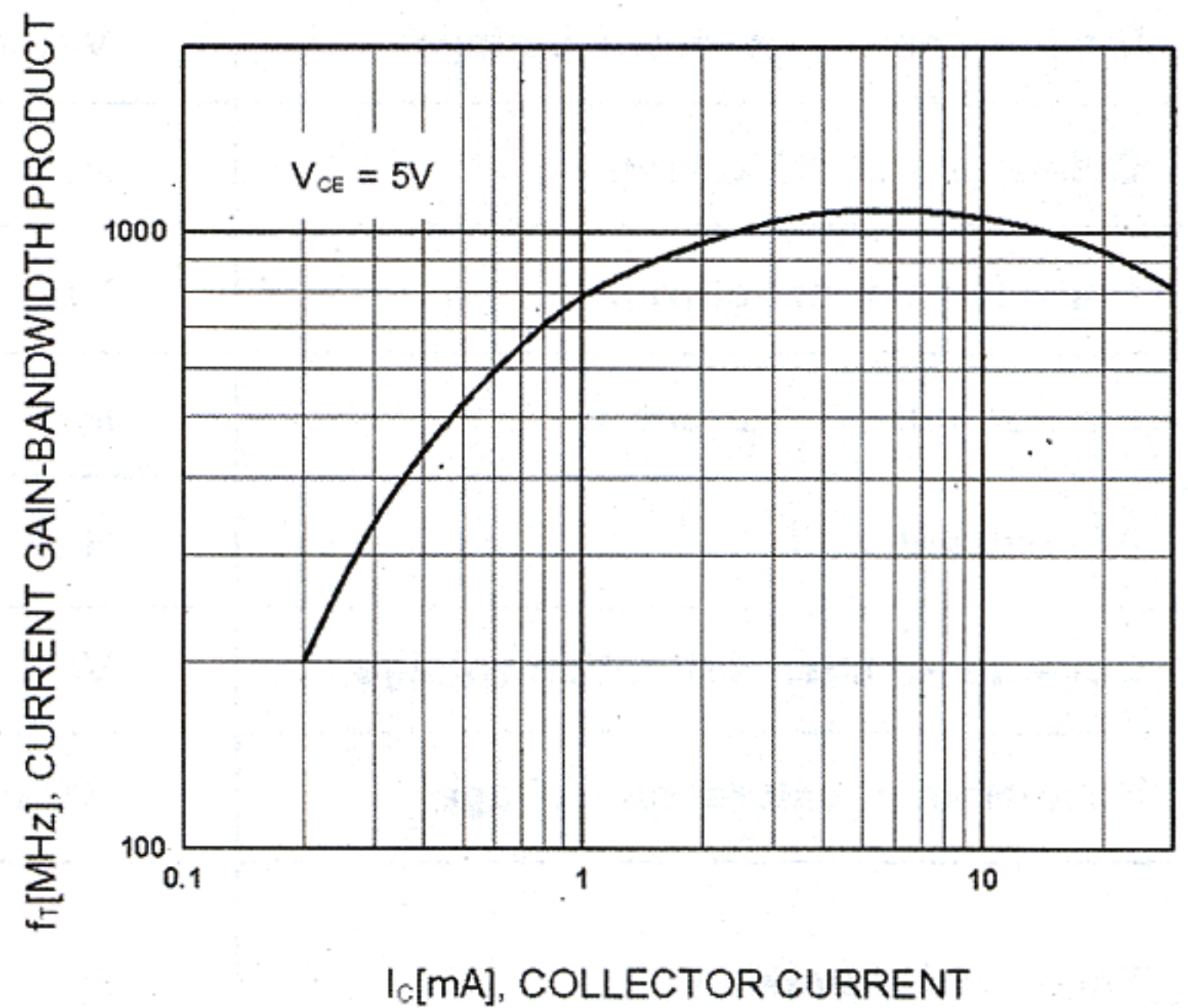
Static Characteristic



DC Current Gain



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



Current Gain Bandwidth Product