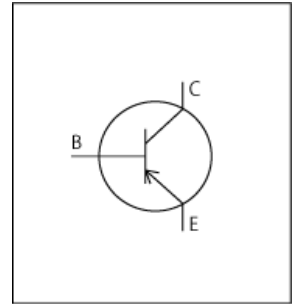


PSpice Model

PNP

Panasonic

DSA2401



Model Information

Model Gummel-Poon model
Call Name MDC_DSA2401_PS
Pin Assign 1:C 2:B 3:E
File List Model Library MDC_DSA2401_PS02.lib
 Model Report MDC_DSA2401_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 Ver. BJD
- Product name DSA2401
- Company name Panasonic Corporation
- Characteristics $I_c V_{ce}[I_b], h_{FE} I_c[Temp], V_{ce}(sat) I_c[Temp], I_c V_{be}[Temp], C_{ob}, f_T I_c[V_{ce}], V_{be}(sat) I_c[Temp]$

Simulation Range

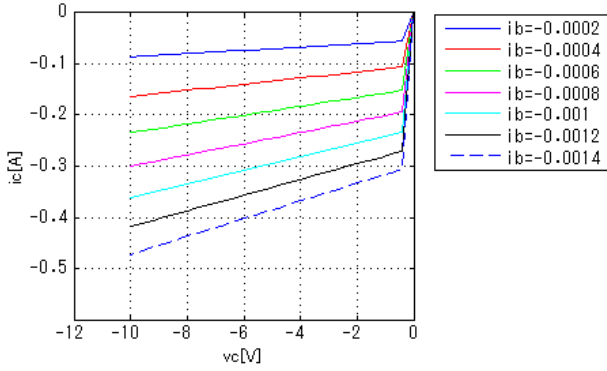
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

| Item | Range | | | Unit |
|--------------------------------|-------|----|--------|-------|
| | Min. | | Max. | |
| Collector-emitter voltage (DC) | 0 | to | -10 | V |
| Base current (DC) | 0 | to | -0.010 | A |
| Temperature | -55 | to | 150 | deg C |

Simulation results are following.
 Explanatory notes — : simulated

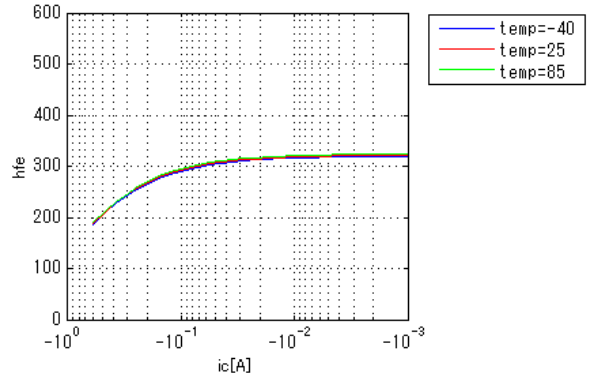
IcVce[ib]

Temp. = 25deg C



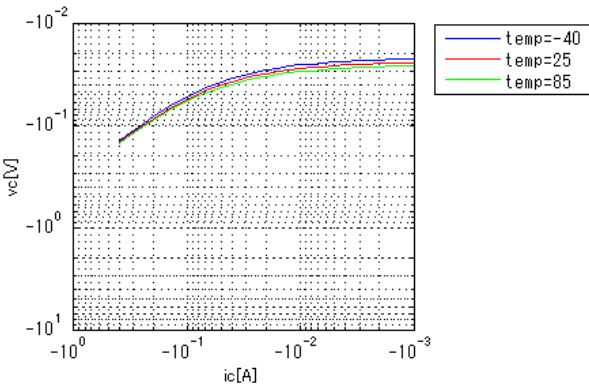
hFEIc[Temp]

Vce = -2V



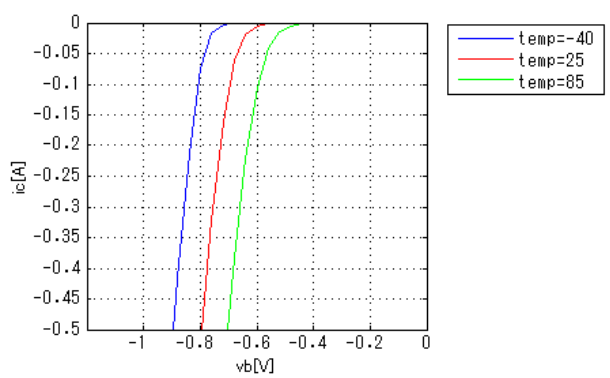
Vce(sat)Ic[Temp]

IC/IB = 50



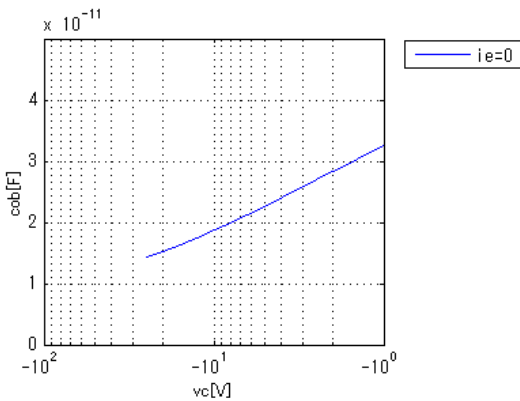
IcVbe[Temp]

Vce = -2V

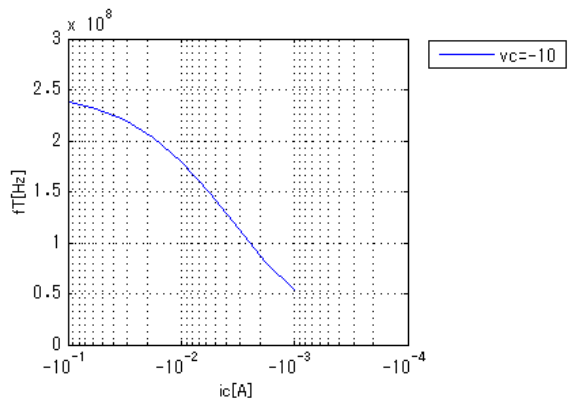


Cob

Freq. = 1MHz



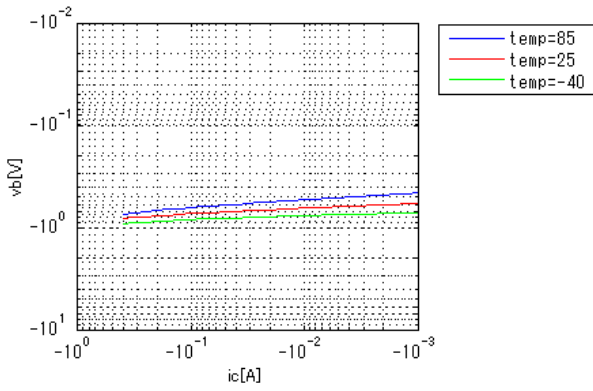
fT Ic[Vce]



Simulation results are following.
Explanatory notes — : simulated

Vbe(sat)Ic[Temp]

IC/IB = 50



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