

# PSpice Model

## PNP

## ROHM

## 2SA1774FRA



### Model Information

**Model** Mextram model  
**Call Name** MDC\_2SA1774FRA\_PS  
**Pin Assign** 1:C 2:B 3:E  
**File List** Model Library MDC\_2SA1774FRA\_PS01.lib  
 Model Report MDC\_2SA1774FRA\_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 2012.01 - Rev.C
- Product name 2SA1774FRA
- Company name ROHM Co., Ltd.
- Characteristics  $I_c V_{be}[Temp]$ ,  $I_c V_{ce}[ib]$ ,  $hFE I_c[V_{ce}]$ ,  $hFE I_c[Temp]$ ,  $V_{ce}(sat) I_c[hFE]$ ,  $V_{ce}(sat) I_c[Temp]$ ,  $fT I_c[V_{ce}]$ ,  $C_{ob}$ ,  $C_{ib}$

### Simulation Range

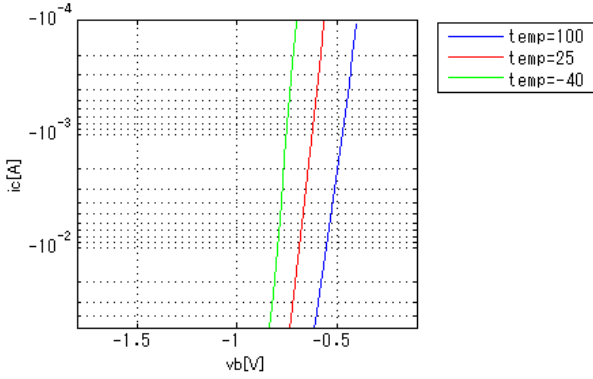
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	-50	V
Base current (DC)	0	to	-0.0150	A
Temperature	-55	to	150	deg C

Simulation results are following.  
 Explanatory notes — : simulated

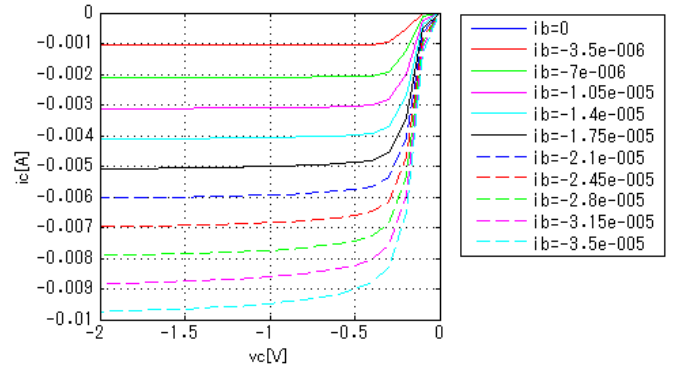
**IcVbe[Temp]**

Vce = -6V



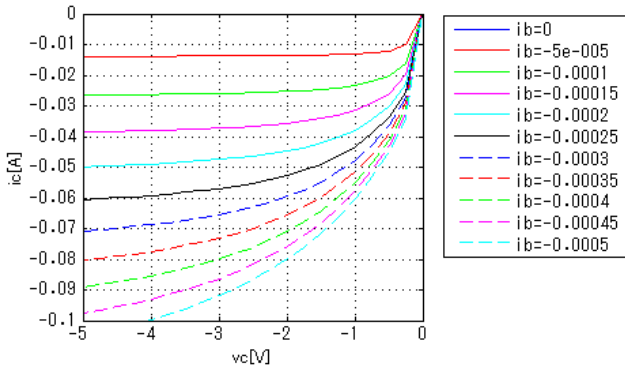
**IcVce[ib]**

Temp. = 25deg C

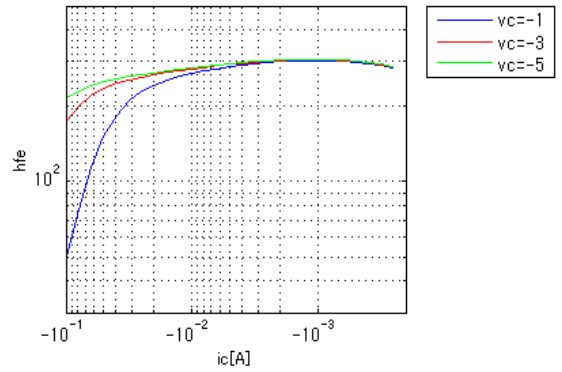


**IcVce[ib]**

Temp. = 25deg C

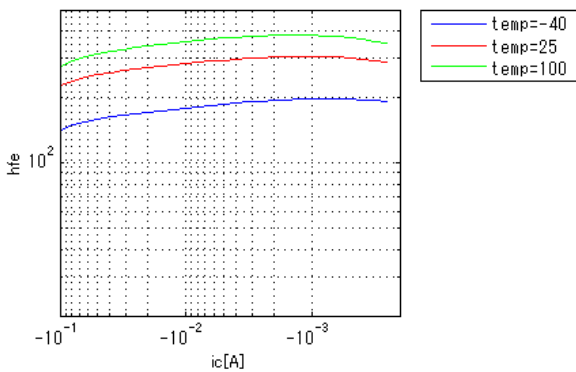


**hFEIc[Vce]**

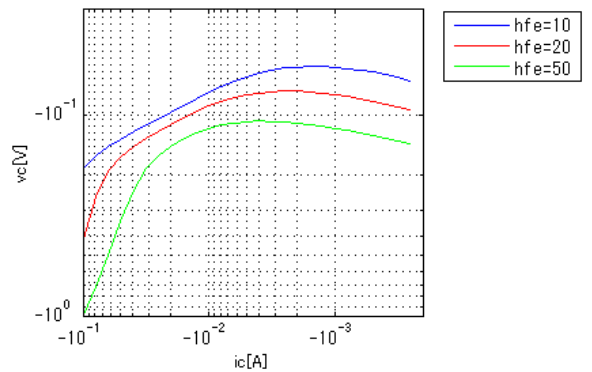


**hFEIc[Temp]**

Vce = -6V



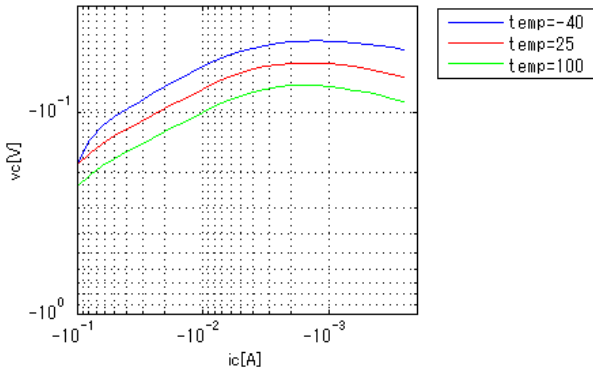
**Vce(sat)Ic[hFE]**



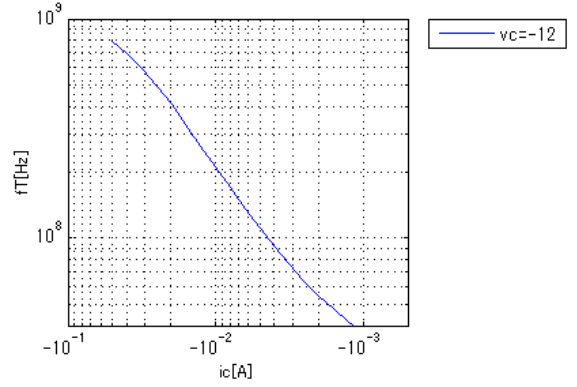
Simulation results are following.  
 Explanatory notes — : simulated

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

IC/IB = 10

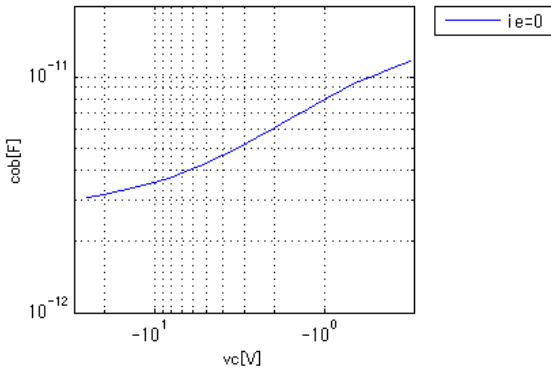


**fT Ic[Vce]**



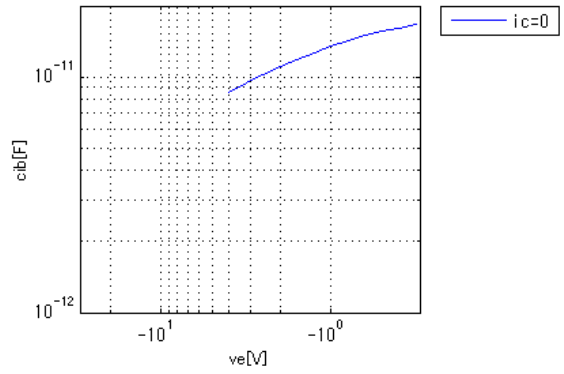
**Cob**

Freq. = 1MHz



**Cib**

Freq. = 1MHz



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