

# PSpice Model

## NPN

## ON

## KSD1691



### Model Information

**Model** Gummel-Poon model  
**Call Name** MDC\_KSD1691\_PS  
**Pin Assign** 1:C 2:B 3:E  
**File List** Model Library MDC\_KSD1691\_PS02.lib  
 Model Report MDC\_KSD1691\_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. A, February 2000
- Product name KSD1691
- Company name ON Semiconductor.
- Characteristics  $I_c[V_{ce}[ib], hFE I_c[V_{ce}], V_{be}(sat) I_c[Temp], V_{ce}(sat) I_c[Temp]$

### Simulation Range

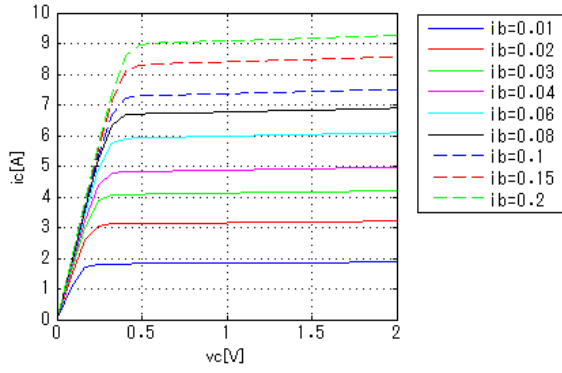
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	60	V
Base current (DC)	0	to	1	A
Temperature	-55	to	150	deg C

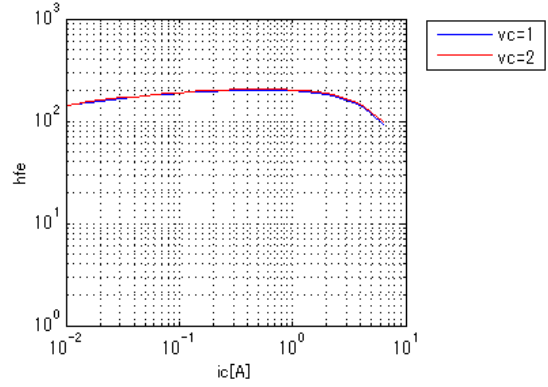
Simulation results are following.  
 Explanatory notes — : simulated

**IcVce[ib]**

Temp. = 25deg C

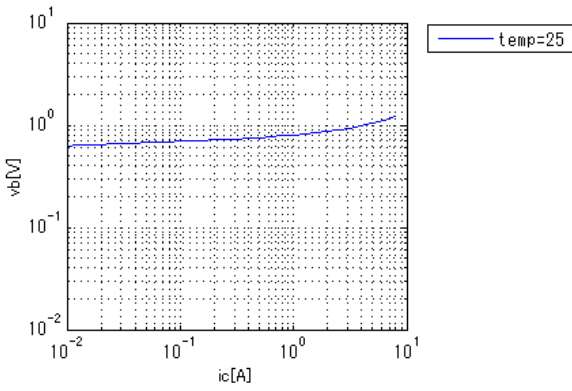


**hFEIc[Vce]**



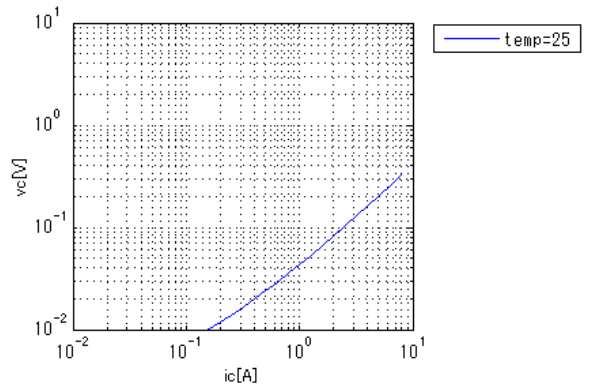
**Vbe(sat)Ic[Temp]**

$I_c/I_b = 10$



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

$I_c/I_b = 10$



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MoDeCH Inc.

Head Office

Location: Mitsuseimei Hachioji Bldg., 5-15 Yokoyama-cho, Hachioji-Shi, Tokyo 192-0081, Japan

Tel:+81-42-656-3360

E-Mail:[model-on-support@modech.co.jp](mailto:model-on-support@modech.co.jp)

URL:<http://www.modech.com/en/>