

PSpice Model

NMOS

Infineon

IPW65R080CFDA



Model Information

Model A macro model based on BSIM3 model
Call Name MDC_IPW65R080CFDA_PS
Pin Assign 1:G 2:D 3:S
File List Model Library MDC_IPW65R080CFDA_PS02.lib
 Model Report MDC_IPW65R080CFDA_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. 2.1
- Product name IPW65R080CFDA
- Company name Infineon Technologies AG
- Characteristics IdVds[Vgs],Rds(on)Id[Vgs],Rds(on)Temp[Id],IdVgs[Temp],Vg sQg[Vdd],IsVsd[Temp],Ciss,Coss,Crss,tdon,tdoff,tf,tr

Simulation Range

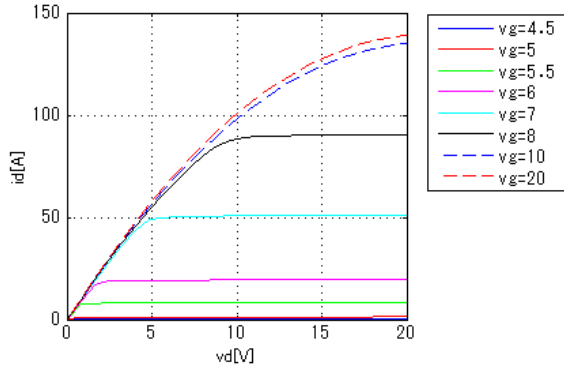
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Drain-source voltage (DC)	0	to	650	V
Gate-source voltage (DC)	0	to	20	V
Temperature	-40	to	150	deg C

Simulation results are following.
 Explanatory notes — : simulated

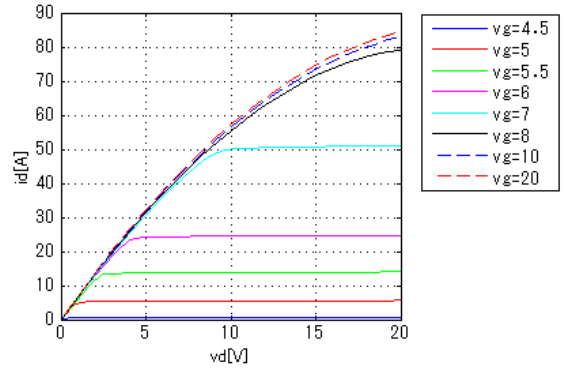
IdVds[Vgs]

Temp. = 25deg C

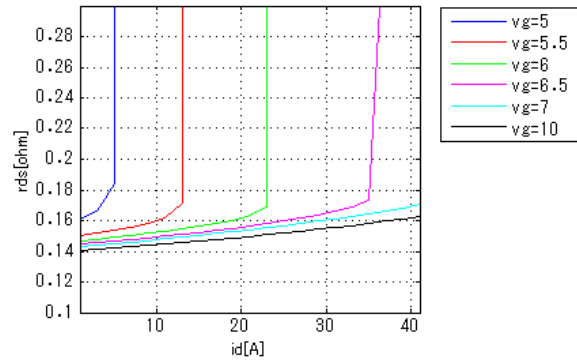


IdVds[Vgs]

Temp. = 125deg C

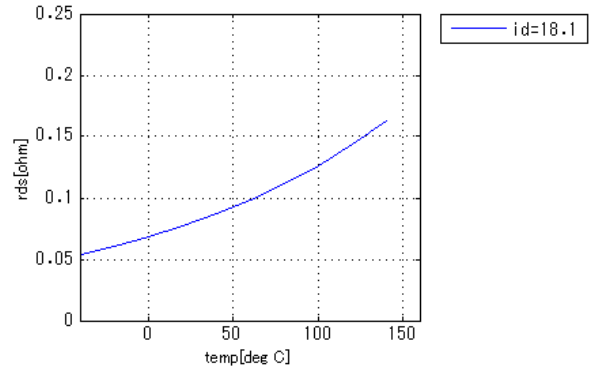


Rds(on)Id[Vgs]



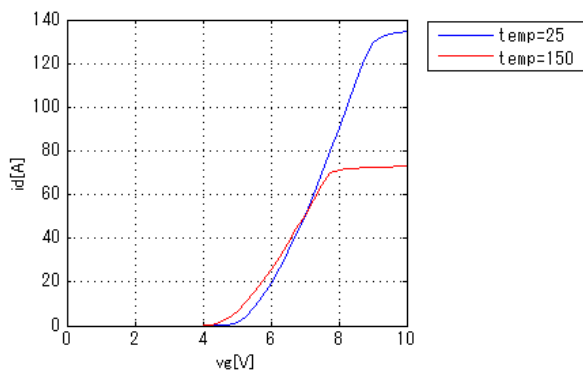
Rds(on)Temp[Id]

$V_{gs} = 10V$



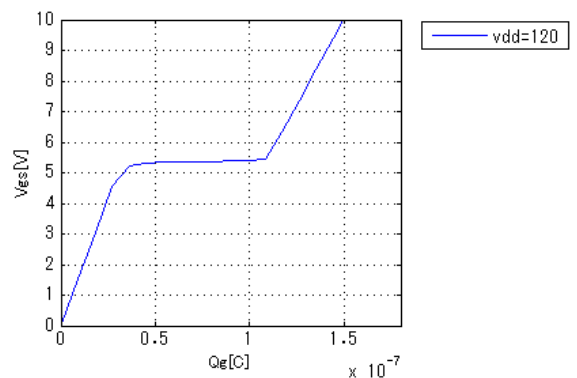
IdVgs[Temp]

$V_{ds} = 20V$



VgsQg[Vdd]

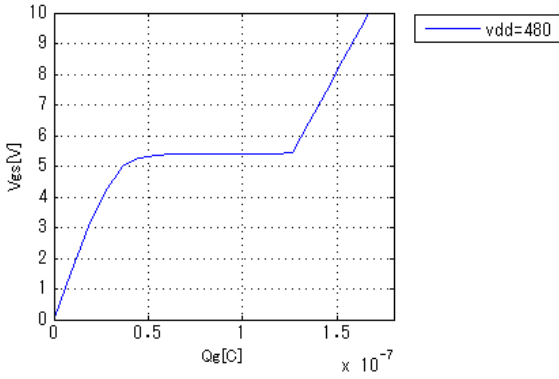
$I_d = 6.5A$



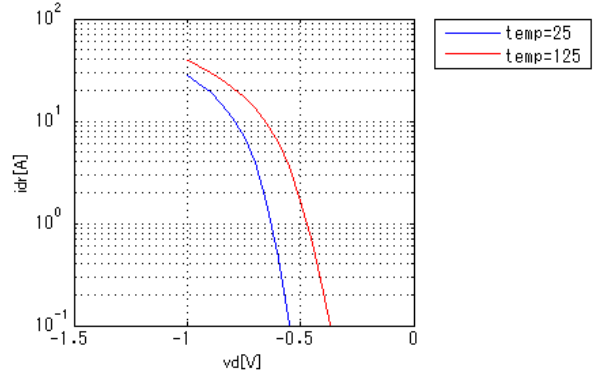
Simulation results are following.
 Explanatory notes — : simulated

VgsQg[Vdd]

Id = 6.5A

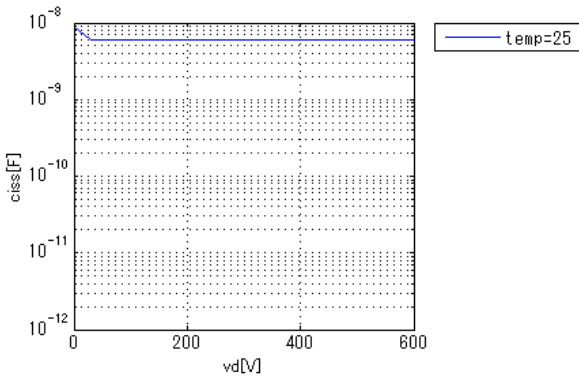


IsVsd[Temp]



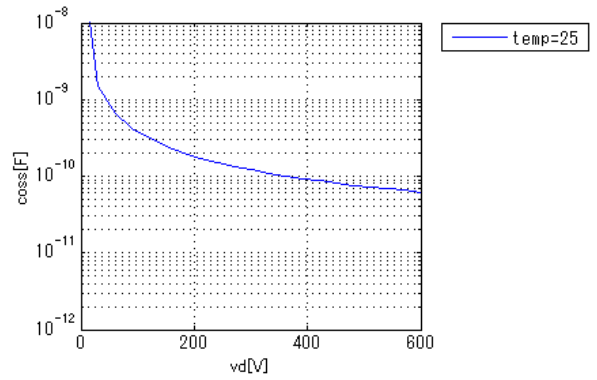
Ciss

Freq. = 1MHz



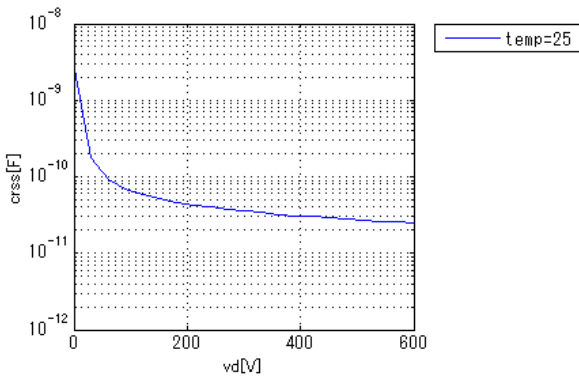
Coss

Freq. = 1MHz



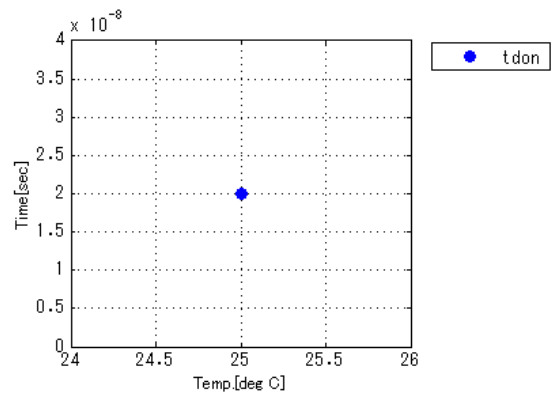
Crss

Freq. = 1MHz



tdon

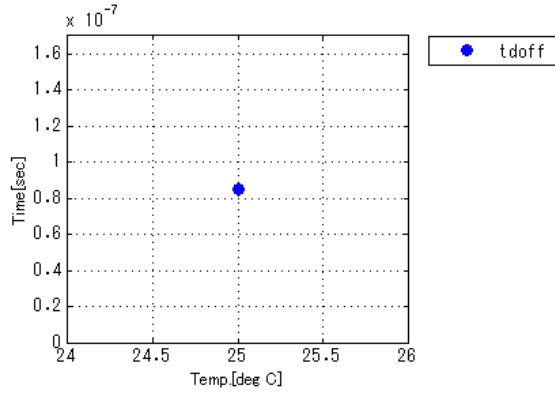
Vdd = 400V, Id = 26.3A, +Vg = 13V, -Vg = 0V, Rg = 1.8ohm



Simulation results are following.
 Explanatory notes — : simulated

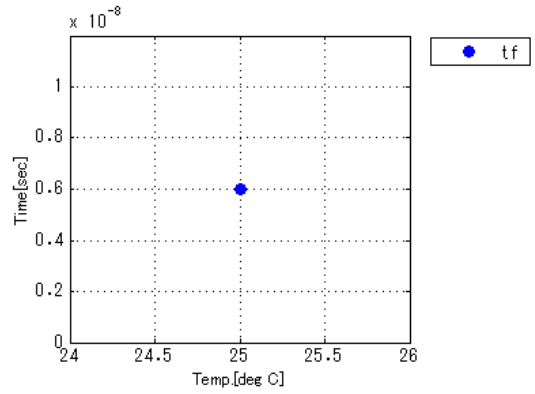
tdoff

Vdd = 400V, Id = 26.3A, +Vg = 13V, -Vg = 0V, Rg = 1.8ohm



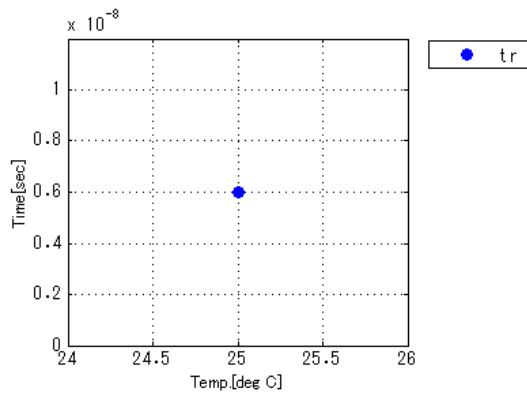
tf

Vdd = 400V, Id = 26.3A, +Vg = 13V, -Vg = 0V, Rg = 1.8ohm



tr

Vdd = 400V, Id = 26.3A, +Vg = 13V, -Vg = 0V, Rg = 1.8ohm



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