

# PSpice Model

## NPN

## TOSHIBA

## 2SC4117



### Model Information

**Model** Mextram model  
**Call Name** MDC\_2SC4117\_PS  
**Pin Assign** 1:C 2:B 3:E  
**File List** Model Library MDC\_2SC4117\_PS01.lib  
 Model Report MDC\_2SC4117\_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 2014-03-01
- Product name 2SC4117
- Company name Toshiba Corporation
- Characteristics IcVce[ib],Cob,IcVbe[Temp],hFEIc[Temp],Vce(sat)Ic[Temp]

### Simulation Range

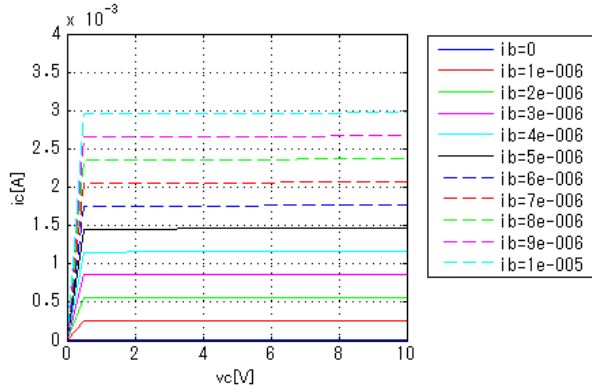
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	120	V
Base current (DC)	0	to	20m	A
Temperature	-55	to	125	deg C

Simulation results are following.  
 Explanatory notes — : simulated

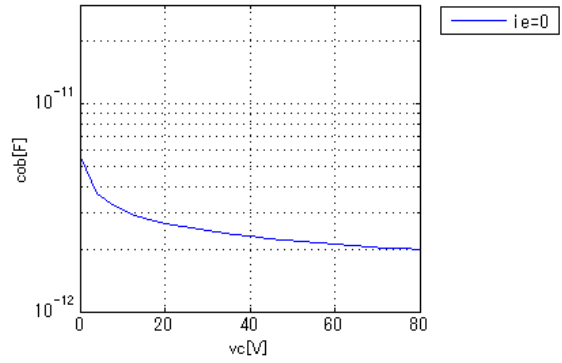
**IcVce[ib]**

Temp. = 25deg C



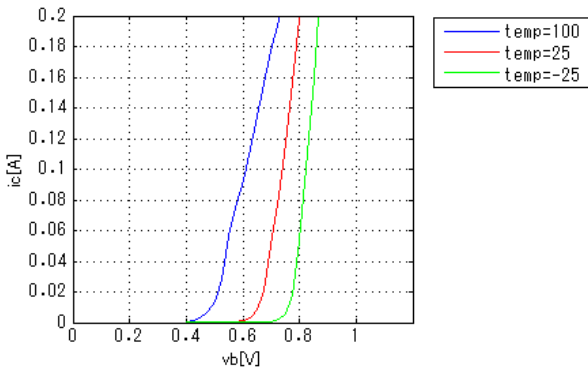
**Cob**

Freq. = 1MHz



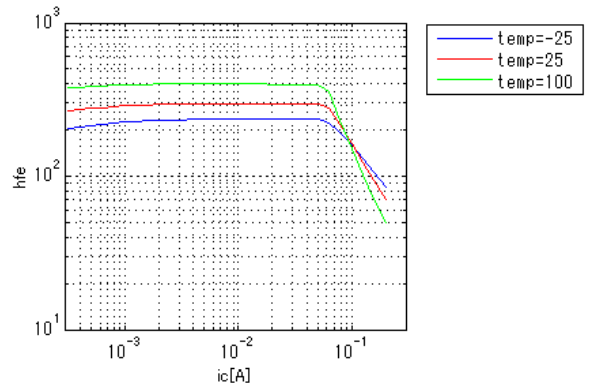
**IcVbe[Temp]**

Vce = 6V



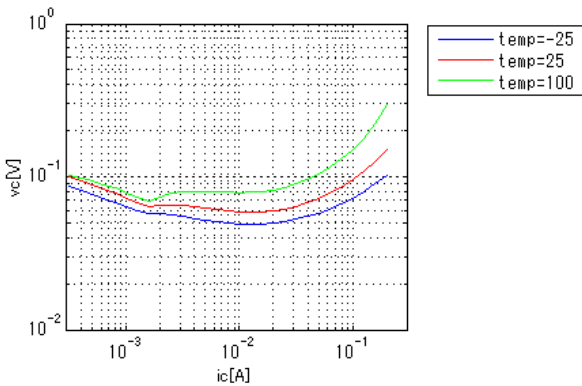
**hFEIc[Temp]**

Vce = 6V



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

IC/IB = 10



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