NGSPICE

```
.temp 27
.control
save all
save @n.xm1.nsg13_lv_nmos[gm]
save @n.xm1.nsg13_lv_nmos[gds]
save @n.xm1.nsg13_lv_nmos[vth]
save @n.xm1.nsg13_lv_nmos[cgg]
save @n.xm1.nsg13_lv_nmos[cgd]
save @n.xm1.nsg13_lv_nmos[vdss]
save @n.xm1.nsg13_lv_nmos[fug]
save @n.xm1.nsg13_lv_nmos[rg]
save @n.xm1.nsg13_lv_nmos[sid]
op
write dc_lv_nmos.raw
set appendwrite
dc Vds 0 1.5 0.01 Vgs 0 1.5 0.1
write dc_lv_nmos.raw
quit
.endc
```

i(vd)

gm=
?
gds=
?
vth=
?
vdss(vds_sat)=
?

cgs=
?
fug(f_t)=
?
cdg=
?
rg=
?

sid=
?

sg13_lv_nmos
w=1.3u
l=0.13u
ng=1
m=1
M1

Vds
1.5

Vgs
0.65

GND   GND   GND   GND

➤ simulate

➤ load waves

➤ annotate OP

MODEL
```
.lib cornerMOSlv.lib mos_tt
```

XSCHEM

dc_lv_nmos.sch