

PSpice Model

NPN

SanKen

2SC5100



Model Information

Model Gummel-Poon model
Call Name MDC_2SC5100_PS
Pin Assign 1:C 2:B 3:E
File List Model Library MDC_2SC5100_PS02.lib
 Model Report MDC_2SC5100_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 None
- Product name 2SC5100
- Company name Sanken Electric Co., Ltd.
- Characteristics $I_{cVce}[I_b], V_{ce(sat)}[I_c], I_{cVbe}[Temp], hFE[I_c][Temp], fT[I_c][V_{ce}]$

Simulation Range

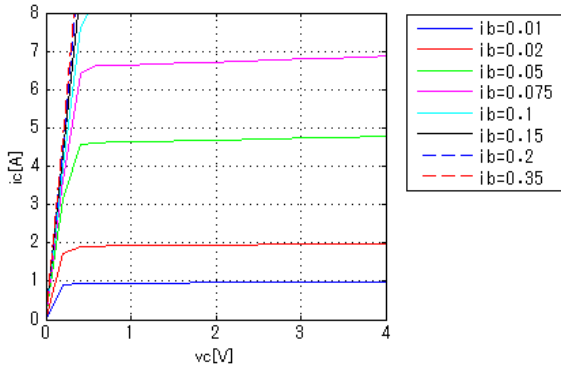
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	120	V
Base current (DC)	0	to	3	A
Temperature	-55	to	150	deg C

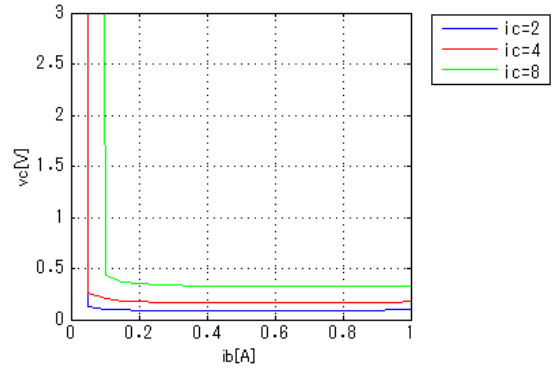
Simulation results are following.
 Explanatory notes — : simulated

IcVce[ib]

Temp. = 25deg C

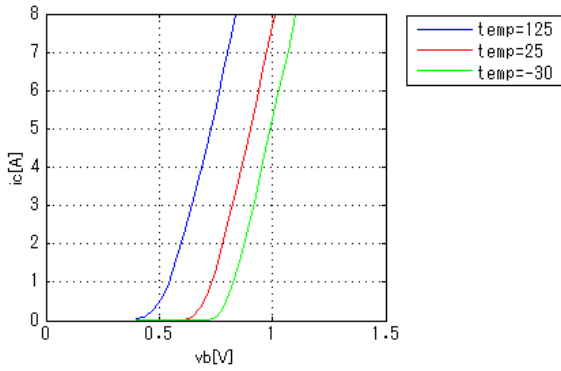


Vce(sat)Ib[Ic]



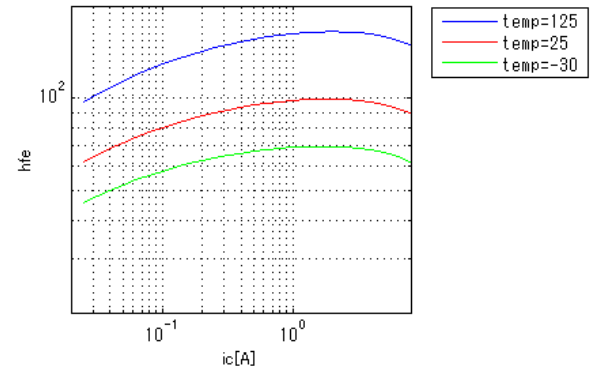
IcVbe[Temp]

Vce = 4V

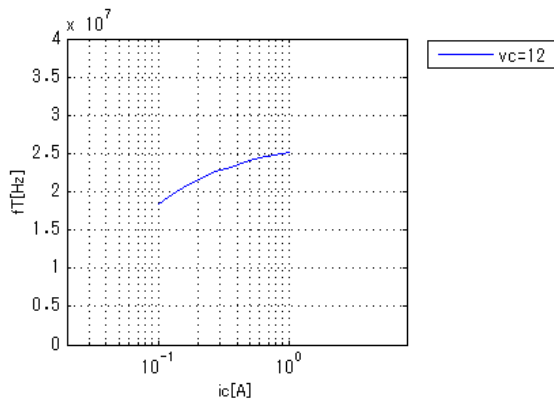


hFEIc[Temp]

Vce = 4V



fT[Ic[Vce]]



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