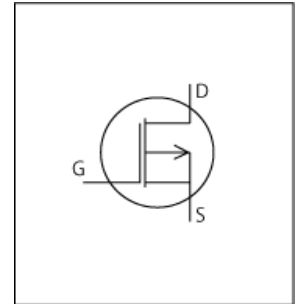


PSpice Model

PMOS

VISHAY POLYTECH

SQM110P06-8m9L



Model Information

Model A macro model based on BSIM3 model
Call Name MDC_SQM110P06-8m9L_PS
Pin Assign 1:D 2:G 3:S
File List Model Library MDC_SQM110P06-8m9L_PS01.lib
 Model Report MDC_SQM110P06-8m9L_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 22-Oct-12
- Product name SQM110P06-8m9L
- Company name Vishay Polytech Co., Ltd.
- Characteristics IdVds[Vgs], IdVgs[Temp], YfsId[Temp], Rds(on)Id[Vgs], CapacitanceVds[Cname], VgsQg[Vdd], Rds(on)Temp[Vgs], Rds(on)Temp[Vgs]02, IsVsd[Temp], Rds(on)Vgs[Temp], VthTemp[Id], BvTemp[ir], SwitchingIdd[Tname], SwitchingWaveform

Simulation Range

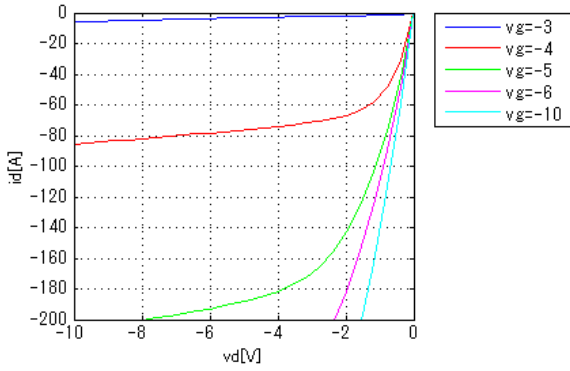
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Drain-source voltage (DC)	0	to	-60	V
Gate-source voltage (DC)	20	to	-20	V
Temperature	-55	to	175	deg C

Simulation results are following.
 Explanatory notes — : simulated

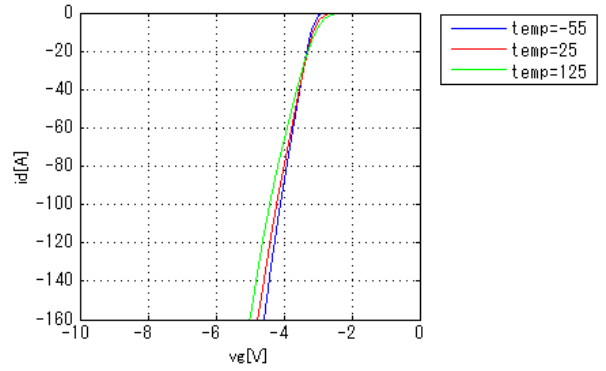
IdVds[Vgs]

Temp. = 25degC



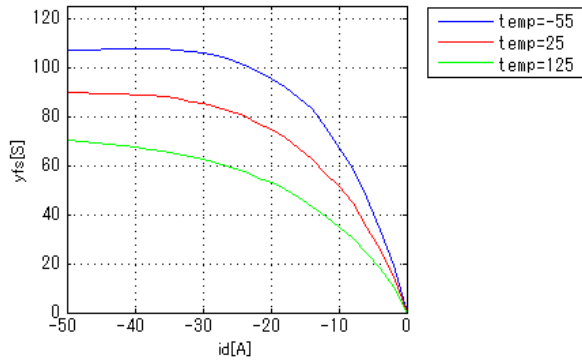
IdVgs[Temp]

Vds = -6V

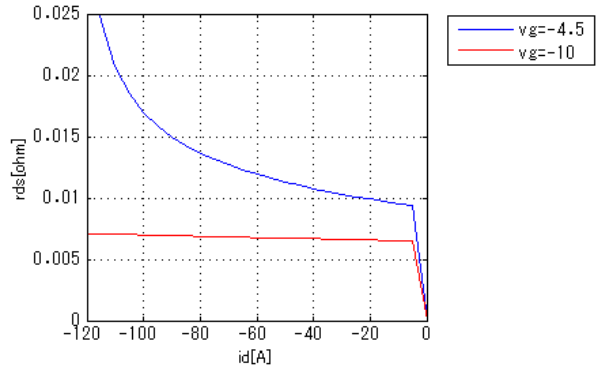


YfslId[Temp]

Vds = -15V

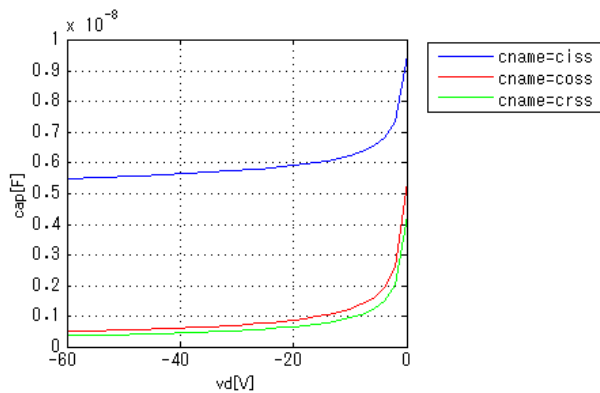


Rds(on)Id[Vgs]



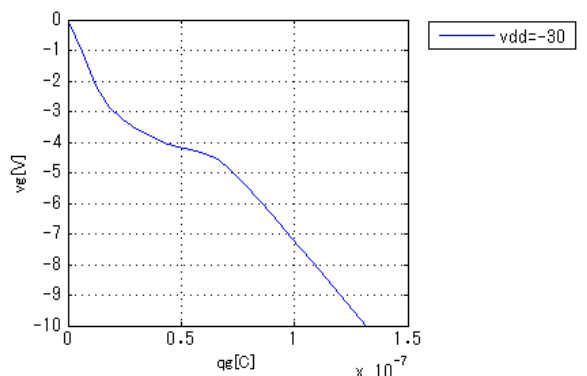
CapacitanceVds[Cname]

freq = 1000000Hz



VgsQg[Vdd]

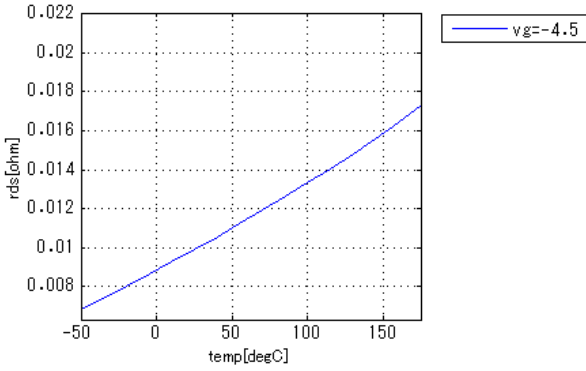
Id = -110A



Simulation results are following.
 Explanatory notes — : simulated

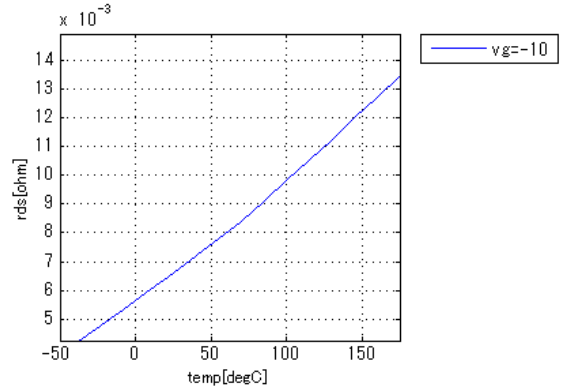
Rds(on)Temp[Vgs]

Id = -20A



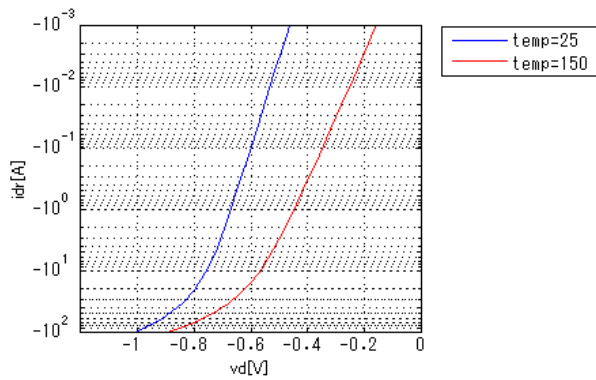
Rds(on)Temp[Vgs]02

Id = -30A



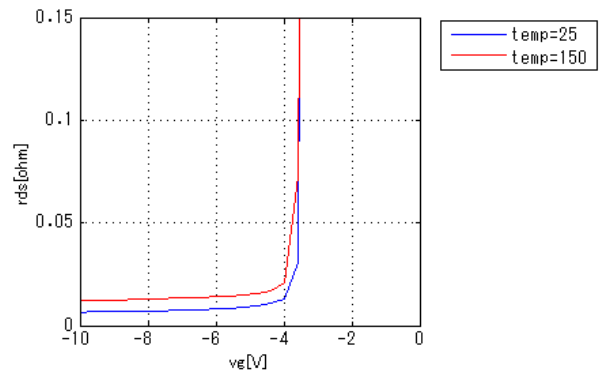
IsVsd[Temp]

vg = 0V



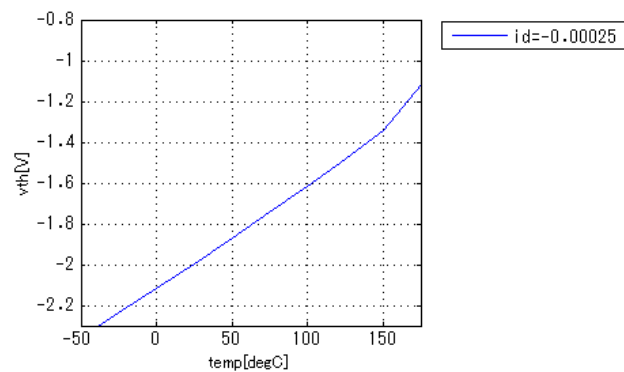
Rds(on)Vgs[Temp]

Id = -30A

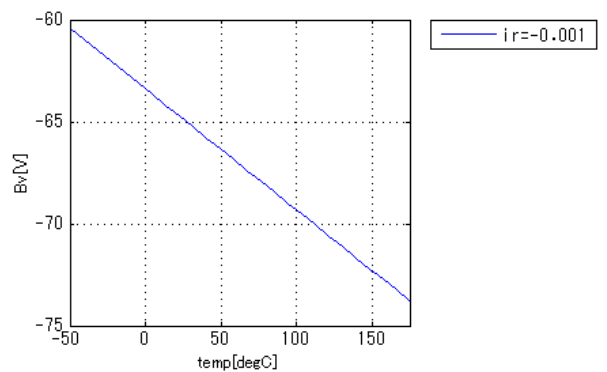


VthTemp[Id]

Vd = Vg



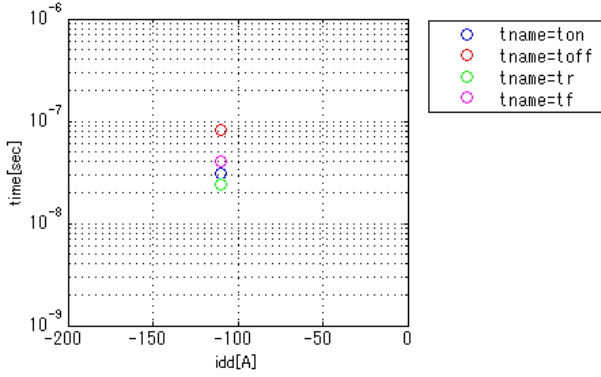
BvTemp[ir]



Simulation results are following.
 Explanatory notes — : simulated

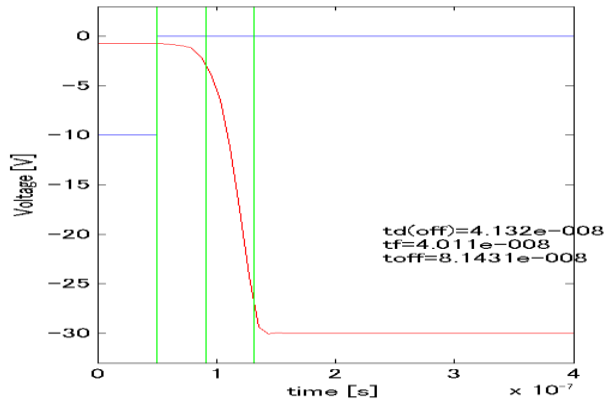
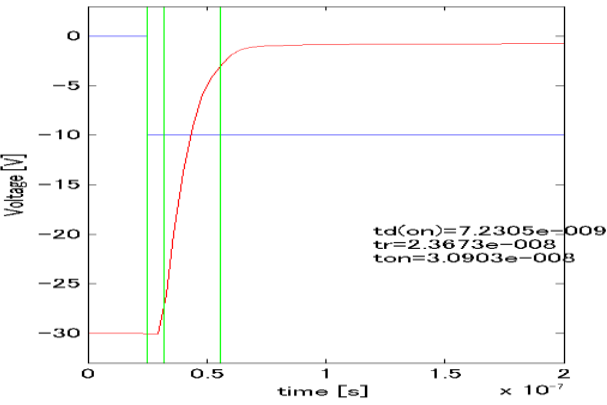
SwitchingIdd[Tname]

v_{gg} = -10V, v_{dd} = -30V, R_{GG} = 1ohm



SwitchingWaveform

Blue : INPUT Red : OUTPUT



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