The code for bulk PMOS is as mentioned below.

2D Coding:

```
#-------PMOS with triangular mesh --------#

GLOBAL    T=300 DopingScale=1e15 resistivemetal=false

#----------------MESHING----------------#

MESH      Type = S_Tri3


X.MESH    WIDTH=0.12                N.SPACES=8

X.MESH    WIDTH=0.035               N.SPACES=6

X.MESH    WIDTH=0.09                N.SPACES=15

X.MESH    WIDTH=0.035               N.SPACES=6

X.MESH    WIDTH=0.12                N.SPACES=8


Y.MESH    Y.TOP=-0.004   DEPTH=0.004    N.SPACES=4

Y.MESH                   DEPTH=0.015    N.SPACES=4

Y.MESH                   DEPTH=0.010    N.SPACES=4

Y.MESH                   DEPTH=0.005    N.SPACES=8

Y.MESH                   DEPTH=0.37     N.SPACES=10


#----------------SPREAD----------------#

#SPREAD    Location=Left Width=0.125 Upper=0 Lower=2 Thickness=0.02 Encroach=1

#SPREAD    Location=Right Width=0.125 Upper=0 Lower=2 Thickness=0.02 Encroach=1


#----------------REGION----------------#


REGION    Label=N.SUBSTRATE                                    Material=Si

REGION    Label=N.Oxide     IY.MAX=4                           Material=Ox

REGION    Label=N.Source              X.MIN=0.0   X.MAX=0.155 IY.MAX=4   Material=Elec
```

```
REGION    Label=N.Drain              X.MIN=0.245 X.MAX=0.4   IY.MAX=4   Material=Elec

FACE      Label=N.SUB                                                   Location=BOTTOM
FACE      Label=N.GATE               X.MIN=0.155 X.MAX=0.245       Location=Top

#----------------DOPING----------------#

DOPING    Type=analytic

PROFILE   Type=Uniform    Ion=Donor  N.PEAK=5E15    X.MIN=0.0  \
        X.MAX=0.4       Y.TOP=0       Y.BOTTOM=0.4
PROFILE   Type=analytic   Ion=Donor  N.PEAK=1E18    X.MIN=0.0  \
        X.MAX=0.4       Y.TOP=0.00    Y.CHAR=0.02
PROFILE   Type=analytic   Ion=Acceptor     N.PEAK=2E18    Y.Junction=0.005   \
        X.MIN=0.0       X.MAX=0.15    XY.RATIO=1
PROFILE   Type=analytic   Ion= Acceptor     N.PEAK=1E20    Y.Junction=0.02   \
        X.MIN=0.0       X.MAX=0.120   XY.RATIO=0.5
PROFILE   Type=analytic   Ion= Acceptor     N.PEAK=2E18    Y.Junction=0.005   \
        X.MIN=0.25      X.MAX=0.4     XY.RATIO=1
PROFILE   Type=analytic   Ion= Acceptor     N.PEAK=1E20    Y.Junction=0.02    \
        X.MIN=0.280     X.MAX=0.4     XY.RATIO=0.5

Export VtkFile="PMOS2D.vtu" CgnsFile="PMOS2D.cgns"
```