

# PSpice Model

## NPN

## ON

## FJP2145



### Model Information

**Model** Gummel-Poon model  
**Call Name** MDC\_FJP2145\_PS  
**Pin Assign** 1:C 2:B 3:E  
**File List** Model Library MDC\_FJP2145\_PS02.lib  
 Model Report MDC\_FJP2145\_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. 1.1
- Product name FJP2145
- Company name ON Semiconductor.
- Characteristics  $I_c V_{ce}[I_b], h_{FE} I_c [Temp], V_{ce(sat)} I_c [Temp], V_{ce(sat)} I_b [I_c], C_{ob}$

### Simulation Range

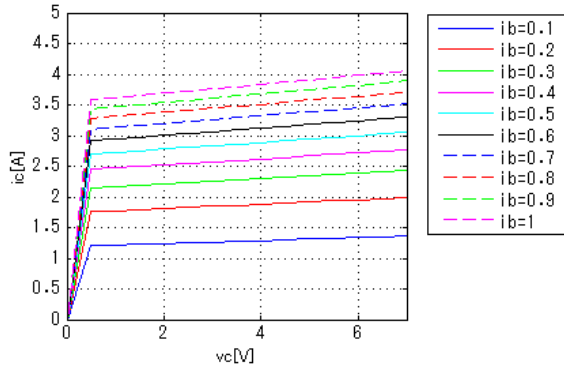
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	800	V
Base current (DC)	0	to	2	A
Temperature	-55	to	150	deg C

Simulation results are following.  
 Explanatory notes — : simulated

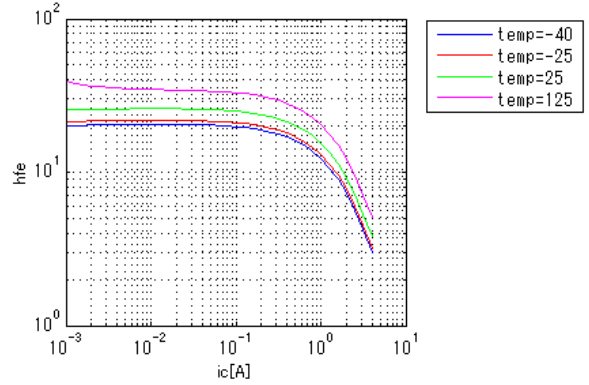
**IcVce[ib]**

Temp. = 25deg C



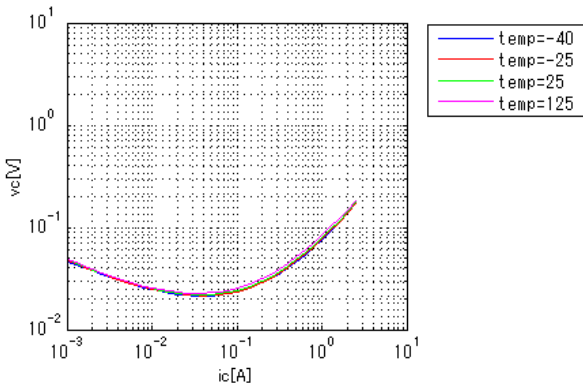
**hFEIc[Temp]**

Vce = 5V

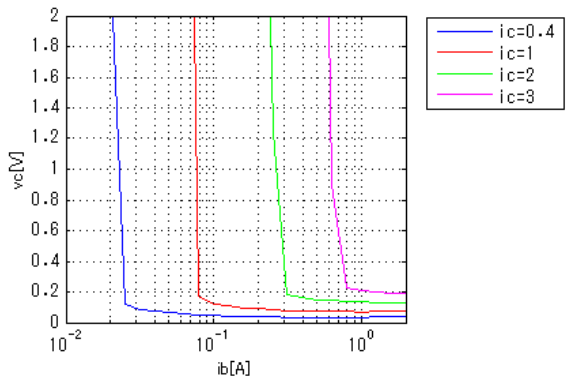


**Vce(sat)Ic[Temp]**

IC/IB = 3

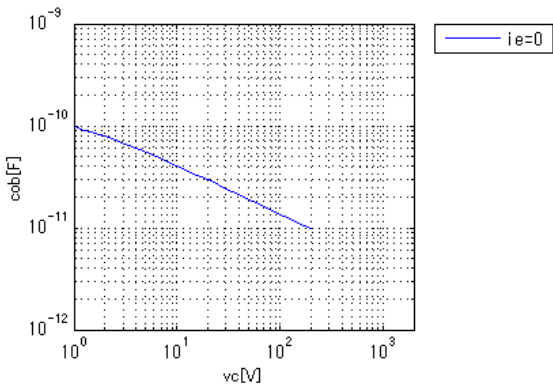


**Vce(sat)Ib[Ic]**



**Cob**

Freq. = 1MHz



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