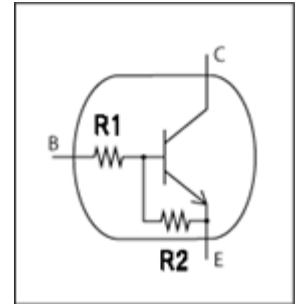


ADS Model BRT (Bias Resistor Transistor) Isahaya RT1N14HC



Model Information

Model A macro model based on Gummel-Poon model
Call Name MDC_RT1N14HC_AD
Pin Assign 1:B 2:E 3:C
File List Model Library MDC_RT1N14HC_AD.zip
 Model Report MDC_RT1N14HC_AD.pdf (this file)

Verified Simulator Version ADS version 2016
Note

References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version 2016.11
- Product name RT1N14HC
- Company name Isahaya Electronics Corporation
- Characteristics HFEICTEMP,VIONICTEMP,ICVIOFFTEMP,VCESATICTEM P,FTIEVCE

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
R1	10	to	10	kOhm
R2	5	to	5	kOhm
Temperature	-55	to	150	deg C

BRT

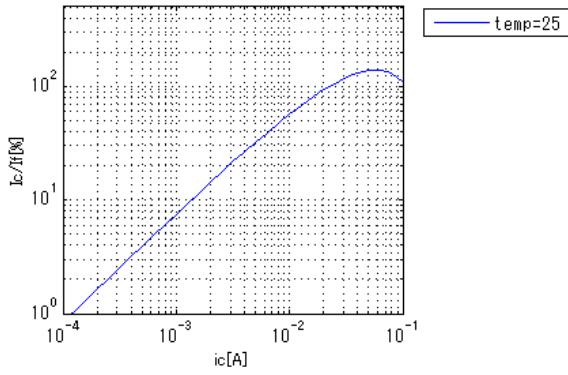
○ : Implemented
× : Not Implemented
— : Not applicable

Model Functions Table
RANK=1

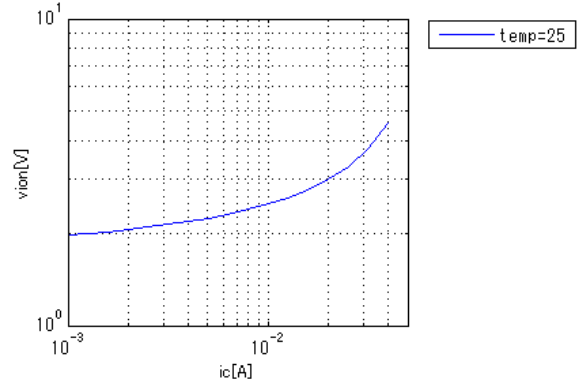
Functions	RANK	Implemented
VIN(on)-Iout(Temp)	1	○
Iout-VIN(off)(Temp)	1	○
Iout-Vo-Iin	1	—
DC_Current_Gain-Iout	1	○
VOOUT(on)-Iout(Temp)	1	—
VOOUT(sat)-Iin(Temp)	1	○
Capacitance	1	—
Transition Frequency	1	○
Switching(Typ.)	1	—

Simulation results are following.
 Explanatory notes — : simulated

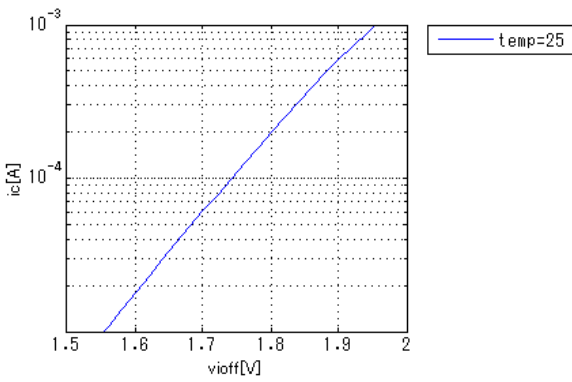
HFEICTEMP



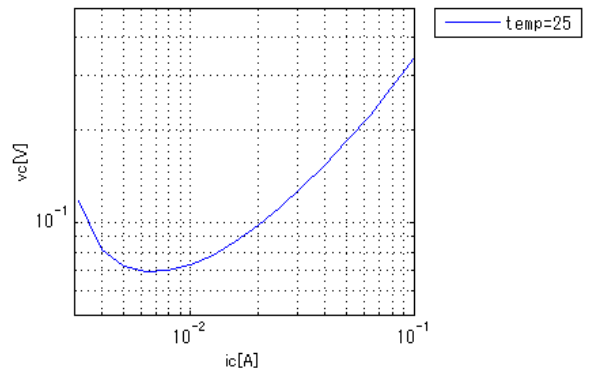
VIONICTEMP



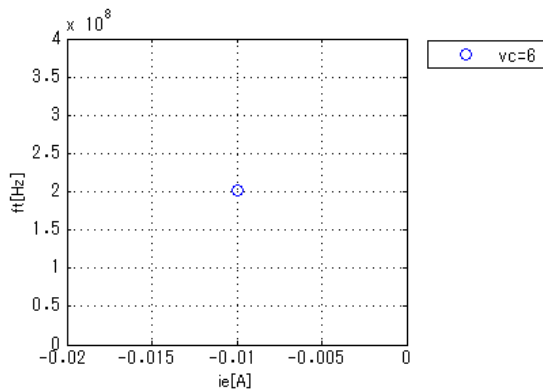
ICVIOFFTEMP



VCESATICTEMP



FTIEVCE



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