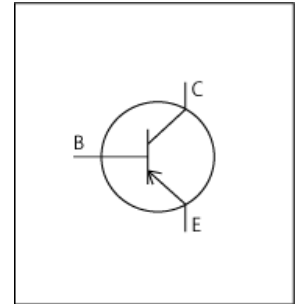


ADS Model

PNP

ROHM

2SB1198K



Model Information

Model	Gummel-Poon model		
Call Name	MDC_2SB1198K_AD		
Pin Assign	1:E 2:B 3:C		
File List	Model Library	MDC_2SB1198K_AD01.lib	
	Model Report	MDC_2SB1198K_AD.pdf (this file)	
Verified Simulator Version	ADS version 2016		
Note			

References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version Unknown
- Product name 2SB1198K
- Company name ROHM Co., Ltd.
- Characteristics IcVbe[Temp],IcVce[ib],hFEIc[Temp],Vce(sat)Ic[hFE],Vce(sat)Ic[Temp],Vce(sat)Ic[Temp]2,Vce(sat)Ic[Temp]3,fTle[Vce],CobVcb,CibVeb

Simulation Range

This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	-80	V
Temperature	-55	to	150	deg C

BJT

○ : Implemented
 × : Not Implemented
 — : Not applicable

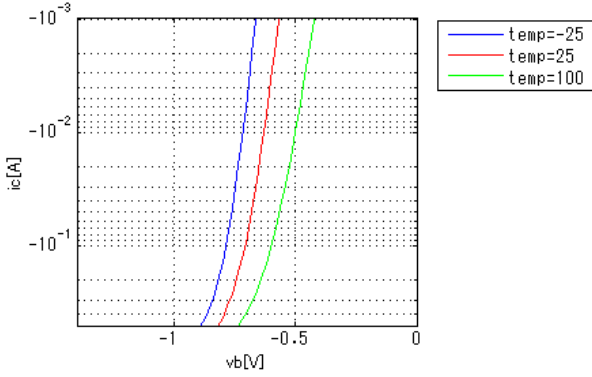
Model Functions Table
RANK=1

Functions	RANK	Implemented
IC-VBE(Temp)	1	○
IC-VCE-IB(Temp)	1	○
IC-hFE(Temp)	1	○
VCE(sat)-IC	1	○
VBE(sat)-IC	1	—
Capacitance	1	○
Transition	1	○
Switching	1	—

Simulation results are following.
 Explanatory notes — : simulated

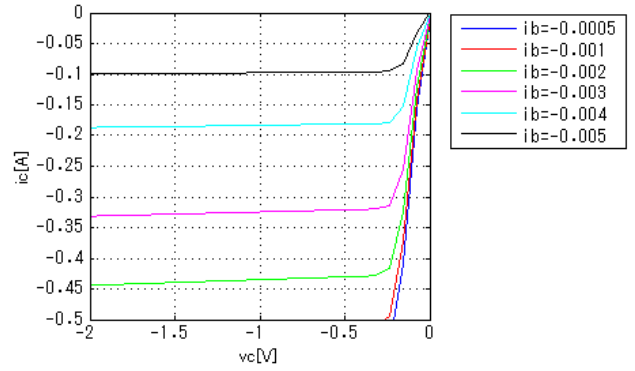
IcVbe[Temp]

Vce = -3V



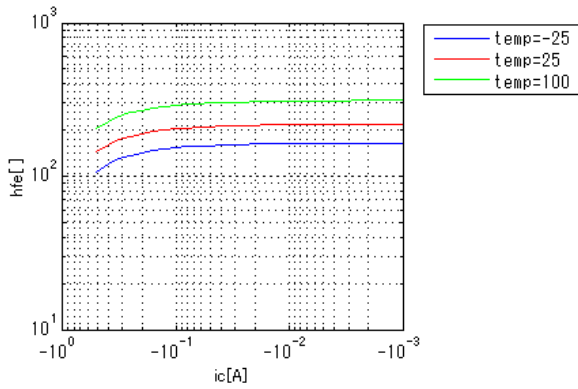
IcVce[ib] ※疑似飽和なし

Temp = 25degC

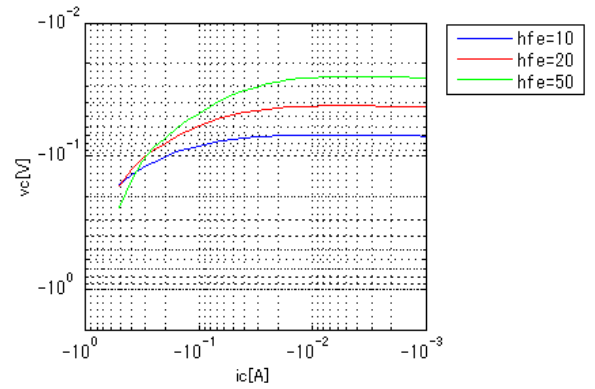


hFEIc[Temp]

Vce = -3V

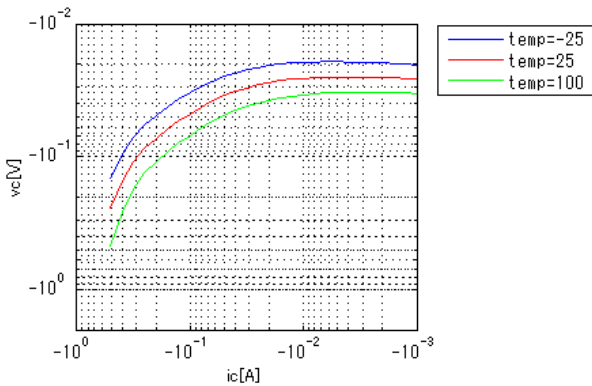


Vce(sat)Ic[hFE]



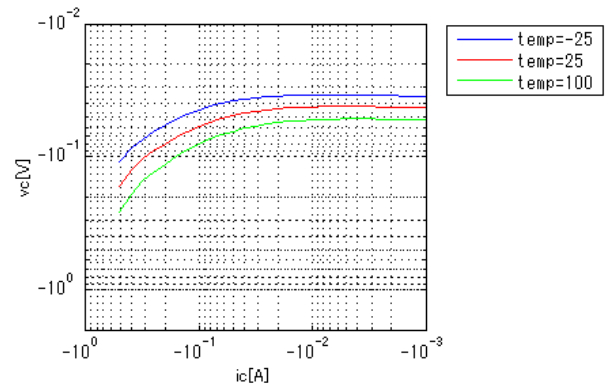
Vce(sat)Ic[Temp]

IC/IB = 10



Vce(sat)Ic[Temp]2

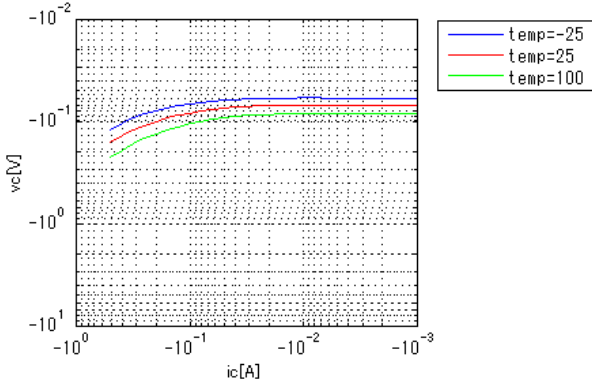
IC/IB = 20



Simulation results are following.
 Explanatory notes — : simulated

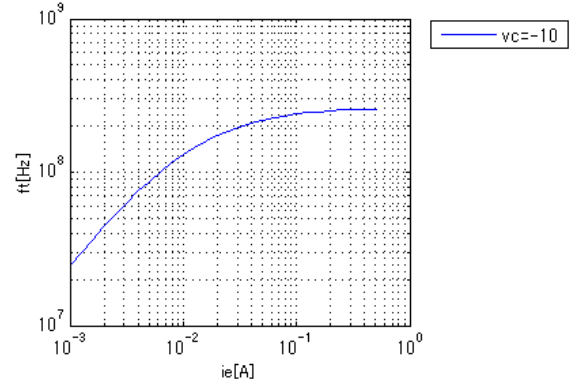
Vce(sat)Ic[Temp]3

IC/IB = 50



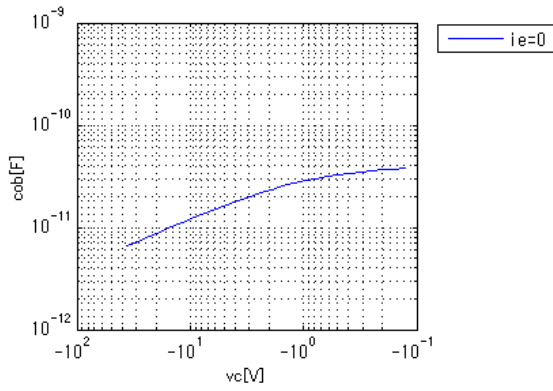
fTle[Vce]

Freq = 50000000Hz



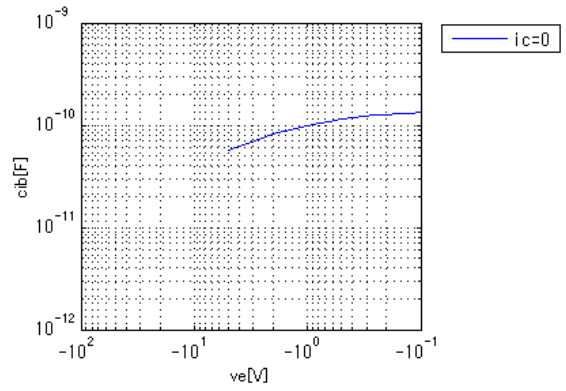
CobVcb

Freq = 1000000Hz



CibVeb

Freq = 1000000Hz



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