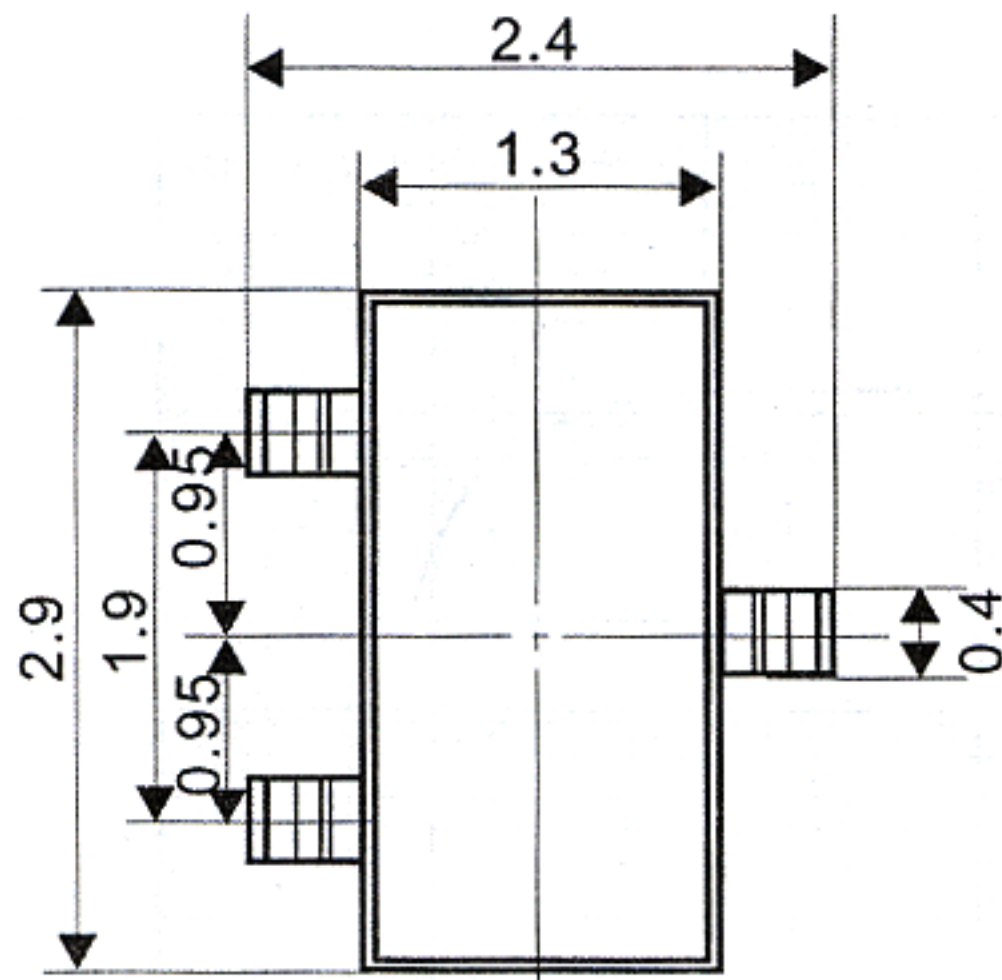
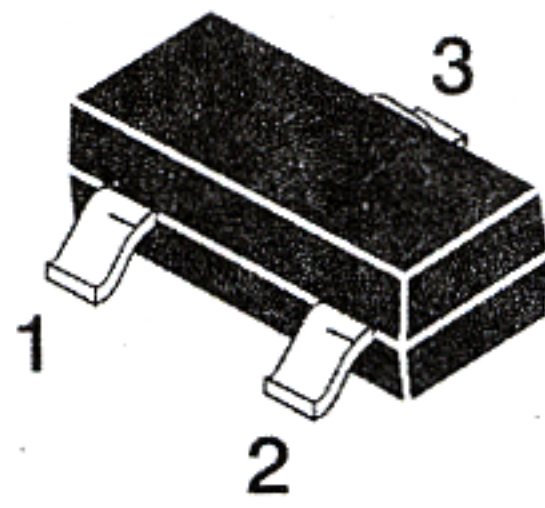
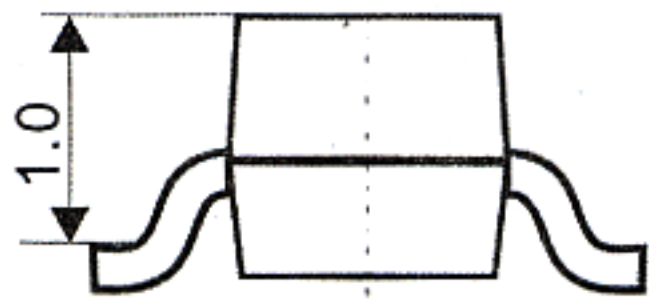


SOT-23 Plastic-Encapsulate Transistors

S9013LT1 TRANSISTOR (NPN)

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



UNIT: mm

FEATURES

Power dissipation

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

Collector current

I_{CM} : 0.5 A

Collector-base voltage

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

Operating and storage junction temperature range

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

ELECTRICAL CHARACTERISTICS

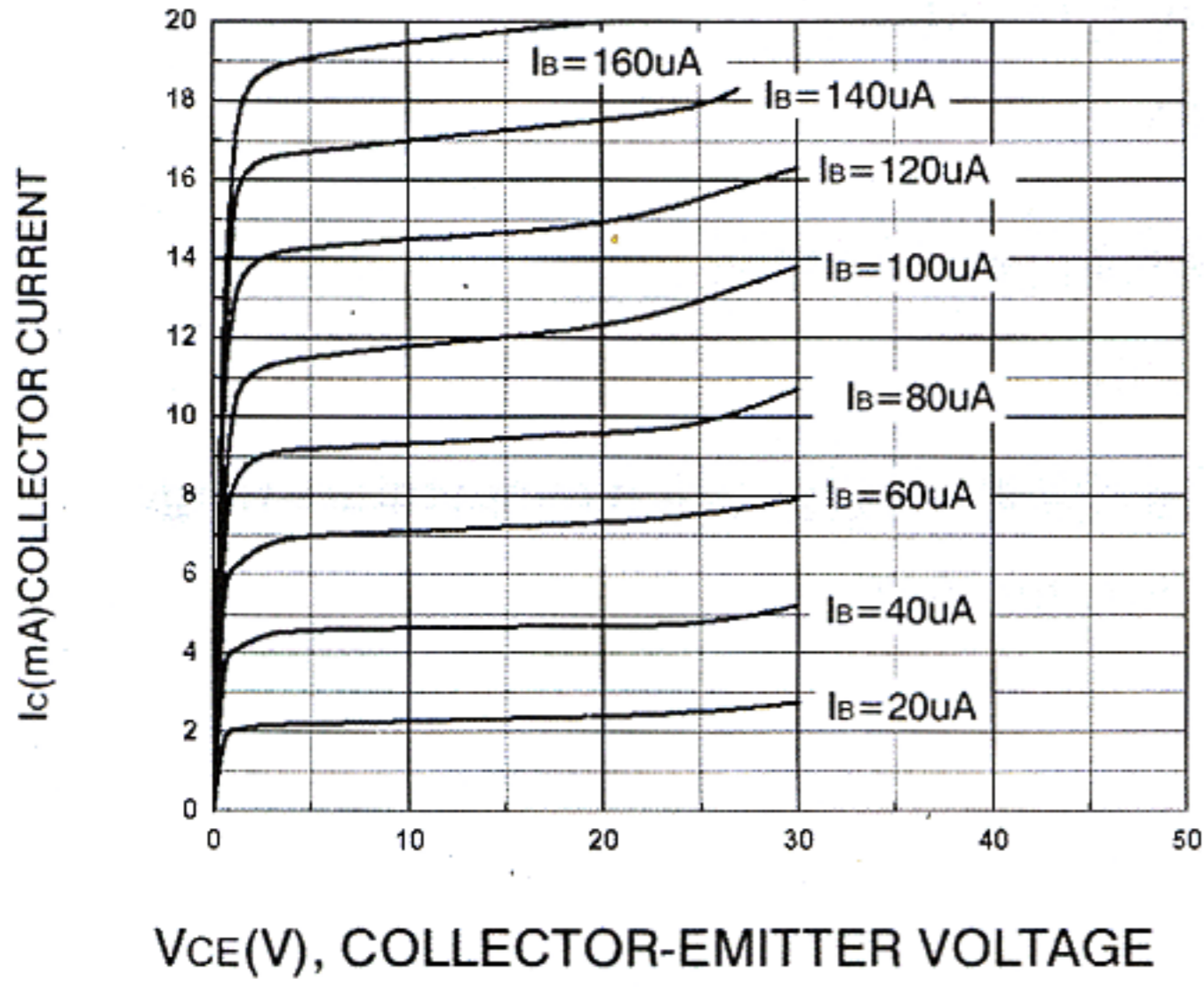
($T_{amp}=25^{\circ}C$ unless otherwise specified)

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

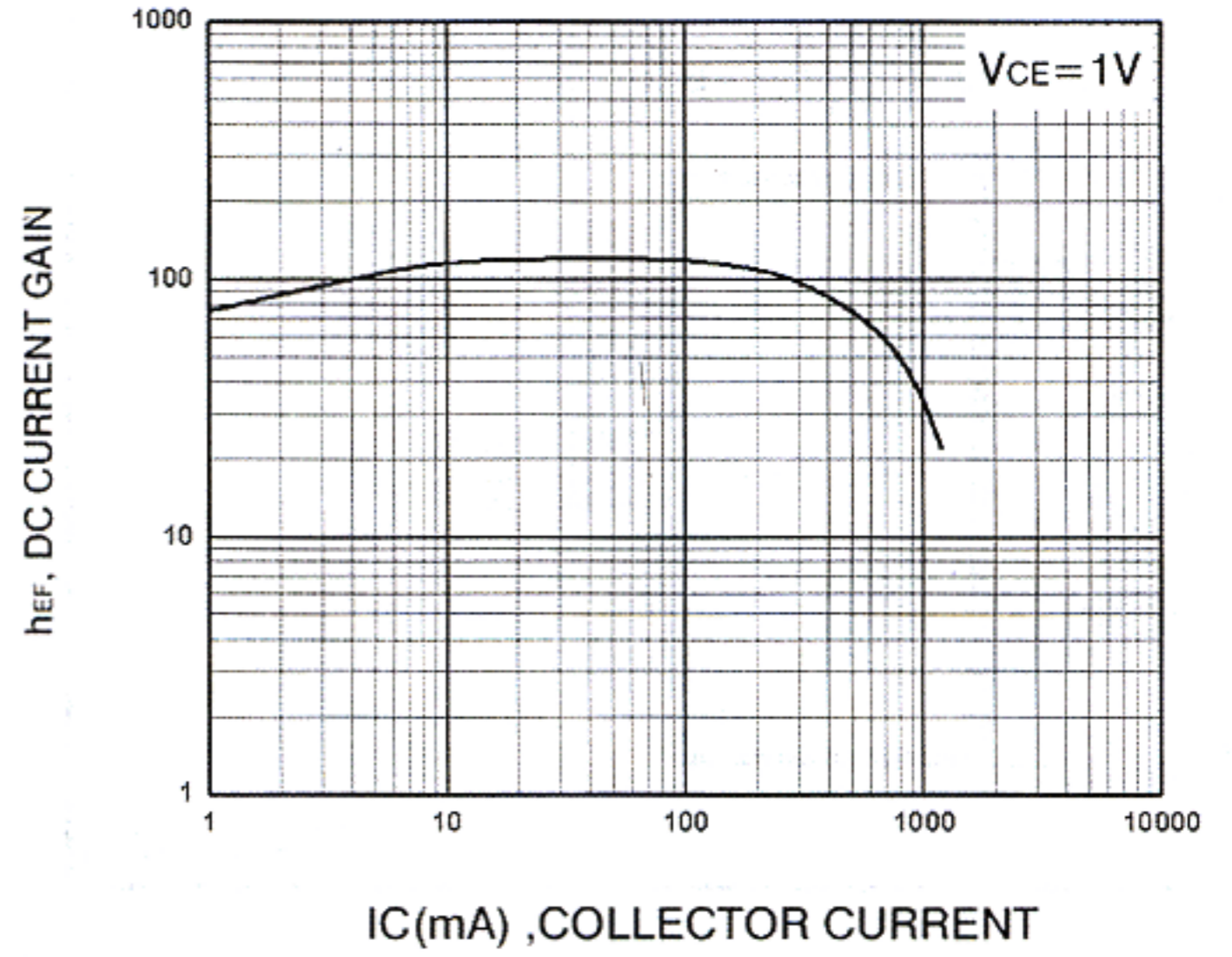
CLASSIFICATION OF $h_{FE(1)}$

Rank	L	H
Range	120-200	200-350

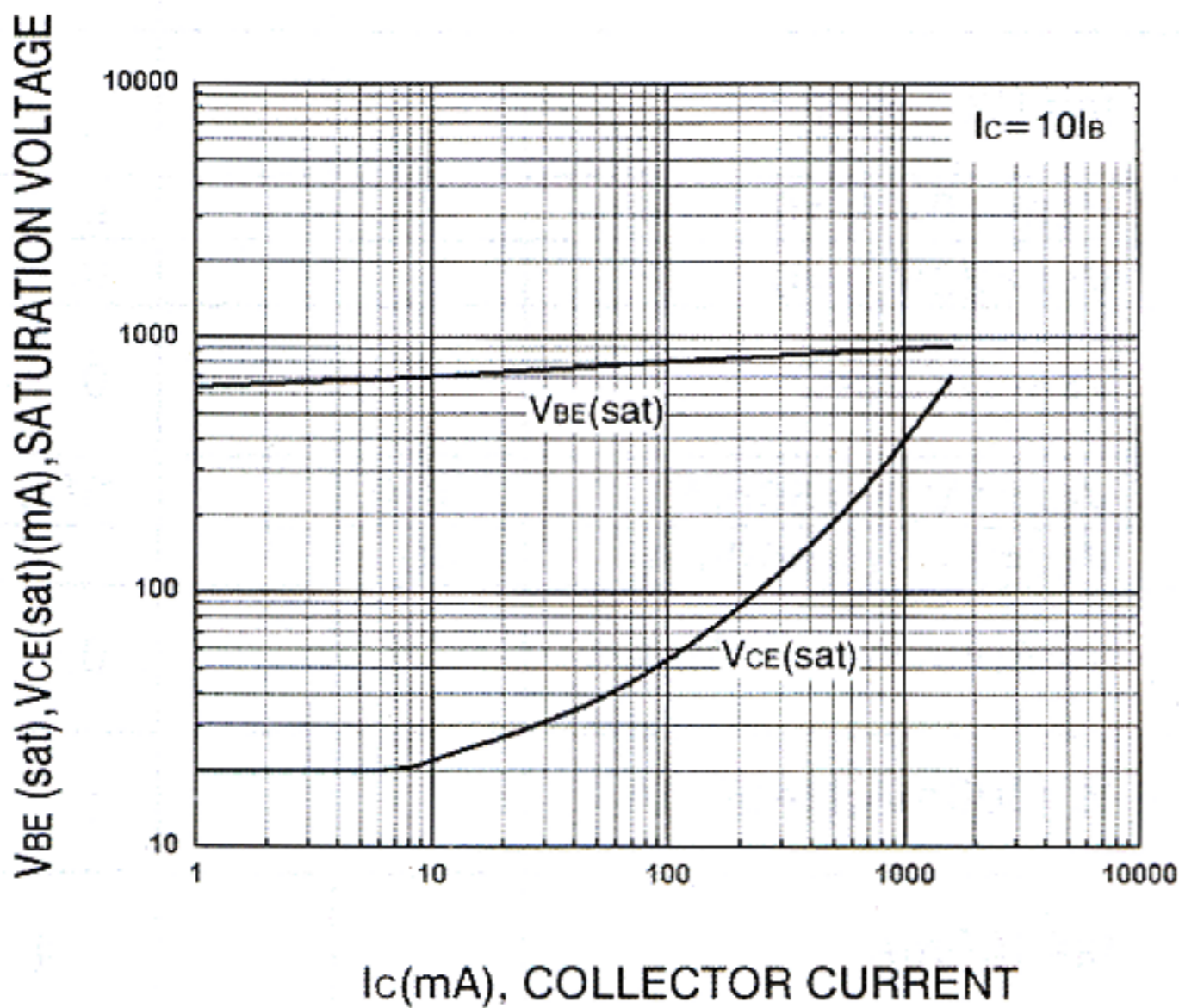
DEVICE MARKING : S9013LT1=J3



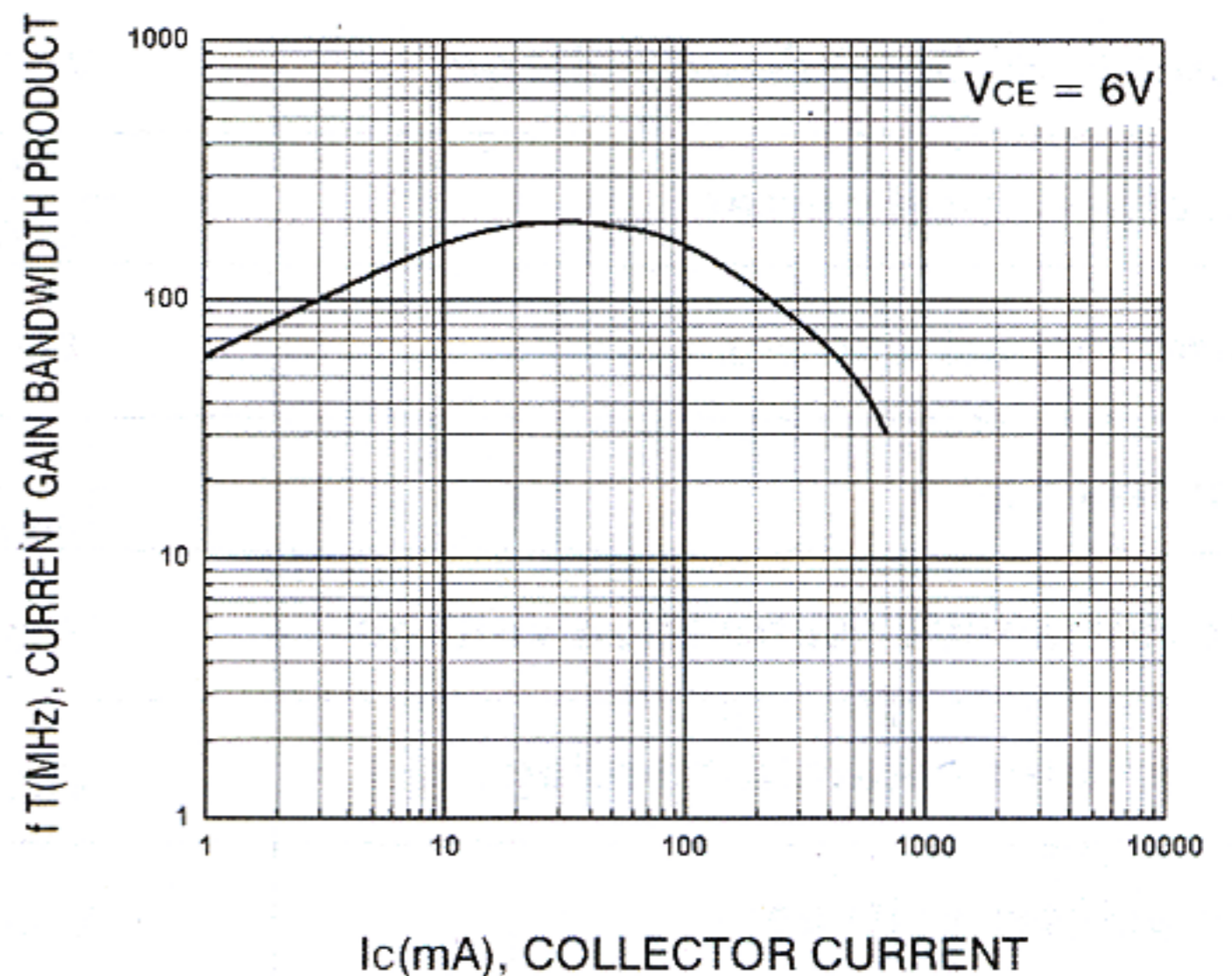
Static Characteristic



DC current Gain



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



Current Gain Bandwidth Product