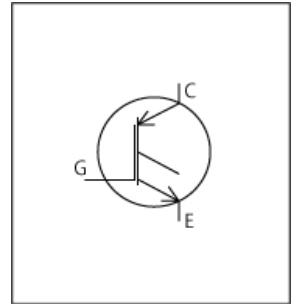


LTspice Model

Nch IGBT

RENESAS

RJH65T04BDPM-A0



Model Information

Model An original macro model based on BSIM3 and Gummel-Poon model
Call Name MDC_RJH65T04BDPM-A0_LT
Pin Assign 1:G 2:C 3:E
File List Model Library MDC_RJH65T04BDPM-A0_LT01.lib
 Model Report MDC_RJH65T04BDPM-A0_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 Jul 14, 2016
- Product name RJH65T04BDPM-A0
- Company name Renesas Electronics Corporation
- Characteristics IcVge[Temp],IcVce[Vge],Vce(sat)Vge[Ic],Vce(sat)Temp[Ic], VthTemp[Ic],Cies,Coes,Cres,VgeQg[Vcc],VceQg[Vcc], IfVf[Temp],Transient

Simulation Range

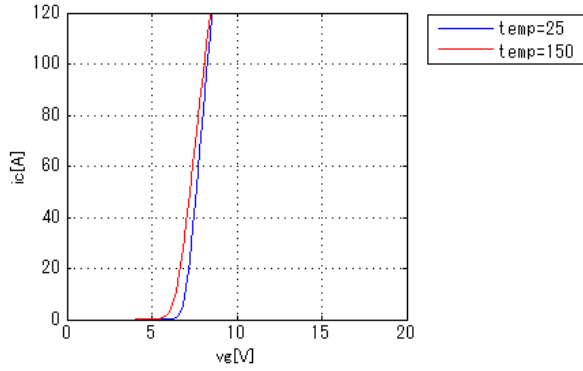
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Collector-emitter voltage (DC)	0	to	650	V
Gate-emitter voltage (DC)	0	to	30	V
Temperature	-55	to	150	deg C

Simulation results are following.
 Explanatory notes — : simulated

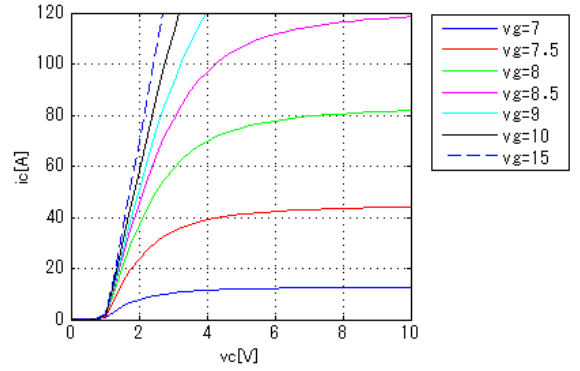
IcVge[Temp]

Vce = 10V



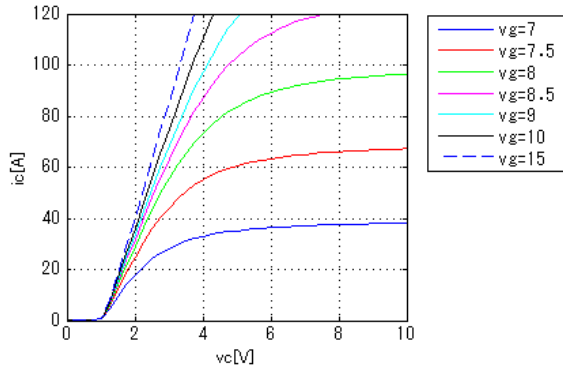
IcVce[Vge]

Temp. = 25deg C



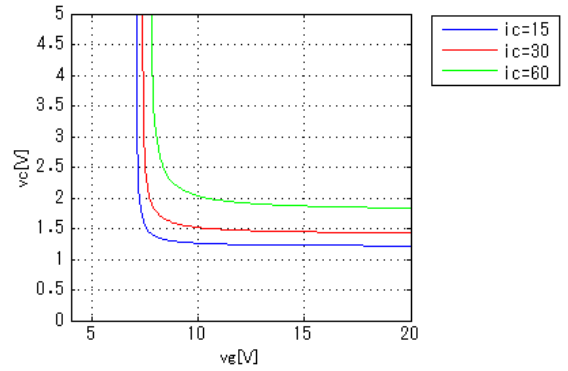
IcVce[Vge]

Temp. = 150deg C



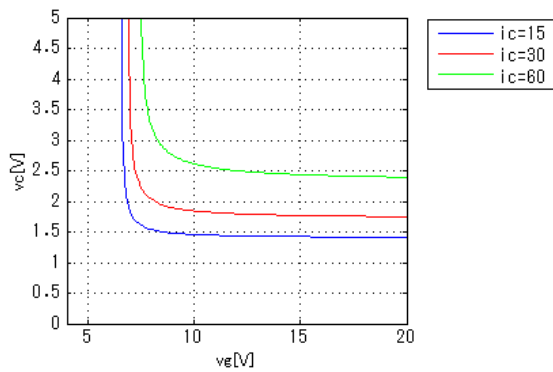
Vce(sat)Vge[Ic]

Temp. = 25deg C



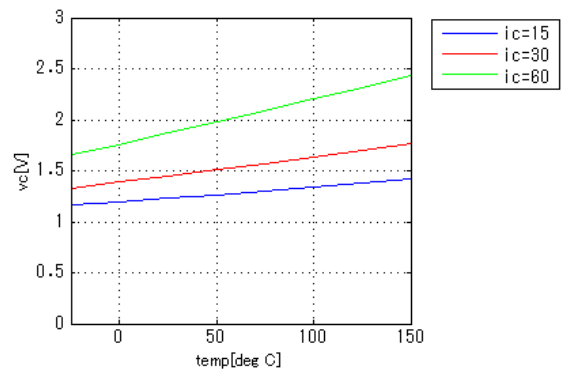
Vce(sat)Vge[Ic]

Temp. = 150deg C



Vce(sat)Temp[Ic]

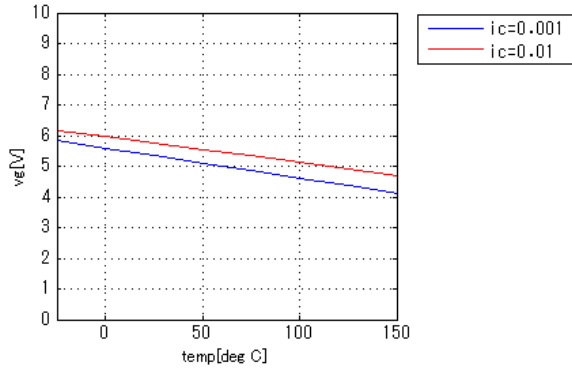
Vge = 15V



Simulation results are following.
 Explanatory notes — : simulated

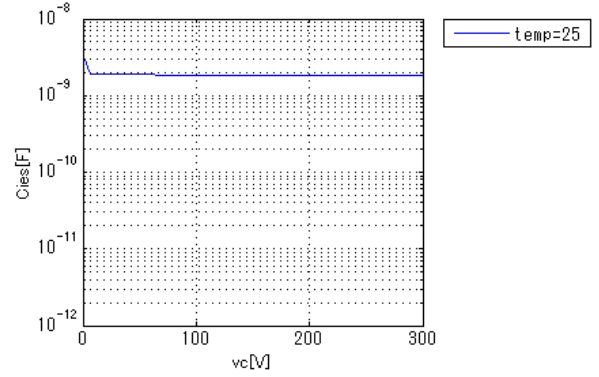
VthTemp[Ic]

Vce = 10V



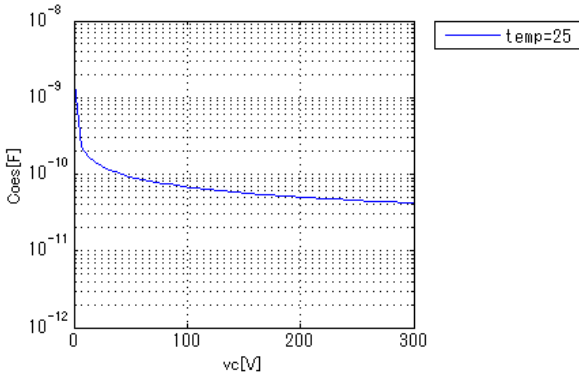
Cies

Freq. = 1MHz



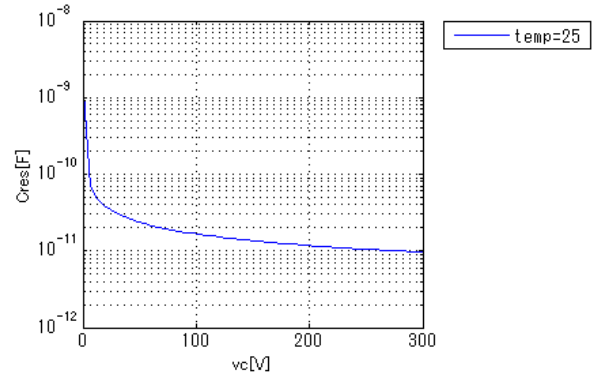
Coes

Freq. = 1MHz



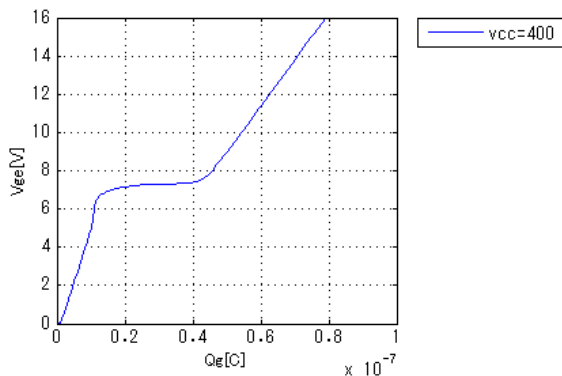
Cres

Freq. = 1MHz



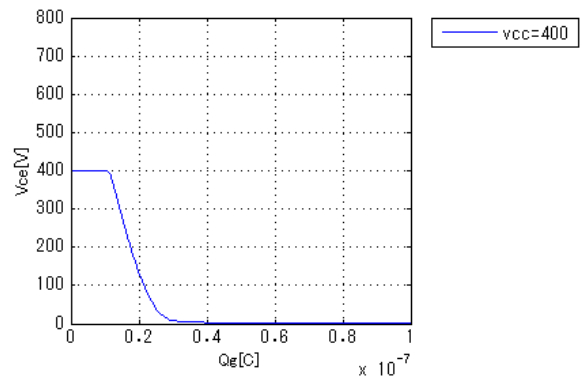
VgeQg[Vcc]

Ic = 30A



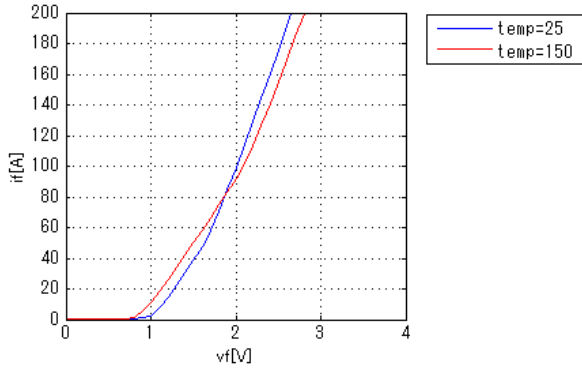
VceQg[Vcc]

Ic = 30A

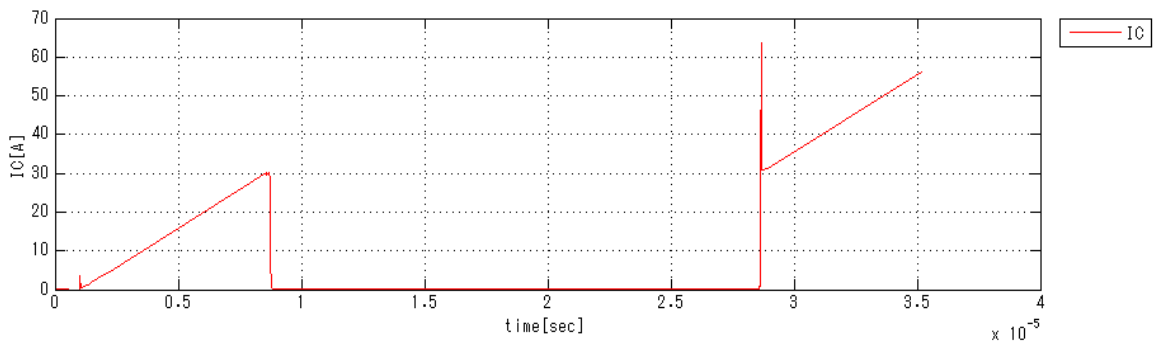
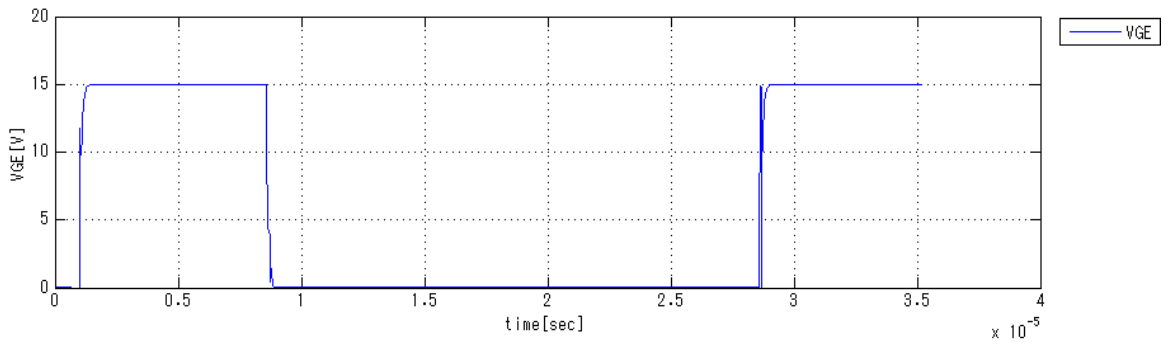


Simulation results are following.
 Explanatory notes — : simulated

IfVf[Temp]



Transient



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