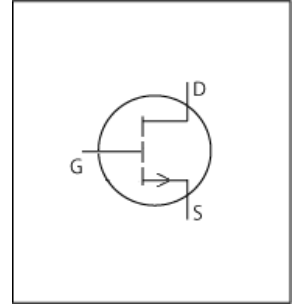


# LTspice Model

## GaN

### Innoscence

### INN150LA070A



### Model Information

**Model** A macro model based on BSIM3 model  
**Call Name** MDC\_INN150LA070A\_LT  
**Pin Assign** 1:S 2:D 3:G  
**File List** Model Library MDC\_INN150LA070A\_LT01.lib  
 Model Report MDC\_INN150LA070A\_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 INN150LA070A
- Company name Innoscence
- Characteristics IdVds[Vgs], IdVds[Vgs]2, Rds(on)Vgs[Id], Rds(on)Vgs[Id]2, NormRds(on)Temp[Id], IdVgs[Temp], IdVds[Vgs]3, IdVds[Vgs]4, IdVds[Vgs]5, IdVds[Vgs]6, CapacitanceVds[Cname], VgsQg[Vdd], NormVthTemp[Id]

### 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	150	V
Gate-source voltage (DC)	-4	to	6	V
Temperature	-40	to	150	deg C

## MOSFET

○ : Implemented  
× : Not Implemented  
— : Not applicable

Model Functions Table

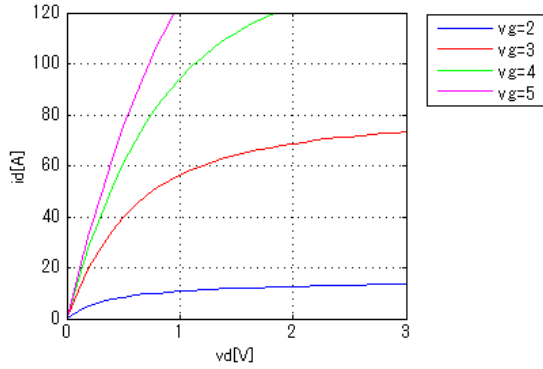
RANK=1

Functions	RANK	Implemented
ID-VDS-VGS	1	○
ID-VGS(Temp)	1	○
RDS(on)	1	○
Capacitance	1	○
Gate Charge	1	○
IS-VSD	1	○
Reverse recovery	1	—
Switching(Typ.)	1	—
Bv	1	—
Yfs	1	—
Vth	1	○

Simulation results are following.  
 Explanatory notes — : simulated

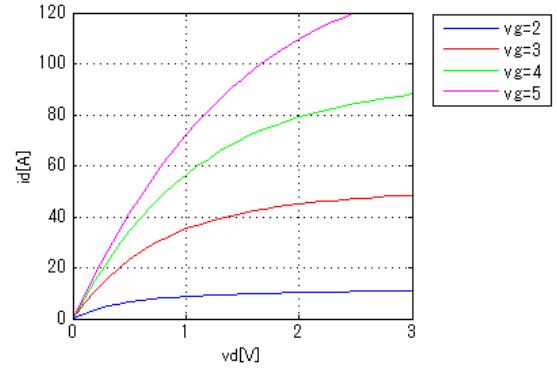
**IdVds[Vgs]**

Temp = 25degC



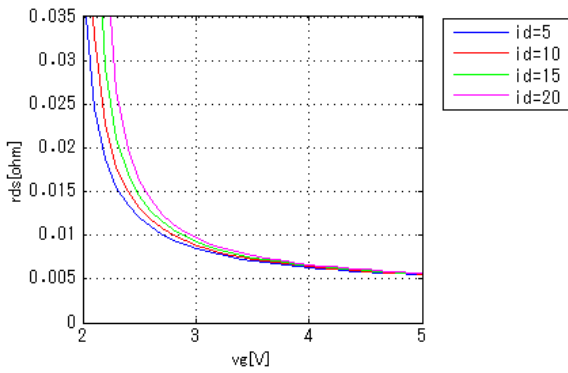
**IdVds[Vgs]2**

Temp = 125degC



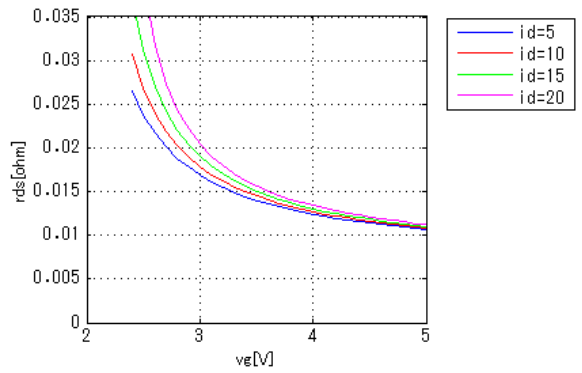
**Rds(on)Vgs[Id]**

Temp = 25degC



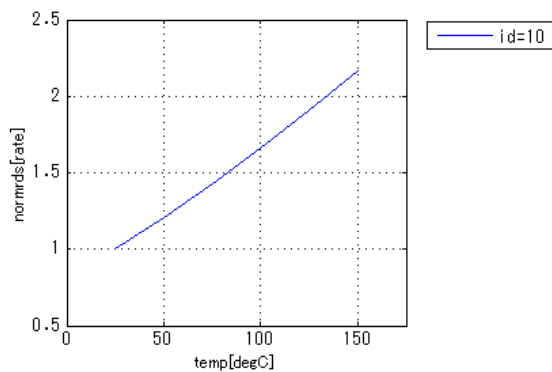
**Rds(on)Vgs[Id]2**

Temp = 125degC



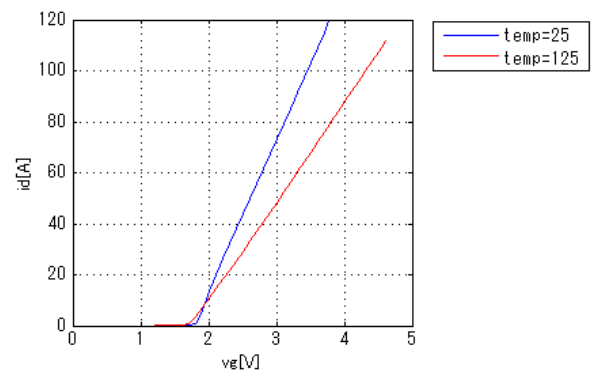
**NormRds(on)Temp[Id]**

Vgs = 5V



**IdVgs[Temp]**

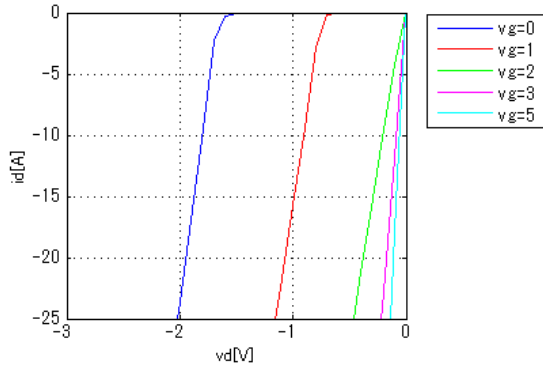
Vds = 3V



Simulation results are following.  
 Explanatory notes — : simulated

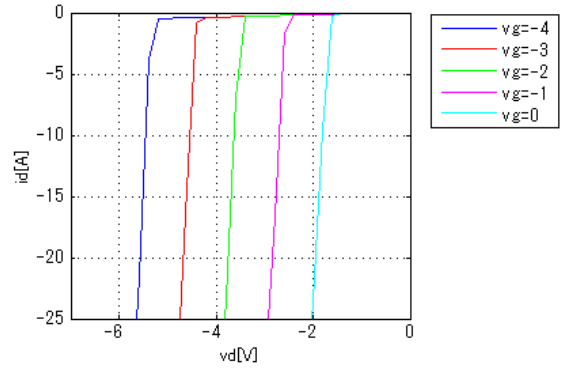
**IdVds[Vgs]3**

Temp = 25degC



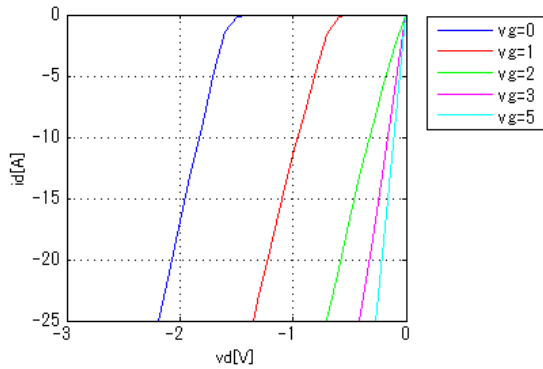
**IdVds[Vgs]4**

Temp = 25degC



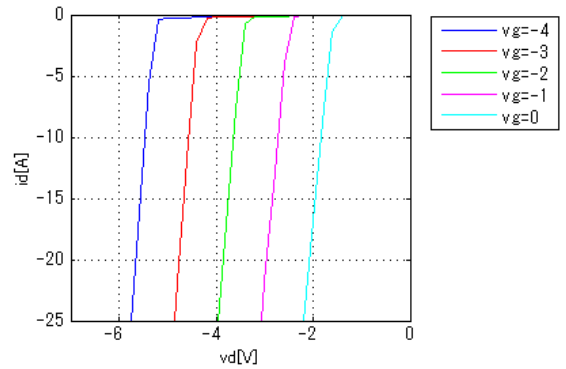
**IdVds[Vgs]5**

Temp = 125degC



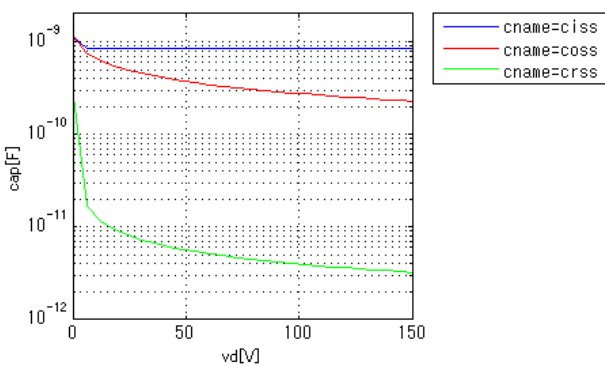
**IdVds[Vgs]6**

Temp = 125degC



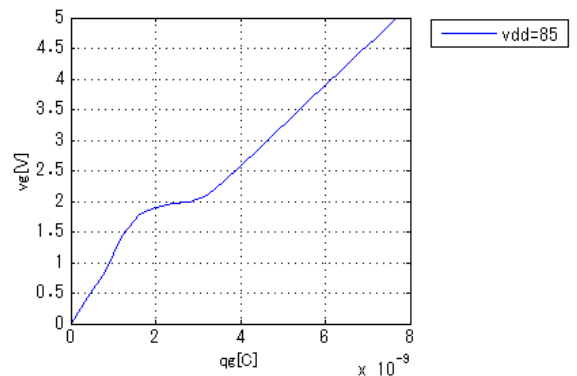
**CapacitanceVds[Cname]**

freq = 1000000Hz



**VgsQg[Vdd]**

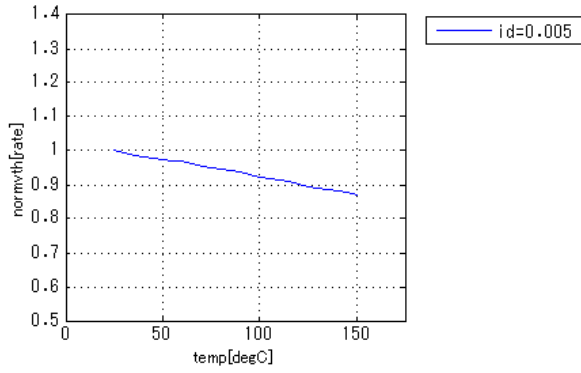
Id = 10A



Simulation results are following.  
Explanatory notes — : simulated

**NormVthTemp[Id]**

Vd = Vg



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