

PSpice Model

NMOS

RENESAS

RJK0305DPB-02



Model Information

Model A macro model based on BSIM3 model
Call Name MDC_RJK0305DPB-02_PS
Pin Assign 1:D 2:G 3:S
File List Model Library MDC_RJK0305DPB-02_PS01.lib
 Model Report MDC_RJK0305DPB-02_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 Rev.9.01
- Product name RJK0305DPB-02
- Company name Renesas Electronics Corporation
- Characteristics IdVgs[Temp], IdVds[Vgs], Rds(on)Id[Vgs], Crss, Coss, Ciss, VgsQg[Vdd], VdsVgs[Id], Rds(on)Temp[Id], VdsQg[Vdd], IsVsd[Vgs]

Simulation Range

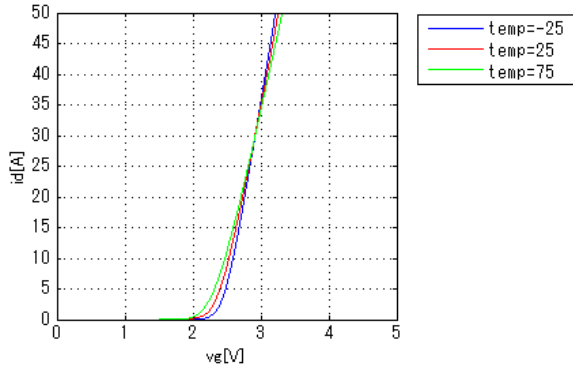
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Drain-source voltage (DC)	0	to	30	V
Gate-source voltage (DC)	0	to	16	V
Temperature	-55	to	150	deg C

Simulation results are following.
 Explanatory notes — : simulated

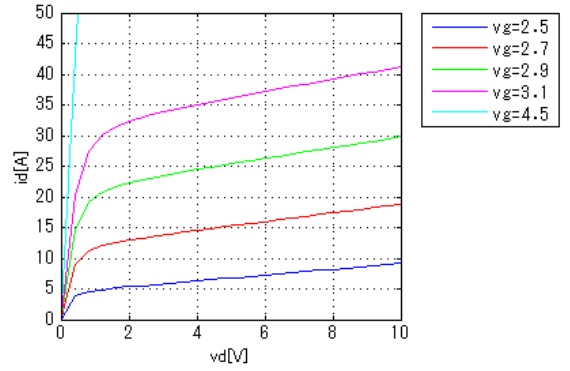
IdVgs[Temp]

Vds = 10V

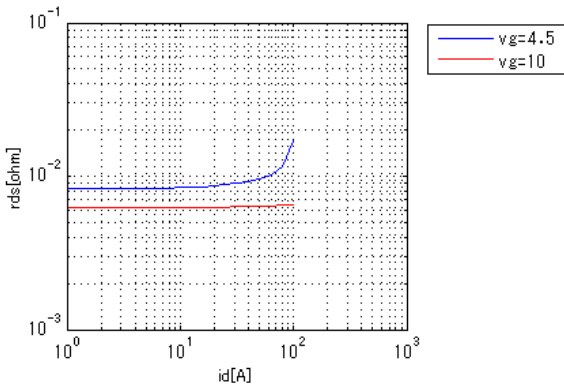


IdVds[Vgs]

Temp. = 25deg C

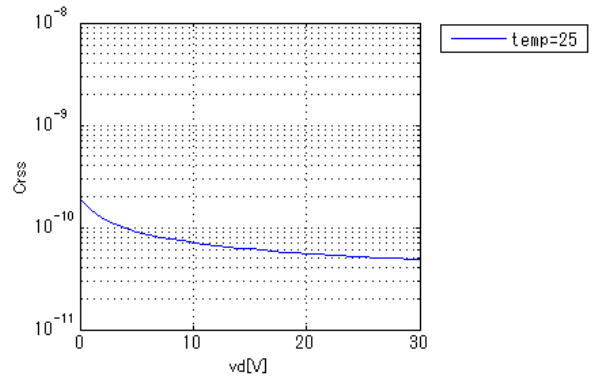


Rds(on)Id[Vgs]



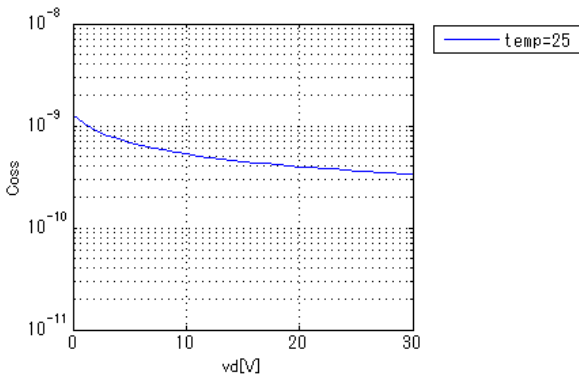
Crss

Freq. = 1MHz



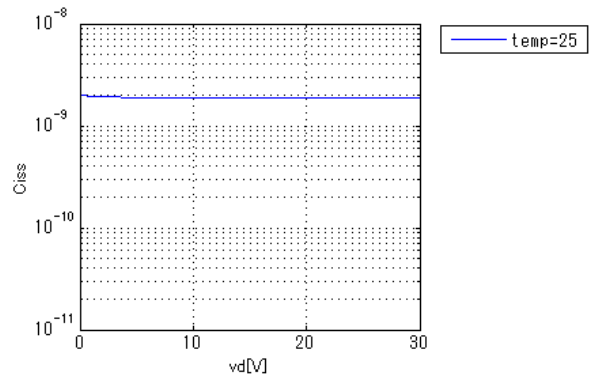
Coss

Freq. = 1MHz



Ciss

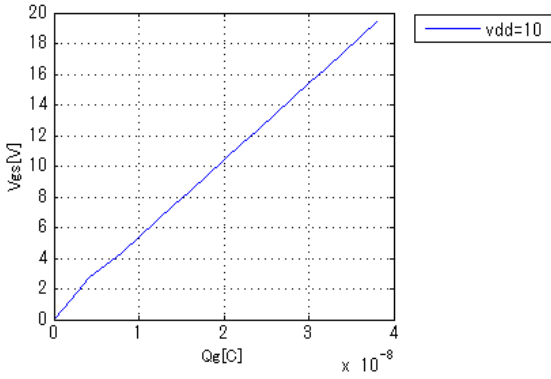
Freq. = 1MHz



Simulation results are following.
 Explanatory notes — : simulated

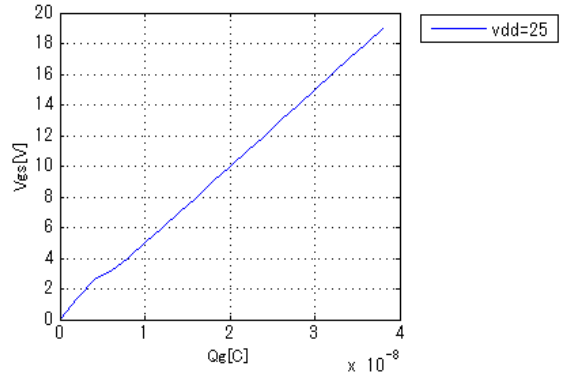
VgsQg[Vdd]

Id = 30A

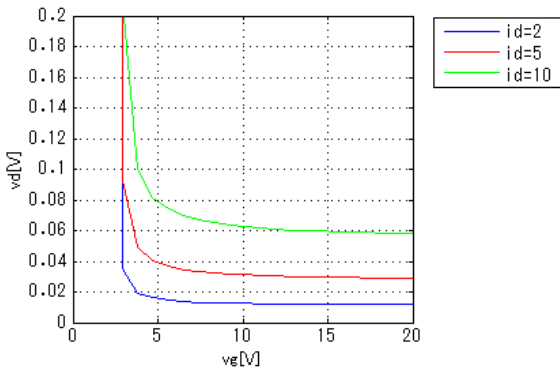


VgsQg[Vdd]

Id = 30A

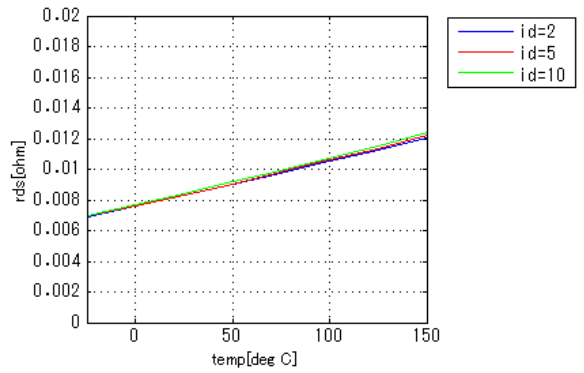


VdsVgs[Id]



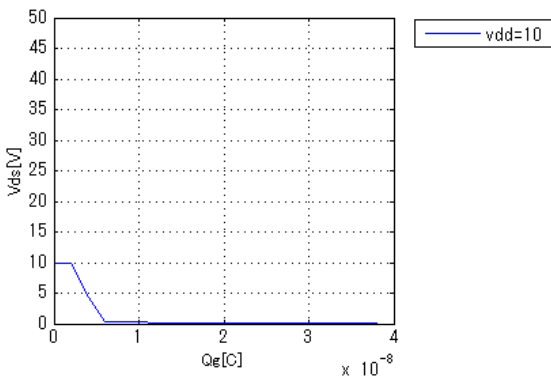
Rds(on)Temp[Id]

Vgs = 4.5V



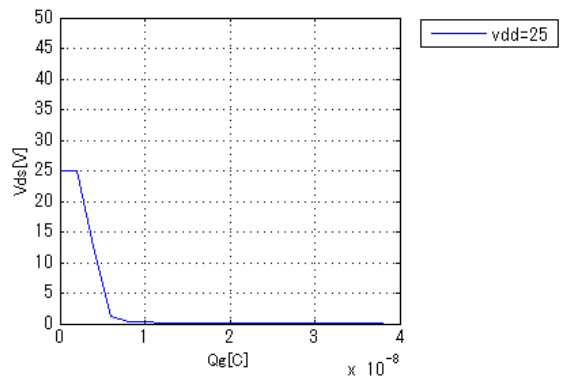
VdsQg[Vdd]

Id = 30A



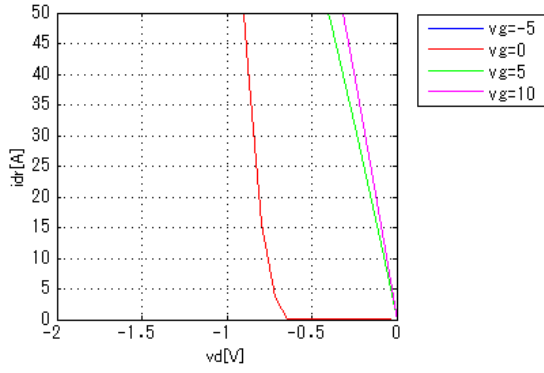
VdsQg[Vdd]

Id = 30A



Simulation results are following.
Explanatory notes — : simulated

IsVsd[Vgs]



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