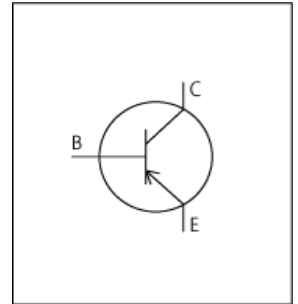# LTspice Model
PNP
ROHM
2SB1198K

Model Information

Model   Gummel-Poon model
Call Name MDC_2SB1198K_LT
Pin Assign 1:E 2:B 3:C
File List   Model Library   MDC_2SB1198K_LT01.lib
                Model Report   MDC_2SB1198K_LT.pdf (this file)

Verified Simulator Version   LTspice version XVII
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,fTIe[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

Model Functions Table

○ : Implemented
× : Not Implemented
— : Not applicable

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.
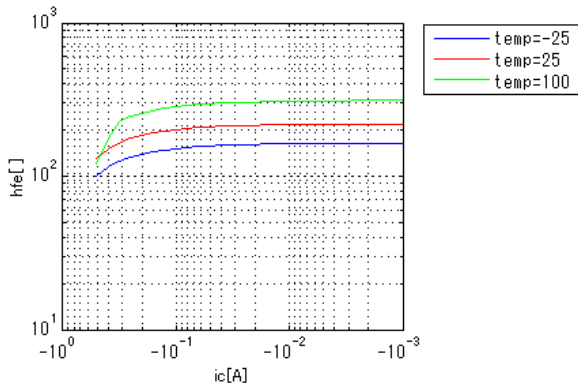Explanatory notes — : simulated
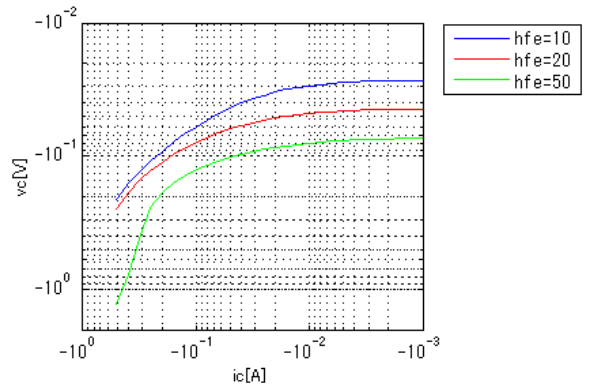
IcVbe[Temp]

Vce = -3V
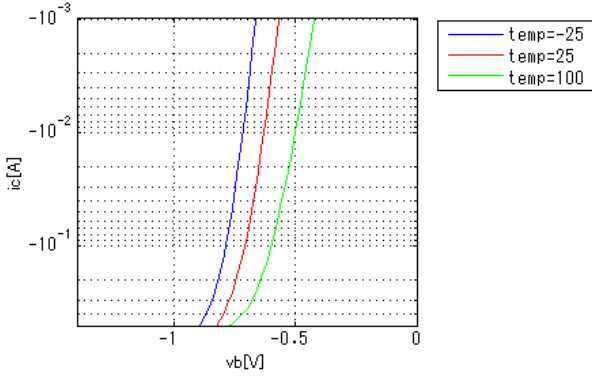
IcVce[ib]

Temp = 25degC
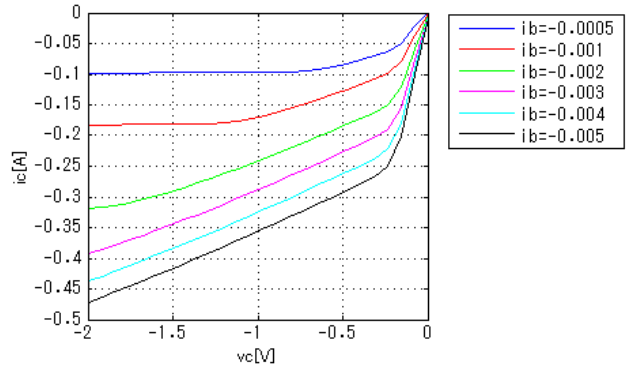
hFEIc[Temp]

Vce = -3V

Vce(sat)Ic[hFE]

Vce(sat)Ic[Temp]

IC/IB = 10
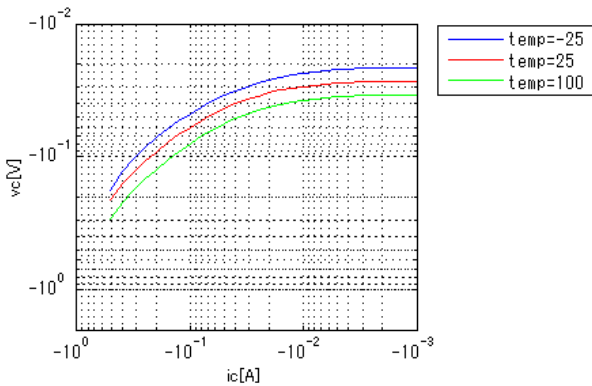
Vce(sat)Ic[Temp]2

IC/IB = 20

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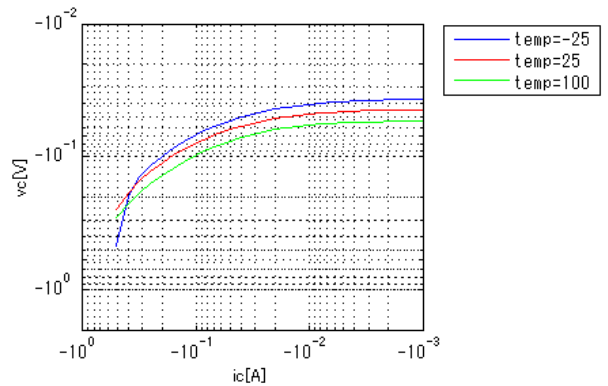
Simulation results are following.
Explanatory notes　　— : simulated

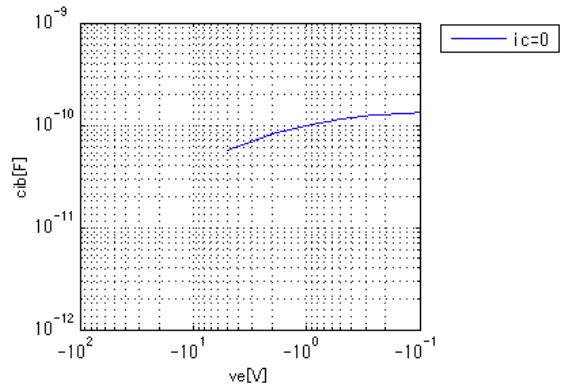### Vce(sat)Ic[Temp]3

IC/IB = 50
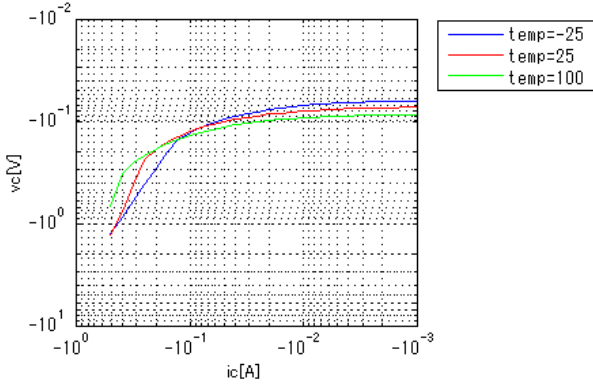
fTIe[Vce]

Freq = 50000000Hz
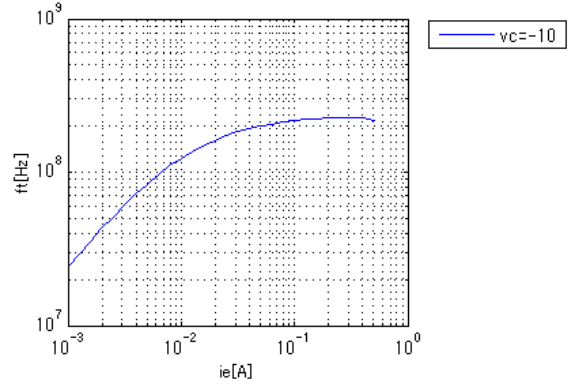
CobVcb

Freq = 1000000Hz

CibVeb

Freq = 1000000Hz

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