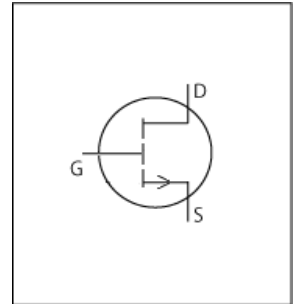


PSpice Model

GaN

Infineon

IGLR60R190D1



Model Information

Model	A macro model based on BSIM3 model		
Call Name	MDC_IGLR60R190D1_PS		
Pin Assign	1:S 2:S 3:S 4:G 5:D		
File List	Model Library	MDC_IGLR60R190D1_PS01.lib	
	Model Report	MDC_IGLR60R190D1_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 Rev.2.1 2022-09-22
- Product name IGLR60R190D1
- Company name Infineon Technologies AG
- Characteristics IdVds[Ig], IdVds[Ig]2, Rds(on)Id[Ig], Rds(on)Temp[Vgs], Rds(on)Temp[Ig], IdVgs[Temp], IdVds[Vgs], IdVds[Vgs]2, IsVsd[Vgs], IsVsd[Vgs]2, VgsQg[Vdd], CapacitanceVds[Cname], Switching Lload[Tname], SwitchingWaveform

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	600	V
Temperature	-40	to	150	deg C

MOSFET

○ : Implemented
× : Not Implemented
— : Not applicable

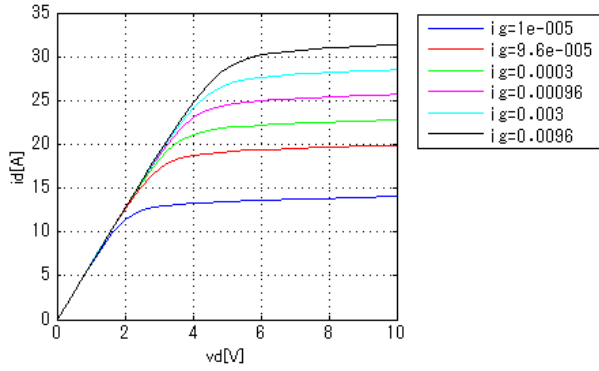
Model Functions Table
RANK=1

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

Simulation results are following.
 Explanatory notes — : simulated

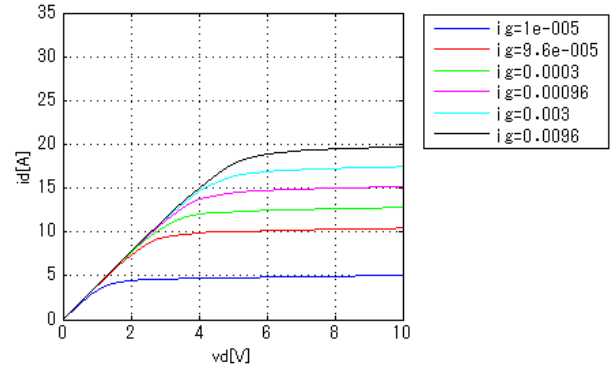
IdVds[Ig]

Temp = 25degC



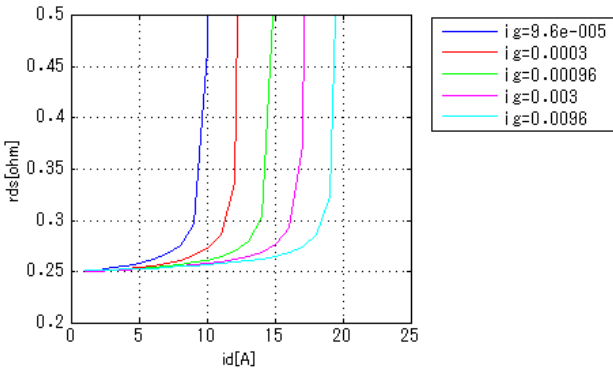
IdVds[Ig]2

Temp = 125degC



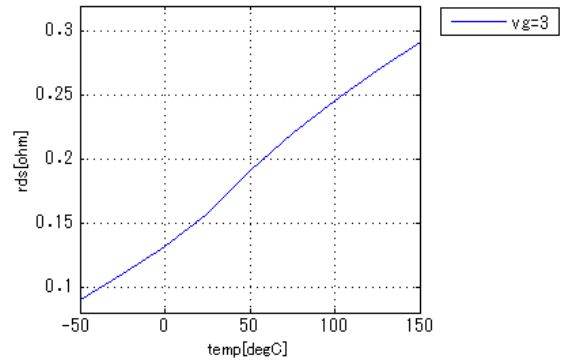
Rds(on)Id[Ig]

Temp = 125degC



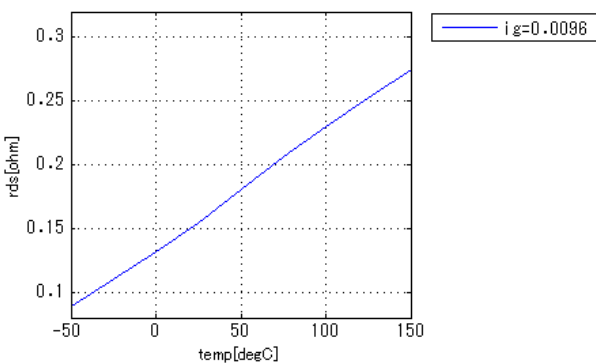
Rds(on)Temp[Vgs]

Id = 5A



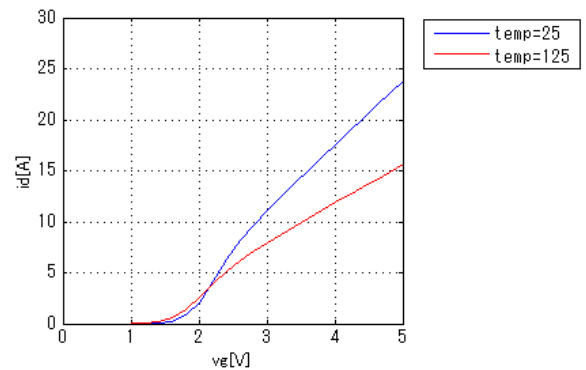
Rds(on)Temp[Ig]

Id = 5A



IdVgs[Temp]

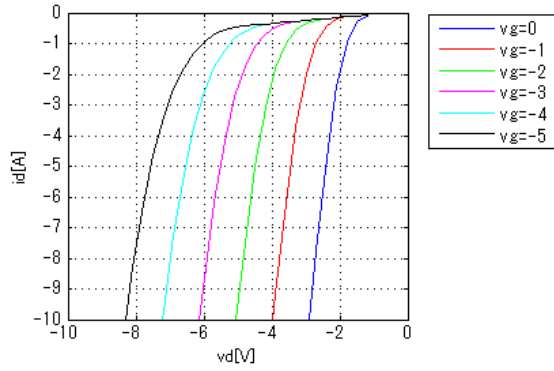
Vds = 8V



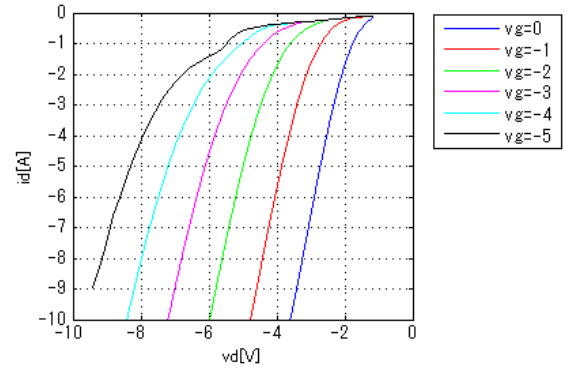
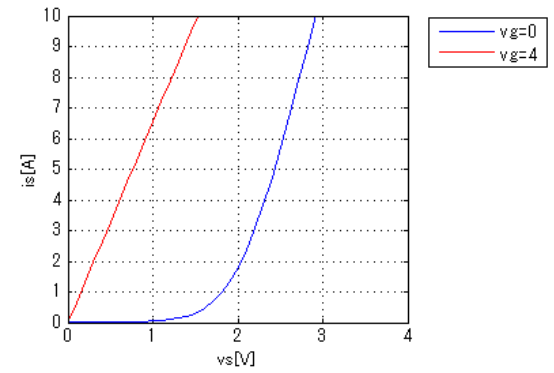
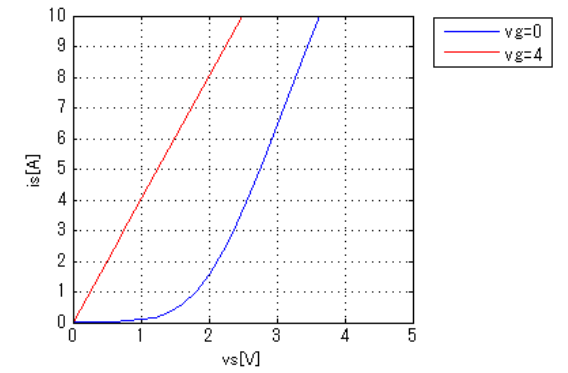
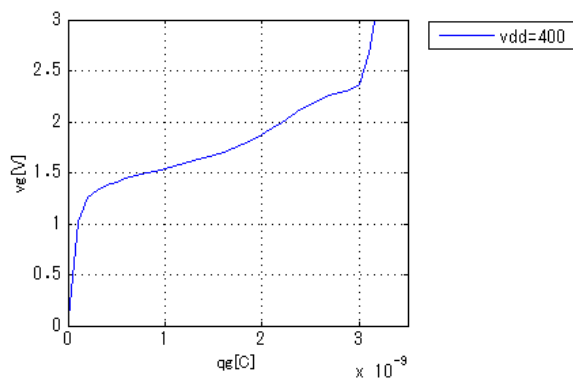
Simulation results are following.
 Explanatory notes — : simulated

IdVds[Vgs]

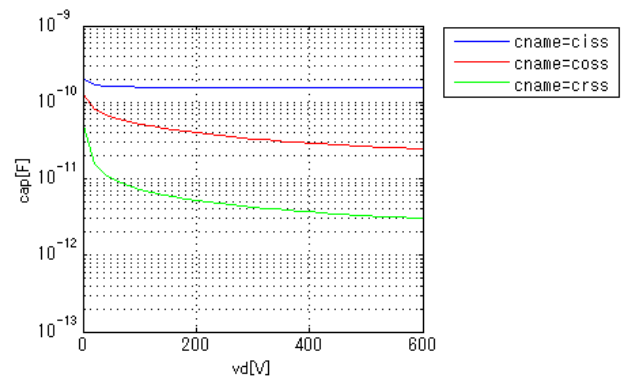
Temp = 25degC


IdVds[Vgs]2

Temp = 125degC


IsVsd[Vgs]

IsVsd[Vgs]2

VgsQg[Vdd]
 $I_d = 5A$

CapacitanceVds[Cname]

freq = 1000000Hz

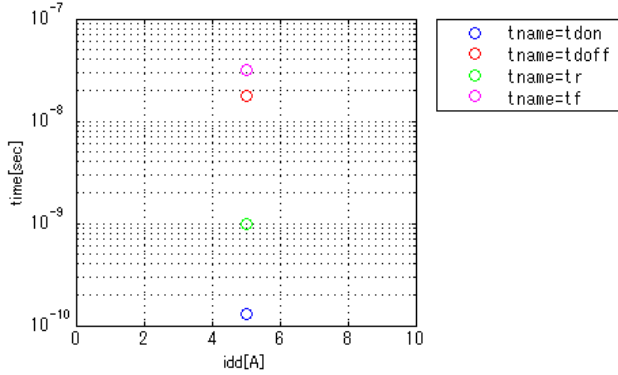


Simulation results are following.

Explanatory notes — : simulated

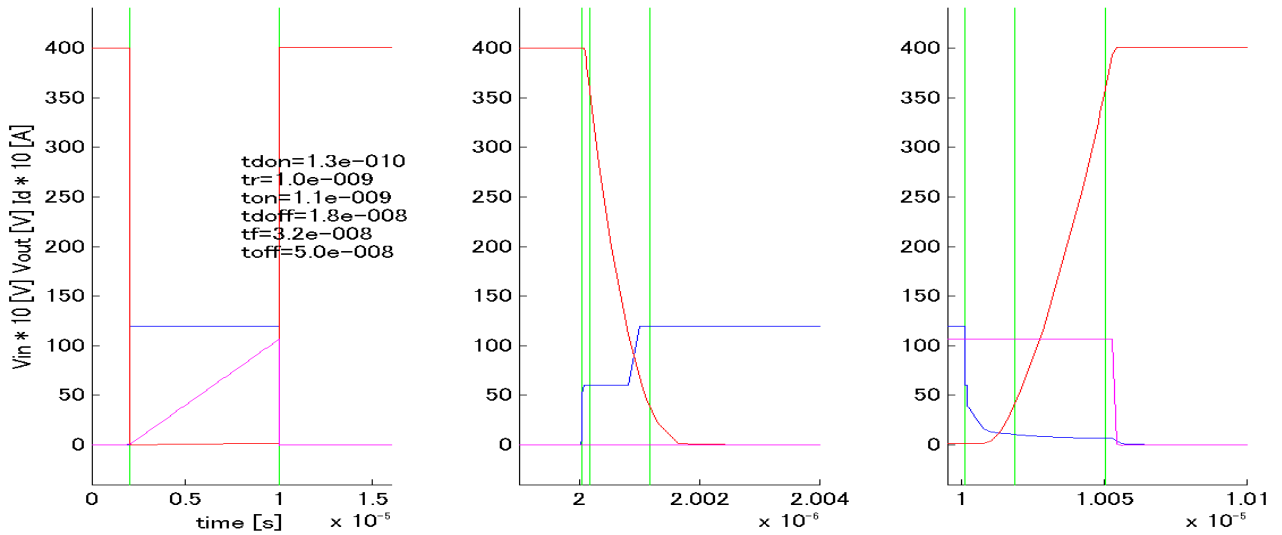
SwitchingLoad[Tname]

vgg = 12V, vdd = 400V, Lload = 0.0003H, RGon = 13ohm,
 RGon = 13ohm, Temp = 25degC



Switching Waveform (Blue : INPUT Red : OUTPUT Magenta : ID)

vgg = 12V, vdd = 400V, Lload = 0.0003H, RGon = 13ohm, RGon = 13ohm, Temp = 25degC, Id = 5A



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