

PSpice Model

NMOS

STM

STB45N60DM2AG



Model Information

Model A macro model based on BSIM3
Call Name MDC_STB45N60DM2AG_PS
Pin Assign 1:D 2:G 3:S
File List Model Library MDC_STB45N60DM2AG_PS01.lib
 Model Report MDC_STB45N60DM2AG_PS.pdf (this file)

Verified Simulator Version PSpice version 16.6
Note

References

The information which was used for modeling is as follow:

[Data Sheet]

- Date/Version Rev 1
- Product name STB45N60DM2AG
- Company name STMicroelectronics N.V.
- Characteristics IdVgs[Temp], IdVds[Vgs], Rds(on)|d[Vgs], VgsQg[Vdd], VdsQg[Vdd], Ciss, Coss, Crss, VthTemp[Id], Rds(on)Temp[Vgs], IsVsd[Temp]

Simulation Range

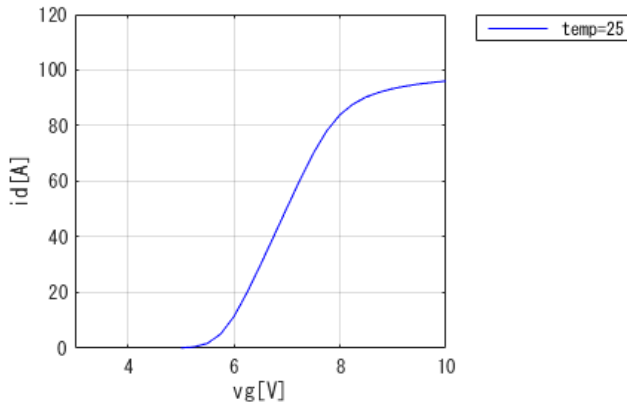
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

| Item | Range | | | Unit |
|---------------------------|-------|----|------|-------|
| | Min. | | Max. | |
| Drain-source voltage (DC) | 0 | to | 650 | V |
| Gate-source voltage (DC) | 0 | to | 25 | V |
| Temperature | -55 | to | 150 | deg C |

Simulation results are following.
 Explanatory notes — : simulated

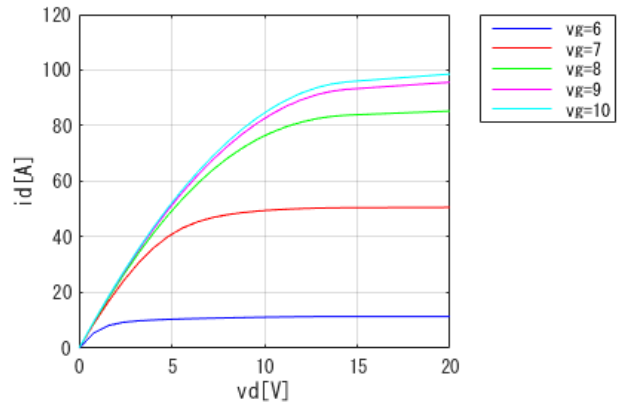
IdVgs[Temp]

Vds = 15V

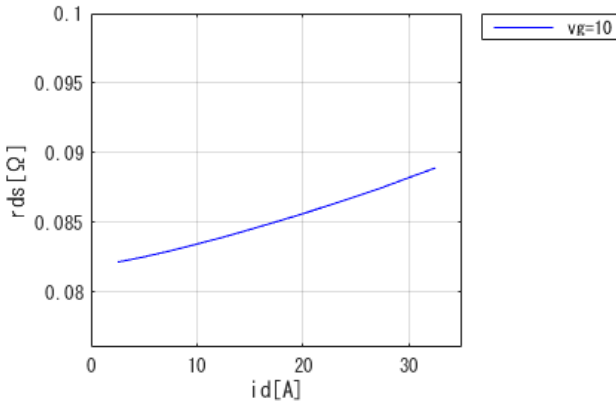


IdVds[Vgs]

Temp. = 25deg C

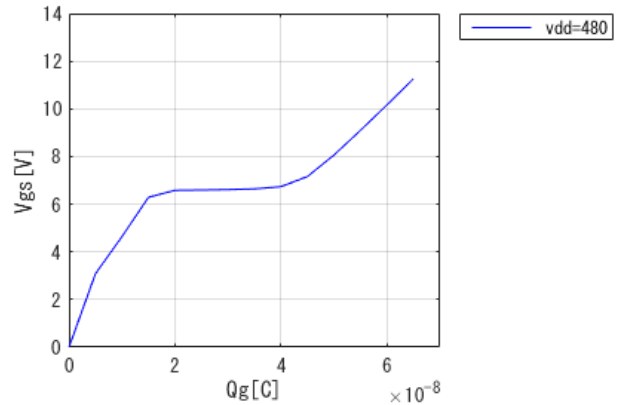


Rds(on)Id[Vgs]



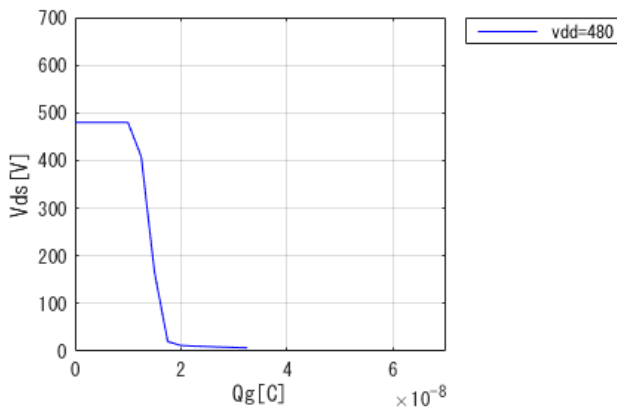
VgsQg[Vdd]

Id = 34A



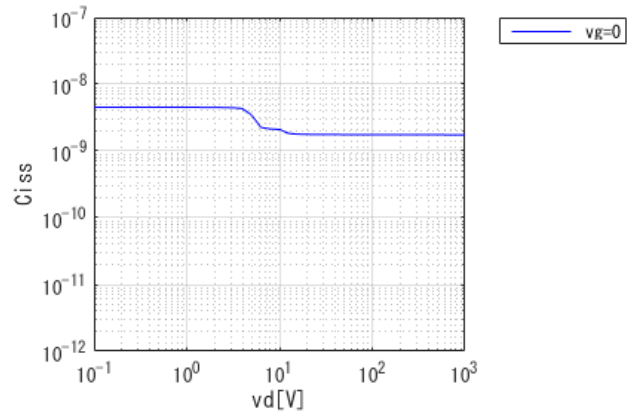
VdsQg[Vdd]

Id = 34A



Ciss

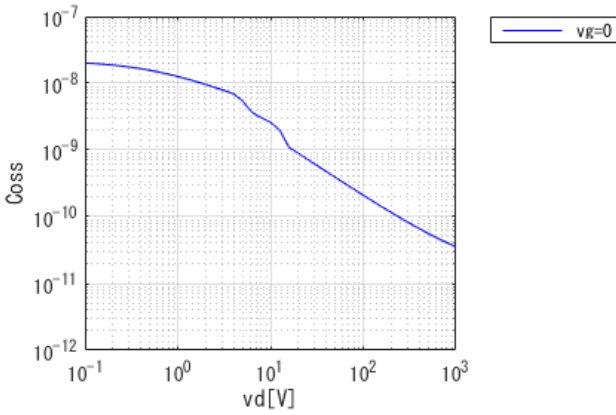
Freq. = 1MHz



Simulation results are following.
 Explanatory notes — : simulated

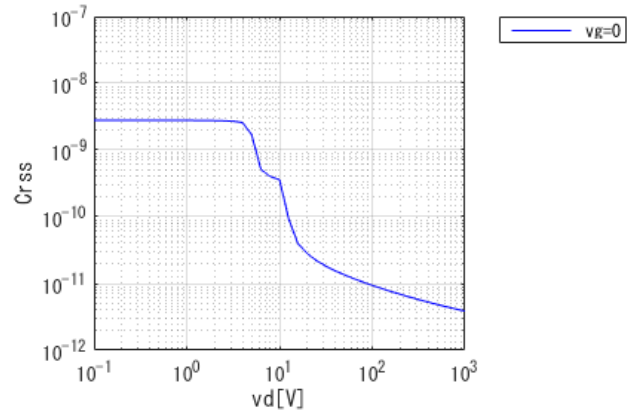
Coss

Freq. = 1MHz

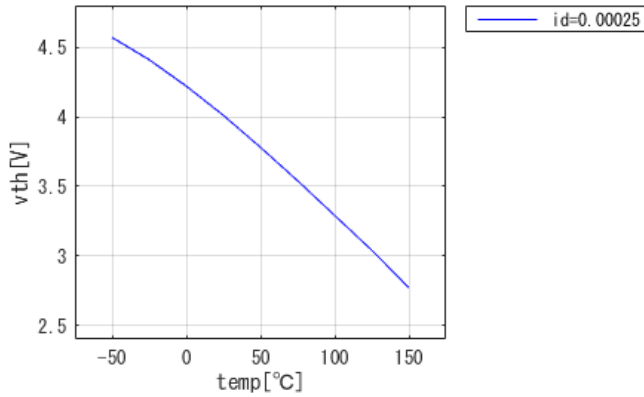


Crss

Freq. = 1MHz

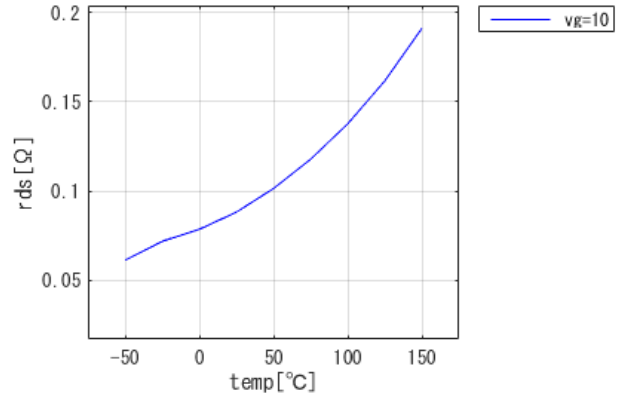


VthTemp[Id]

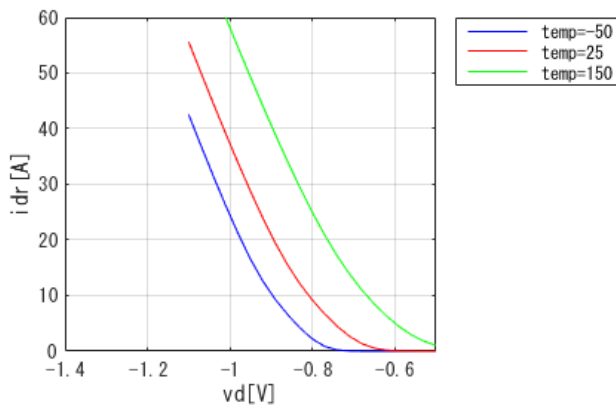


Rds(on)Temp[Vgs]

Id = 30A



IsVsd[Temp]



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