

PSpice Model

NPN

RENESAS

2SC3739



Model Information

Model Mextram model
Call Name MDC_2SC3739_PS
Pin Assign 1:C 2:B 3:E
File List Model Library MDC_2SC3739_PS01.lib
 Model Report MDC_2SC3739_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 April-1-2010
- Product name 2SC3739
- Company name Renesas Electronics Corporation
- Characteristics $I_c[V_{ce}[ib], V_{be}(sat)]_I_c[Temp], V_{ce}(sat)_I_c[Temp], hFE_I_c[V_{ce}], fT_I_c[V_{ce}], C_{ob}, C_{ib}$

Simulation Range

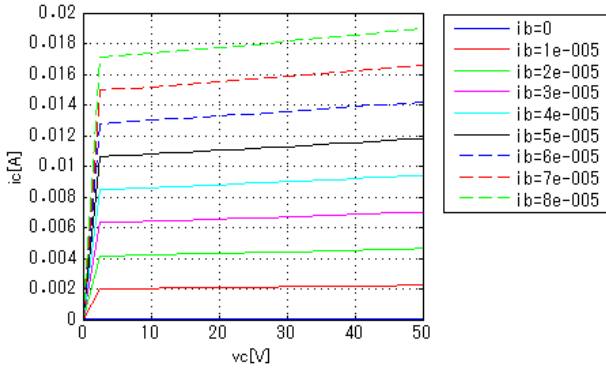
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	40	V
Base current (DC)	0	to	50	A
Temperature	-55	to	150	deg C

Simulation results are following.
 Explanatory notes — : simulated

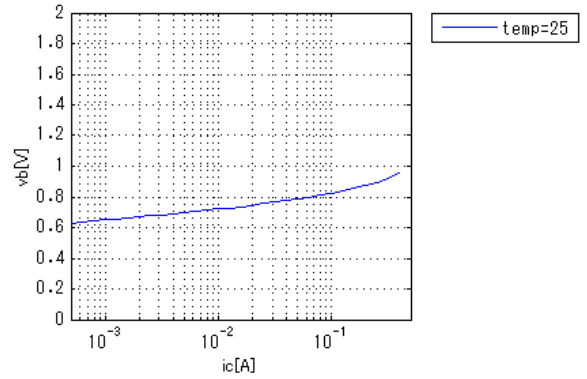
IcVce[ib]

Temp. = 25deg C



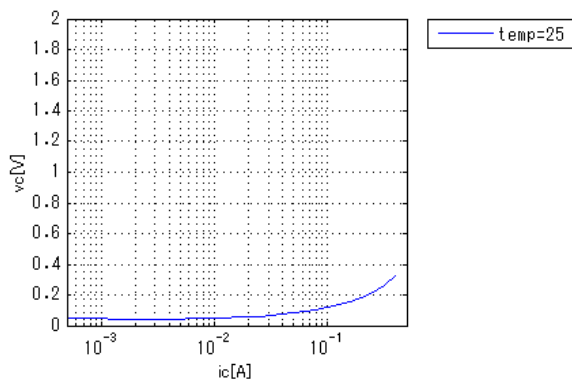
Vbe(sat)Ic[Temp]

IC/IB = 10

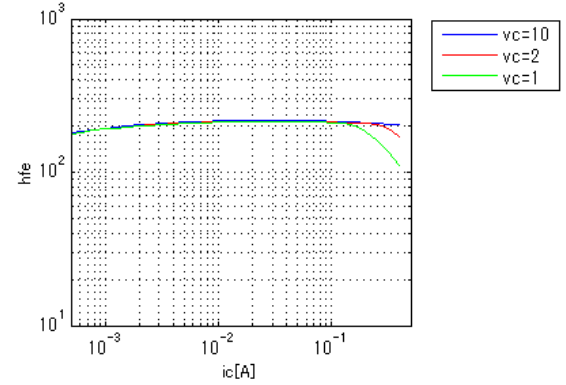


Vce(sat)Ic[Temp]

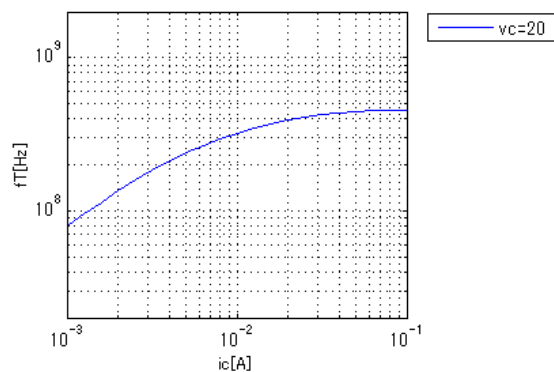
IC/IB = 10



hFEIc[Vce]

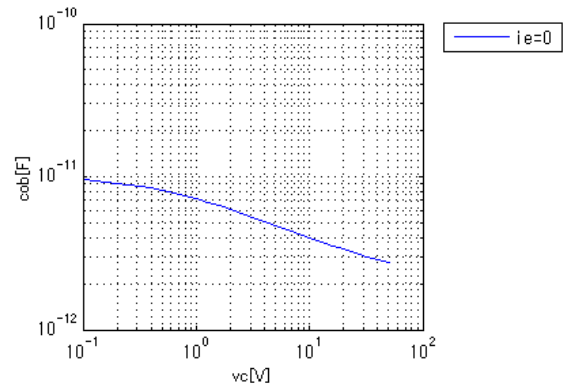


fT[Ic[Vce]]



Cob

Freq. = 1MHz

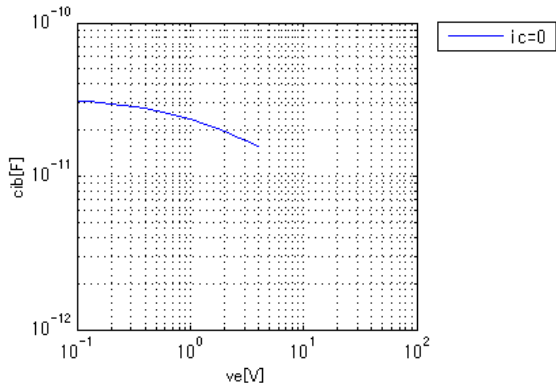


Simulation results are following.

Explanatory notes — : simulated

Cib

Freq. = 1MHz



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