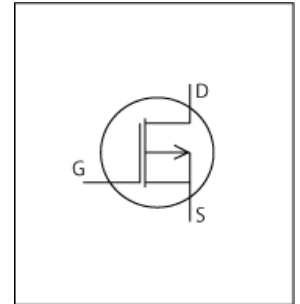


# LTspice Model

## PMOS

## TI

## CSD25402Q3A



### Model Information

**Model** A macro model based on BSIM3 model  
**Call Name** MDC\_CSD25402Q3A\_LT  
**Pin Assign** 1:D 2:D 3:D 4:G 5:S 6:S 7:S 8:S  
**File List** Model Library MDC\_CSD25402Q3A\_LT01.lib  
Model Report MDC\_CSD25402Q3A\_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 REVISED JANUARY 2016
- Product name CSD25402Q3A
- Company name Texas Instruments Inc.
- Characteristics IdVds[Vgs], IdVgs[Temp], VgsQg[Vdd], CapacitanceVds[Cname], VthTemp[Id], Rds(on)Vgs[Temp], Rds(on)Temp[Vgs], Rds(on)Temp[Vgs]02, IsVsd[Temp], SwitchingIdd[Tname], SwitchingWaveform, Trrlf[Ir], Qrrlf[Ir], TrrQrrWaveform

### Simulation Range

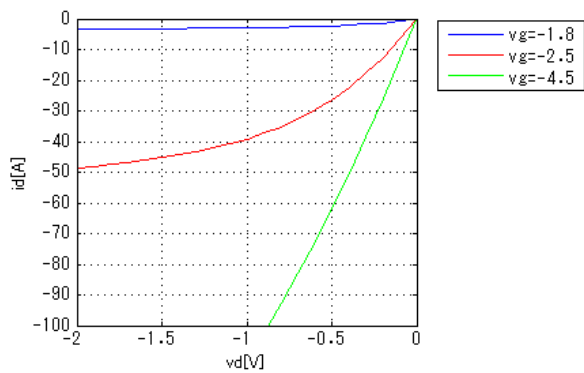
This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.

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

Simulation results are following.  
Explanatory notes    — : simulated

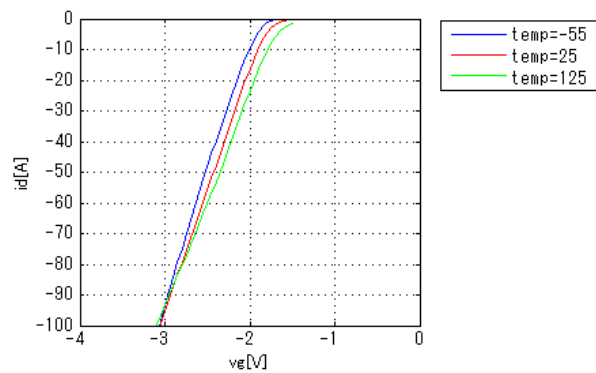
IdVds[Vgs]

Temp. = 25degC



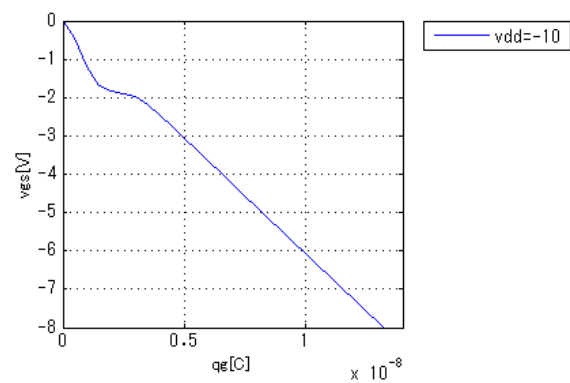
IdVgs[Temp]

Vds = -5V



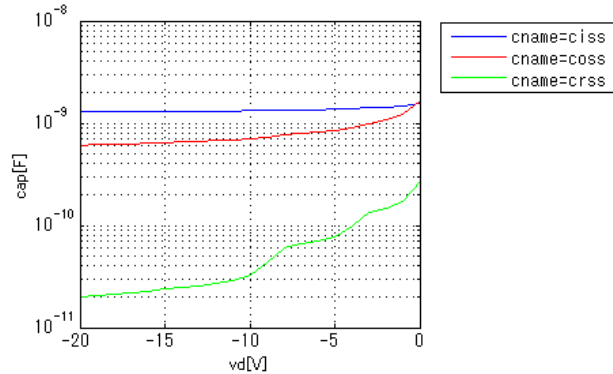
VgsQg[Vdd]

Id = -10A



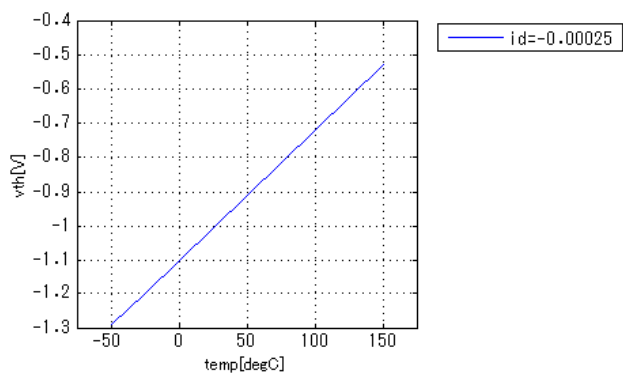
CapacitanceVds[Cname]

freq = 1000000Hz



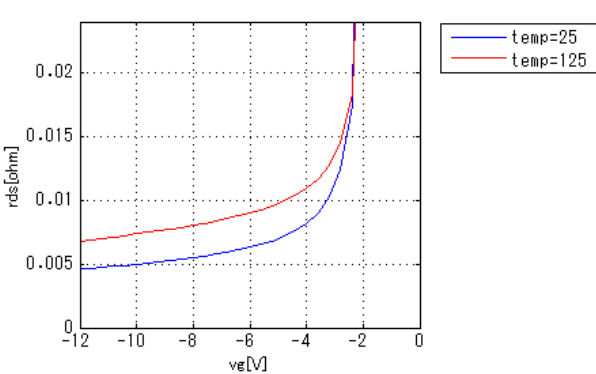
VthTemp[Id]

Vd = Vg



Rds(on)Vgs[Temp]

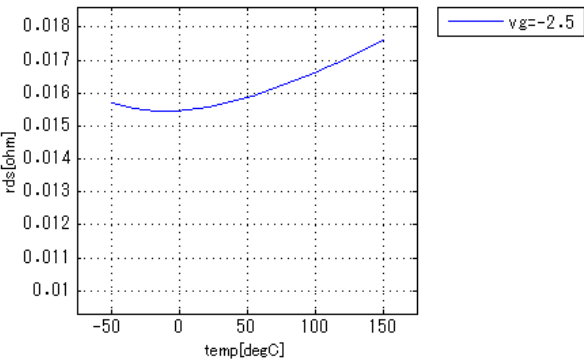
Id = -10A



Simulation results are following.  
Explanatory notes    — : simulated

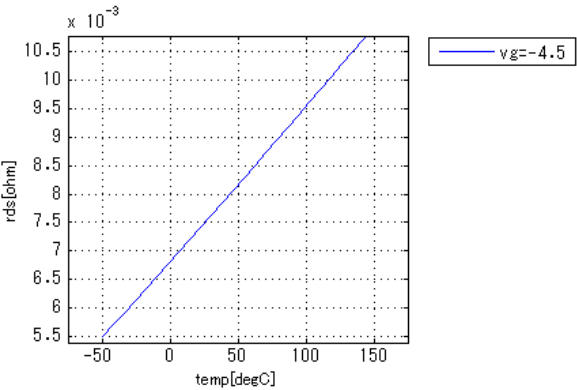
Rds(on)Temp[Vgs]

Id = -10A

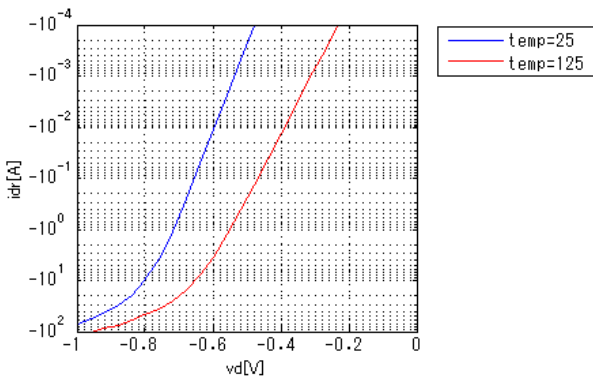


Rds(on)Temp[Vgs]02

Id = -10A

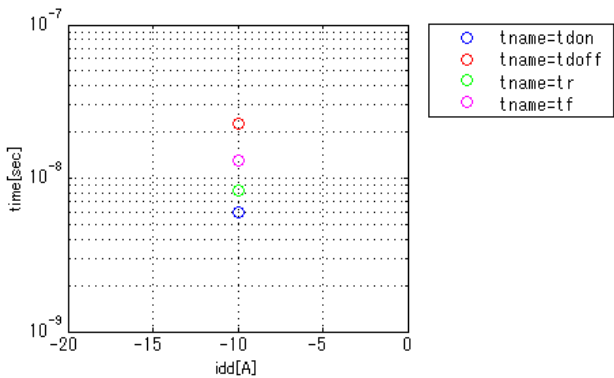


IsVsd[Temp]



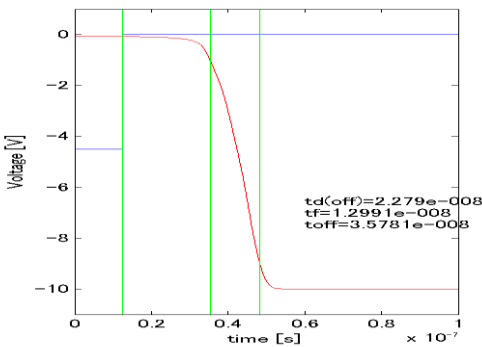
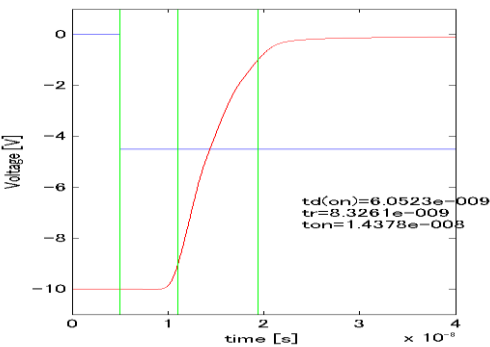
SwitchingIdd[Tname]

vgs = -4.5V, vdd = -10V, RGG = 5.0ohm



SwitchingWaveform

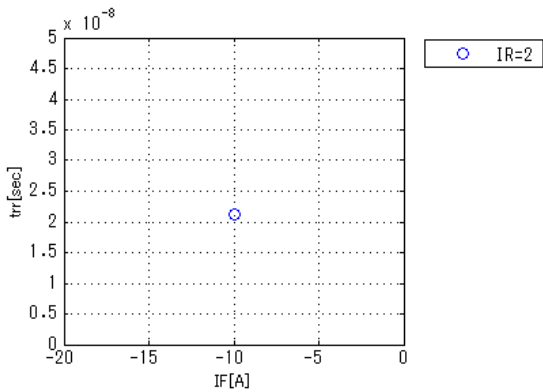
Blue : INPUT Red : OUTPUT



Simulation results are following.  
Explanatory notes    — : simulated

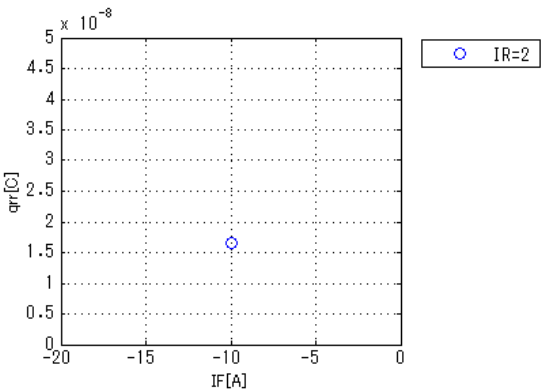
Trrlf[Ir]

vdd = -8.5V, didt = 200A/us

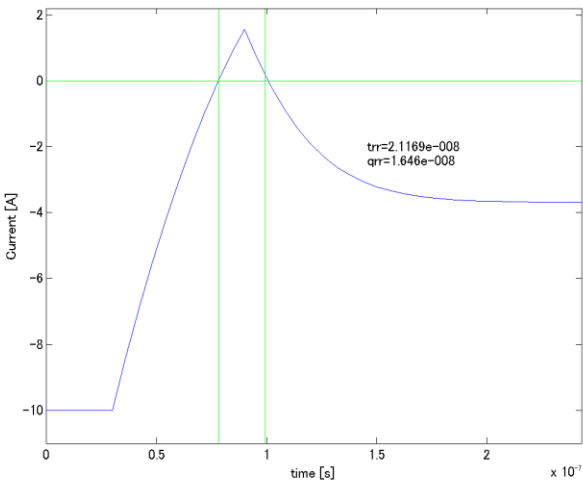


Qrrlf[Ir]

vdd = -8.5V, didt = 200A/us



TrrQrrWaveform



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