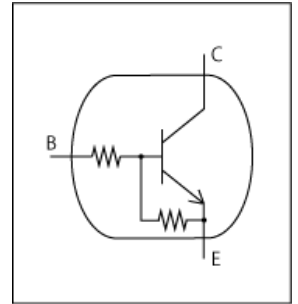


PSpice Model

BRT (Bias Resistor Transistor)

ROHM

DTC014EUBTL



Model Information

Model A macro model based on Gummel-Poon model
Call Name MDC_DTC014EUBTL_PS
Pin Assign 1:C 2:B 3:E
File List Model Library MDC_DTC014EUBTL_PS02.lib
 Model Report MDC_DTC014EUBTL_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 Rev. 003
- Product name DTC014EUBTL
- Company name ROHM Co., Ltd.
- Characteristics $I_{cVce[II]}, h_{FE}I_{c[Temp]}, V_{ce(sat)}I_{c[Temp]}, I_{cVi[OFF]}, I_{cVi[ON]}$

Simulation Range

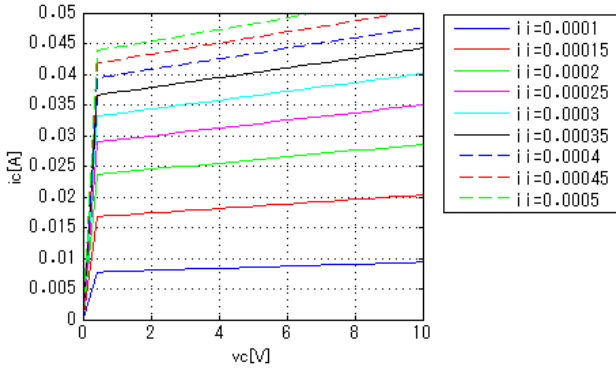
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	50	V
Base current (DC)	0	to	10	A
Temperature	-55	to	150	deg C

Simulation results are following.
 Explanatory notes — : simulated

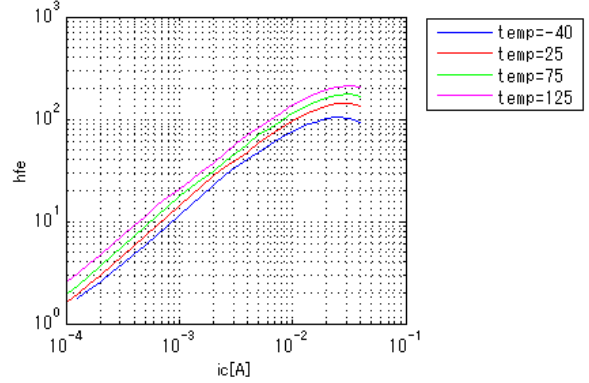
IcVce[li]

Temp. = 25deg C



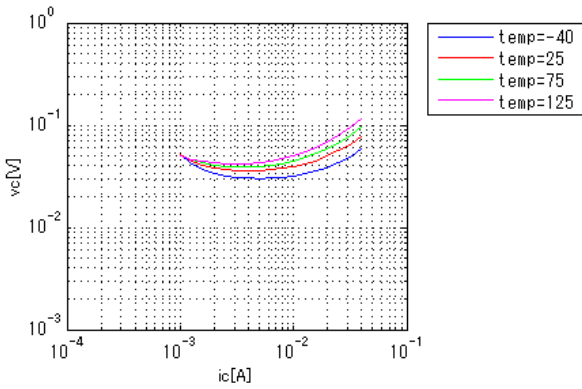
hFEIc[Temp]

Vce = 10V



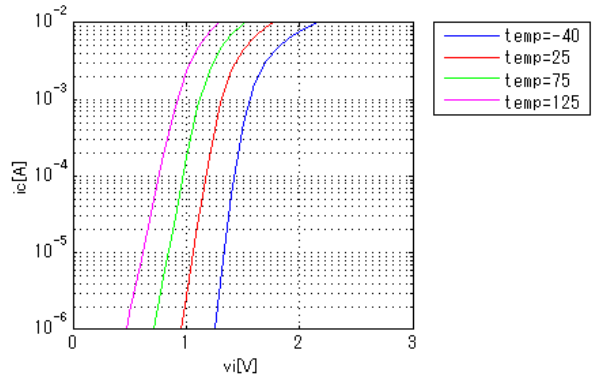
Vce(sat)Ic[Temp]

IC/IB = 10



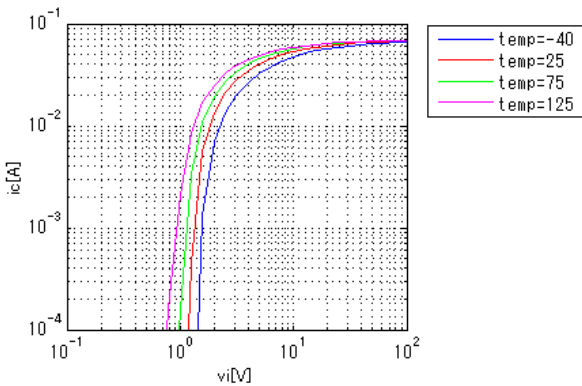
IcVi[OFF]

Vce = 5V



IcVi[ON]

Vce = 0.3V



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