

PSpice Model

NPN+NPN

ON

SBC847BDW1T1G

Model Information

Model Gummel-Poon model
Call Name MDC_SBC847BDW1T1G_PS
Pin Assign 1:C 2:B 3:E
File List Model Library MDC_SBC847BDW1T1G_PS03.lib
 Model Report MDC_SBC847BDW1T1G_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 .11
- Product name SBC847BDW1T1G
- Company name ON Semiconductor.
- Characteristics $hFEIc[Temp]$, $Vce(sat)Ic[Temp]$, $Vbe(sat)Ic[Temp]$, $IcVbe[Temp]$, $fT Ic[Vce]$, Cib , Cob , $Vce(sat)Ib[Ic]$

Simulation Range

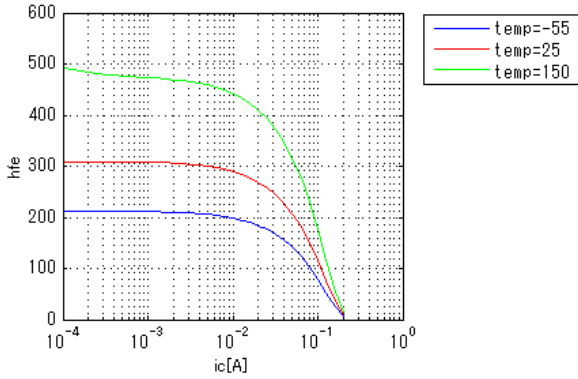
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	45	V
Base current (DC)	0	to	10	A
Temperature	-55	to	150	deg C

Simulation results are following.
 Explanatory notes — : simulated

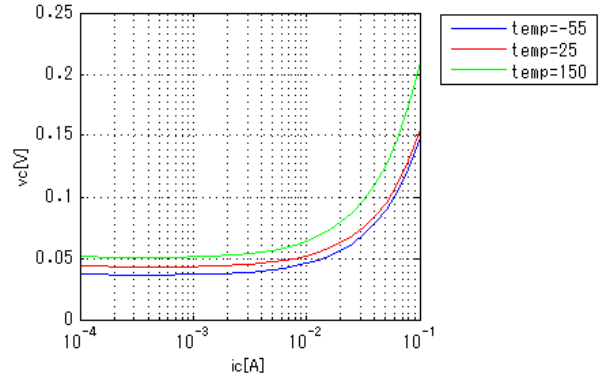
hFEIc[Temp]

Vce = 5V



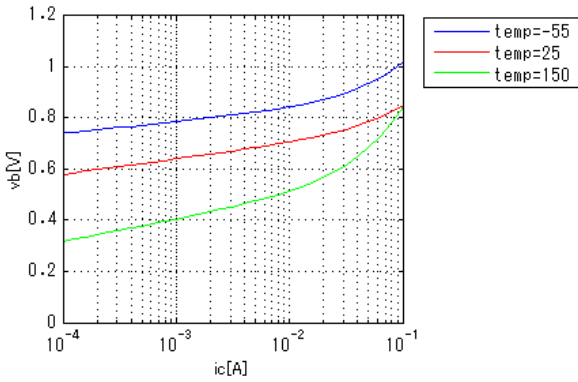
Vce(sat)Ic[Temp]

IC/IB = 10



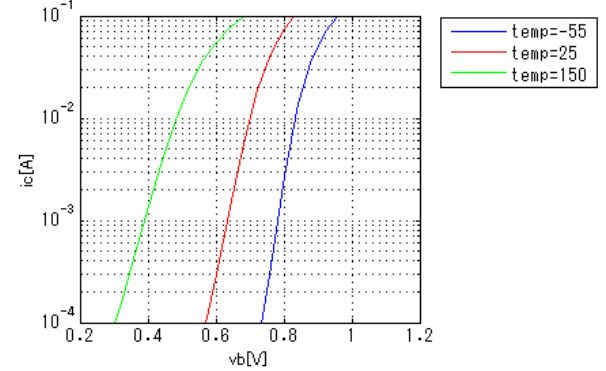
Vbe(sat)Ic[Temp]

IC/IB = 10

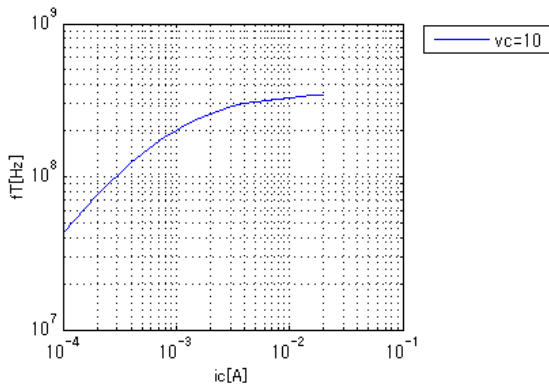


IcVbe[Temp]

Vce = 5V

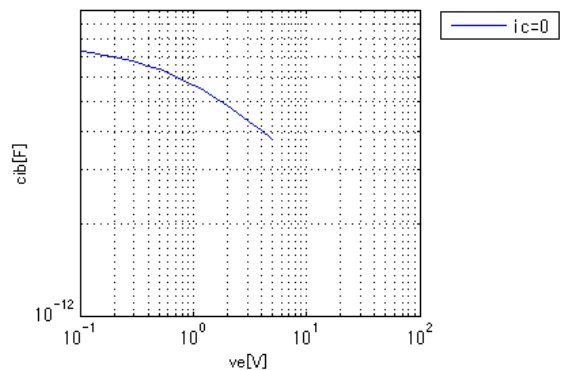


fT[Ic[Vce]]



Cib

Freq. = 1MHz

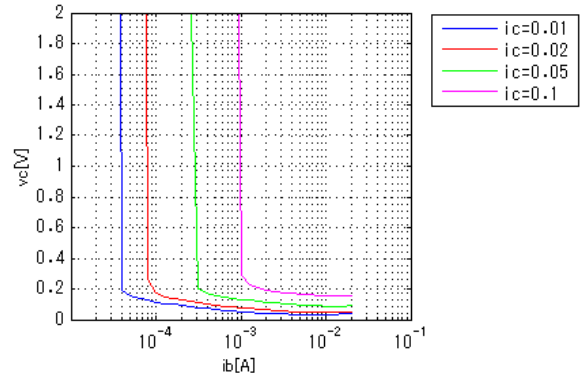
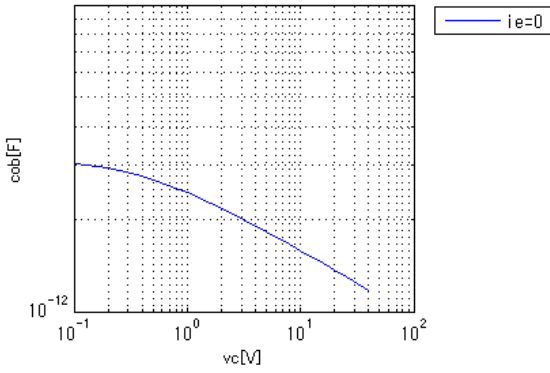


Simulation results are following.
 Explanatory notes — : simulated

Cob

Freq. = 1MHz

Vce(sat)Ib[Ic]



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