PSpice Model
N-Channel
TOSHIBA
2SK209

Model Information

Model	A macro model
Call Name	MDC_2SK209_PS
Pin Assign	1:S 2:D 3:G
File List	Model Library MDC_2SK209_PS.lib
	Model Report MDC_2SK209_PS.pdf

Verified Simulator Version

Note
IDSS=1.2~3.0mA(Y)

References
The information which was used for modeling is as follow:

[Data Sheet]

●Date/Version   March 1 2014
●Product name   2SK209
●Company name   TOSHIBA

[Characteristics listed]

●Characteristics   IdVgs,VGS(off),IDSS,Crs,Cis

Simulation Condition

This table shows the range of evaluated simulation range that was not occurs any convergence problems in this area.
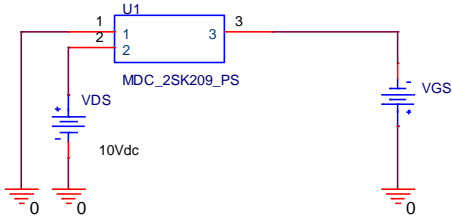
Item	Condition	Unit
Temperature	25	deg C

JFET

Model Functions Table

O : Implemented
× : Not Implemented
— : Not applicable

	RANK=1	
Functions	RANK	Implemented
ID-VDS-VGS	1	—
ID-VGS	1	O
VGS(off)-IDSS	1	O
yfs-IDSS	1	O
RDS(on)-IDSS	1	—
Crs Capacitance	1	O
Cis Capacitance	1	O

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Rev 1.0
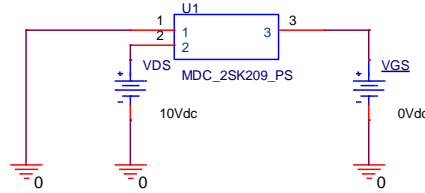
Simulation results are following.
Explanatory notes 　－ : simulated

IdVgs Testbench

IDSS Testbench

CONDITIONS	MIN.	TYP.	MAX.	UNIT
Vds = 10 V, Vgs = 0	1.2	-	14.0	mA

IdVgs[Temp] Data Sheet
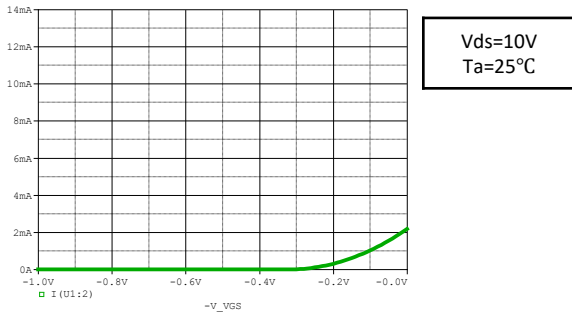
Vds=10V
Ta=25℃
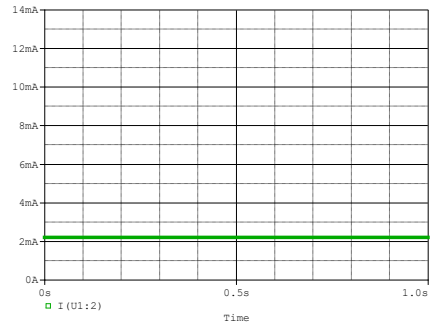
IDSS Data Sheet

VGS(off) Testbench

CONDITIONS	MIN.	TYP.	MAX.	UNIT
Vds = 10 V, Id = 0.1 µA	-0.2	-	-1.5	V

VGS(off) Data Sheet

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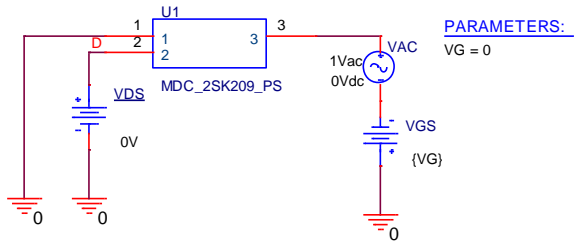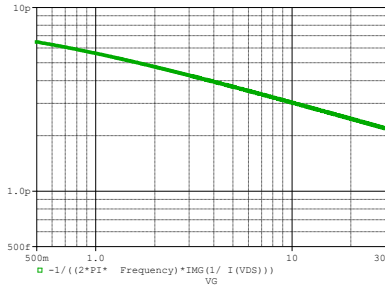Rev 1.0
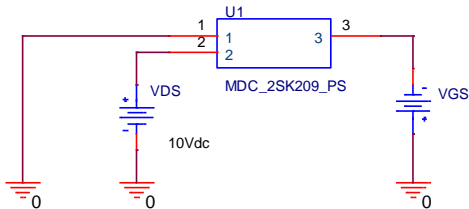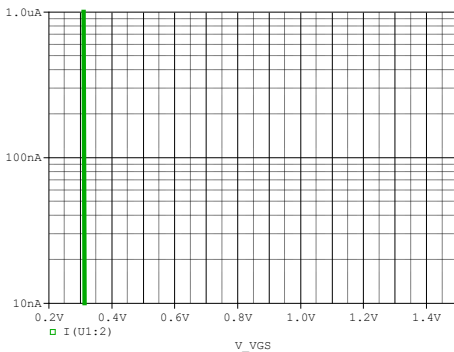
Simulation results are following.
Explanatory notes　　— : simulated

Crs Capacitance Testbench

Crs Capacitance Data Sheet

CONDITIONS	MIN.	TYP.	MAX.	UNIT
Vds = 10 V, Id = 0A, f=1MHz	-	3	-	pF

Cis Capacitance Testbench
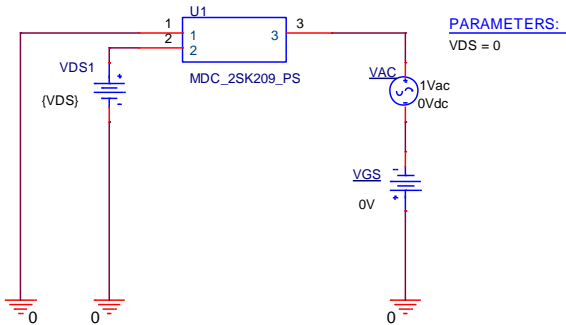
Cis Capacitance Data Sheet

CONDITIONS	MIN.	TYP.	MAX.	UNIT
Vds = 10 V, Id = 0A, f=1MHz	-	13	-	pF
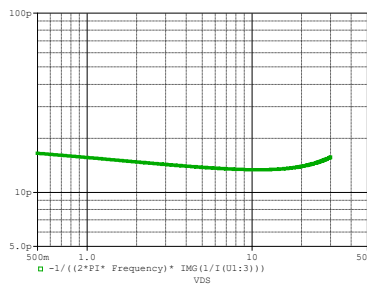
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