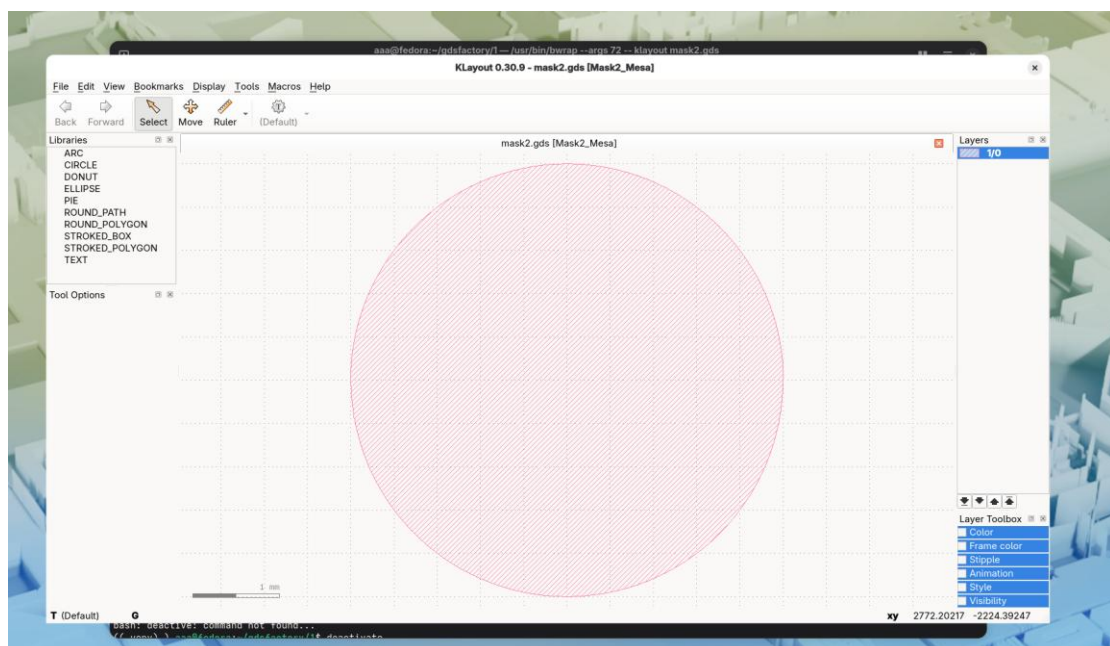


1. 保护环终端器件工艺流程图:

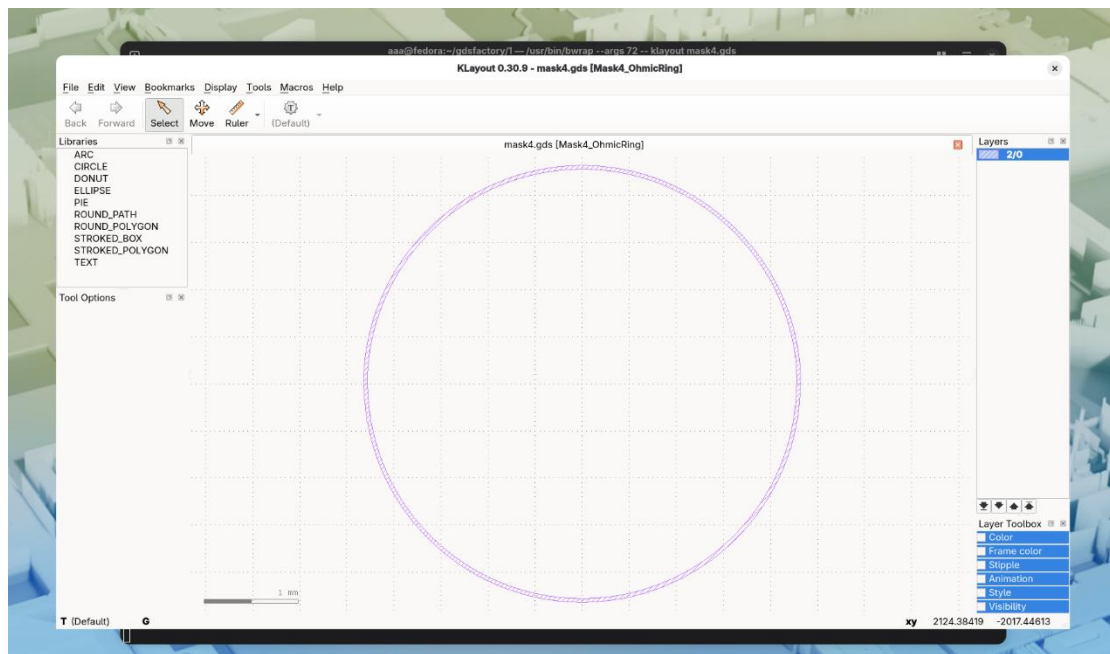


2. 刻蚀终端的光刻板(共四次)

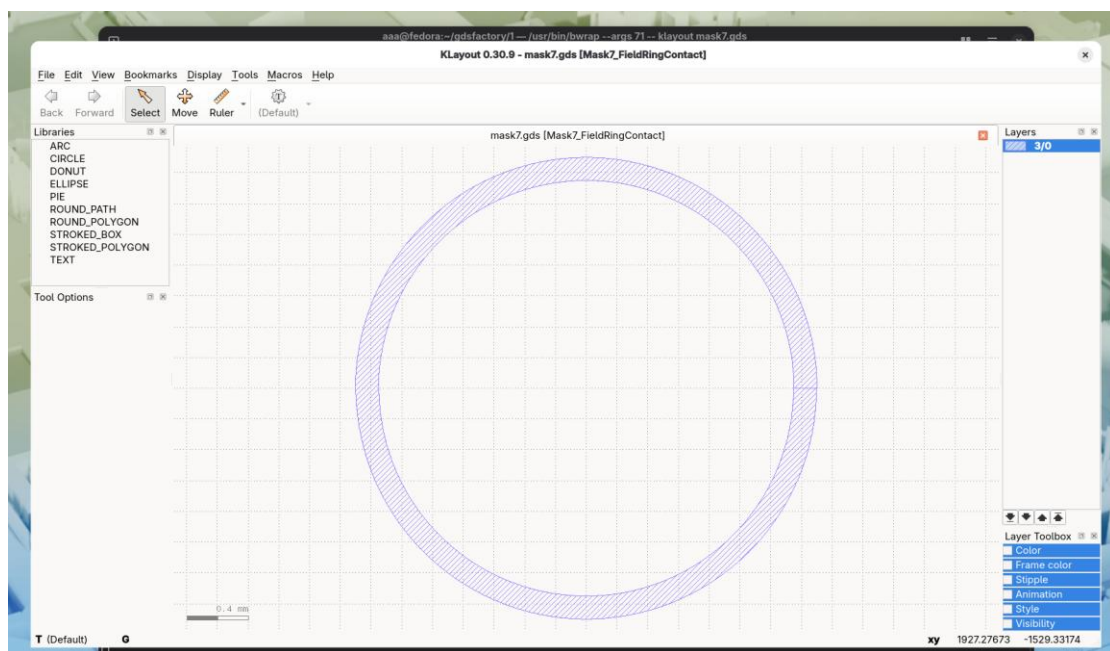
(1)刻蚀终端过刻到增益层以下



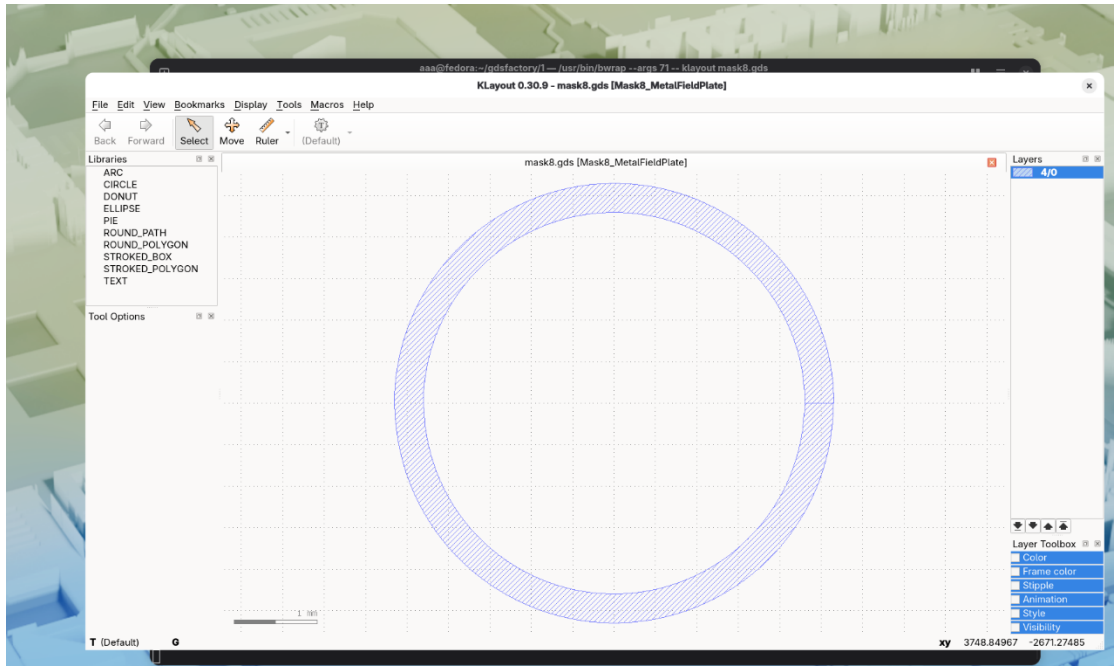
(2)刻蚀钝化层(用以溅射欧姆电极)



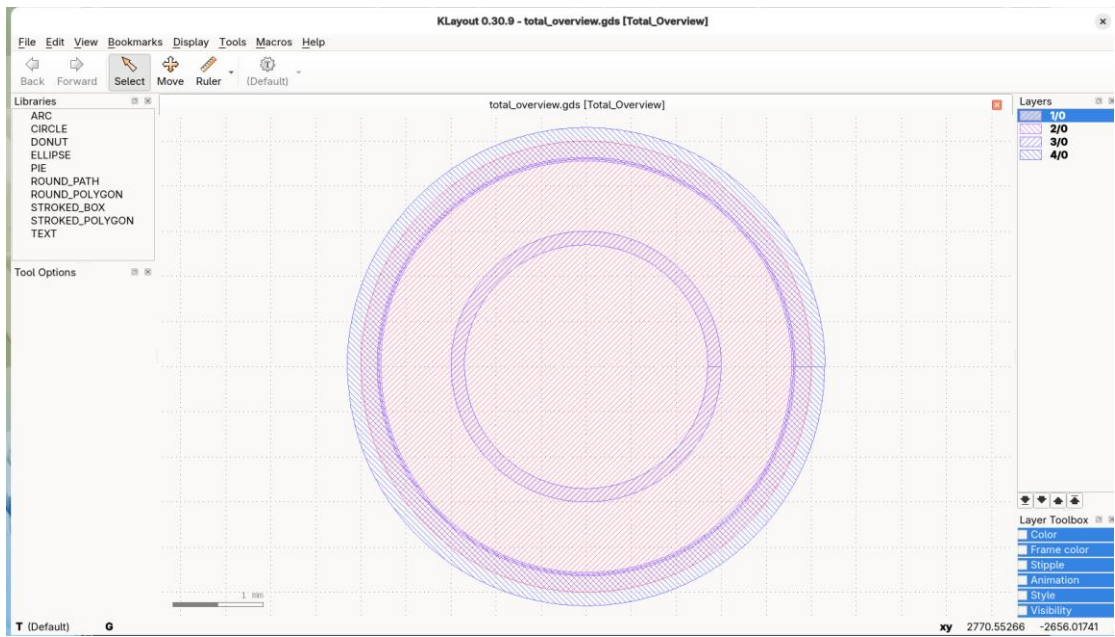
(3)刻蚀钝化层(用以沉积 PAD 金属+场板)



(4)沉积 PAD 金属+场板



总览:



源代码:

```

((.venv) ) aaa@fedora:~/gdsfactory/1$ cat masks.py
import gdsfactory as gf
import numpy as np
from gdsfactory.gpdk import PDK
PDK.activate()

CHIP_SIZE = 10000
CENTER = (0, 0)

MESA_RADIUS = 2500
OHMIC_RING_INNER = 2280
OHMIC_RING_OUTER = 2320
CONTACT_RING_INNER = 1350
CONTACT_RING_OUTER = 1500
METAL_RING_INNER = 2300
METAL_RING_OUTER = 2650

def add_circle(comp, center, radius, layer, n=128):
    t = np.linspace(0, 2*np.pi, n, endpoint=True)
    x = center[0] + radius * np.cos(t)
    y = center[1] + radius * np.sin(t)
    comp.add_polygon(list(zip(x, y)), layer=layer)

def add_ring(comp, center, r_in, r_out, layer, n=128):
    t = np.linspace(0, 2*np.pi, n, endpoint=True)
    x_outer = center[0] + r_out * np.cos(t)
    y_outer = center[1] + r_out * np.sin(t)
    x_inner = center[0] + r_in * np.cos(t[:-1])
    y_inner = center[1] + r_in * np.sin(t[:-1])
    comp.add_polygon(list(zip(x_outer, y_outer)) + list(zip(x_inner, y_inner)), layer=layer)

```

```

c2 = gf.Component("Mask2_Mesa")
add_circle(c2, CENTER, MESA_RADIUS, (1,0))
c2.write_gds("mask2.gds")

c4 = gf.Component("Mask4_OhmicRing")
add_ring(c4, CENTER, OHMIC_RING_INNER, OHMIC_RING_OUTER, (2,0))
c4.write_gds("mask4.gds")

c7 = gf.Component("Mask7_FieldRingContact")
add_ring(c7, CENTER, CONTACT_RING_INNER, CONTACT_RING_OUTER, (3,0))
c7.write_gds("mask7.gds")

c8 = gf.Component("Mask8_MetalFieldPlate")
add_ring(c8, CENTER, METAL_RING_INNER, METAL_RING_OUTER, (4,0))
c8.write_gds("mask8.gds")

c_total = gf.Component("Total_Overview")
add_circle(c_total, CENTER, MESA_RADIUS, (1,0))
add_ring(c_total, CENTER, OHMIC_RING_INNER, OHMIC_RING_OUTER, (2,0))
add_ring(c_total, CENTER, CONTACT_RING_INNER, CONTACT_RING_OUTER, (3,0))
add_ring(c_total, CENTER, METAL_RING_INNER, METAL_RING_OUTER, (4,0))
c_total.write_gds("total_overview.gds")

```