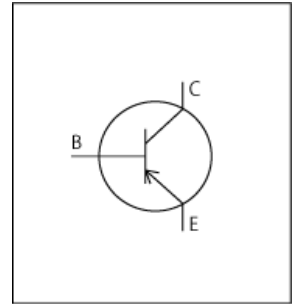


# PSpice Model

## PNP

## ON

## NSS20500UW3TBG



### Model Information

**Model** Gummel-Poon model  
**Call Name** MDC\_NSS20500UW3TBG\_PS  
**Pin Assign** 1:C 2:B 3:E  
**File List** Model Library MDC\_NSS20500UW3TBG\_PS02.lib  
 Model Report MDC\_NSS20500UW3TBG\_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.3
- Product name NSS20500UW3TBG
- Company name ON Semiconductor.
- Characteristics  $V_{ce(sat)}I_c[Temp]$ ,  $h_{FE}I_c[Temp]$ ,  $I_cV_{be}[Temp]$ ,  $V_{ce(sat)}I_b[I_c]$ ,  $C_i$ ,  $b$ ,  $C_{ob}$

### Simulation Range

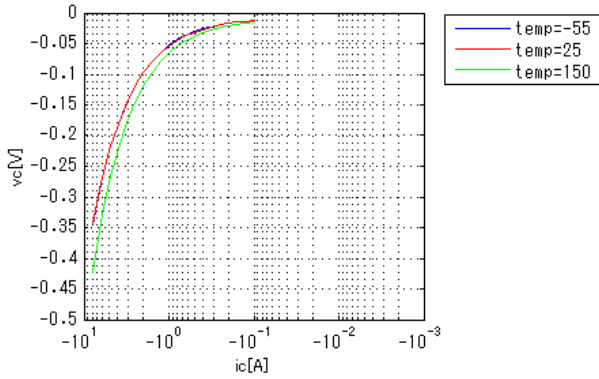
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	-20	V
Base current (DC)	0	to	-0.50	A
Temperature	-55	to	150	deg C

Simulation results are following.  
 Explanatory notes — : simulated

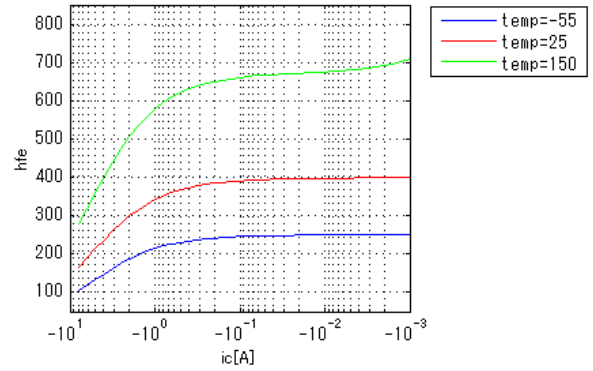
**Vce(sat)Ic[Temp]**

IC/IB = 10



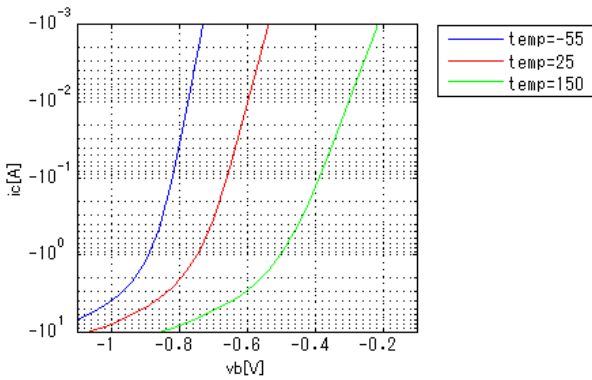
**hFEIc[Temp]**

Vce = -2V

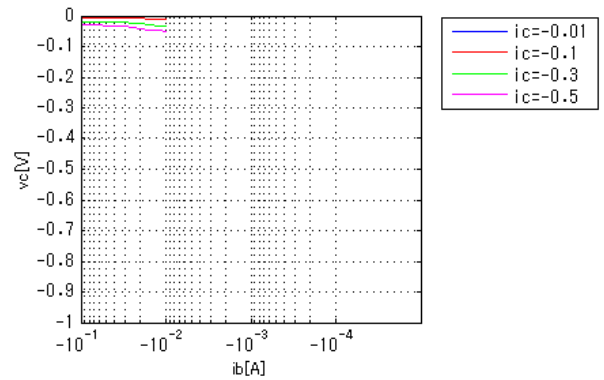


**IcVbe[Temp]**

Vce = -1V

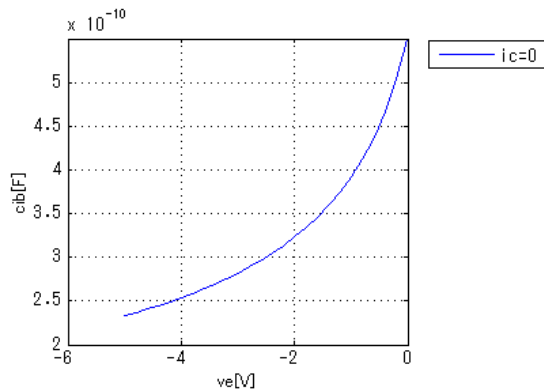


**Vce(sat)Ib[Ic]**



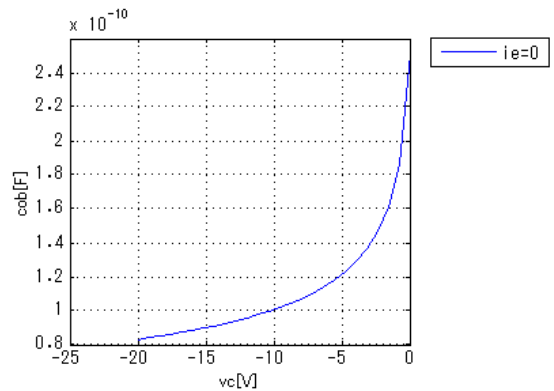
**Cib**

Freq. = 1MHz



**Cob**

Freq. = 1MHz



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