

LTspice Model

NPN

Isahaya

2SC4154



Model Information

Model Gummel-Poon model
Call Name MDC_2SC4154_LT
Pin Assign 1:C 2:B 3:E
File List Model Library MDC_2SC4154_LT00.lib
 Model Report MDC_2SC4154_LT.pdf (this file)

Verified Simulator Version LTspice version XVII
Note

References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version None
- Product name 2SC4154
- Company name Isahaya Electronics Corporation
- Characteristics $I_c V_{ce}[I_b], h_{FE} I_c[Temp], V_{ce(sat)} I_c[Temp], I_c V_{be}[Temp], I_b V_{be}[Temp], C_{ob}, f_{T} I_c[V_{ce}]$

Simulation Range

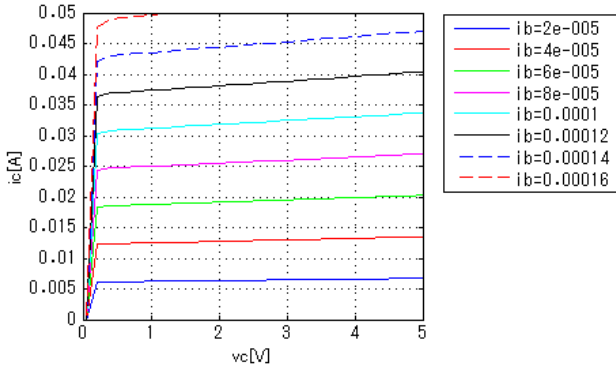
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	50	V
Base current (DC)	0	to	20	A
Temperature	-55	to	150	deg C

Simulation results are following.
 Explanatory notes — : simulated

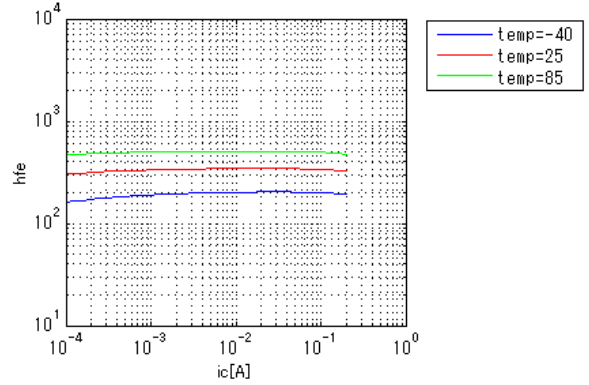
IcVce[ib]

Temp. = 25deg C



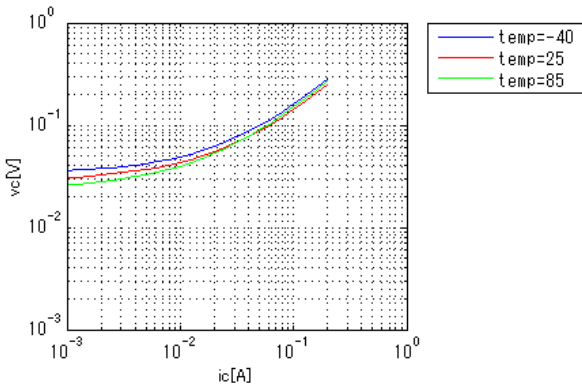
hFEIc[Temp]

Vce = 6V



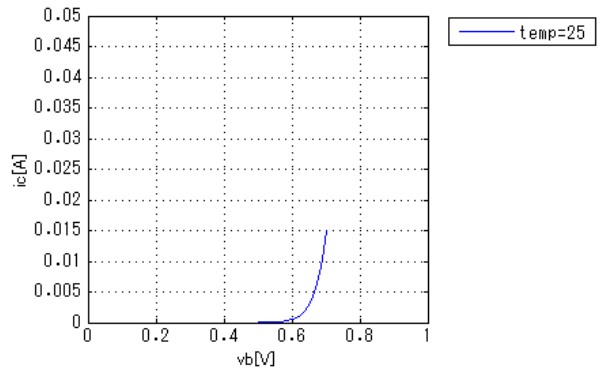
Vce(sat)Ic[Temp]

IC/IB = 10



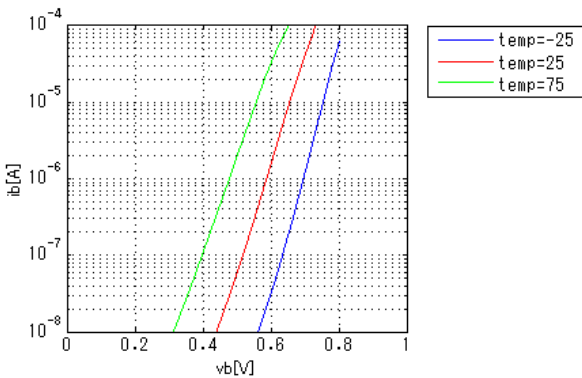
IcVbe[Temp]

Vce = 6V



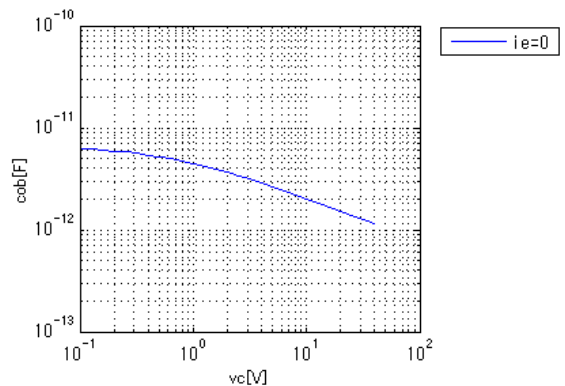
IbVbe[Temp]

Vce = 6V



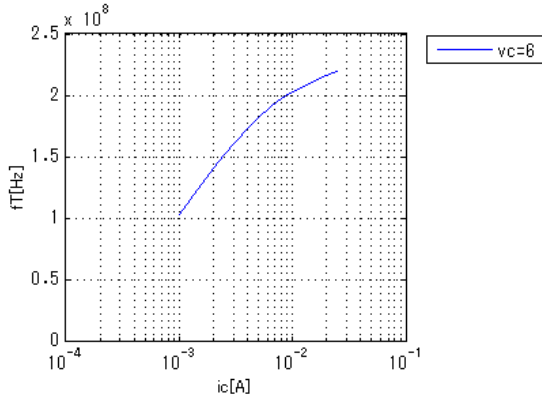
Cob

Freq. = 1MHz



Simulation results are following.
 Explanatory notes — : simulated

fT_{lc}[Vce]



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