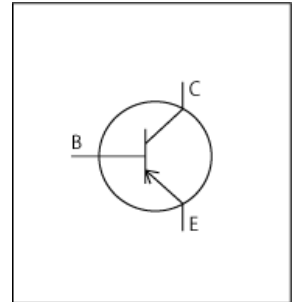


# PSpice Model

## PNP

### SanKen

### 2SA1186



### Model Information

**Model** Mextram model  
**Call Name** MDC\_2SA1186\_PS  
**Pin Assign** 1:C 2:B 3:E  
**File List** Model Library MDC\_2SA1186\_PS01.lib  
 Model Report MDC\_2SA1186\_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 None
- Product name 2SA1186
- Company name Sanken Electric Co., Ltd.
- Characteristics  $I_{cVce}[I_b], V_{ce(sat)}[I_c], I_{cVbe}[Temp], hFEI_c[Temp], fT I_c[V_{ce}]$

### Simulation Range

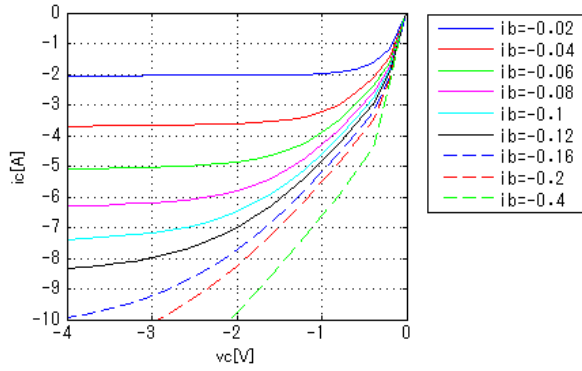
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

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

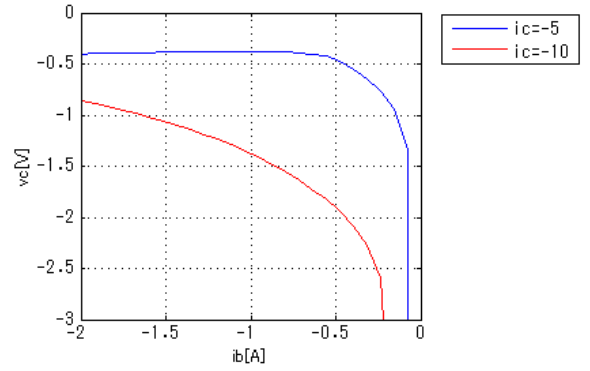
Simulation results are following.  
 Explanatory notes — : simulated

**IcVce[ib]**

Temp. = 25deg C

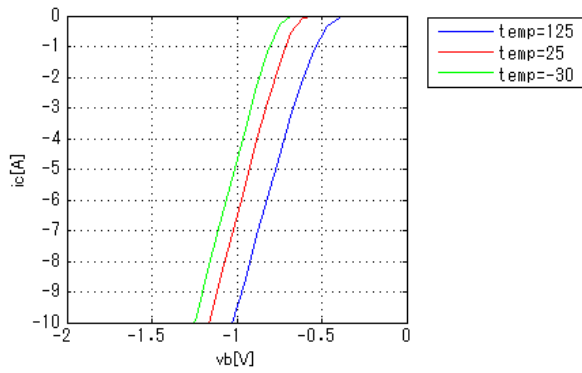


**Vce(sat)Ib[Ic]**



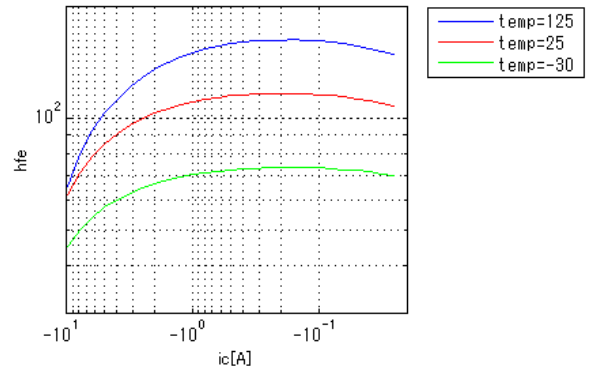
**IcVbe[Temp]**

Vce = -4V

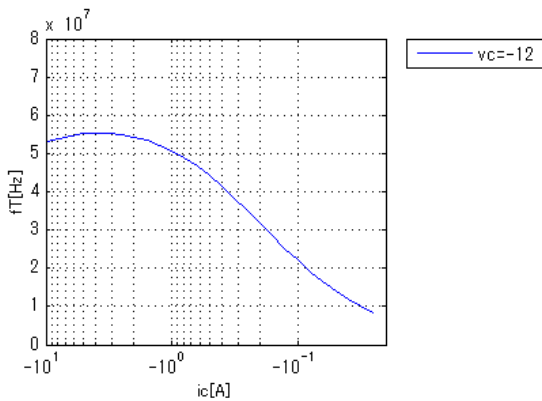


**hFEIc[Temp]**

Vce = -4V



**fT[Ic[Vce]]**



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