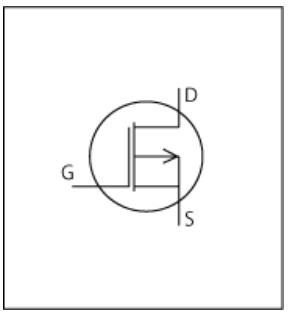
LTspice Model
PMOS
TOREX
XP162A12A6PR-G



Model Information

Model	A macro model based on BSIM3 model	
Call Name	MDC_XP162A12A6PR-G_LT	
Pin Assign	1:G 2:D 3:S	
File List	Model Library	MDC_XP162A12A6PR-G_LT02.lib
	Model Report	MDC_XP162A12A6PR-G_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 JTR1126-003a
- ●Product name XP162A12A6PR-G
- ●Company name TOREX SEMICONDUCTOR LTD.
- ●Characteristics IdVds[Vgs],IdVgs[Temp],Rds(on)Vgs[Id],Rds(on)Id[Vgs],Rds(on)Temp[Vgs],Rds(on)Temp[Vgs]2,CapacitanceVds[Cname],SwitchingIdd[Tname],VgsQg[Vdd],IsVsd[Vgs],YfsId[Temp],IdVgs[Temp]2,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	-20	V
Gate-source voltage (DC)	12	to	-12	V
Temperature	-55	to	150	deg C

MOSFET

○ : Implemented
× : Not Implemented
— : Not applicable

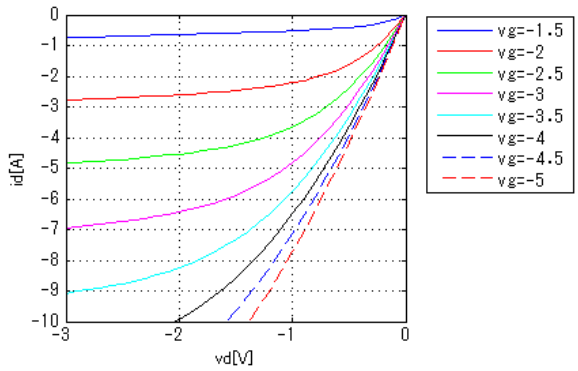
Model Functions Table

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

Simulation results are following.
Explanatory notes — : simulated

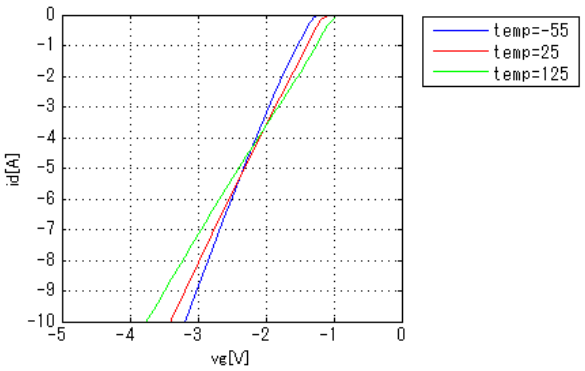
IdVds[Vgs]

Temp. = 25degC

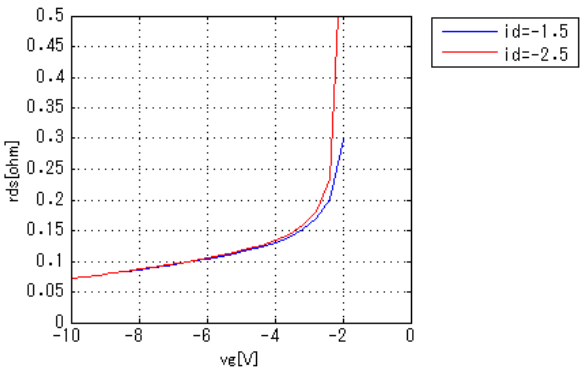


IdVgs[Temp]

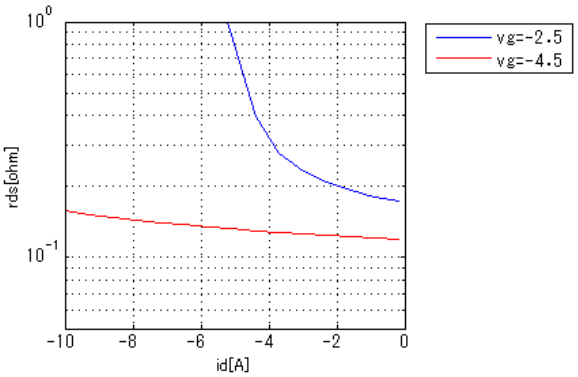
Vds = -10V



Rds(on)Vgs[Id]

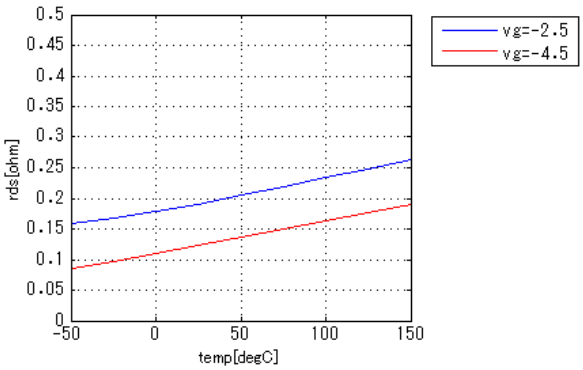


Rds(on)Id[Vgs]



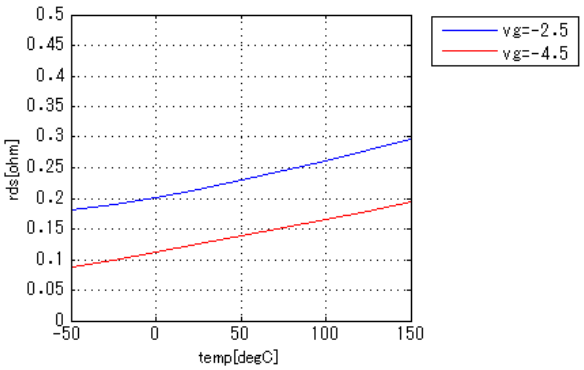
Rds(on)Temp[Vgs]

Id = -1.5A



Rds(on)Temp[Vgs]2

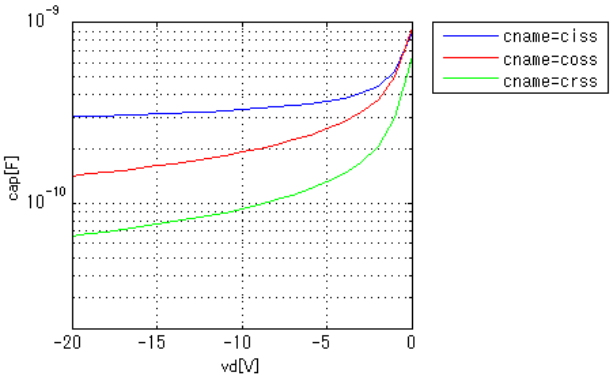
Id = -2.5A



Simulation results are following.
Explanatory notes — : simulated

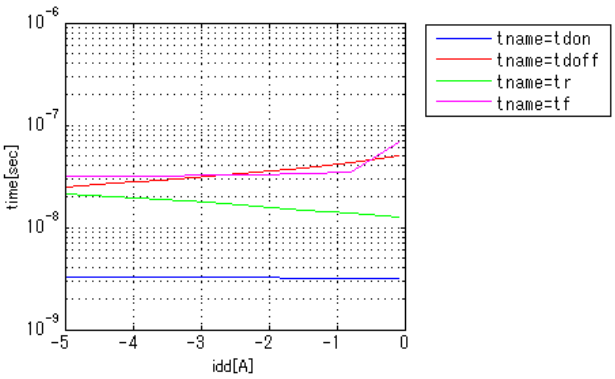
CapacitanceVds[Cname]

freq = 1000000Hz



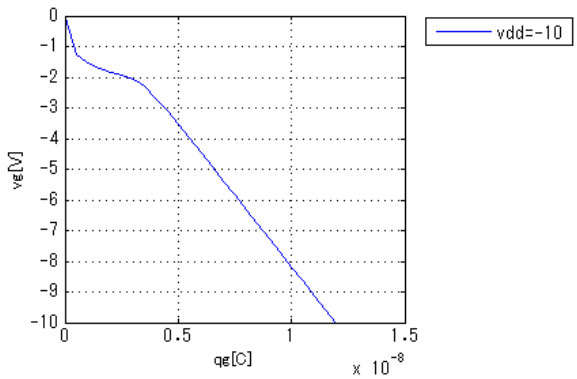
SwitchingIdd[Tname]

vgg = -5V, vdd = -10V, RGG = 5ohm

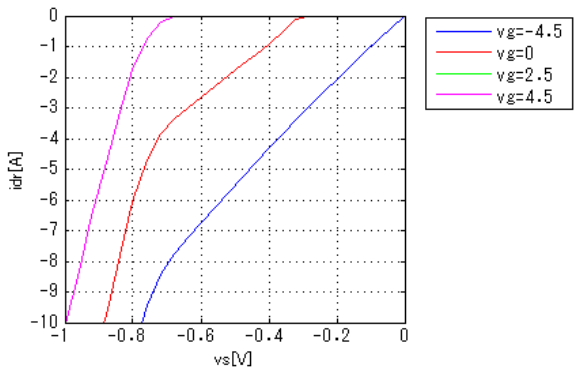


VgsQg[Vdd]

Id. = A

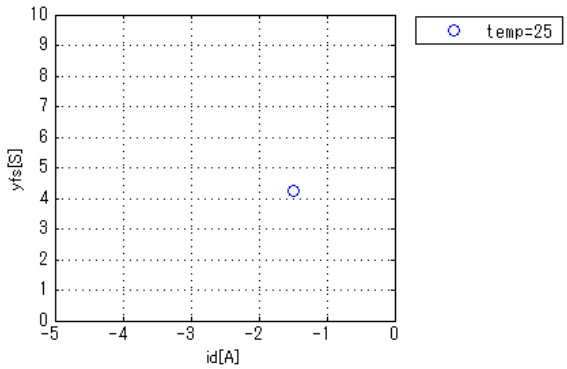


IsVsd[Vgs]



YfsId[Temp]

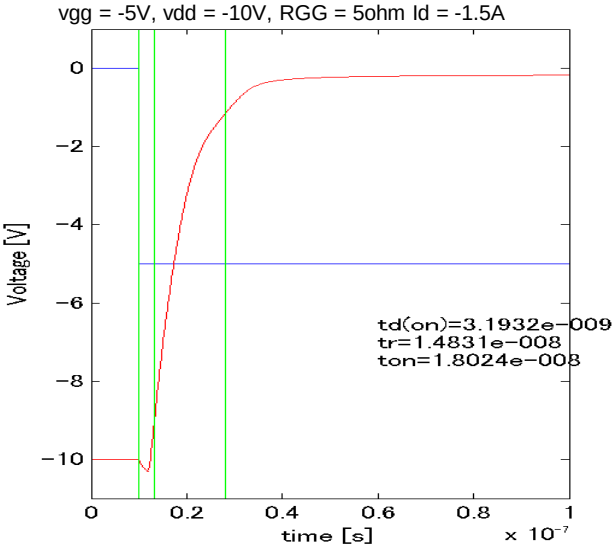
Vds = -10V

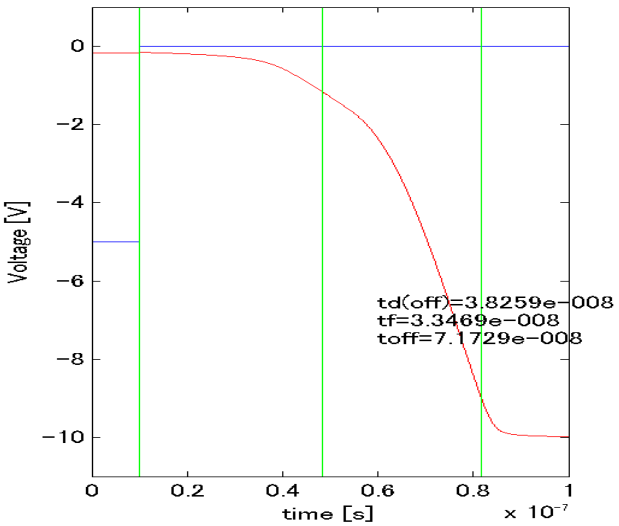


Simulation results are following.
Explanatory notes — : simulated

Switching Waveform

vgg = -5V, vdd = -10V, RGG = 5ohm Id = -1.5A





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