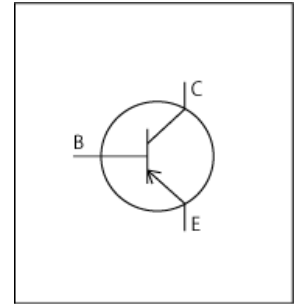


LTspice Model

PNP

ON

2SA2012



Model Information

Model Gummel-Poon model
Call Name MDC_2SA2012_LT
Pin Assign 1:C 2:B 3:E
File List Model Library MDC_2SA2012_LT02.lib
 Model Report MDC_2SA2012_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 December, 2013
- Product name 2SA2012
- Company name ON Semiconductor.
- Characteristics $I_c V_{be}[Temp]$, $I_c V_{ce}[ib]$, $hFE I_c[Temp]$, $fT I_c[V_{ce}]$, C_{ob} , $V_{ce}(sat) I_c[Temp]$, $V_{be}(sat) I_c[Temp]$

Simulation Range

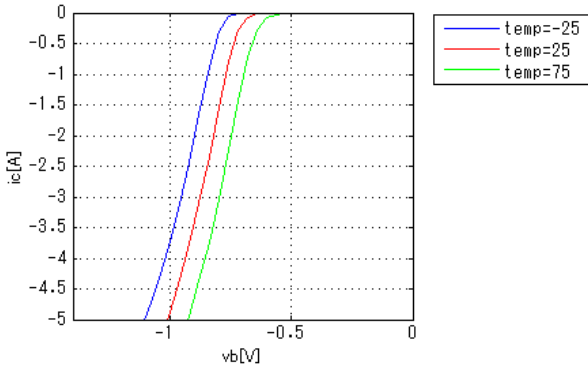
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	-30	V
Base current (DC)	0	to	-600m	A
Temperature	-55	to	150	deg C

Simulation results are following.
 Explanatory notes — : simulated

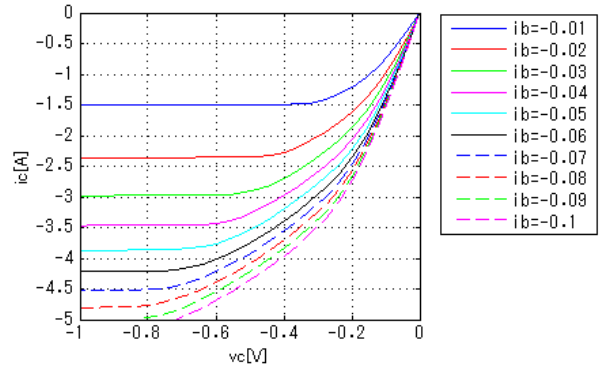
IcVbe[Temp]

Vce = -2V



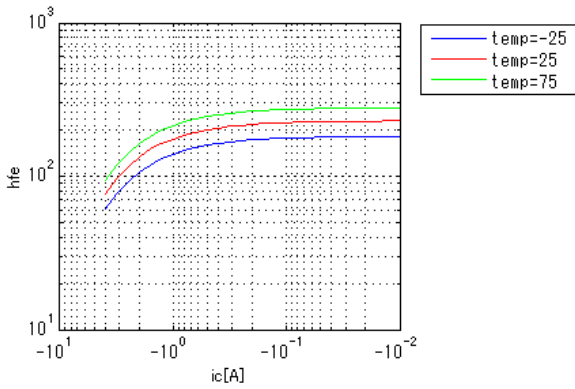
IcVce[ib]

Temp. = 25deg C

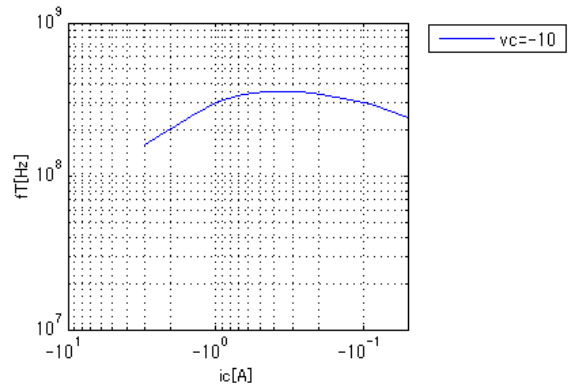


hFEIc[Temp]

Vce = -2V

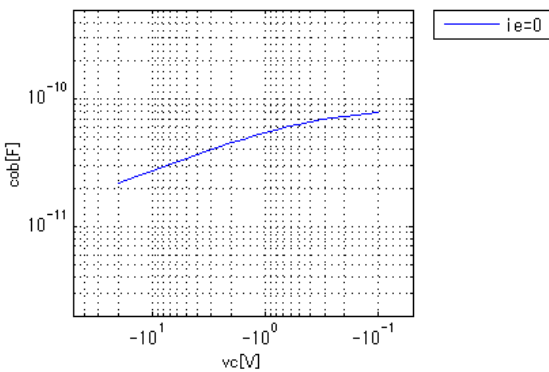


fT[Ic[Vce]]



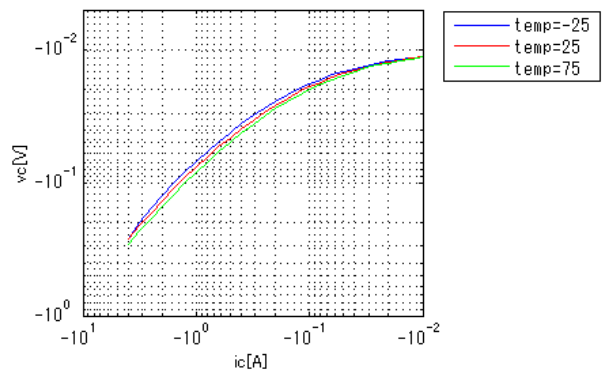
Cob

Freq. = 1MHz



Vce(sat)Ic[Temp]

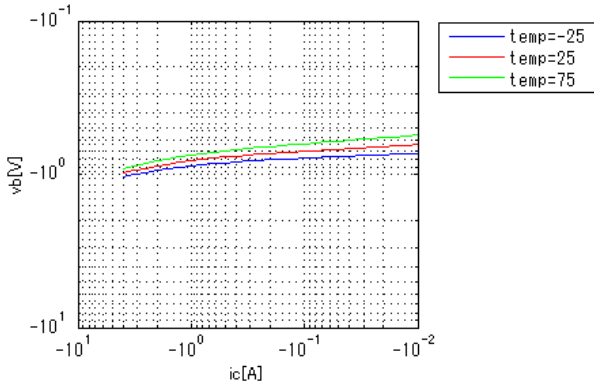
IC/IB = 20



Simulation results are following.
Explanatory notes — : simulated

Vbe(sat)Ic[Temp]

IC/IB = 50



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