

LTspice Model

NPN

RENESAS

2SD1615



Model Information

Model Mextram model
Call Name MDC_2SD1615_LT
Pin Assign 1:C 2:B 3:E
File List Model Library MDC_2SD1615_LT01.lib
 Model Report MDC_2SD1615_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 March 2006
- Product name 2SD1615
- Company name Renesas Electronics Corporation
- Characteristics $I_c[V_{ce}[ib], h_{FE}I_c[Temp], V_{be}(sat)I_c[Temp], V_{ce}(sat)I_c[Temp], f_T I_c[V_{ce}], C_{ob}$

Simulation Range

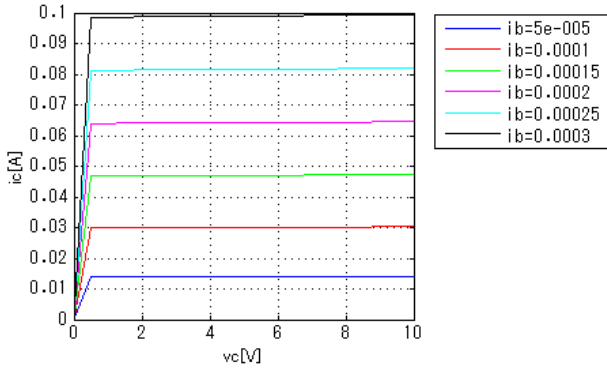
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	50	V
Base current (DC)	0	to	0.05	A
Temperature	-55	to	150	deg C

Simulation results are following.
 Explanatory notes — : simulated

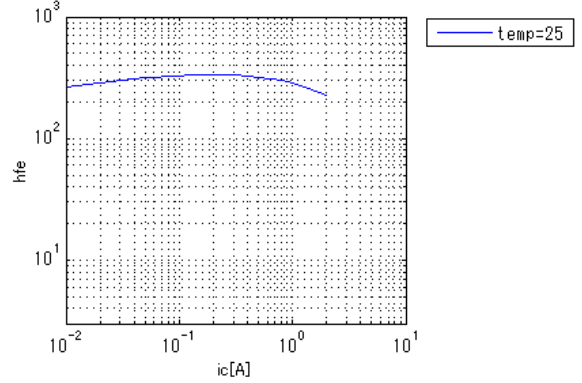
IcVce[ib]

Temp. = 25deg C



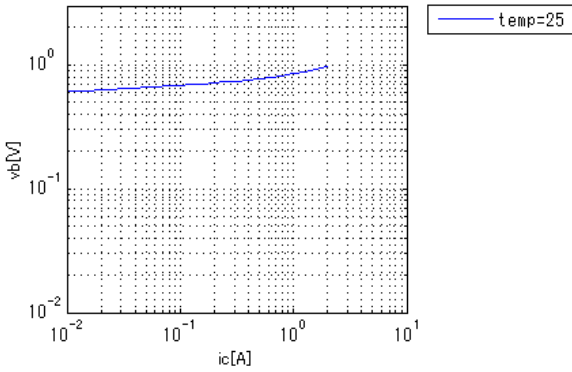
hFEIc[Temp]

Vce = 2V



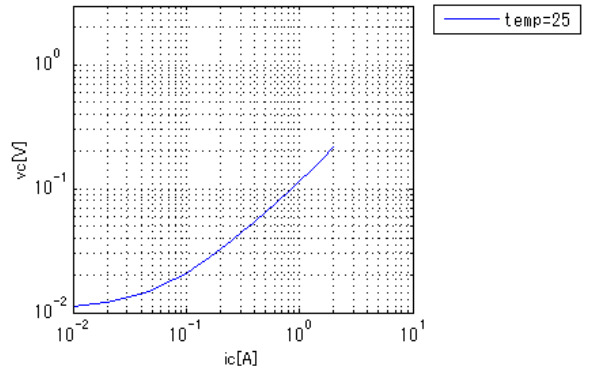
Vbe(sat)Ic[Temp]

IC/IB = 20

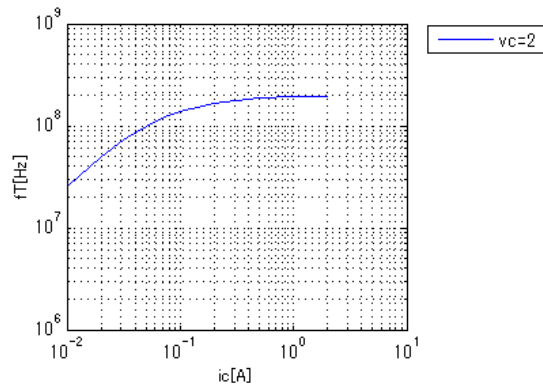


Vce(sat)Ic[Temp]

IC/IB = 20

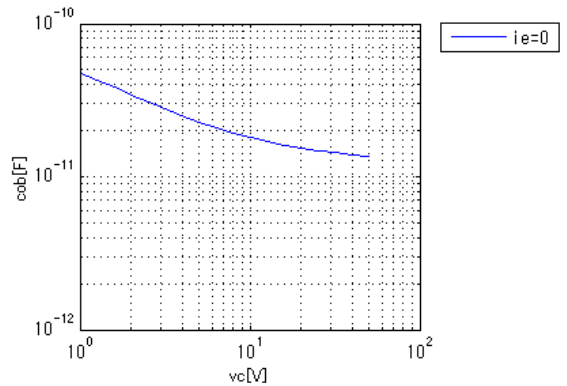


fT[Ic[Vce]]



Cob

Freq. = 1MHz



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