

# PSpice Model

## PNP

## RENESAS

## 2SB1721



### Model Information

**Model** Mextram model  
**Call Name** MDC\_2SB1721\_PS  
**Pin Assign** 1:C 2:B 3:E  
**File List** Model Library MDC\_2SB1721\_PS01.lib  
 Model Report MDC\_2SB1721\_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 July 2006
- Product name 2SB1721
- Company name Renesas Electronics Corporation
- Characteristics  $I_c V_{ce}[ib], hFE I_c[Temp], V_{ce}(sat) I_c[Temp], V_{be}(sat) I_c[Temp], f_T I_c[V_{ce}], C_{ob}$

### Simulation Range

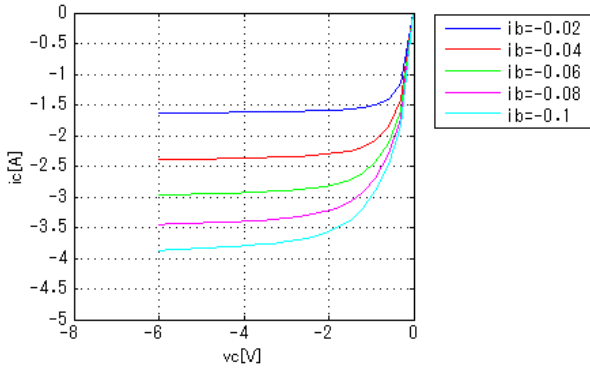
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

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

Simulation results are following.  
 Explanatory notes — : simulated

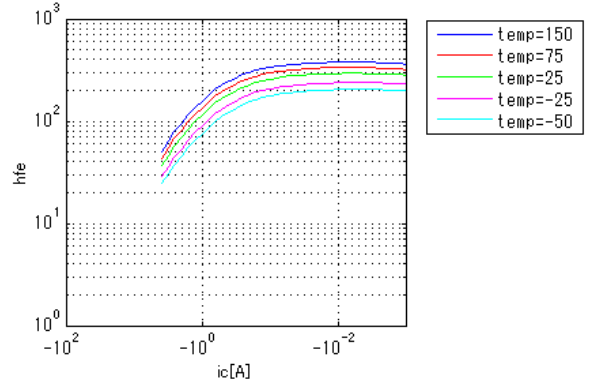
**IcVce[ib]**

Temp. = 25deg C



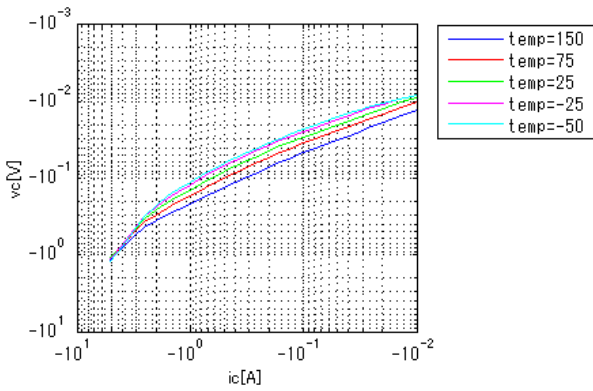
**hFEIc[Temp]**

Vce = -5V



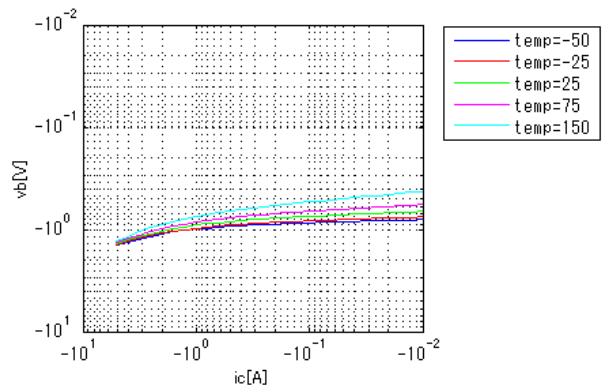
**Vce(sat)Ic[Temp]**

IC/IB = 10

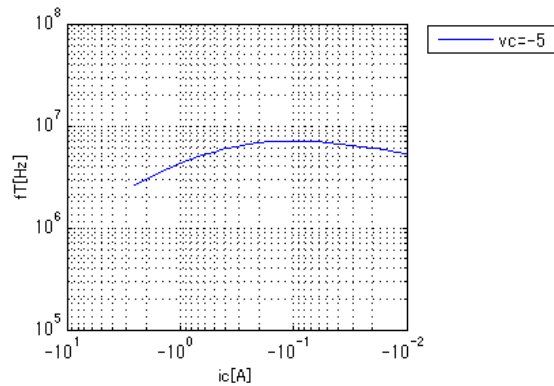


**Vbe(sat)Ic[Temp]**

IC/IB = 10

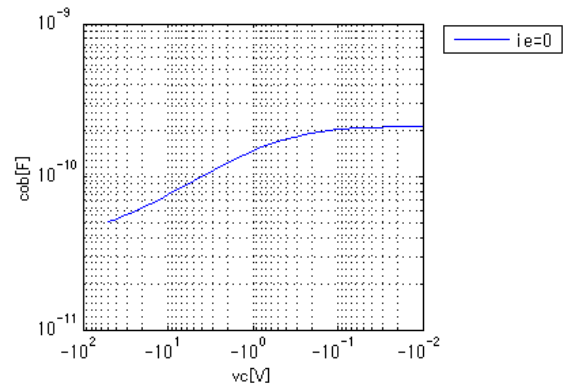


**fT[Ic[Vce]]**



**Cob**

Freq. = 1MHz



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