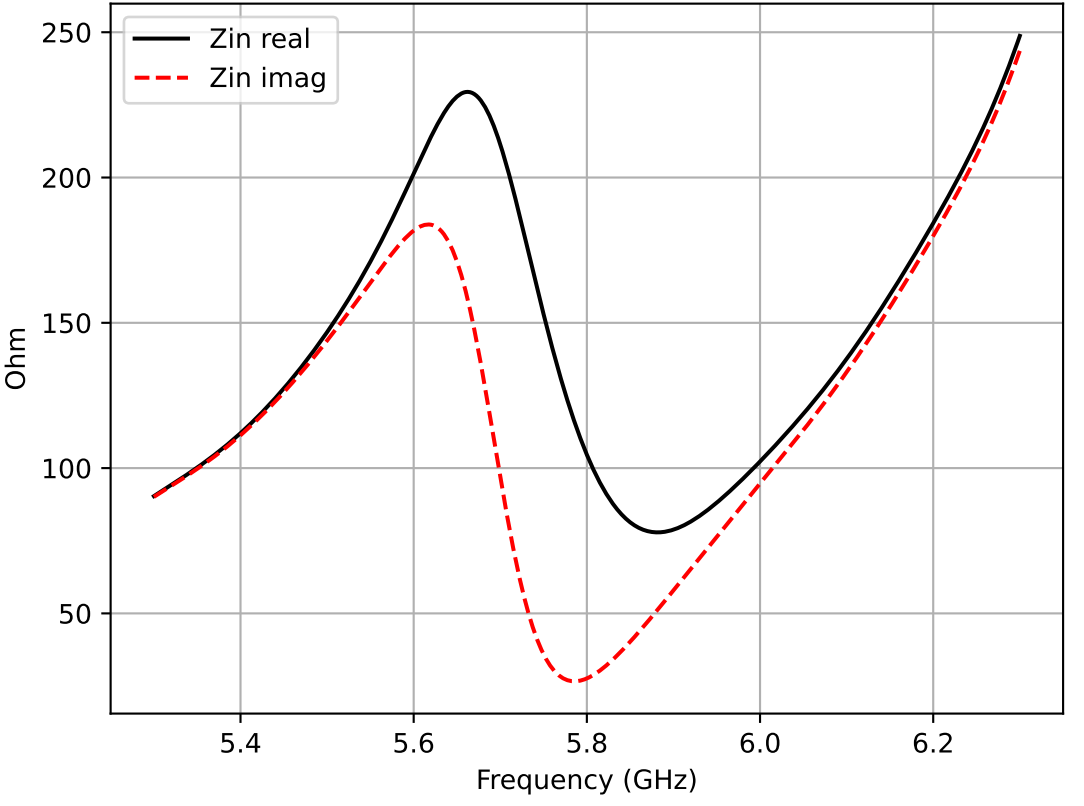
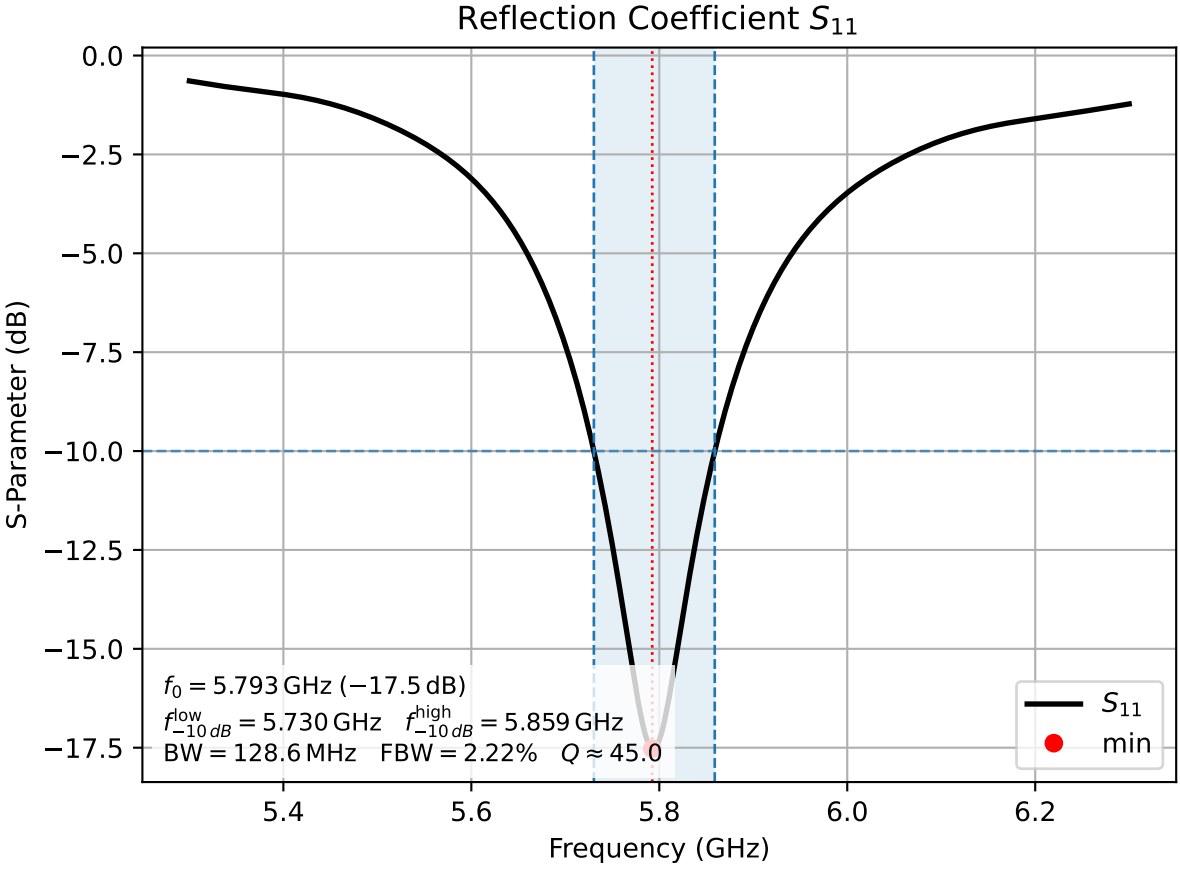
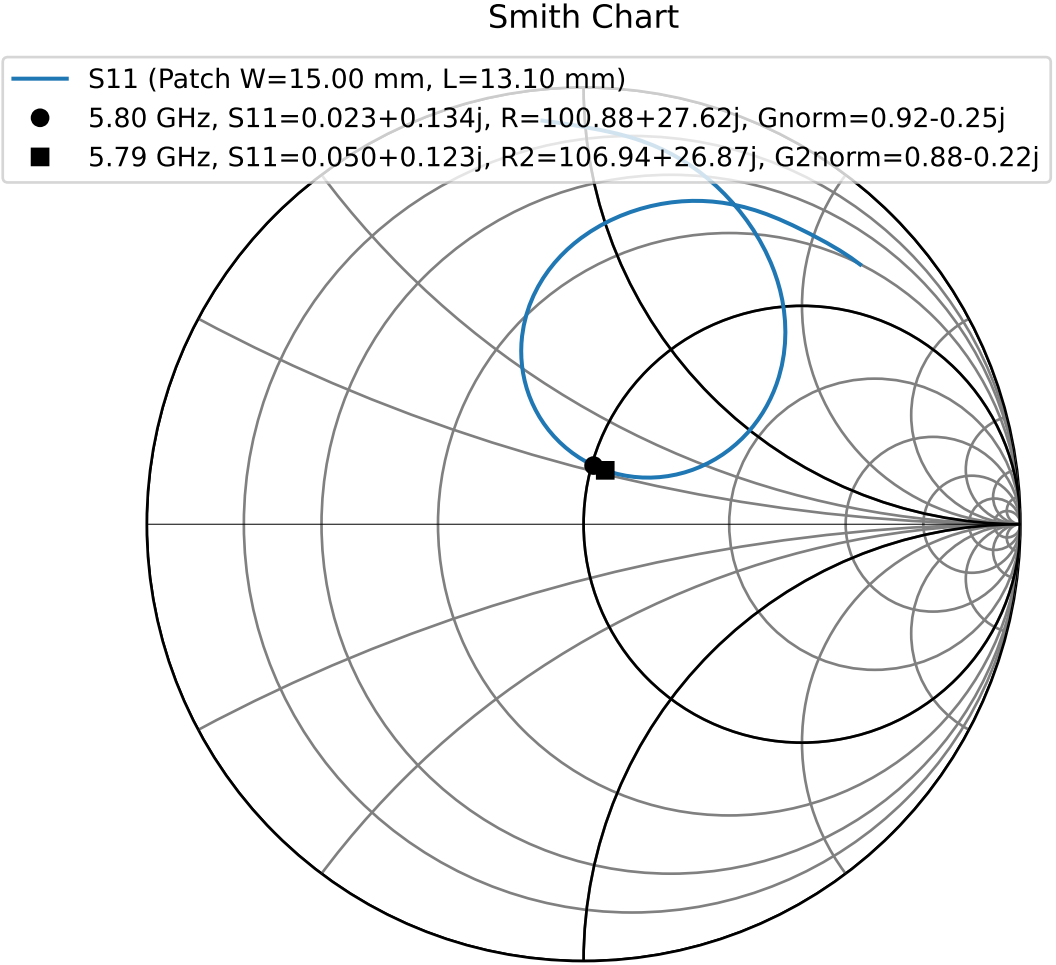
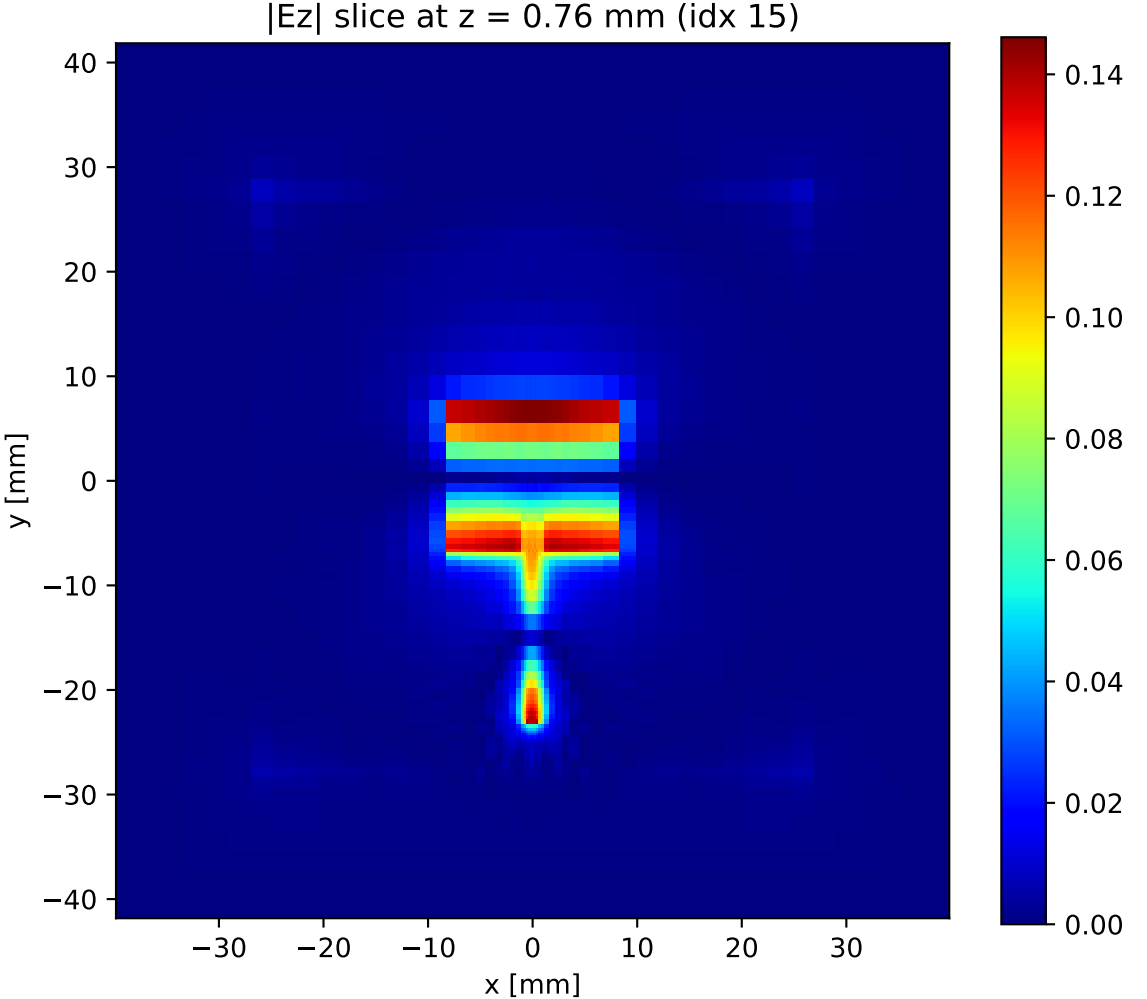
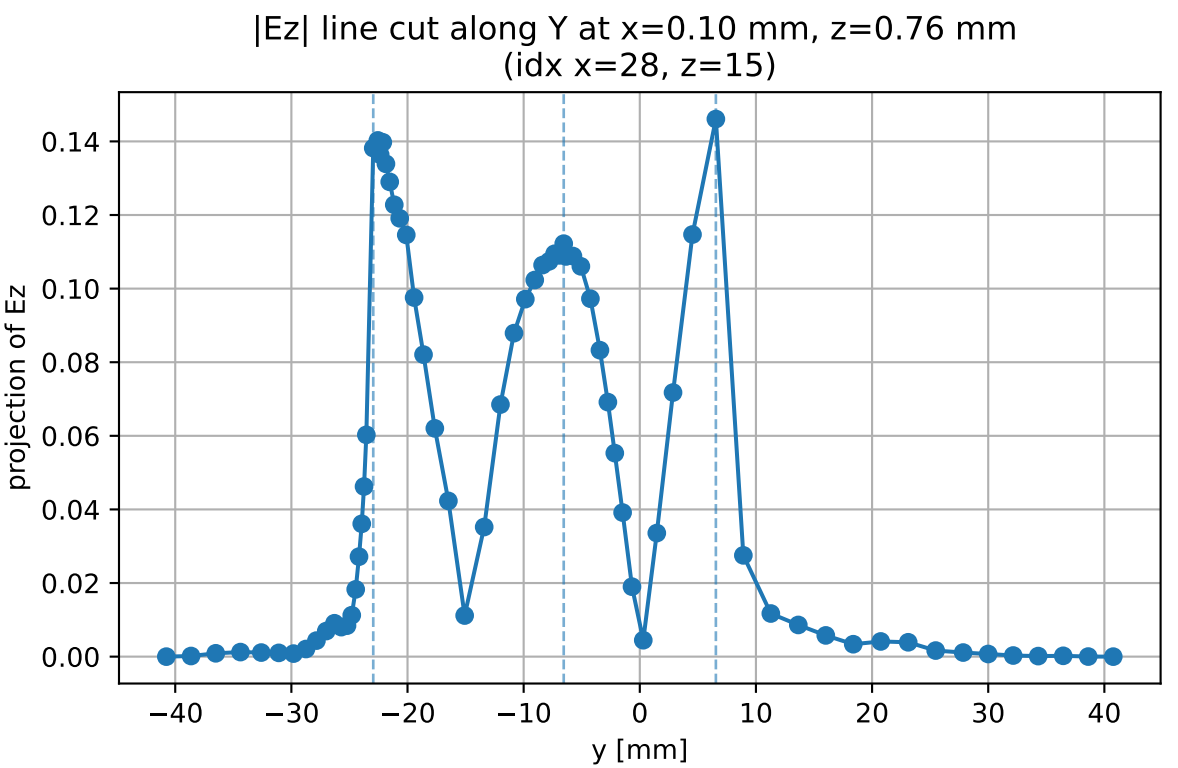
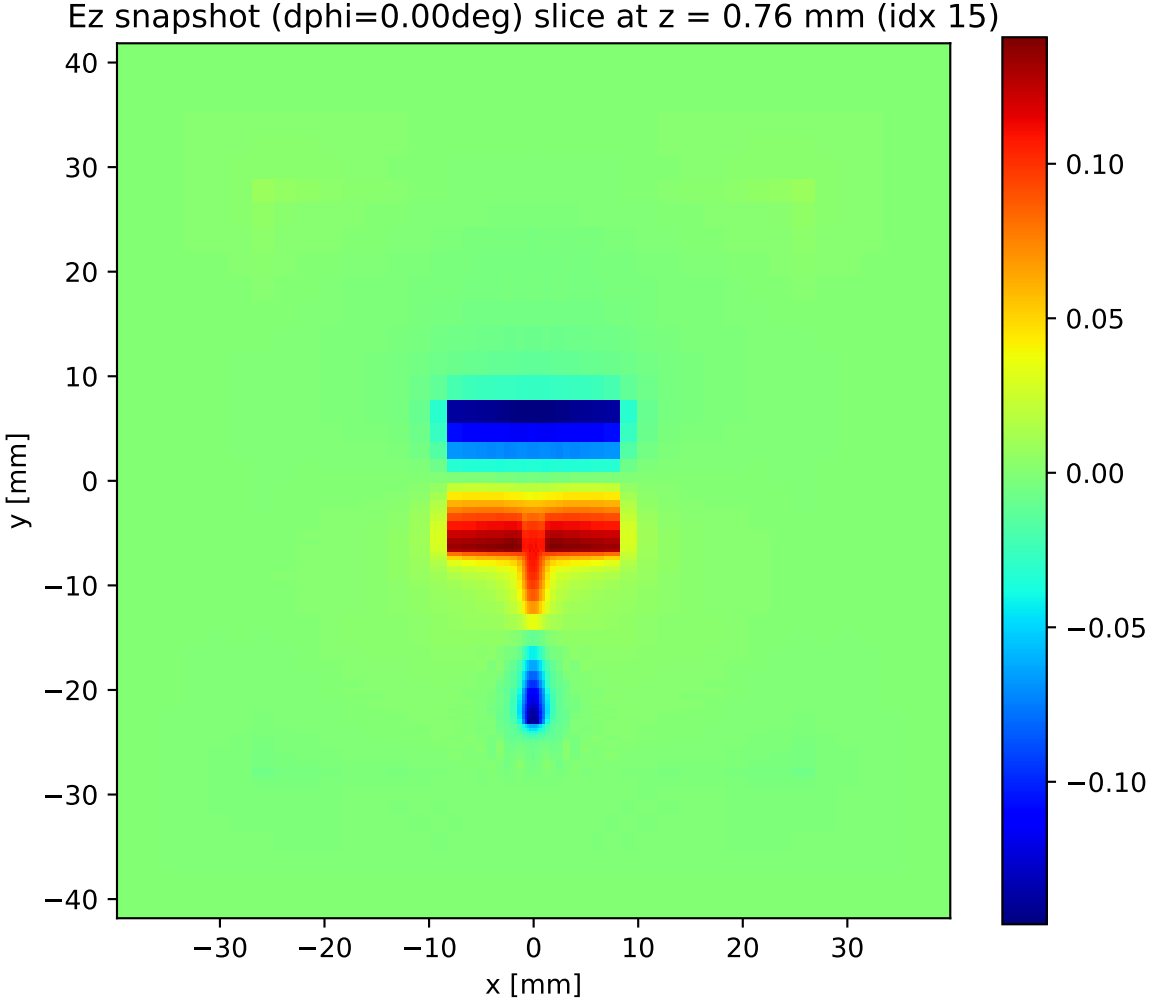

Zin real
Zin imag
250
200
150
100
50
Ohm
5.4
5.6
5.8
6.0
6.2
Frequency (GHz)

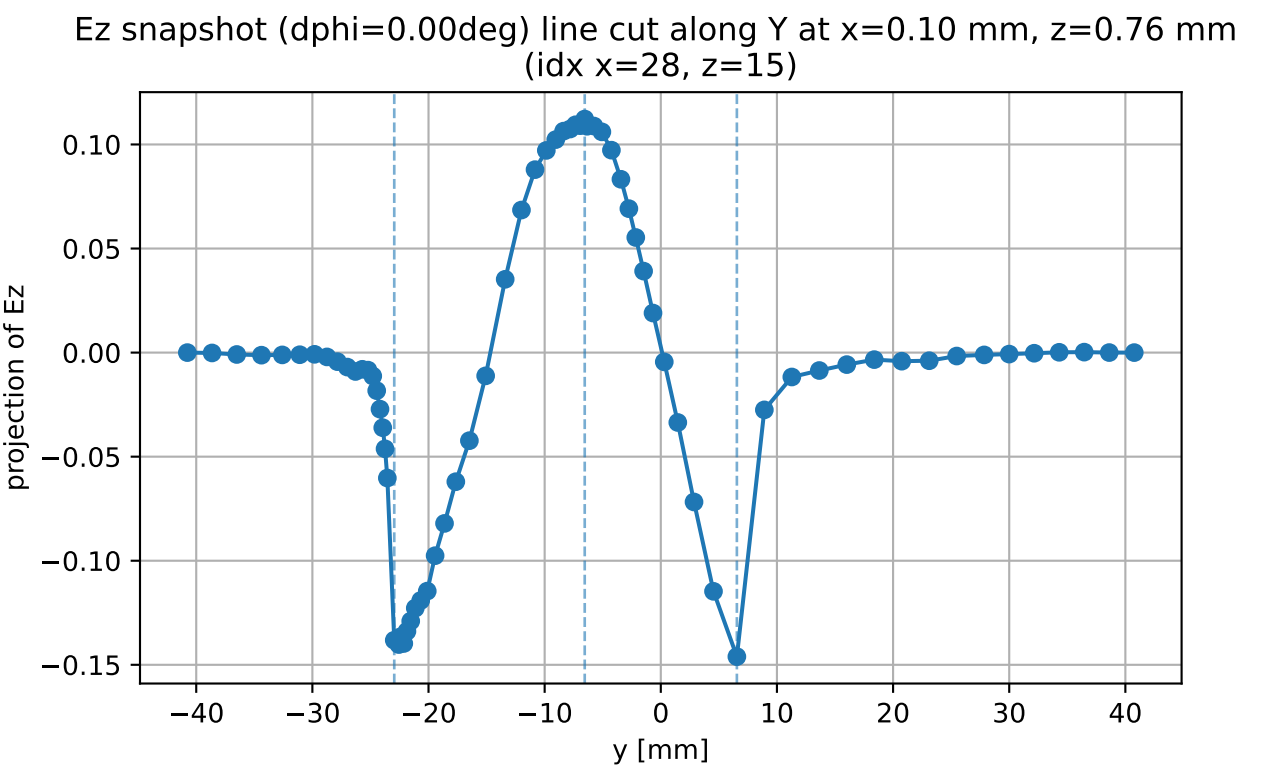

Reflection Coefficient S_{11}
S-Parameter (dB)
Frequency (GHz)
0.0
−2.5
−5.0
−7.5
−10.0
−12.5
−15.0
−17.5
5.4
5.6
5.8
6.0
6.2
$f_0 = 5.793\,\text{GHz}\ (-17.5\,\text{dB})$
$f^{\text{low}}_{-10\,dB} = 5.730\,\text{GHz}$ $f^{\text{high}}_{-10\,dB} = 5.859\,\text{GHz}$
$\text{BW} = 128.6\,\text{MHz}$ $\text{FBW} = 2.22\%$ $Q \approx 45.0$
S_{11}
min

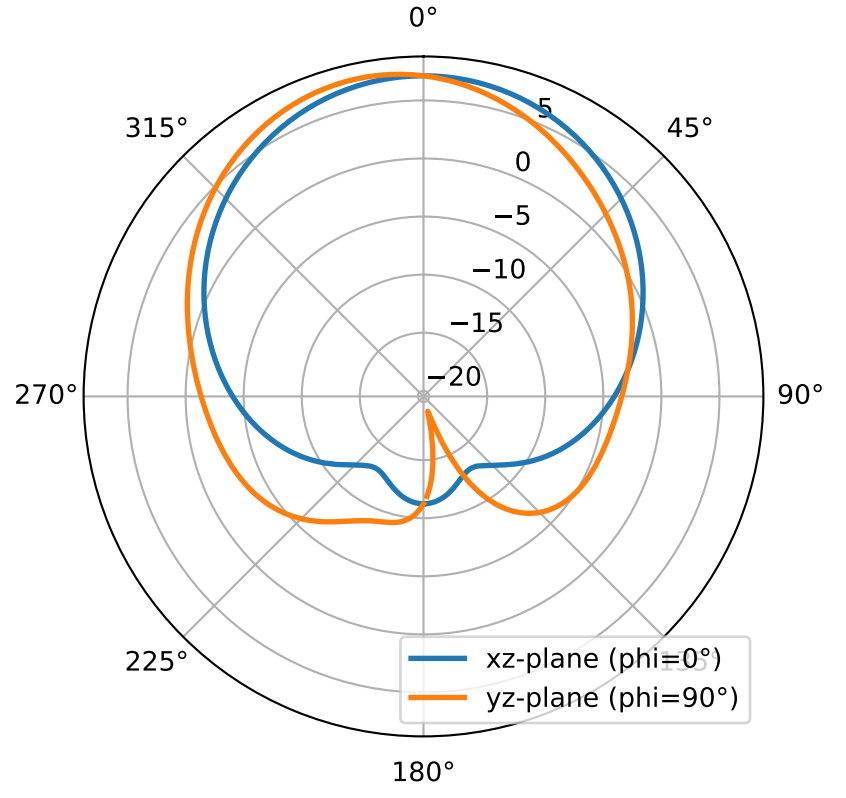

Smith Chart
S11 (Patch W=15.00 mm, L=13.10 mm)
5.80 GHz, S11=0.023+0.134j, R=100.88+27.62j, Gnorm=0.92-0.25j
5.79 GHz, S11=0.050+0.123j, R2=106.94+26.87j, G2norm=0.88-0.22j

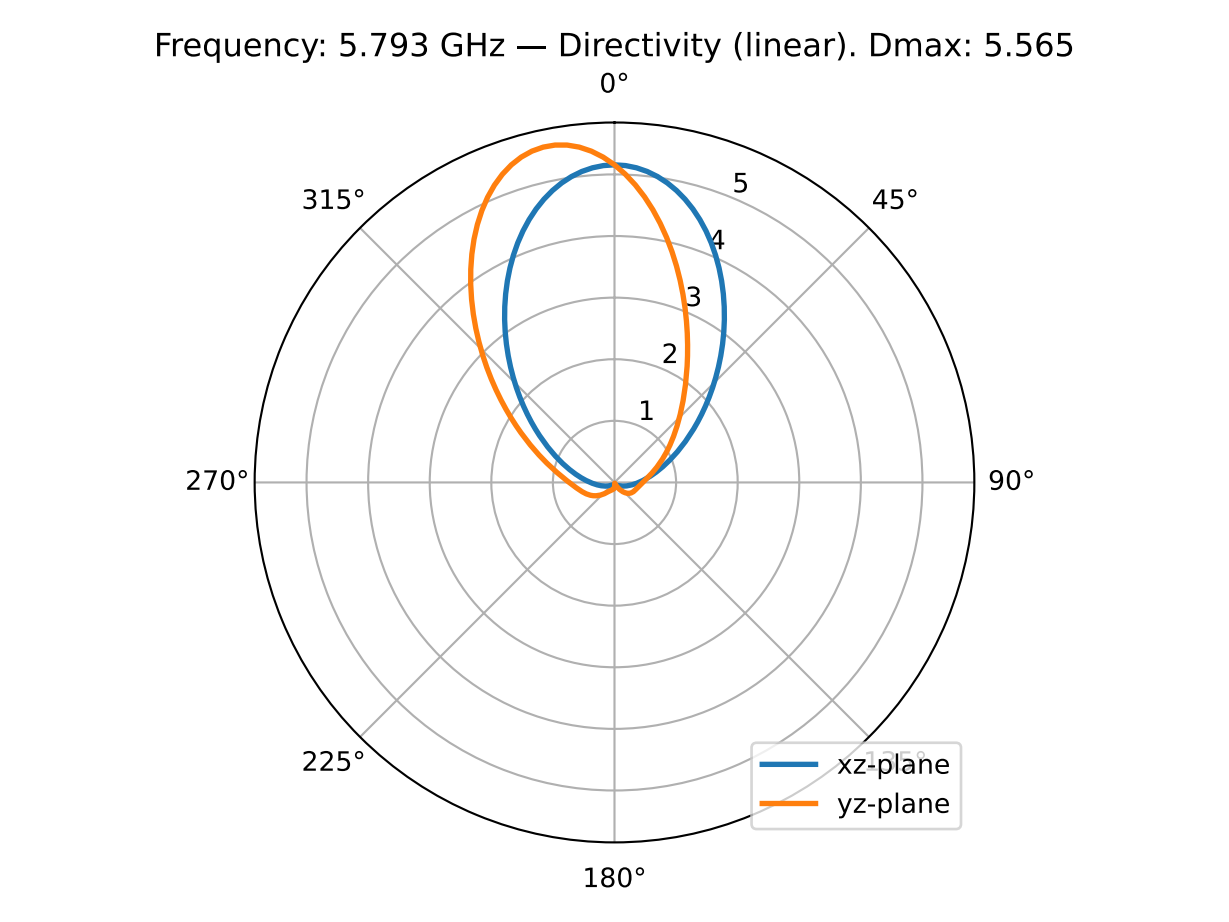

|Ez| slice at z = 0.76 mm (idx 15)
y [mm]
x [mm]
40
30
20
10
0
−10
−20
−30
−40
−30
−20
−10
0
10
20
30
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00

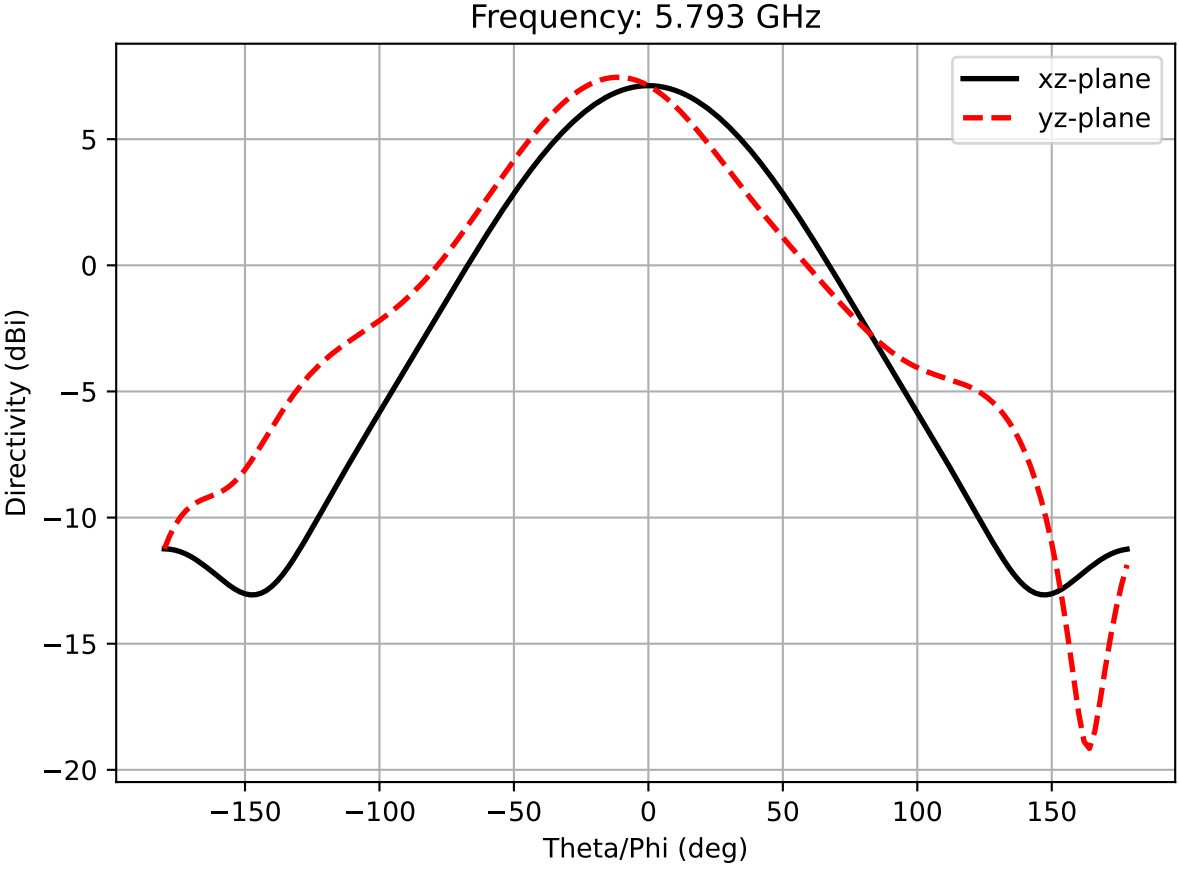

|Ez| line cut along Y at x=0.10 mm, z=0.76 mm
(idx x=28, z=15)
projection of Ez
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
−40
−30
−20
−10
0
10
20
30
40
y [mm]

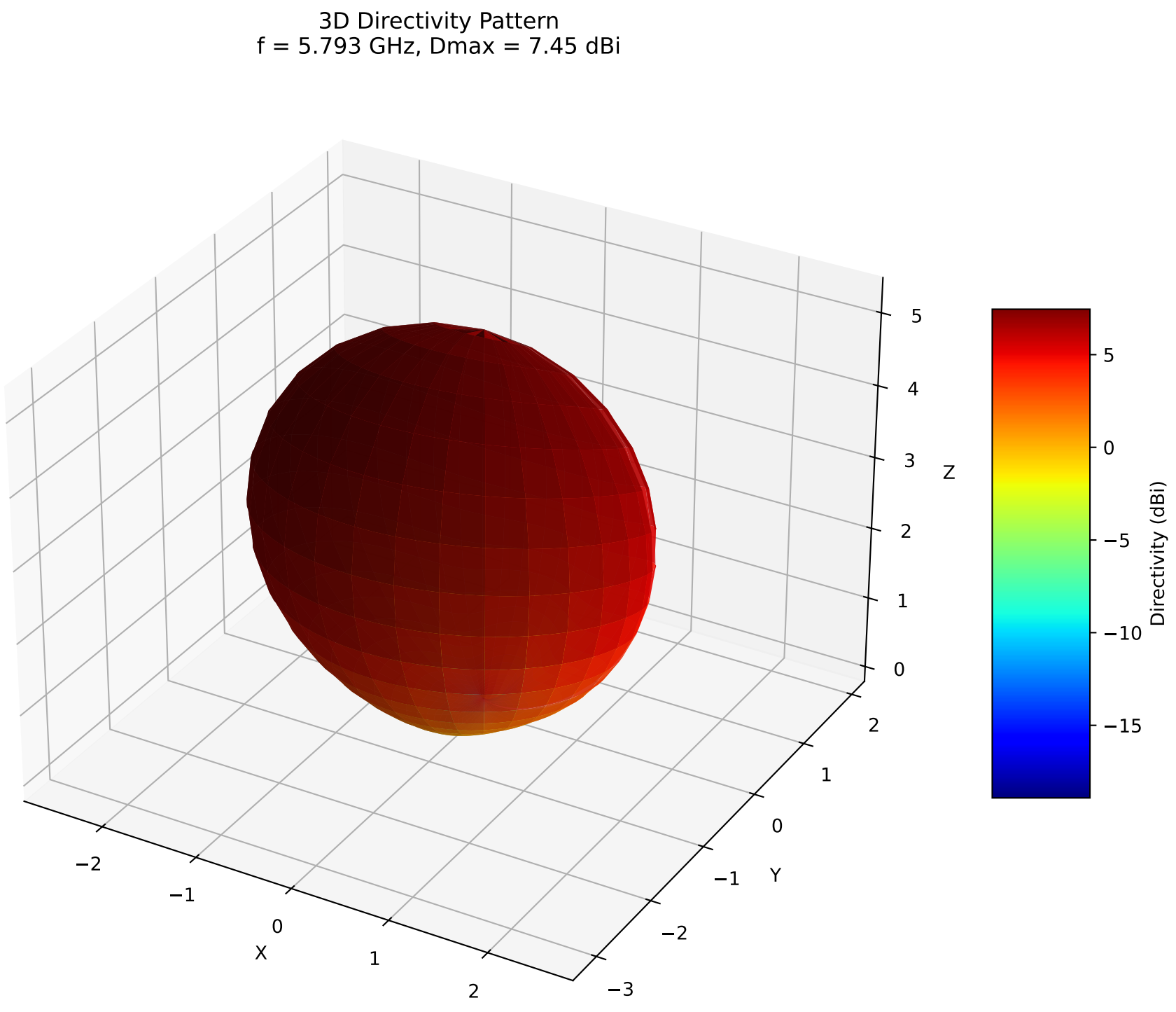

Ez snapshot (dphi=0.00deg) slice at z = 0.76 mm (idx 15)
y [mm]
x [mm]
40
30
20
10
0
−10
−20
−30
−40
−30
−20
−10
0
10
20
30
0.10
0.05
0.00
−0.05
−0.10


Ez snapshot (dphi=0.00deg) line cut along Y at x=0.10 mm, z=0.76 mm
(idx x=28, z=15)
projection of Ez
y [mm]
0.10
0.05
0.00
−0.05
−0.10
−0.15
−40
−30
−20
−10
0
10
20
30
40


f = 5.793 GHz — Directivity (dB)
Dmax (integrated) ≈ 7.45 dB, nf2ff Dmax = 7.45 dB
0°
45°
90°
225°
270°
315°
180°
5
0
−5
−10
−15
−20
xz-plane (phi=0°)
yz-plane (phi=90°)


Frequency: 5.793 GHz — Directivity (linear). Dmax: 5.565
0°
45°
90°
225°
180°
270°
315°
1
2
3
4
5
xz-plane
yz-plane


Frequency: 5.793 GHz
xz-plane
yz-plane
Directivity (dBi)
5
0
−5
−10
−15
−20
−150
−100
−50
0
50
100
150
Theta/Phi (deg)


3D Directivity Pattern
f = 5.793 GHz, Dmax = 7.45 dBi
X
Y
Z
Directivity (dBi)