

PSpice Model

NPN

TOSHIBA

2SC3076



Model Information

Model Gummel-Poon model
Call Name MDC_2SC3076_PS
Pin Assign 1:C 2:B 3:E
File List Model Library MDC_2SC3076_PS02.lib
 Model Report MDC_2SC3076_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 2013-11-01
- Product name 2SC3076
- Company name Toshiba Corporation
- Characteristics $I_c V_{ce}[ib], h_{FE} I_c[Temp], V_{ce}(sat) I_c[Temp], V_{be}(sat) I_c[Temp], I_c V_{be}[Temp]$

Simulation Range

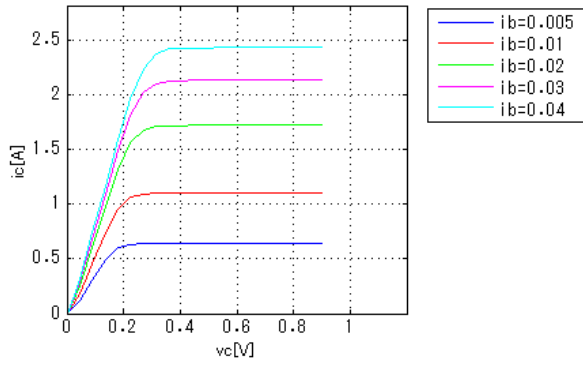
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	50	V
Base current (DC)	0	to	1	A
Temperature	-55	to	150	deg C

Simulation results are following.
 Explanatory notes — : simulated

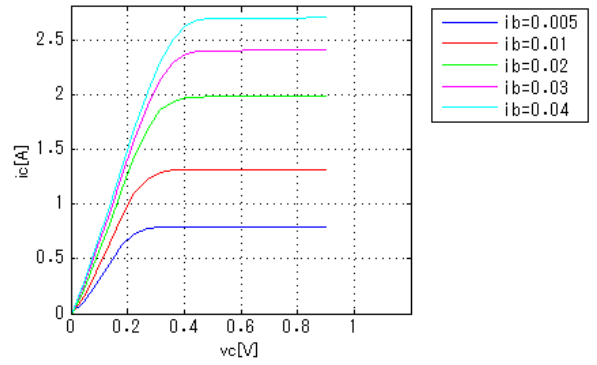
IcVce[ib]

Temp. = 25deg C



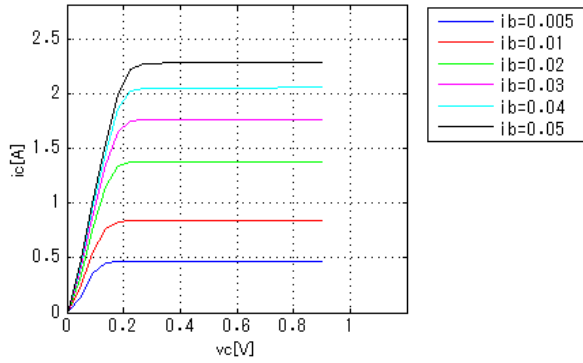
IcVce[ib]

Temp. = 100deg C



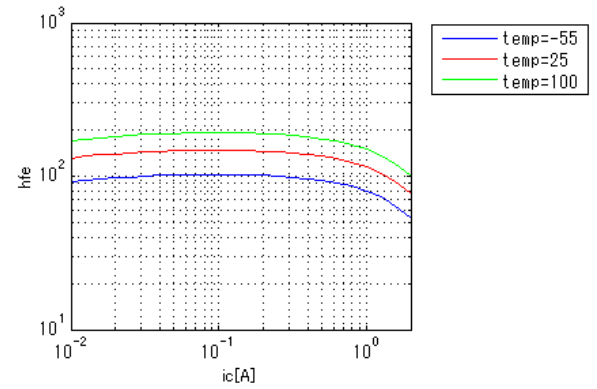
IcVce[ib]

Temp. = -55deg C



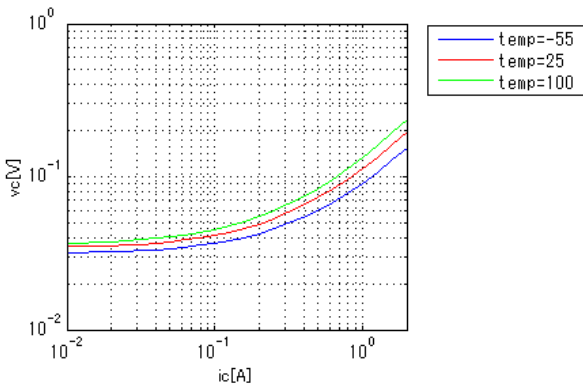
hFEIc[Temp]

Vce = 2V



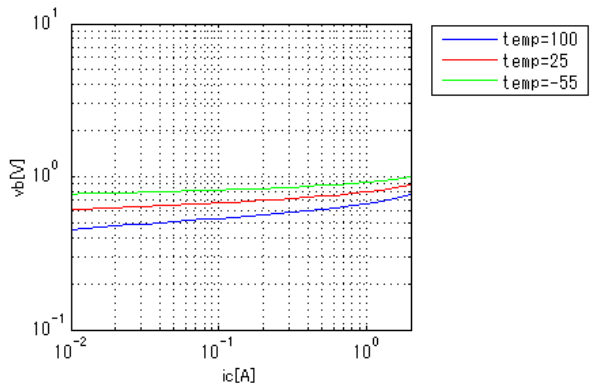
Vce(sat)Ic[Temp]

IC/IB = 20



Vbe(sat)Ic[Temp]

IC/IB = 20

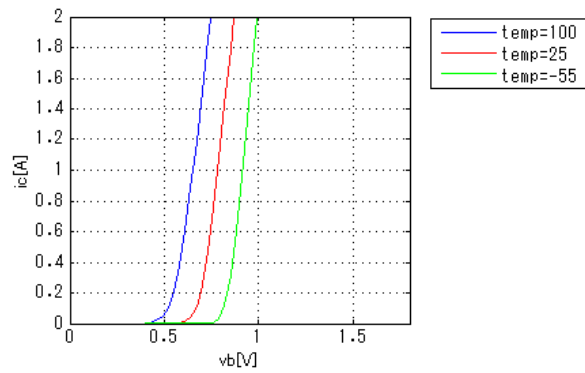


Simulation results are following.

Explanatory notes — : simulated

IcVbe[Temp]

Vce = 2V



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