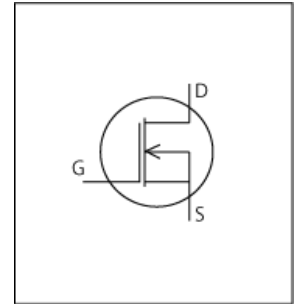


PSpice Model

NMOS

Infineon

IPT059N15N3



Model Information

Model A macro model based on BSIM3 model
Call Name MDC_IPT059N15N3_PS
Pin Assign 1:G 2:S 3:S 4:S 5:S 6:S 7:S 8:S 9:Tab
File List Model Library MDC_IPT059N15N3_PS01.lib
 Model Report MDC_IPT059N15N3_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. 2.2
- Product name IPT059N15N3
- Company name Infineon Technologies AG
- Characteristics IdVds[Vgs],Rds(on)Id[Vgs],IdVgs[Temp],VthTemp[Id],
Rds(on)Temp[Id],Ciss,Coss,Crss,IsVsd[Temp],VgsQg[Vdd],
tdon,tdoff,tf,tr

Simulation Range

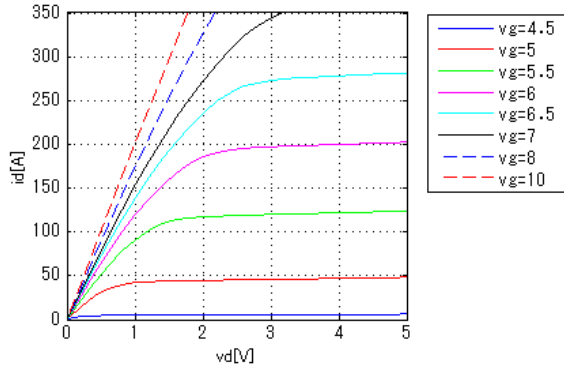
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Drain-source voltage (DC)	0	to	150	V
Gate-source voltage (DC)	0	to	20	V
Temperature	-55	to	175	deg C

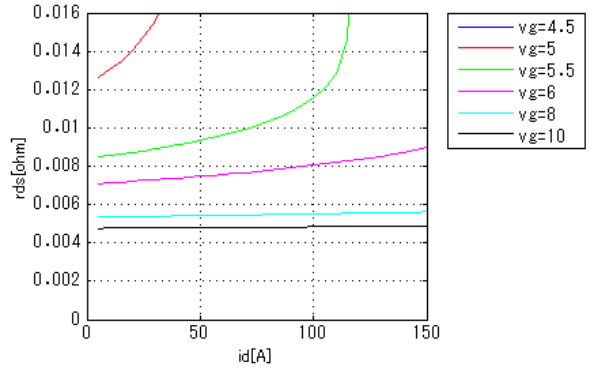
Simulation results are following.
 Explanatory notes — : simulated

IdVds[Vgs]

Temp. = 25deg C

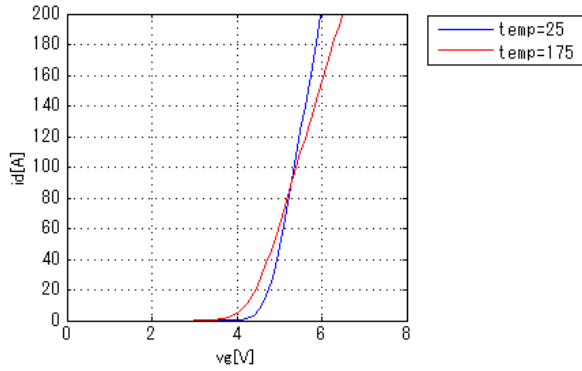


Rds(on)Id[Vgs]



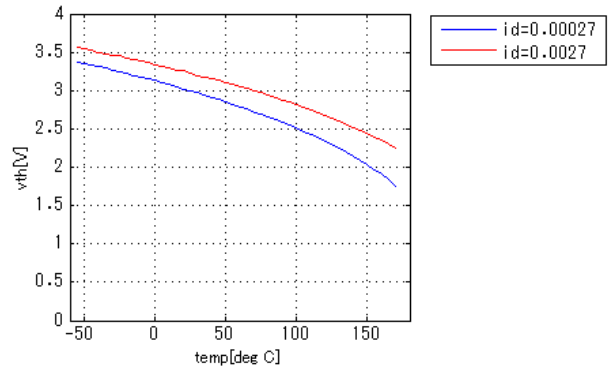
IdVgs[Temp]

Vds = 5V



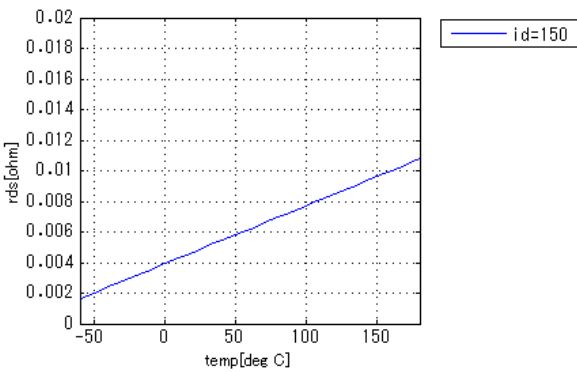
VthTemp[Id]

Vd = Vg



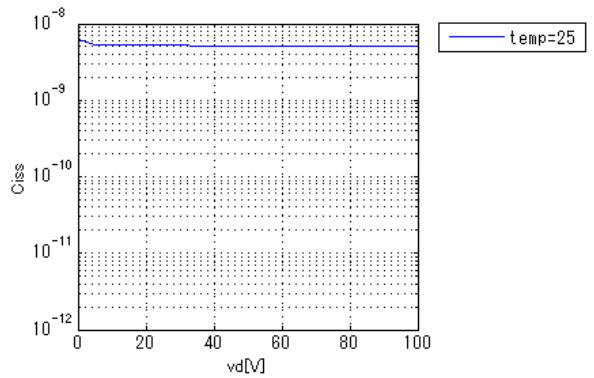
Rds(on)Temp[Id]

Vgs = 10V



Ciss

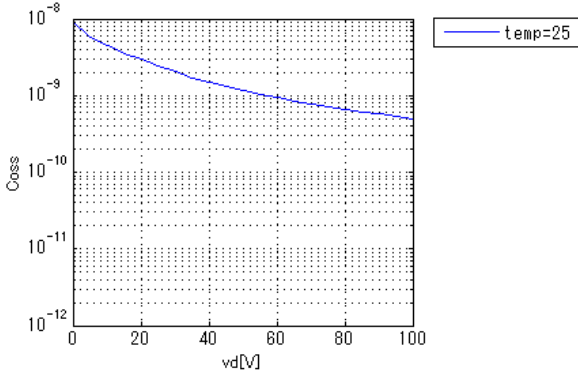
Freq. = 1MHz



Simulation results are following.
 Explanatory notes — : simulated

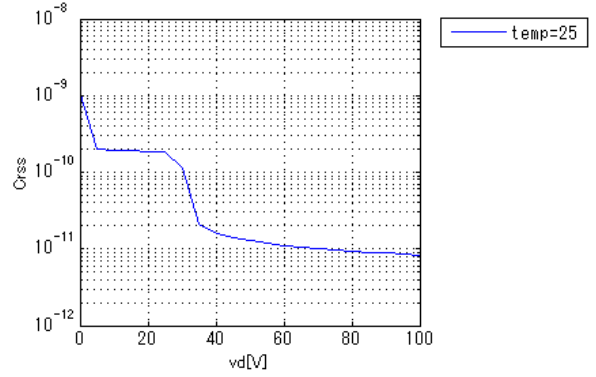
Coss

Freq. = 1MHz

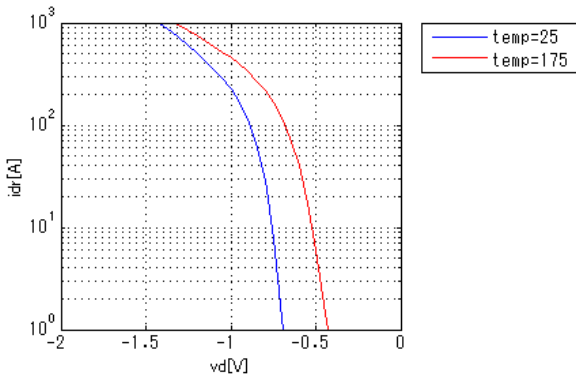


Crss

Freq. = 1MHz

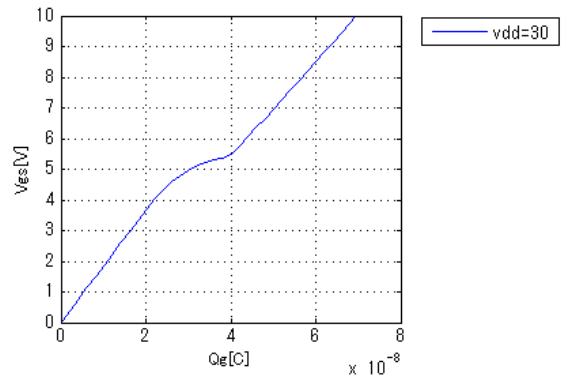


IsVsd[Temp]



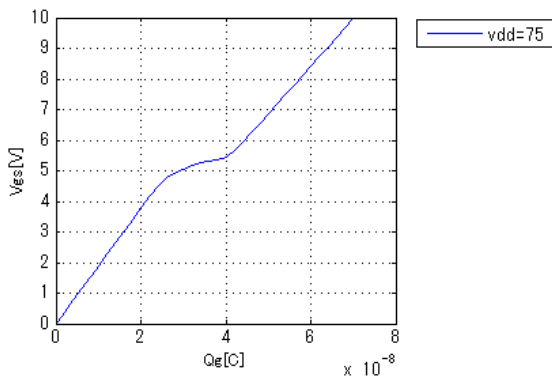
VgsQg[Vdd]

Id = 100A



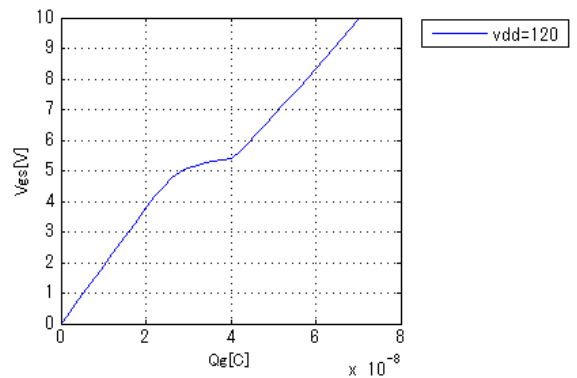
VgsQg[Vdd]

Id = 100A



VgsQg[Vdd]

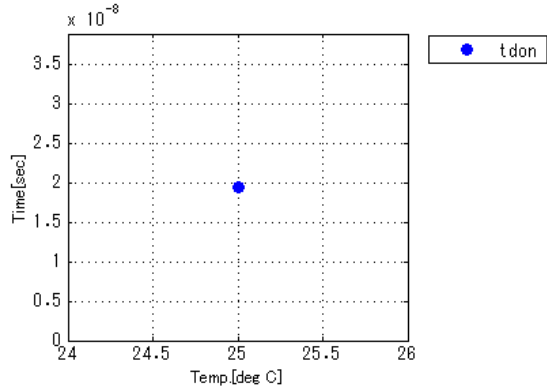
Id = 100A



Simulation results are following.
 Explanatory notes — : simulated

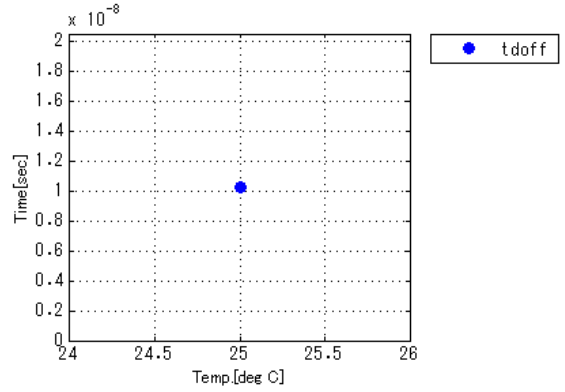
tdon

Vdd = 75V, Id = 100A, +Vg = 10V, -Vg = 0V, Rg = 1.6ohm



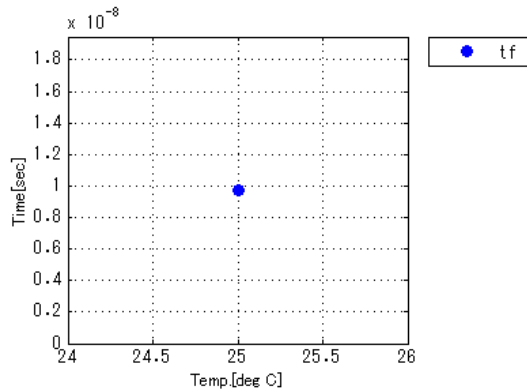
tdoff

Vdd = 75V, Id = 100A, +Vg = 10V, -Vg = 0V, Rg = 1.6ohm



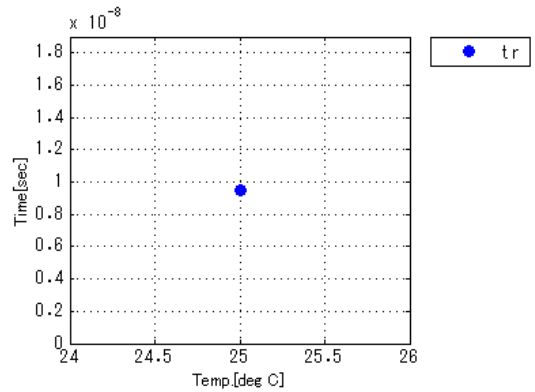
tf

Vdd = 75V, Id = 100A, +Vg = 10V, -Vg = 0V, Rg = 1.6ohm



tr

Vdd = 75V, Id = 100A, +Vg = 10V, -Vg = 0V, Rg = 1.6ohm



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