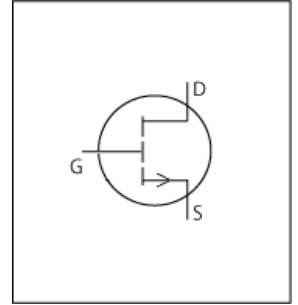


PSpice Model

GaN

Innoscence

INN150LA070A



Model Information

Model A macro model based on BSIM3 model
Call Name MDC_INN150LA070A_PS
Pin Assign 1:S 2:D 3:G
File List Model Library MDC_INN150LA070A_PS01.lib
 Model Report MDC_INN150LA070A_PS.pdf (this file)

Verified Simulator Version PSpice version 17.2
Note

References

The information which was used for modeling is as follow :

[Data Sheet]

- Date/Version Unknown
- Product name INN150LA070A
- Company name Innoscence
- Characteristics IdVds[Vgs], IdVds[Vgs]2, Rds(on)Vgs[Id], Rds(on)Vgs[Id]2, NormRds(on)Temp[Id], IdVgs[Temp], IdVds[Vgs]3, IdVds[Vgs]4, IdVds[Vgs]5, IdVds[Vgs]6, CapacitanceVds[Cname], VgsQg[Vdd], NormVthTemp[Id]

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)	-4	to	6	V
Temperature	-40	to	150	deg C

MOSFET

○ : Implemented
× : Not Implemented
— : Not applicable

Model Functions Table

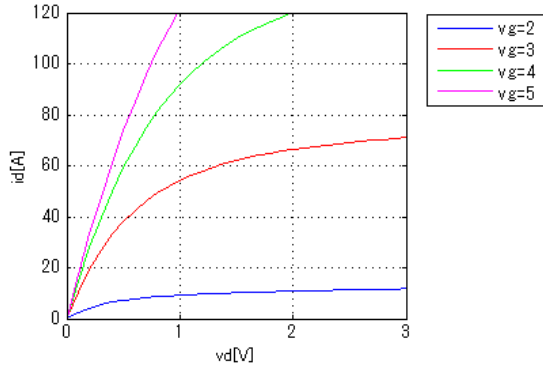
RANK=1

Functions	RANK	Implemented
ID-VDS-VGS	1	○
ID-VGS(Temp)	1	○
RDS(on)	1	○
Capacitance	1	○
Gate Charge	1	○
IS-VSD	1	○
Reverse recovery	1	—
Switching(Typ.)	1	—
Bv	1	—
Yfs	1	—
Vth	1	○

Simulation results are following.
 Explanatory notes — : simulated

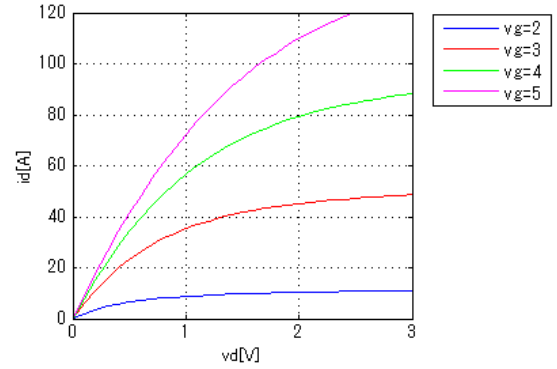
IdVds[Vgs]

Temp = 25degC



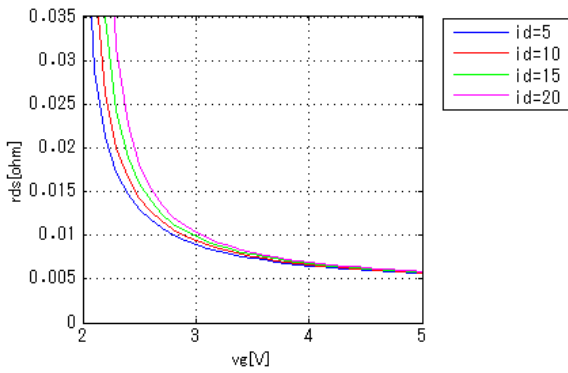
IdVds[Vgs]2

Temp = 125degC



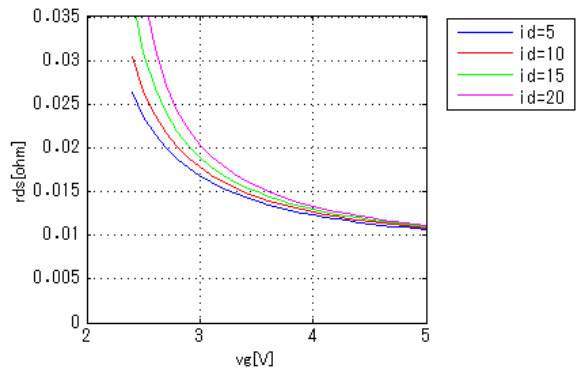
Rds(on)Vgs[Id]

Temp = 25degC



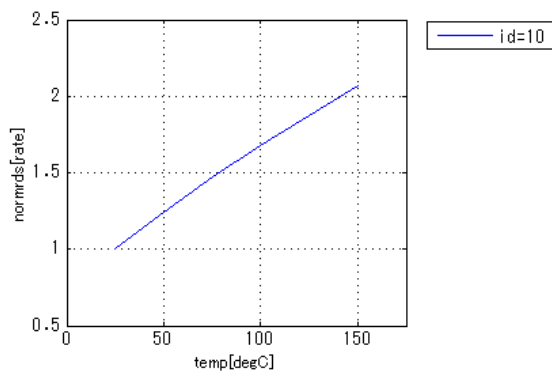
Rds(on)Vgs[Id]2

Temp = 125degC



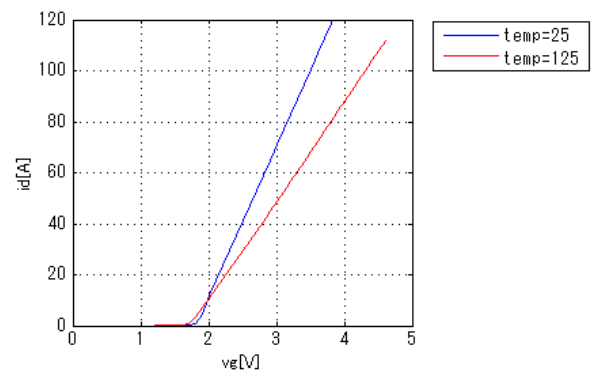
NormRds(on)Temp[Id]

Vgs = 5V



IdVgs[Temp]

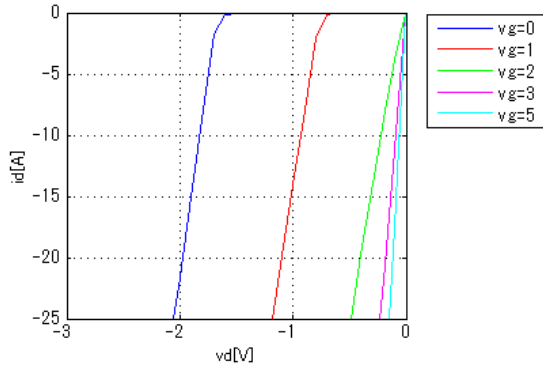
Vds = 3V



Simulation results are following.
 Explanatory notes — : simulated

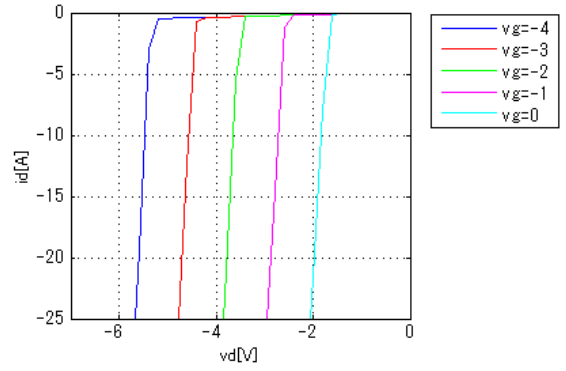
IdVds[Vgs]3

Temp = 25degC



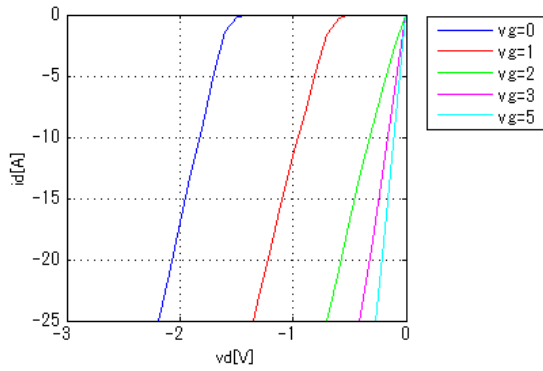
IdVds[Vgs]4

Temp = 25degC



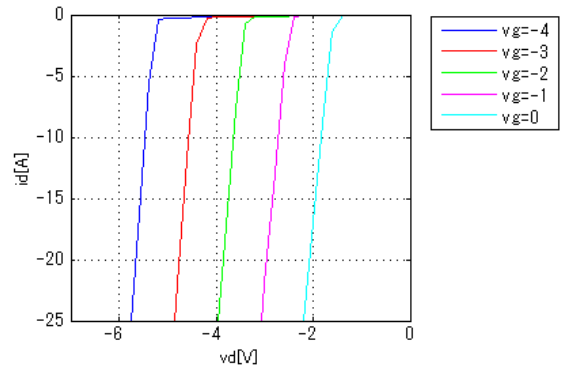
IdVds[Vgs]5

Temp = 125degC



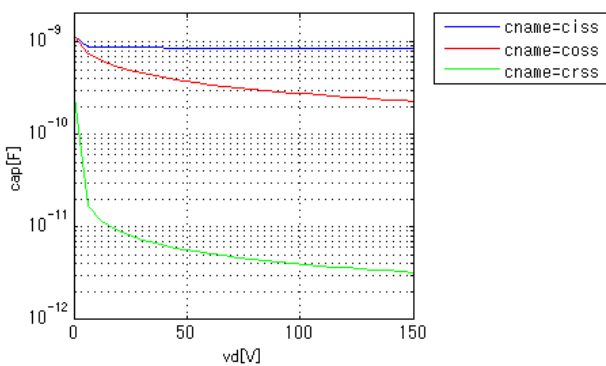
IdVds[Vgs]6

Temp = 125degC



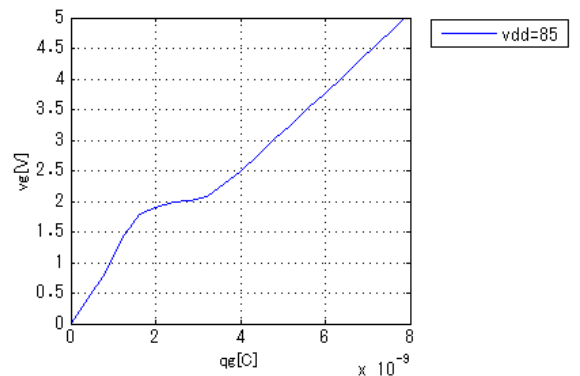
CapacitanceVds[Cname]

freq = 1000000Hz



VgsQg[Vdd]

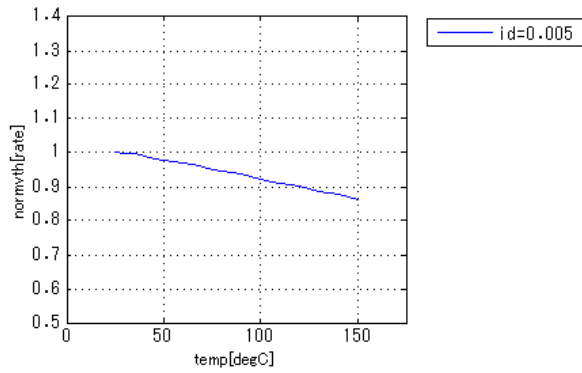
Id = 10A



Simulation results are following.
Explanatory notes — : simulated

NormVthTemp[Id]

Vd = Vg



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