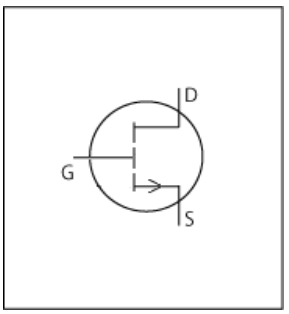
LTspice Model
GaN
Infineon
IGLR60R190D1



Model Information

Model	A macro model based on BSIM3 model	
Call Name	MDC_IGLR60R190D1_LT	
Pin Assign	1:S 2:S 3:S 4:G 5:D	
File List	Model Library	MDC_IGLR60R190D1_LT01.lib
	Model Report	MDC_IGLR60R190D1_LT.pdf (this file)
Verified Simulator Version		LTspice version XVII
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],SwitchingLload[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

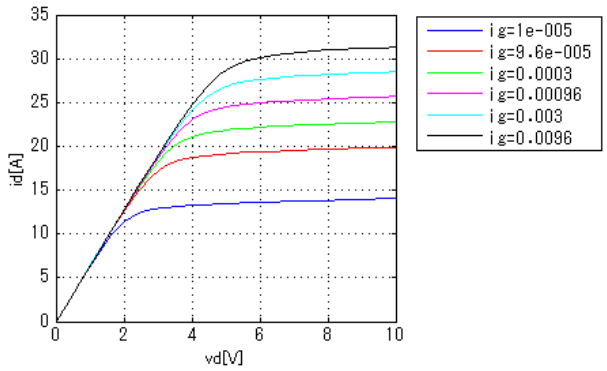
Model Functions Table

	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

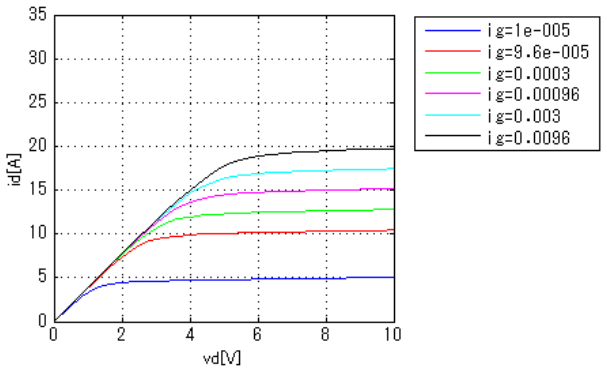
IdVds[Ig]

Temp = 25degC



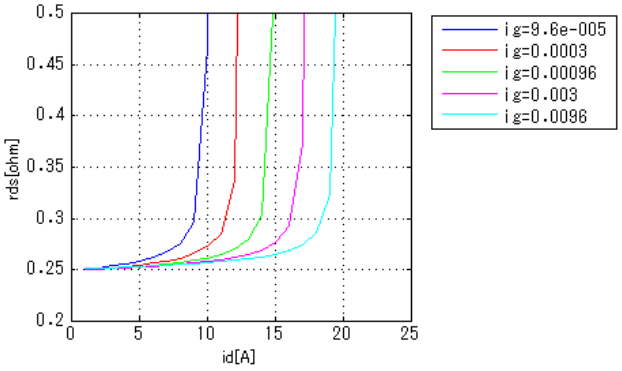
IdVds[Ig]2

Temp = 125degC



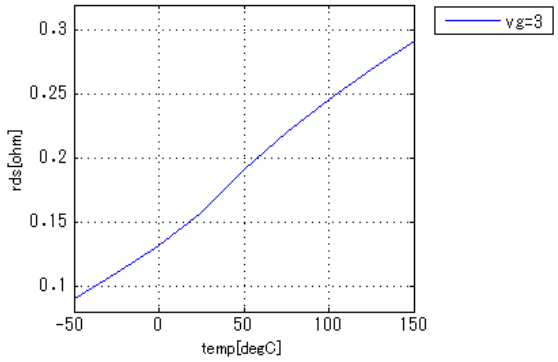
Rds(on)Id[Ig]

Temp = 125degC



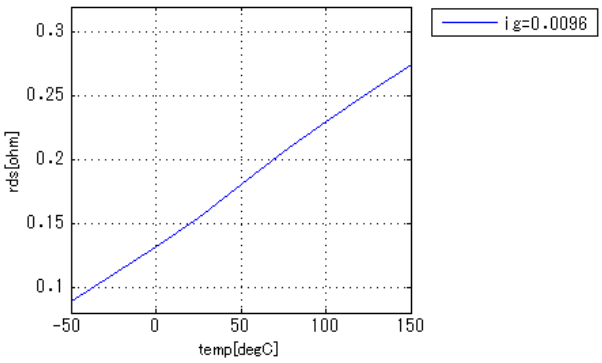
Rds(on)Temp[Vgs]

Id = 5A



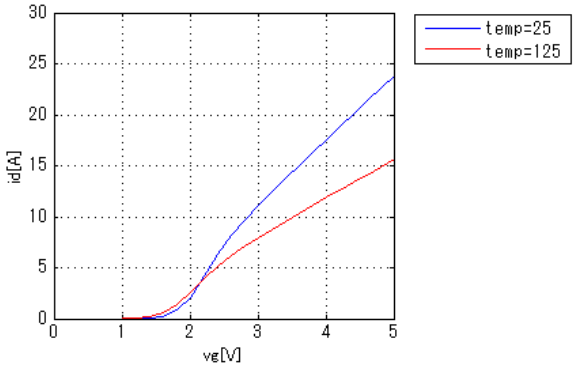
Rds(on)Temp[Ig]

Id = 5A



IdVgs[Temp]

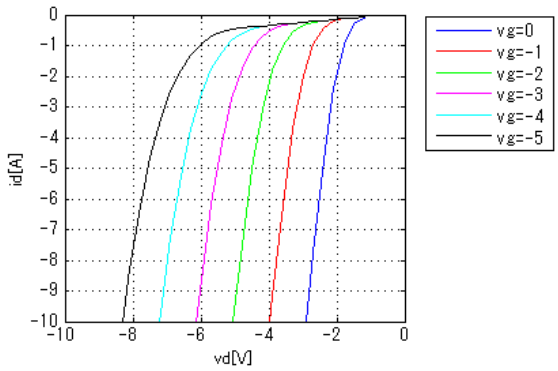
Vds = 8V



Simulation results are following.
Explanatory notes — : simulated

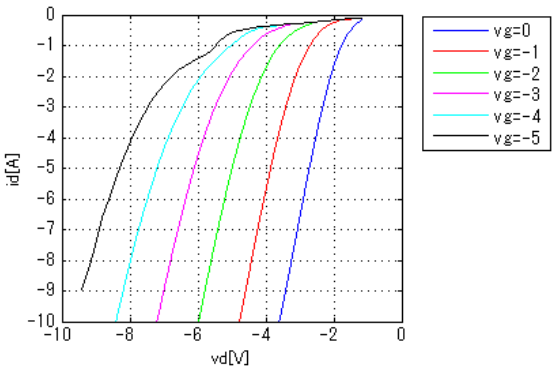
IdVds[Vgs]

Temp = 25degC

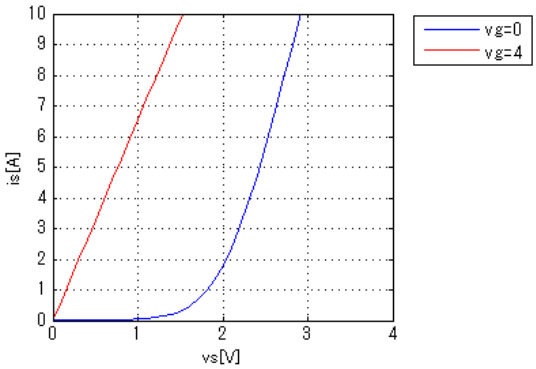


IdVds[Vgs]2

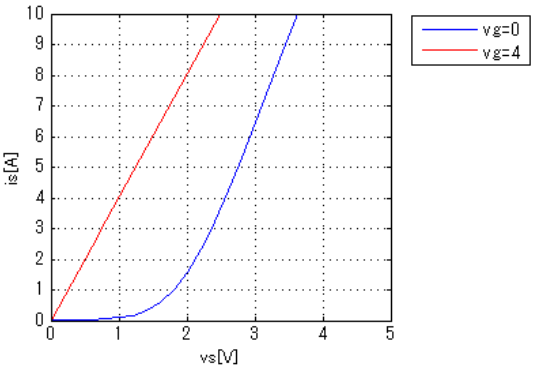
Temp = 125degC



IsVsd[Vgs]

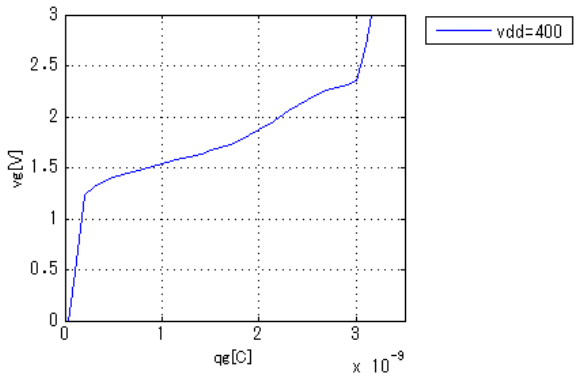


IsVsd[Vgs]2



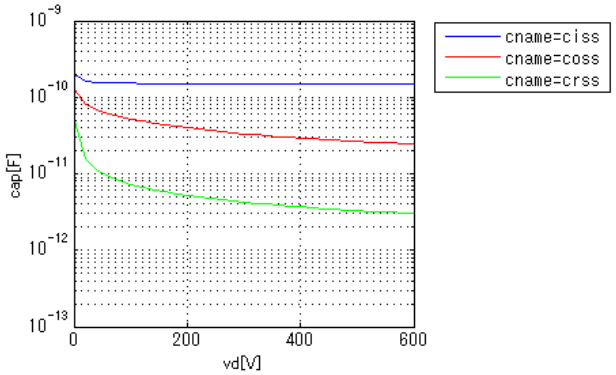
VgsQg[Vdd]

Id = 5A



CapacitanceVds[Cname]

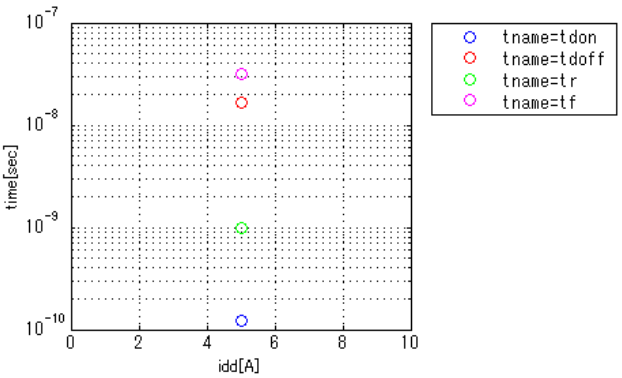
freq = 1000000Hz



Simulation results are following.
Explanatory notes — : simulated

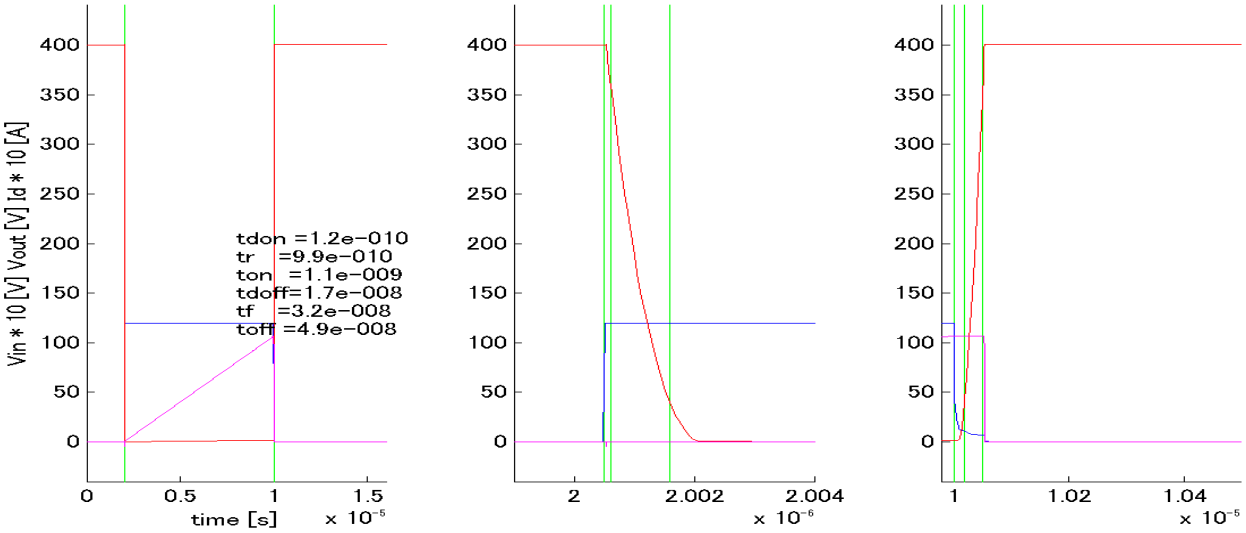
SwitchingLload[Tname]

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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