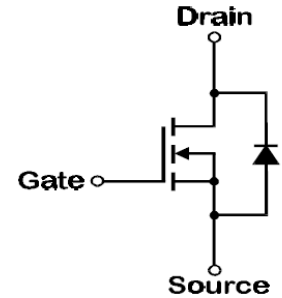
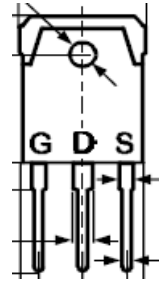


LTspice Model NMOS FUJI ELECTRIC 2SK2258-01



Model Information

Model A macro model based on BSIM3 model
Call Name MDC_2SK2258-01_LT
Pin Assign 1:G 2:D 3:S
File List Model Library MDC_2SK2258-01_LT01.lib
 Model Report MDC_2SK2258-01_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 Unknown
- Product name 2SK2258-01
- Company name FUJI ELECTRIC CO., LTD.
- Characteristics IdVds[Vgs],Rds(on)Temp[Id],IdVgs[Temp],Rds(on)Id[Vgs],Yf sld[Temp],VthTemp[Id],CapacitanceVds[Cname],VgsQg[Vdd],VdsQg[Vdd],IsVsd[Temp],SwitchingIdd[Tname]Rs,Trrlf[Ir],Q rrlf[Ir],SwitchingWaveform,TrrWaveform

Simulation Range

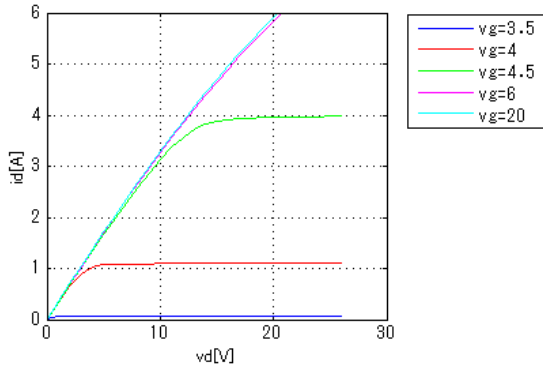
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

Item	Range			Unit
	Min.		Max.	
Drain-source voltage (DC)	0	to	1,000	V
Gate-source voltage (DC)	-30	to	30	V
Temperature	-55	to	150	deg C

Simulation results are following.
 Explanatory notes — : simulated

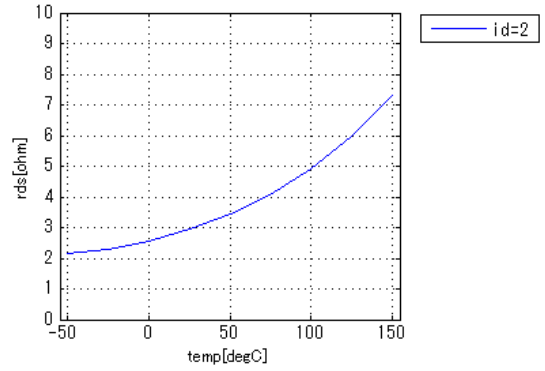
IdVds[Vgs]

Temp = 25degC



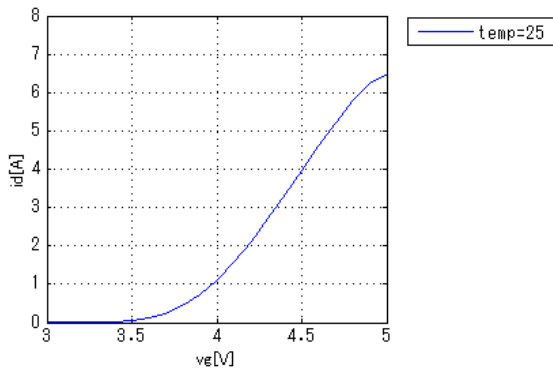
Rds(on)Temp[Id]

Vgs = 10V



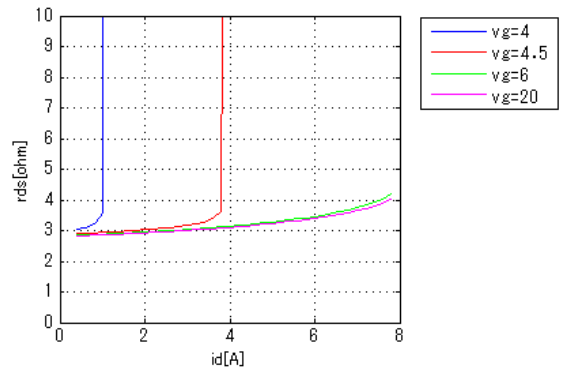
IdVgs[Temp]

Vds = 25V



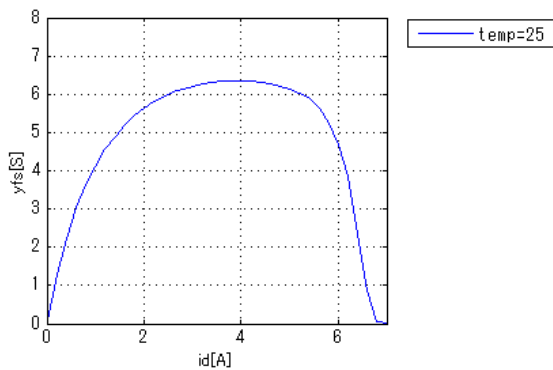
Rds(on)Id[Vgs]

Temp = 25degC



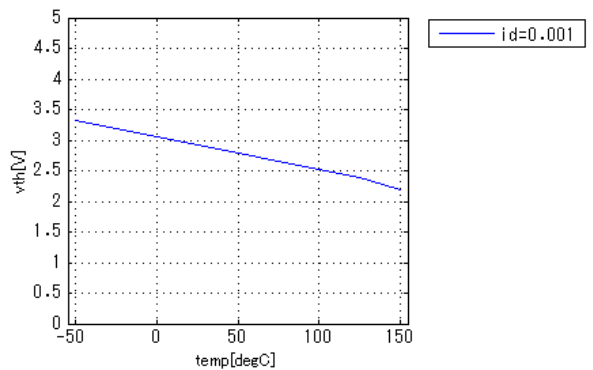
YfsId[Temp]

Vds = 25V



VthTemp[Id]

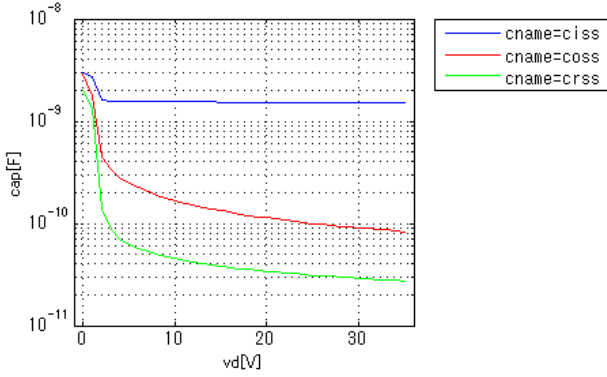
Vd = Vg



Simulation results are following.
 Explanatory notes — : simulated

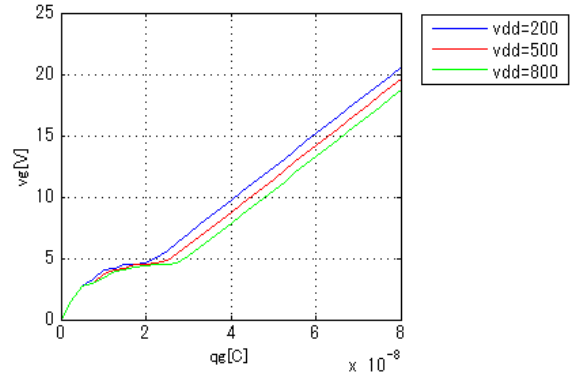
CapacitanceVds[Cname]

freq = 1000000Hz



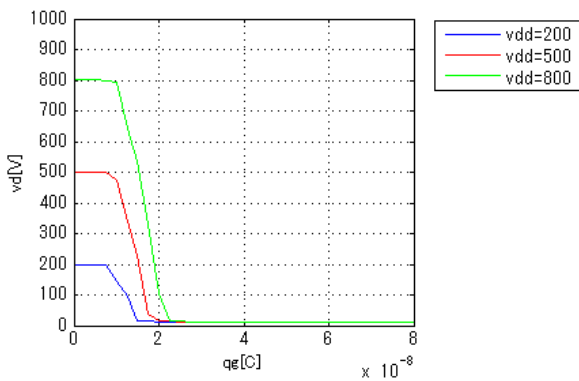
VgsQg[Vdd]

Id = 4A



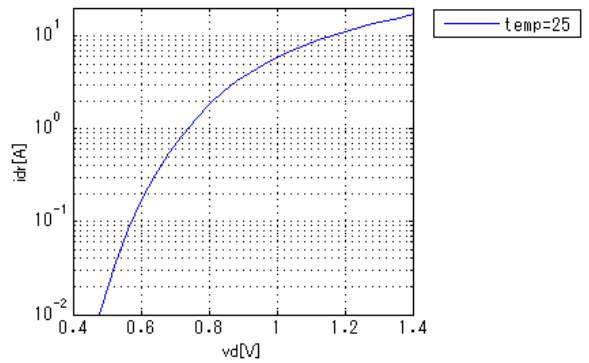
VdsQg[Vdd]

Id = 4A



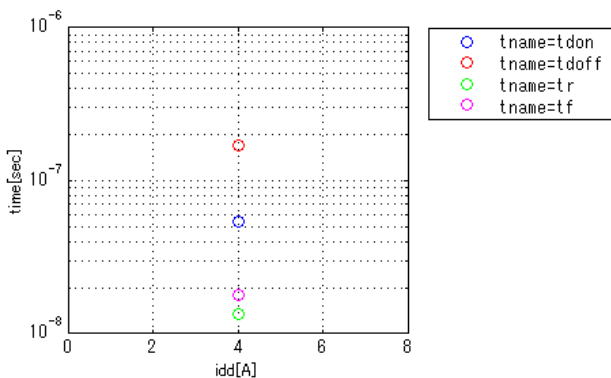
IsVsd[Temp]

vg = 0V



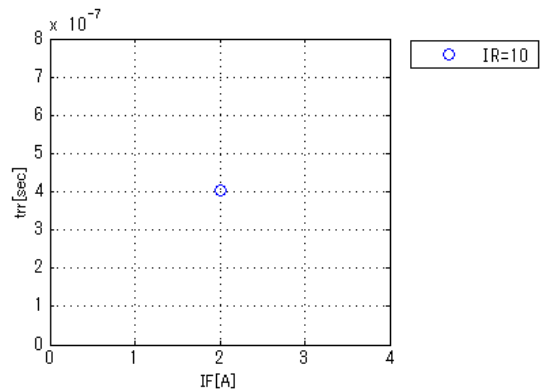
SwitchingIdd[Tname]Rs

v_{gg} = 10V, v_{dd} = 600V, R_{GS} = 10ohm



TrrIf[Ir]

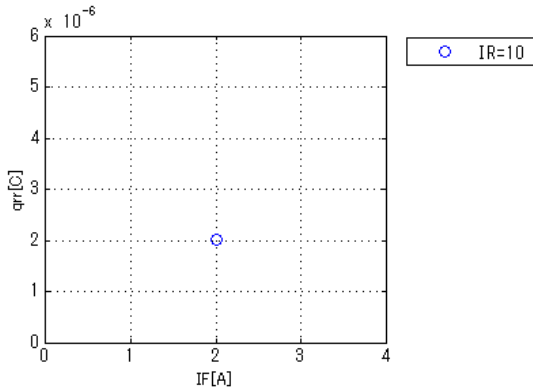
v_{dd} = 25V, didt = 100A/us, Temp = 25degC



Simulation results are following.
 Explanatory notes — : simulated

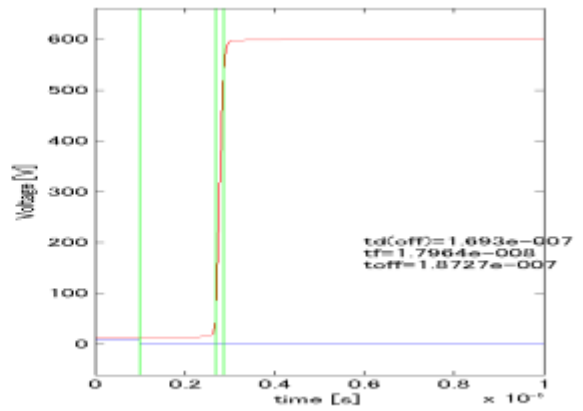
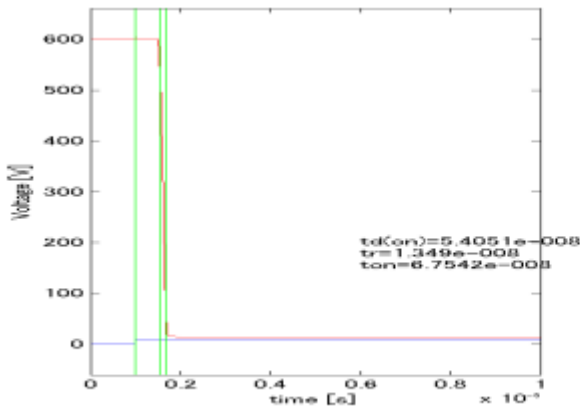
Qrrf[Ir]

vdd = 25V, didt = 100A/us, Temp = 25degC



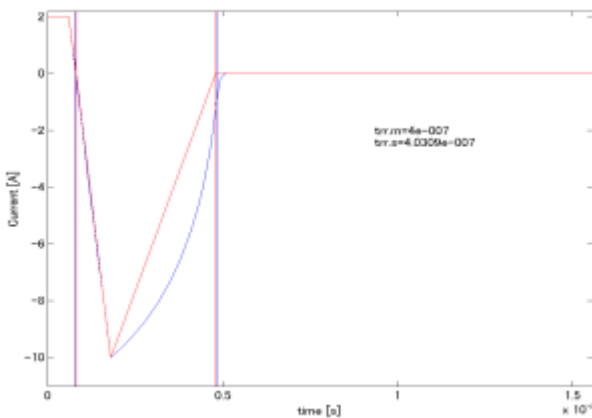
Switching Waveform (Blue : INPUT Red : OUTPUT)

vvg = 10V, vdd = 600V, RGS = 10ohm, idd = 4A



Trr Waveform (Red : Datasheet Blue : Simulation)

vdd = 25V, didt = 100A/us, Temp = 25degC, IF = 2A



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