

ANNEXES

Annexes :A

```
go athena
set boundary=0.15
#
line x loc=0.0 spac=1
line x loc=10 spac=0.5
line x loc=30 spac=0.1
line x loc=70 spac=1
#

line y loc=0.0 spac=0.2
line y loc=0.2 spac=0.5
line y loc=2 spac=0.5
line y loc=3 spac=0.15
#
init silicon orientation=100
dif time=350 temperature=950 dryo2

deposit polysilicon thick=0.25 div=20

deposit oxide thick=5

etch oxide left x=30

implant phosphor dose=4.5e14 energy=80

etch oxide all

deposit oxide thick=1

etch oxide right x=27.5

implant boron dose=4e15 energy=30
etch oxide all

deposit alumin thick=0.1
etch alumin start x=26 y=-4
etch cont x=26 y=-0.25
etch cont x=30 y=-0.25
etch done x=30 y=-4

electrode name=cathode x=20 y=-0.6
electrode name=anode x=40 y=-0.6

structure outfile=diodel.str

# plot the structure
tonyplot diodel.str -set diodel.set
```

Annexes :B

```
go athena
#
line x loc=0.0 spac=1
line x loc=10 spac=0.5
line x loc=30 spac=0.1
line x loc=70 spac=1
#
line y loc=0.0 spac=0.2
line y loc=0.2 spac=0.5
line y loc=2 spac=0.5
line y loc=3 spac=0.15
#
init silicon orientation=100
dif time=350 temperature=950 dryo2

deposit polysilicon thick=0.25 div=20

deposit oxide thick=5

etch oxide left x=30

implant phosphor dose=4.5e14 energy=80

etch oxide all

deposit oxide thick=1

etch oxide right x=27.5

implant boron dose=4e15 energy=30
etch oxide all

deposit alumin thick=0.1
etch alumin start x=25 y=-4
etch cont x=25 y=-0.25
etch cont x=32 y=-0.25
etch done x=32 y=-4

electrode name=anode x=20 y=-0.6
electrode name=cathode x=40 y=-0.6

structure outfile=diodel.str

# plot the structure
```

```
#tonyplot diodel.str -set diodel.set

go atlas

model    fermi srh auger cvt bbt.std bbt.kl bb.a=6e23
bb.b=1.6e7 bb.gamma=2 mass.tunnel= 0.3 trap.coulombic
trap.tunnel print temperature=300
#model    conmob fldmob srh

solve init

method newton gummel block
log      outfile=diodel_300K.log
solve    vanode=0 vstep=0.05 vfinal=1 name=anode

tonyplot -overlay diodel_300K.log -set diodel_log.set
```
