

A44 TRANSISTOR(NPN)

FEATURES

Power dissipation

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

Collector current

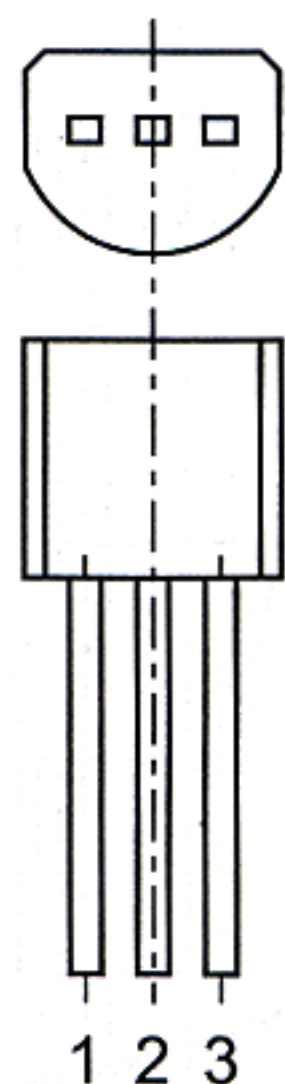
I_{CM} : 0.2 A

Collector-base voltage

$V_{(BR)CBO}$: 400V

Operating and storage junction temperature range

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



TO-92

1.EMITTER

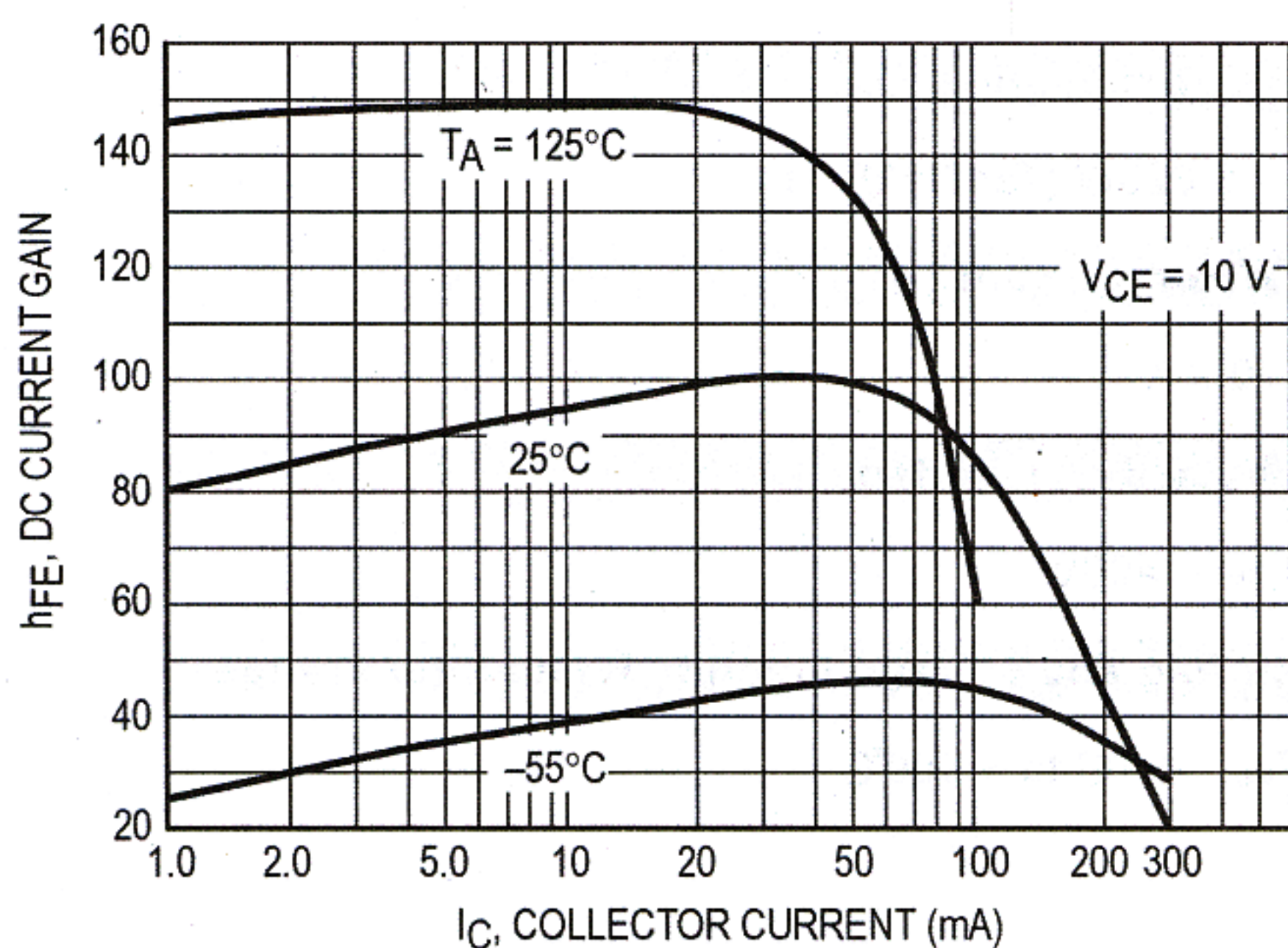
2.BASE

3.COLLECTOR

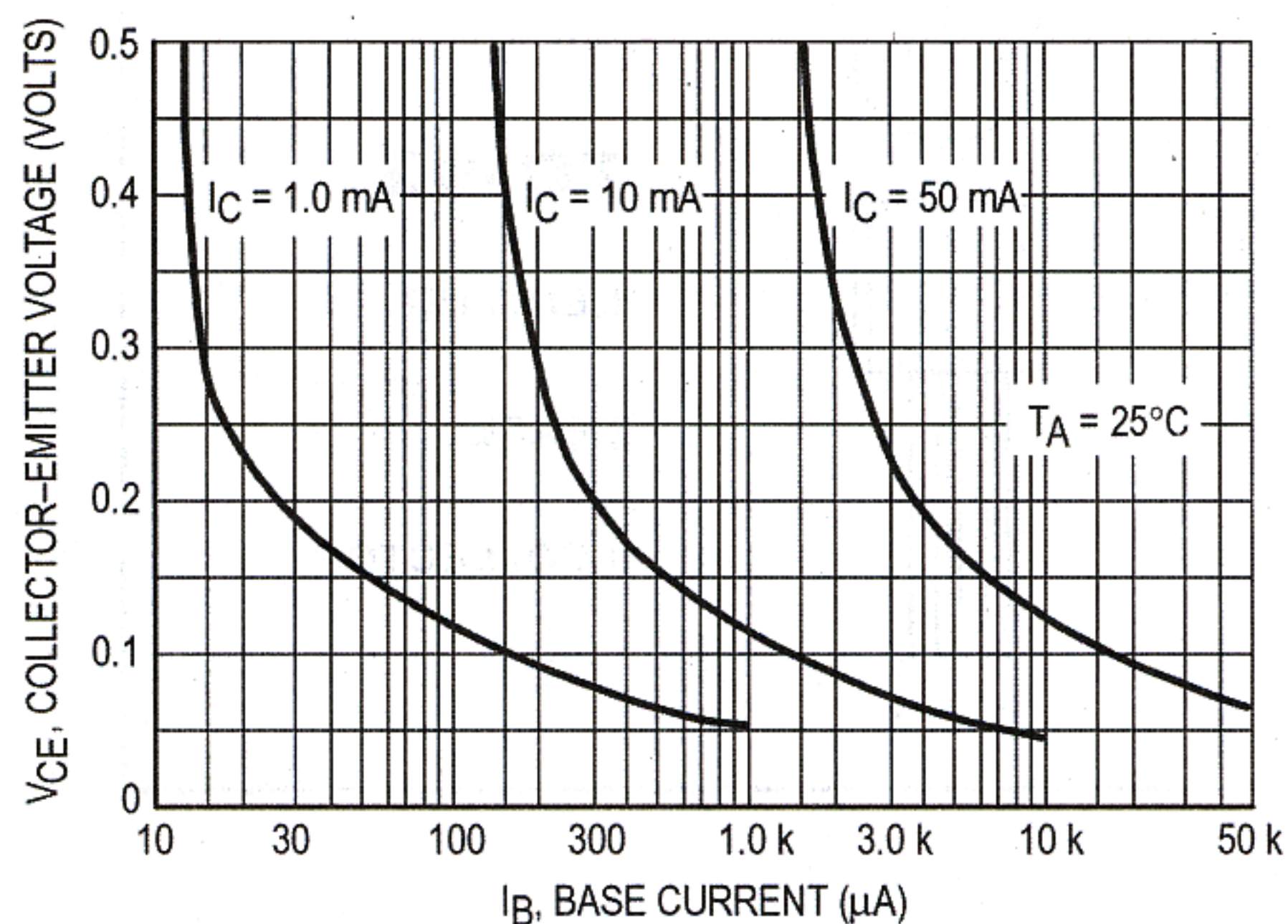
ELECTRICAL CHARACTERISTICS

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

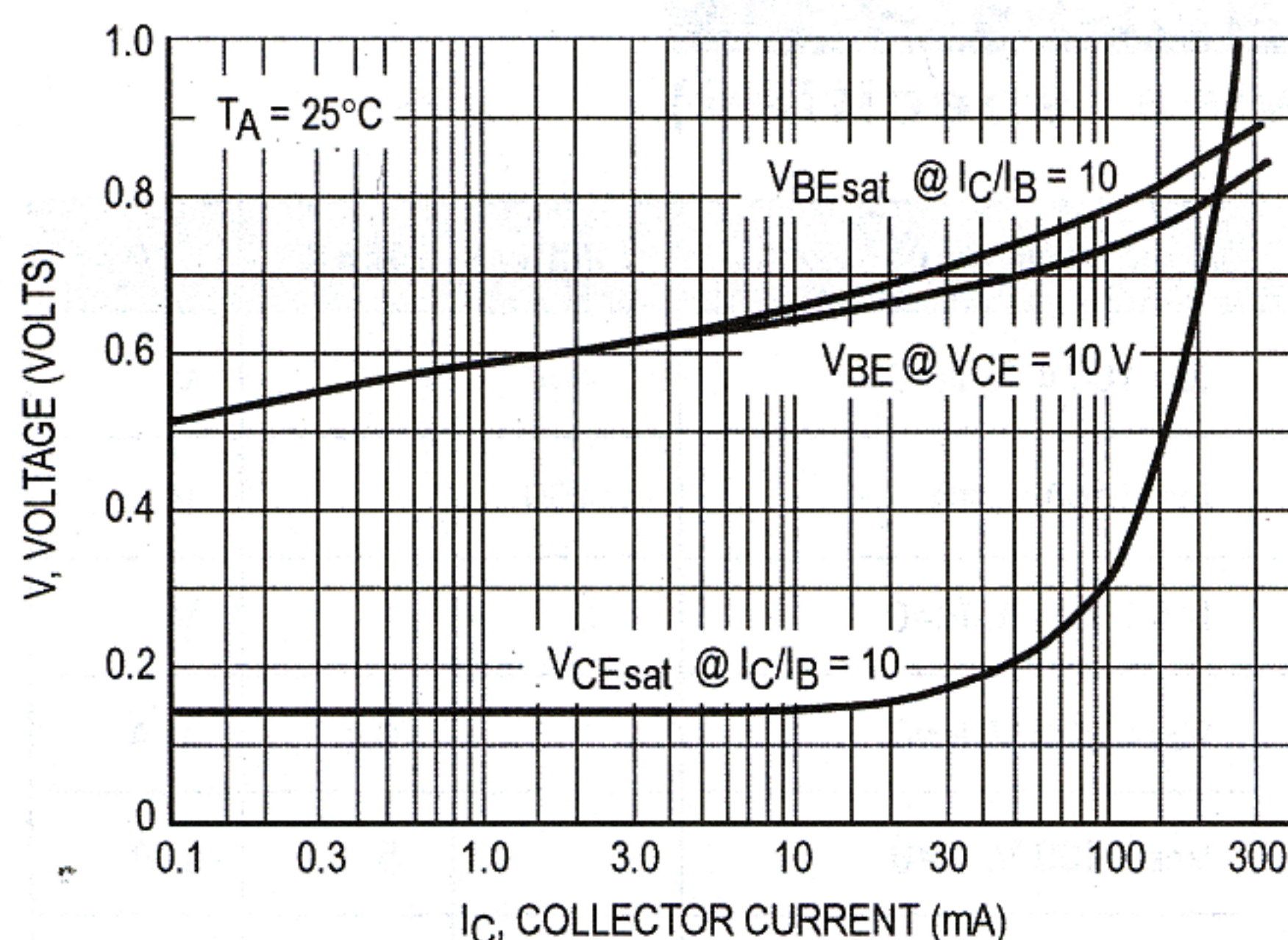
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100 \mu A, I_E = 0$	400		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1 mA, I_B = 0$	400		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100 \mu A, I_C = 0$	5		V
Collector cut-off current	I_{CBO}	$V_{CB} = 300 V, I_E = 0$		0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 400 V, I_B = 0$		5	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4 V, I_C = 0$		0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 10 V, I_C = 10 mA$	80	300	
	$h_{FE(2)}$	$V_{CE} = 10 V, I_C = 1 mA$	70		
	$h_{FE(3)}$	$V_{CE} = 10 V, I_C = 100 mA$	60		
Collector-emitter saturation voltage	V_{CEsat}	$I_C = 10 mA, I_B = 1 mA$		0.2	V
	V_{CEsat}	$I_C = 50 mA, I_B = 5 mA$		0.3	V
Base-emitter saturation voltage	V_{BEsat}	$I_C = 10 mA, I_B = 1 mA$		0.75	V
Transition frequency	f_T	$V_{CE} = 5 V, I_C = 10 mA$ $f = 30 MHz$	50		MHz



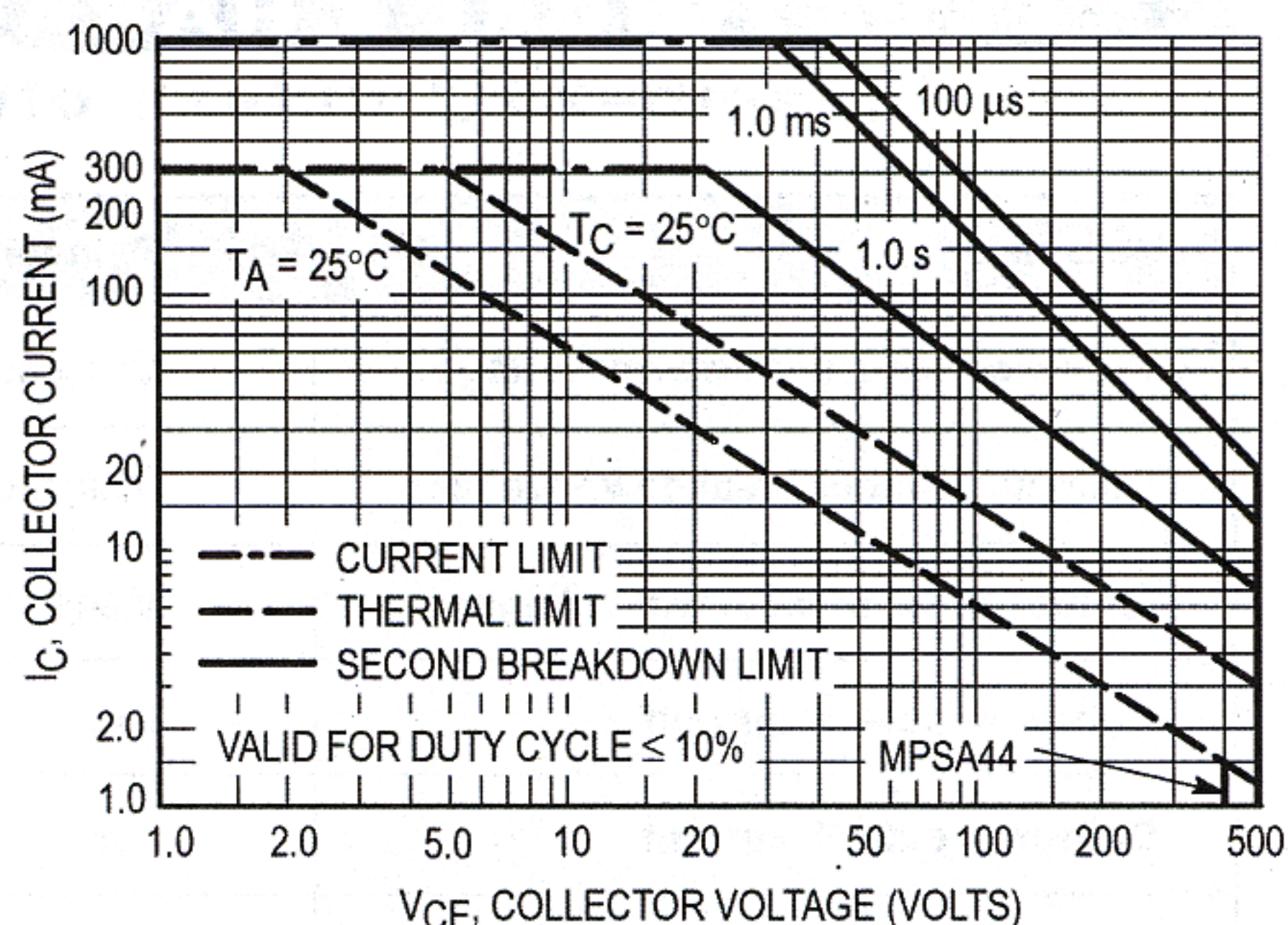
DC Current Gain



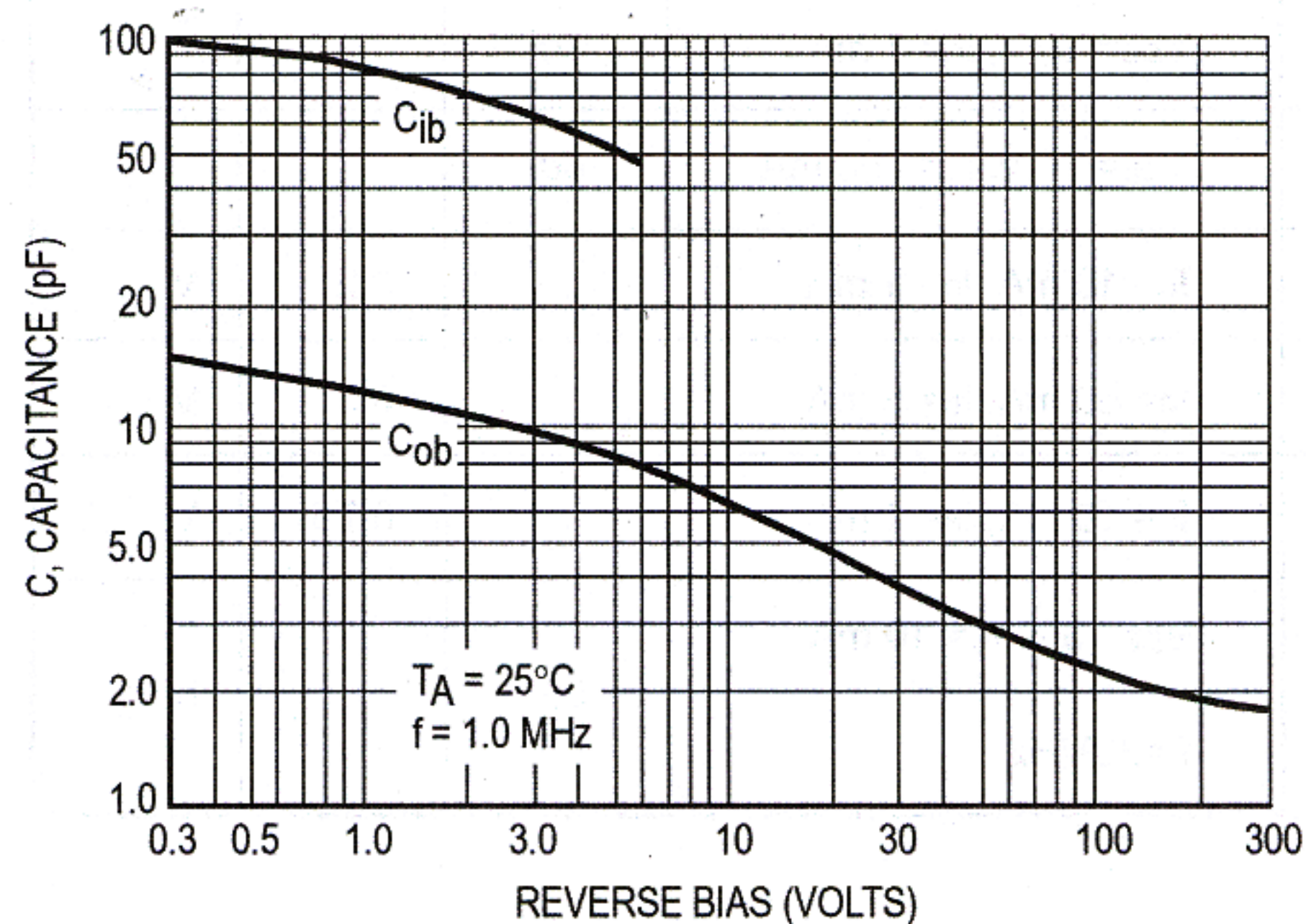
Collector Saturation Region



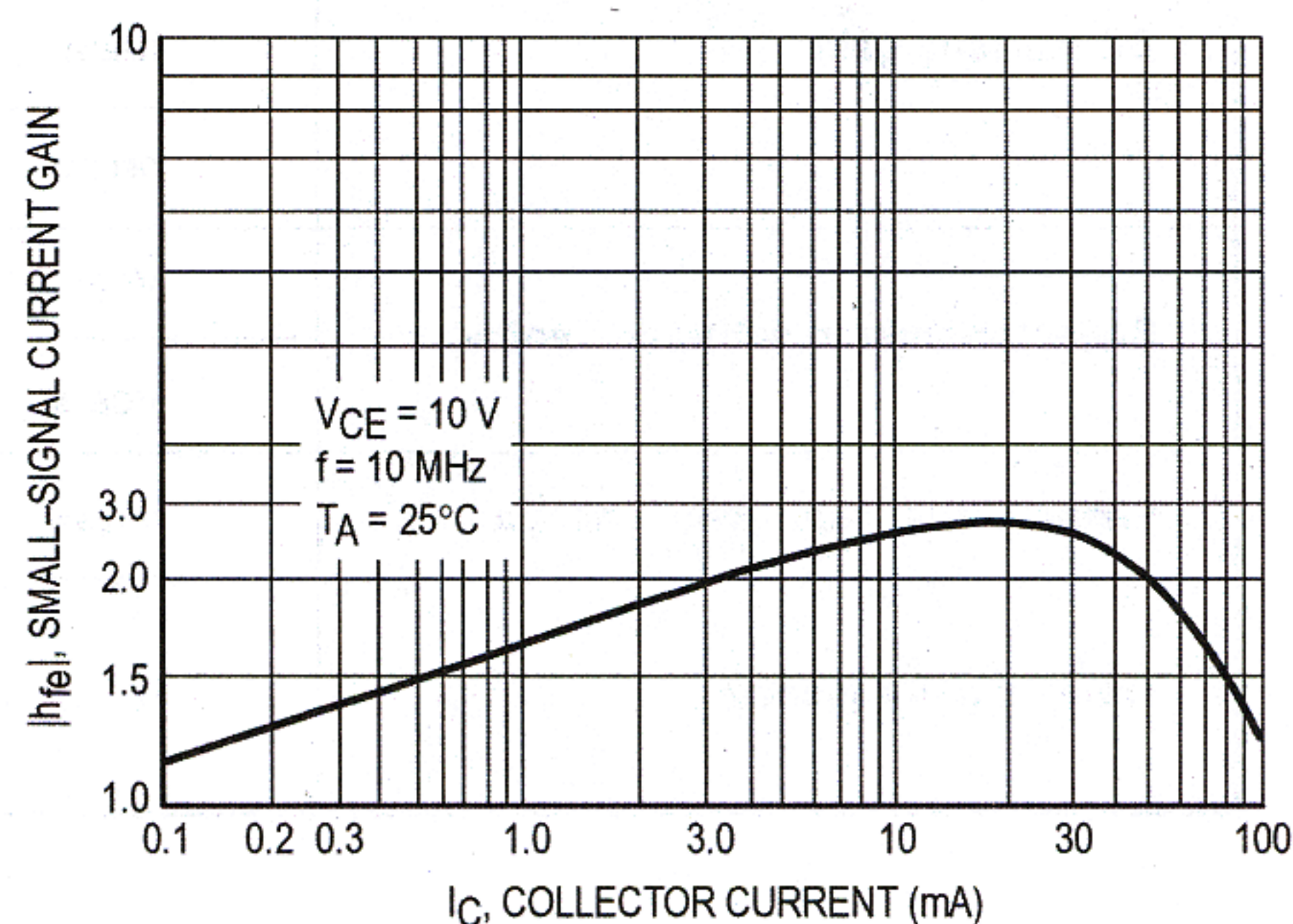
"On" Voltages



Active Region — Safe Operating Area



Capacitance



High Frequency Current Gain