

LTspice Model

PNP

Comchip

2SA1213-G



Model Information

Model Gummel-Poon model
Call Name MDC_2SA1213-G_LT
Pin Assign 1:C 2:B 3:E
File List Model Library MDC_2SA1213-G_LT01.lib
 Model Report MDC_2SA1213-G_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 REV: A
- Product name 2SA1213-G
- Company name Comchip Technology Co., Ltd.
- Characteristics $I_c V_{ce}[I_b], h_{FE} I_c[Temp], V_{ce}(sat) I_c[Temp], V_{be}(sat) I_c[Temp], I_c V_{be}[Temp], C_{ob}, C_{ib}$

Simulation Range

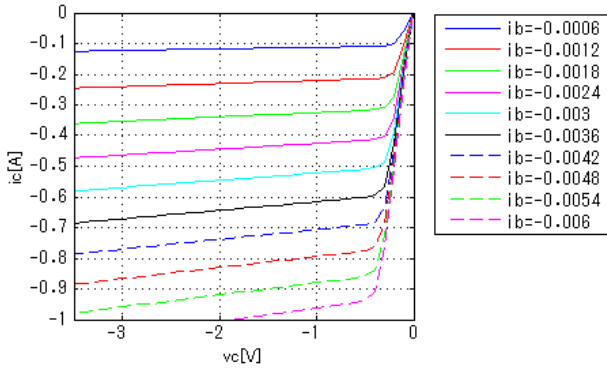
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	-50	V
Base current (DC)	0	to	-0.10	A
Temperature	-55	to	150	deg C

Simulation results are following.
 Explanatory notes — : simulated

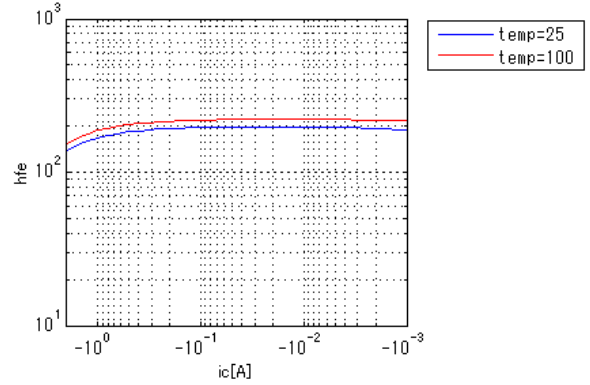
IcVce[ib]

Temp. = 25deg C



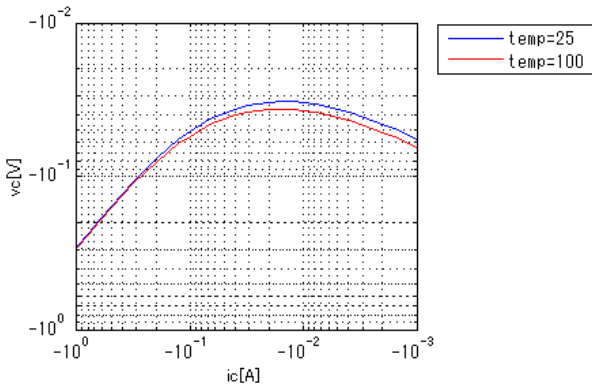
hFEIc[Temp]

Vce = -2V



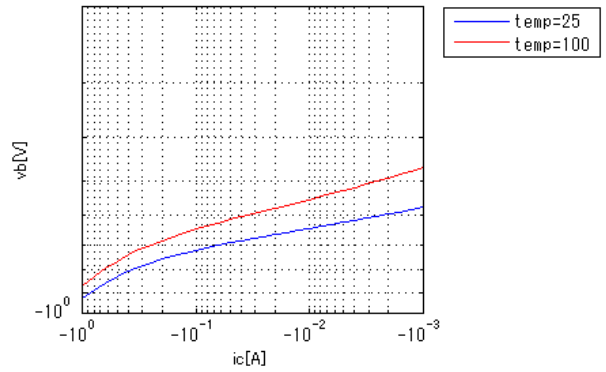
Vce(sat)Ic[Temp]

IC/IB = 20



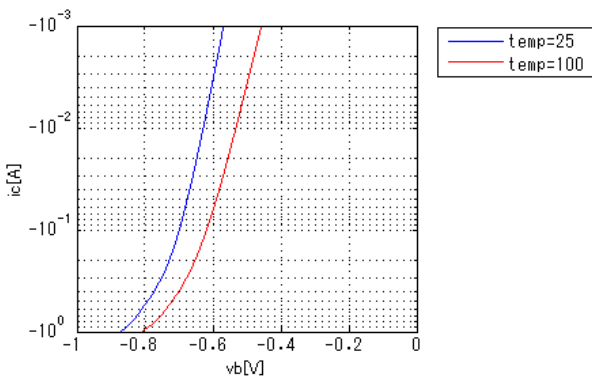
Vbe(sat)Ic[Temp]

IC/IB = 20



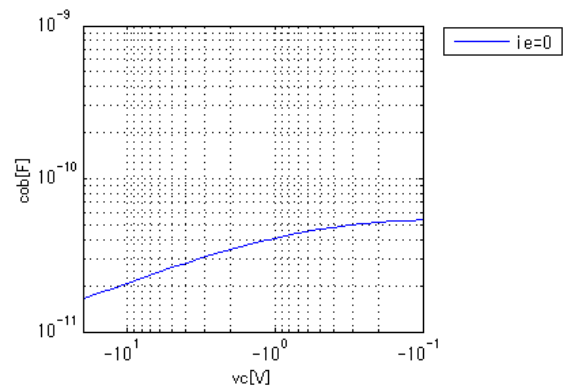
IcVbe[Temp]

Vce = -2V



Cob

Freq. = 1MHz

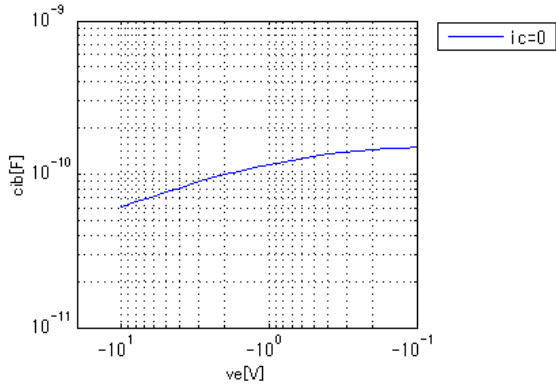


Simulation results are following.

Explanatory notes — : simulated

Cib

Freq. = 1MHz



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