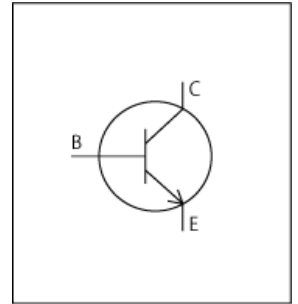


PSpice Model

NPN

JCET

2SD2118



Model Information

Model Mextram model
Call Name MDC_2SD2118_PS
Pin Assign 1:C 2:B 3:E
File List Model Library MDC_2SD2118_PS01.lib
 Model Report MDC_2SD2118_PS.pdf (this file)

Verified Simulator Version PSpice version 16.6
Note

References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version D,Mar,2016
- Product name 2SD2118
- Company name Jiangsu Changjiang Electronics Technology Co., Ltd.
- Characteristics $I_{cV_{ce}}[I_b], h_{FE}I_c[Temp], V_{ce(sat)}I_c[Temp], V_{be(sat)}I_c[Temp], I_cV_{be}[Temp], C_{ob}, C_{ib}, f_T I_c[V_{ce}]$

Simulation Range

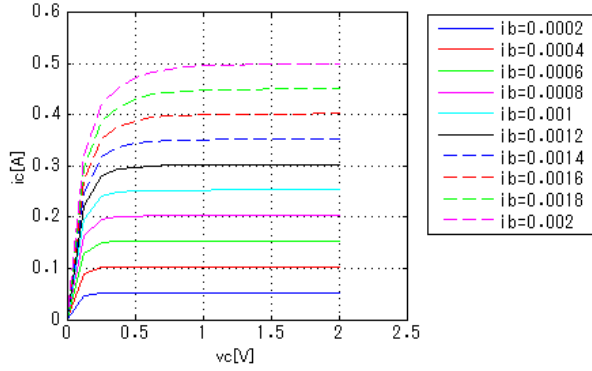
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	20	V
Base current (DC)	0	to	0.125	A
Temperature	-55	to	150	deg C

Simulation results are following.
 Explanatory notes — : simulated

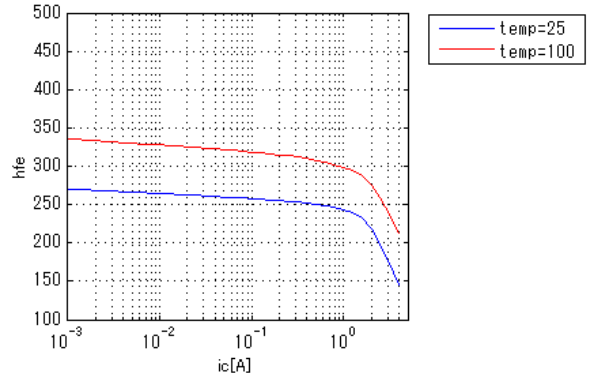
IcVce[ib]

Temp. = 25deg C



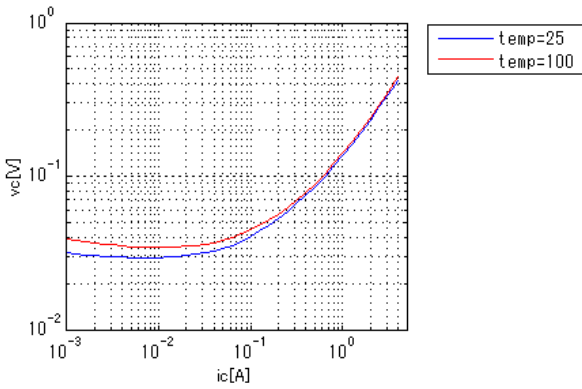
hFEIc[Temp]

Vce = 2V



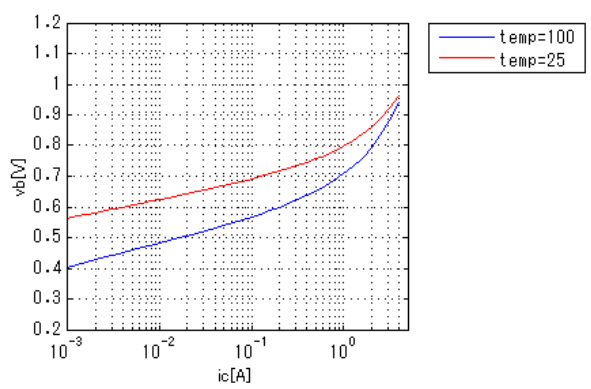
Vce(sat)Ic[Temp]

IC/IB = 40



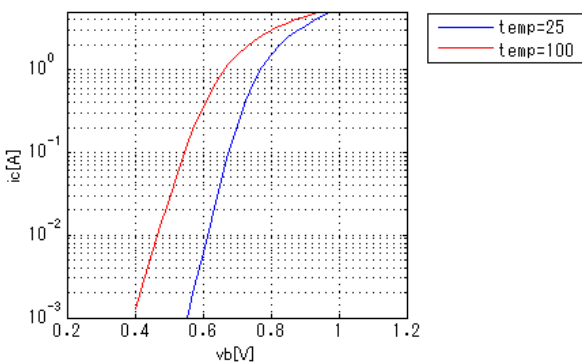
Vbe(sat)Ic[Temp]

IC/IB = 40



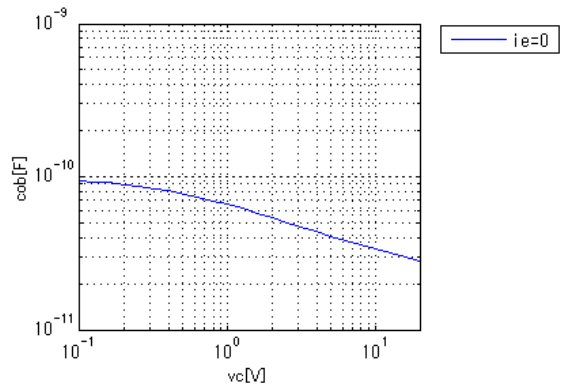
IcVbe[Temp]

Vce = 2V



Cob

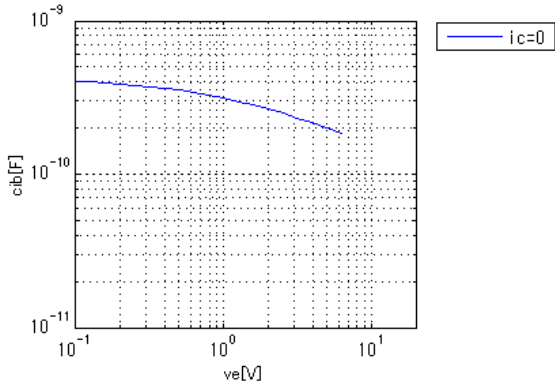
Freq. = 1MHz



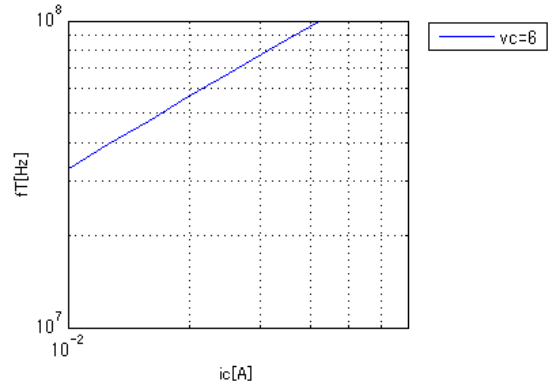
Simulation results are following.
 Explanatory notes — : simulated

Cib

Freq. = 1MHz



fTic[Vce]



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MoDeCH Inc.

Head Office

Location: Mitsuseimei Hachioji Bldg., 5-15 Yokoyama-cho, Hachioji-Shi, Tokyo 192-0081, Japan

Tel:+81-42-656-3360

E-Mail:model-on-support@modech.co.jp

URL:<http://www.modech.com/en/>