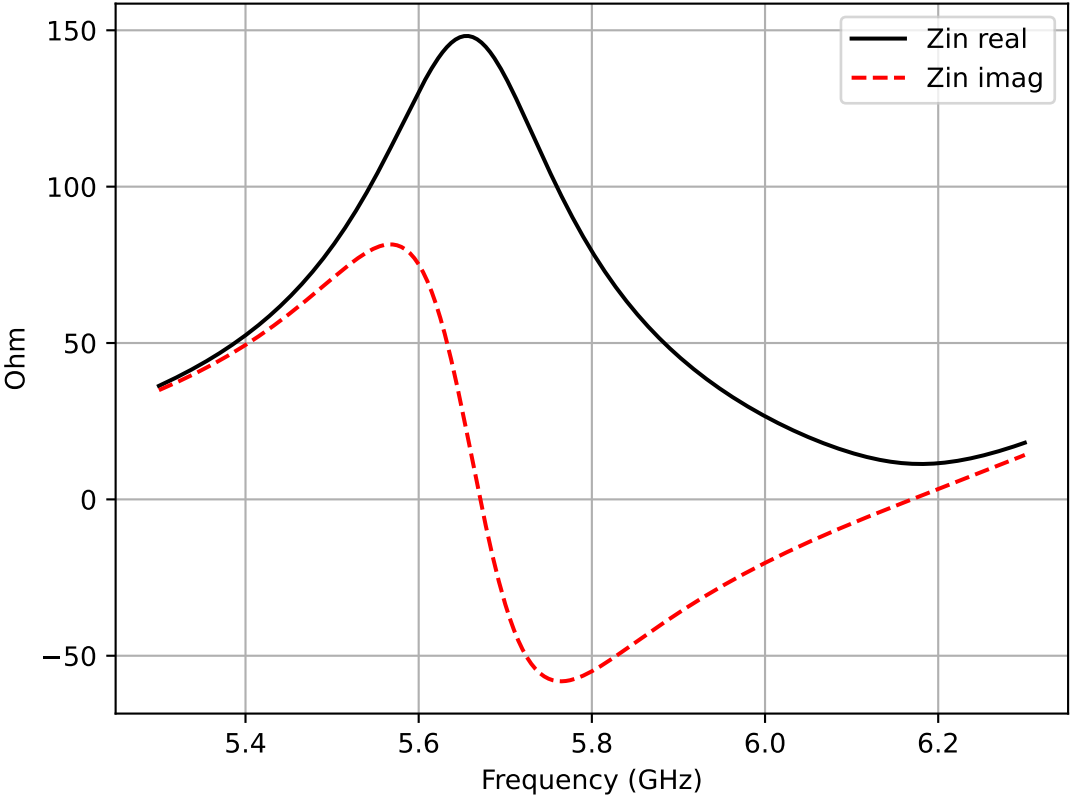
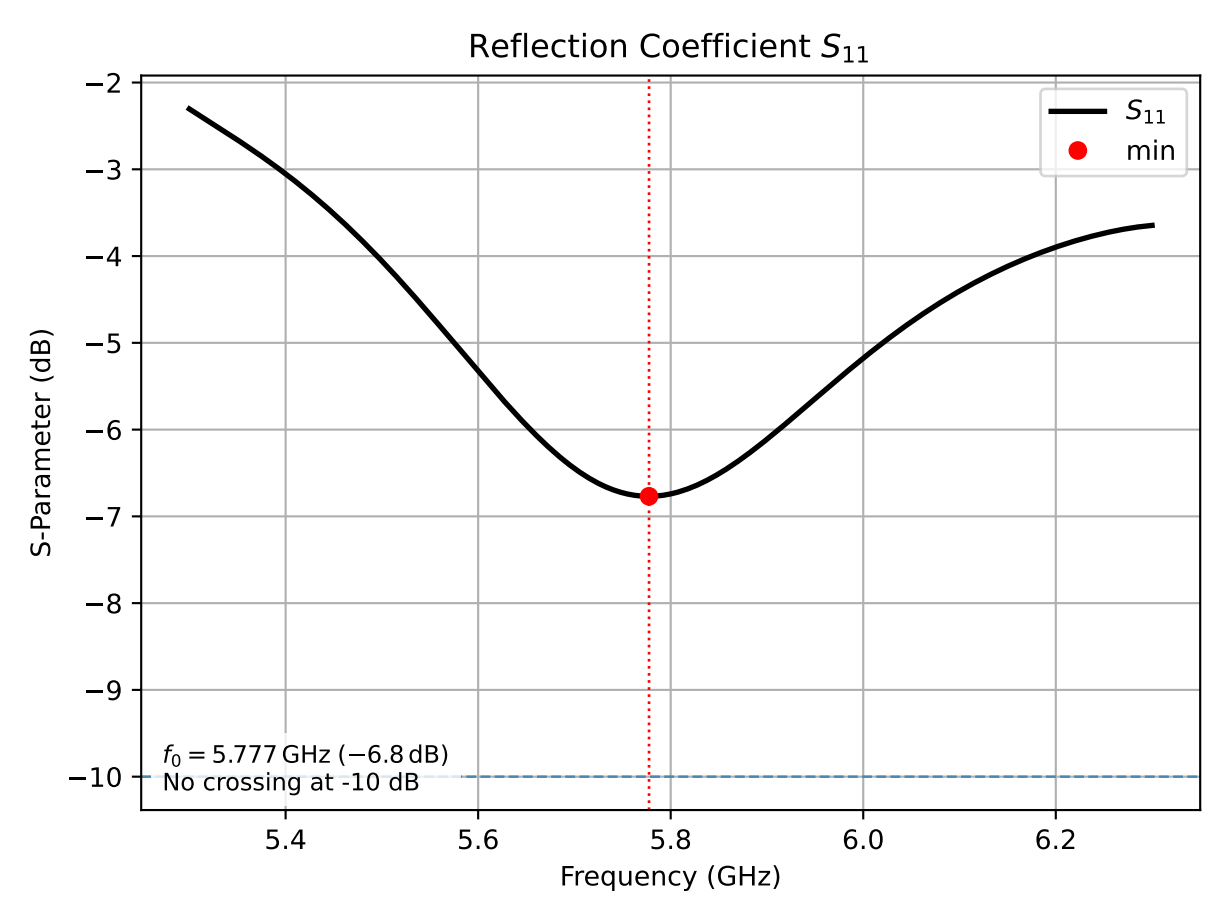
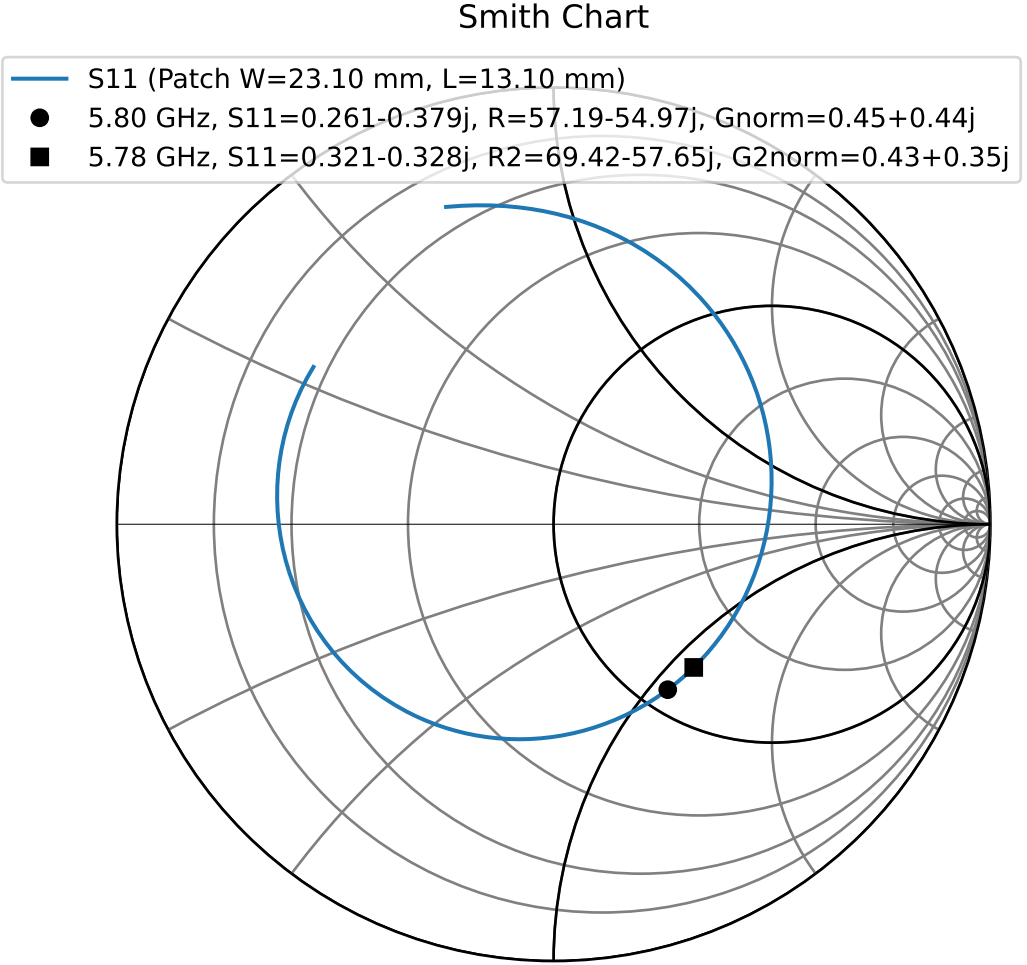
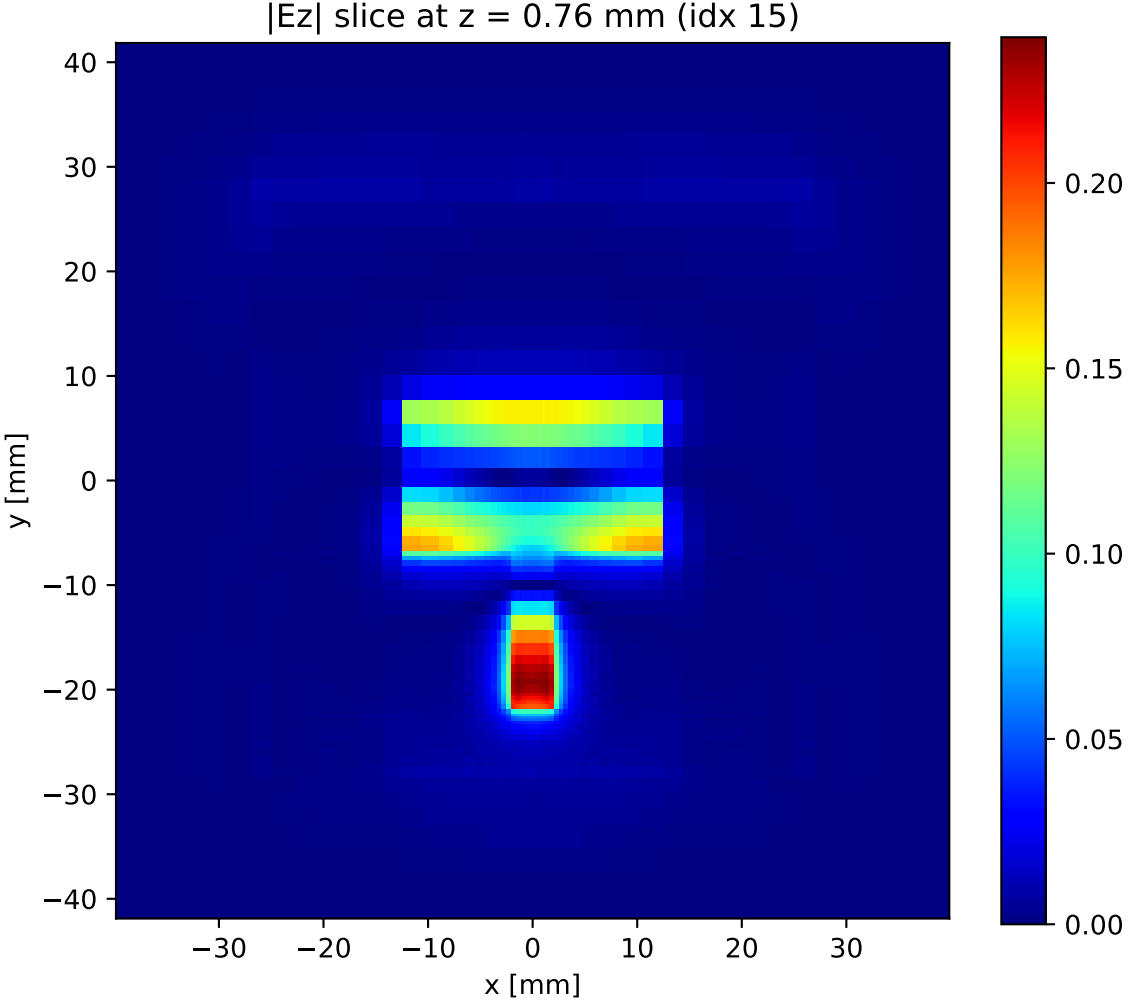
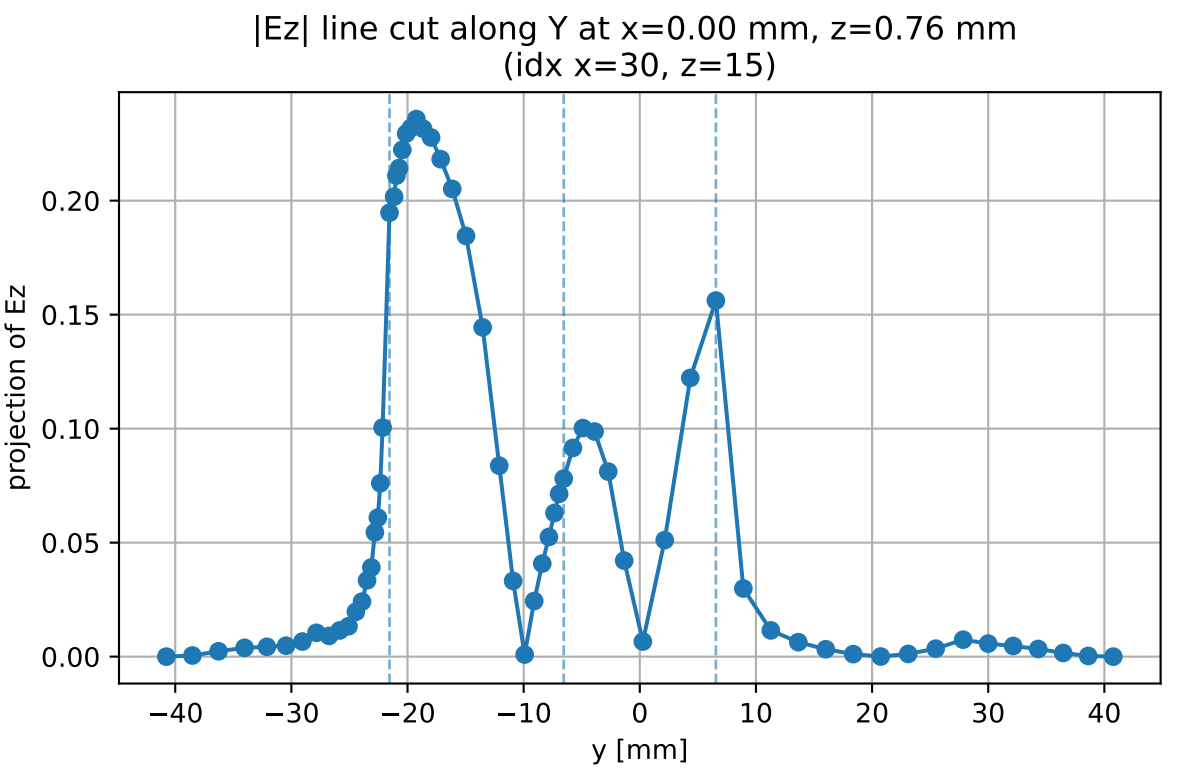
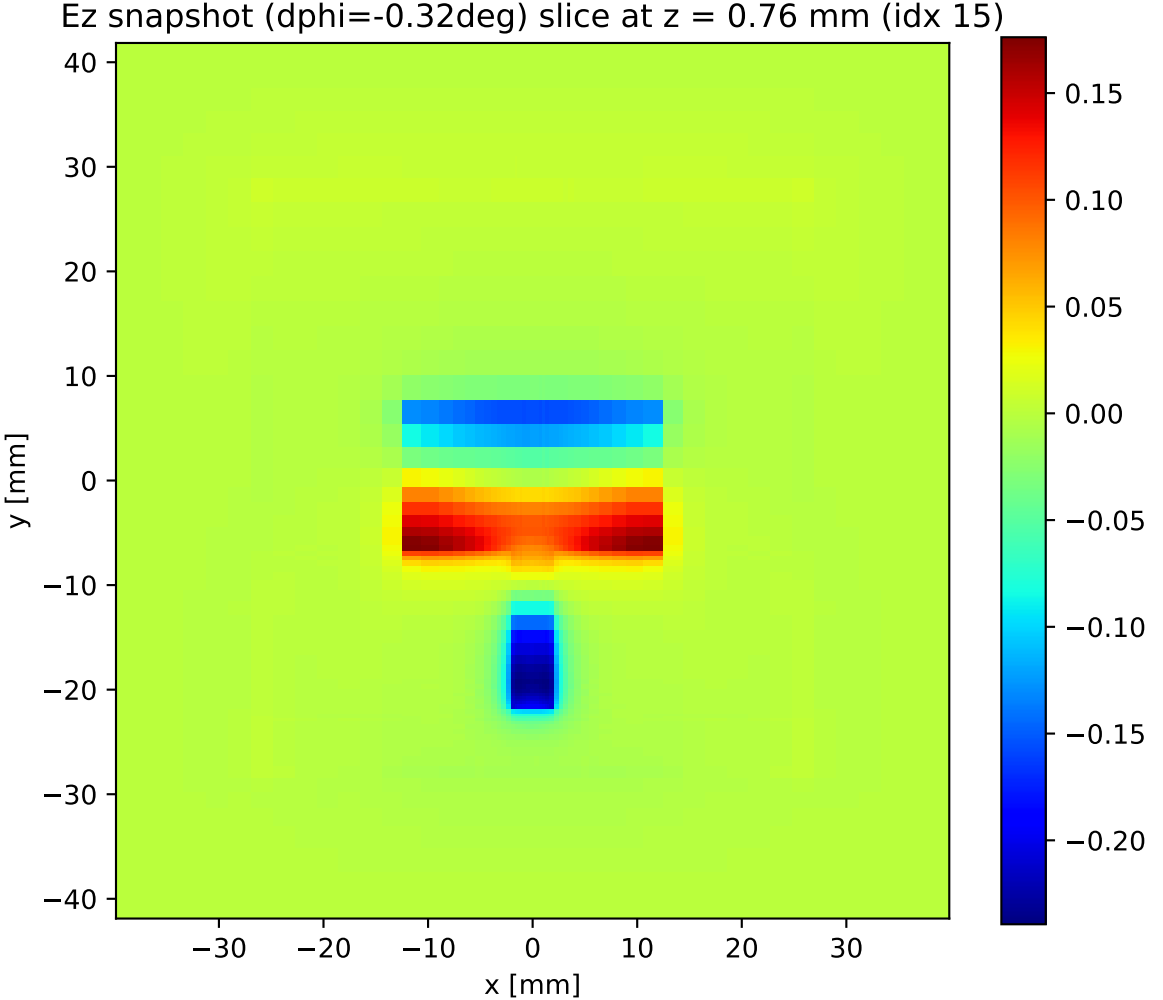

Zin real
Zin imag
150
100
50
0
−50
Ohm
5.4
5.6
5.8
6.0
6.2
Frequency (GHz)

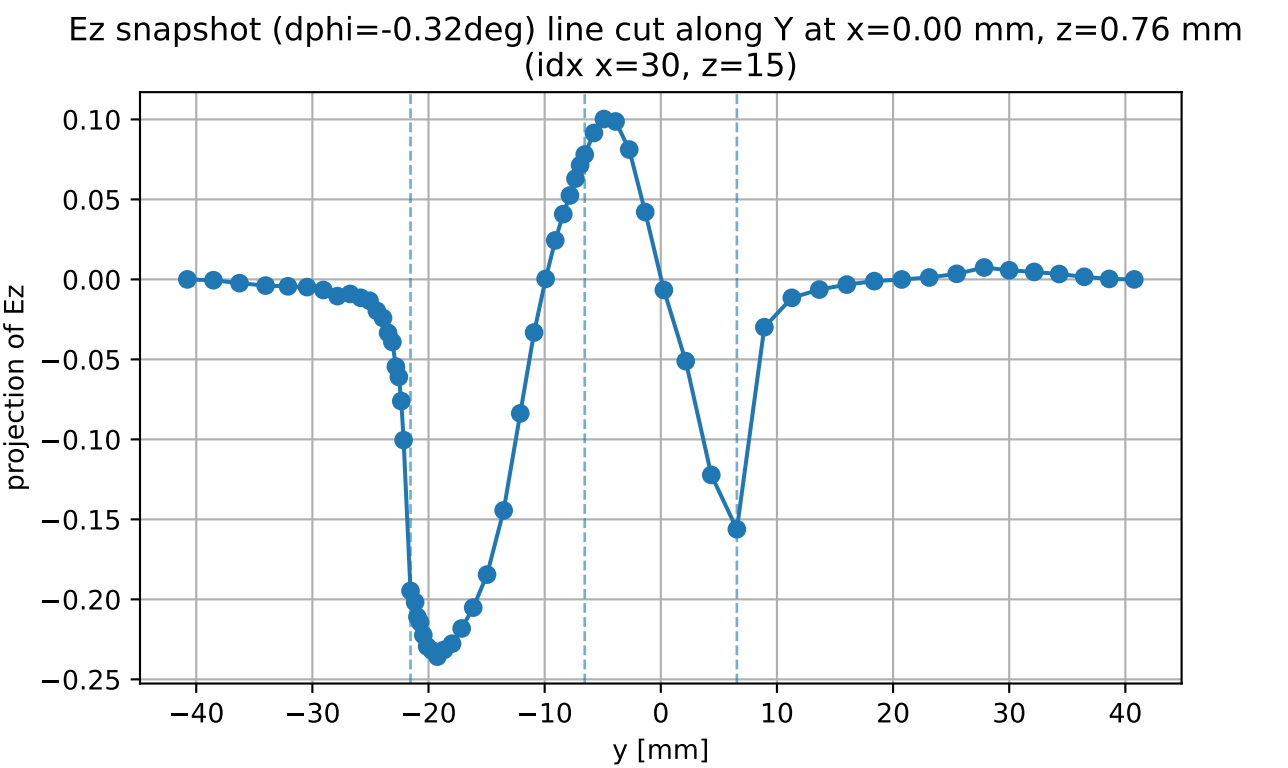

Reflection Coefficient S_{11}
S_{11}
min
S-Parameter (dB)
−2
−3
−4
−5
−6
−7
−8
−9
−10
$f_0 = 5.777\,\mathrm{GHz}\ (-6.8\,\mathrm{dB})$
No crossing at -10 dB
5.4
5.6
5.8
6.0
6.2
Frequency (GHz)

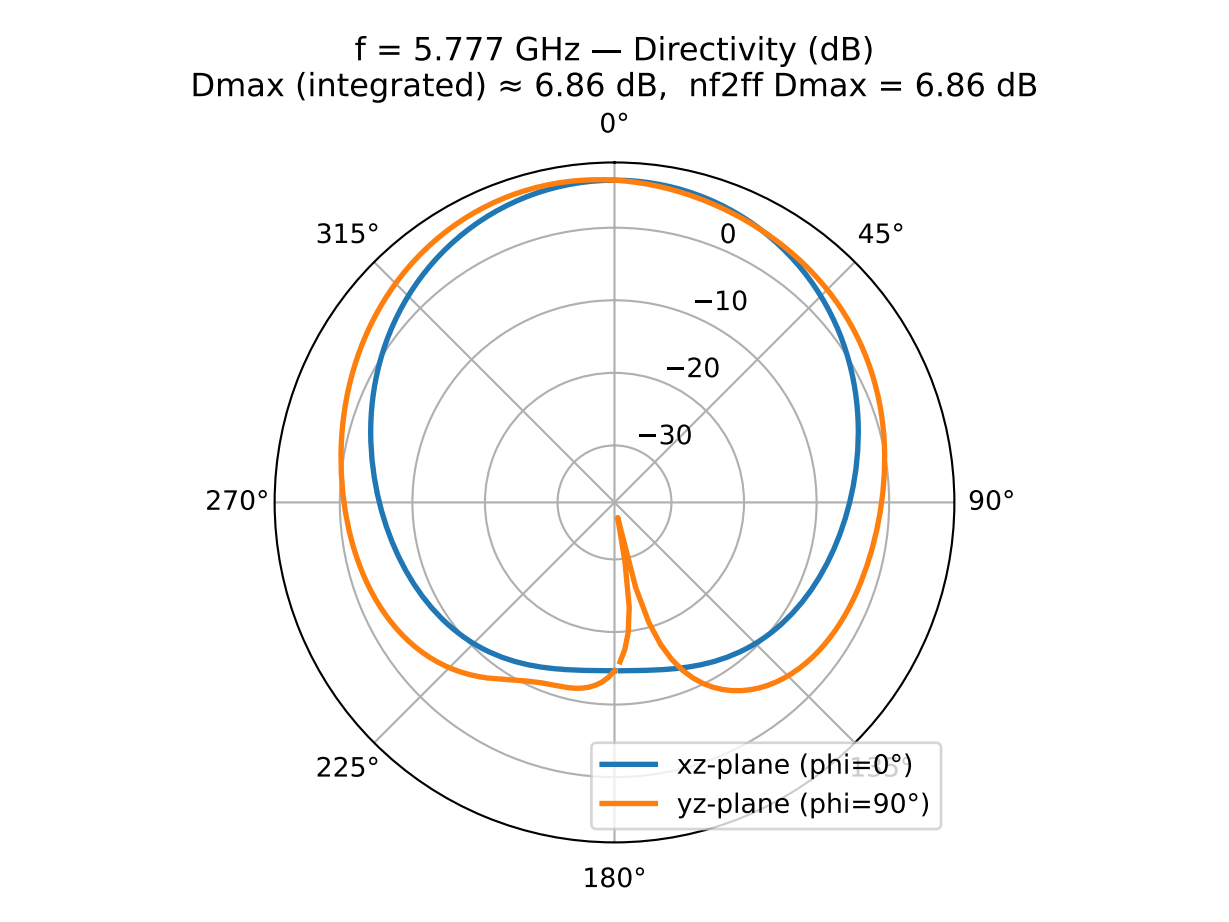

Smith Chart
S11 (Patch W=23.10 mm, L=13.10 mm)
5.80 GHz, S11=0.261-0.379j, R=57.19-54.97j, Gnorm=0.45+0.44j
5.78 GHz, S11=0.321-0.328j, R2=69.42-57.65j, G2norm=0.43+0.35j

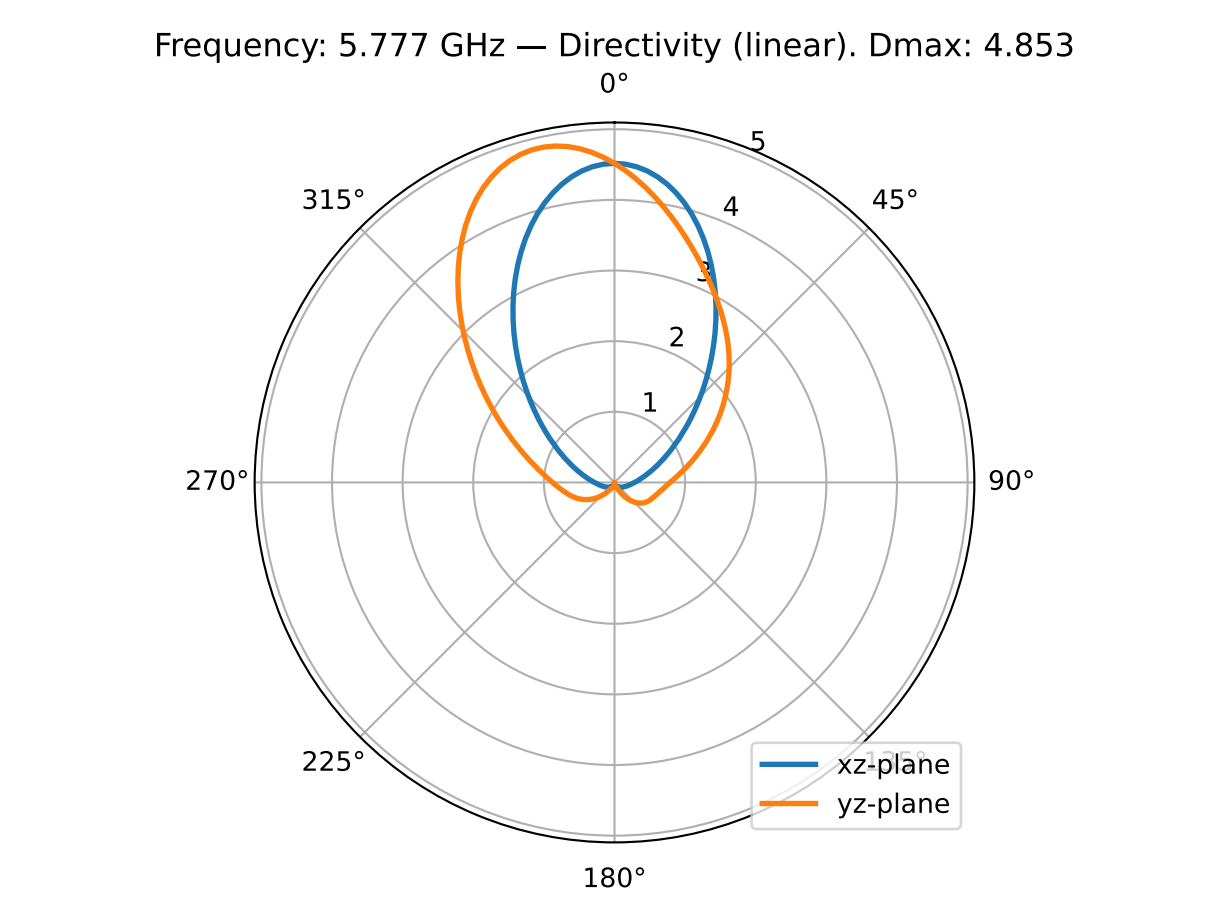

|Ez| slice at z = 0.76 mm (idx 15)
y [mm]
x [mm]
40
30
20
10
0
−10
−20
−30
−40
−30
−20
−10
0
10
20
30
0.20
0.15
0.10
0.05
0.00

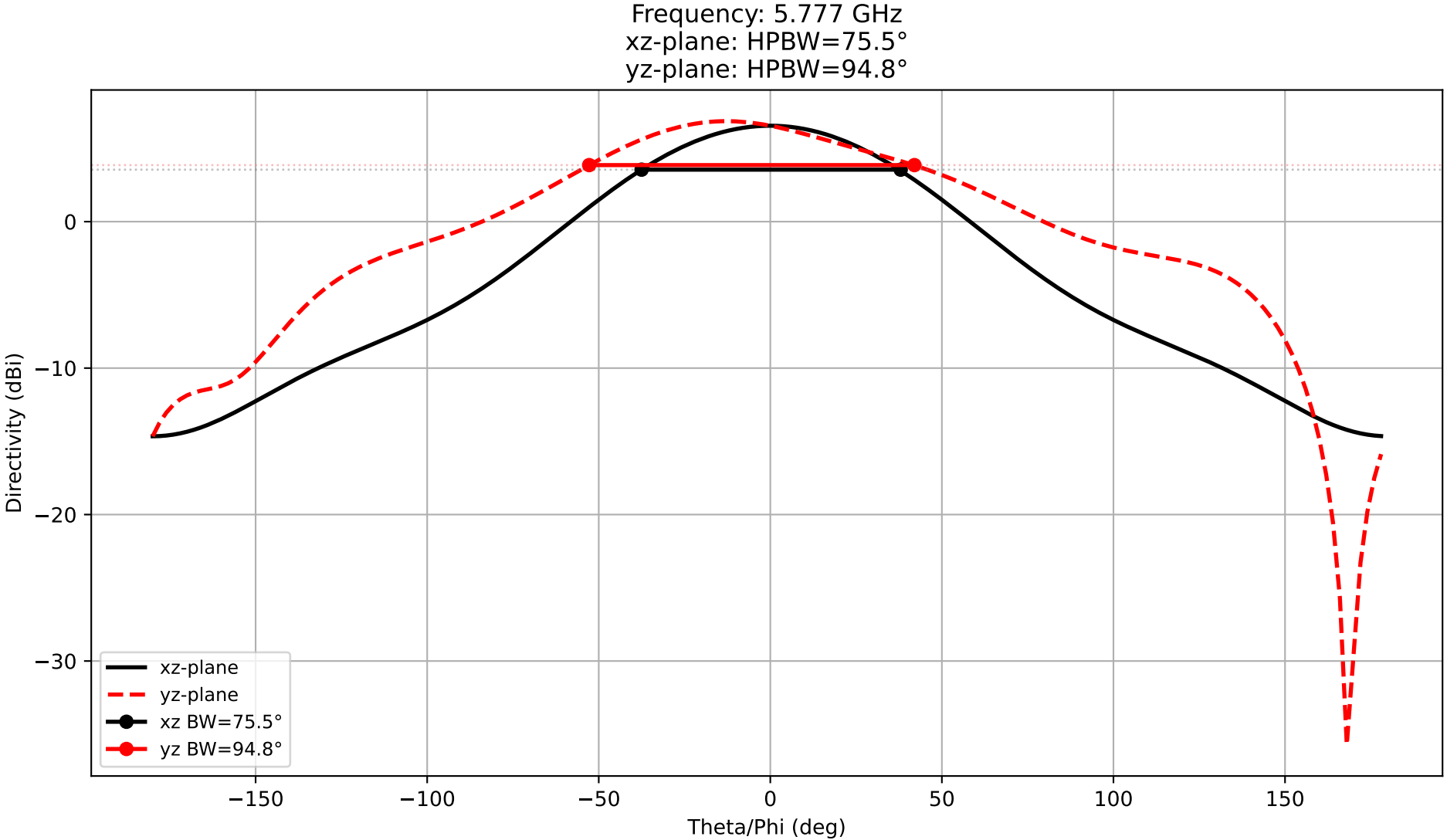

|Ez| line cut along Y at x=0.00 mm, z=0.76 mm
(idx x=30, z=15)
projection of Ez
0.00
0.05
0.10
0.15
0.20
−40
−30
−20
−10
0
10
20
30
40
y [mm]


Ez snapshot (dphi=-0.32deg) 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
0.15
0.10
0.05
0.00
−0.05
−0.10
−0.15
−0.20


Ez snapshot (dphi=-0.32deg) line cut along Y at x=0.00 mm, z=0.76 mm
(idx x=30, z=15)
projection of Ez
y [mm]
0.10
0.05
0.00
−0.05
−0.10
−0.15
−0.20
−0.25
−40
−30
−20
−10
0
10
20
30
40


f = 5.777 GHz — Directivity (dB)
Dmax (integrated) ≈ 6.86 dB, nf2ff Dmax = 6.86 dB
0°
45°
90°
225°
270°
315°
180°
0
−10
−20
−30
xz-plane (phi=0°)
yz-plane (phi=90°)


Frequency: 5.777 GHz — Directivity (linear). Dmax: 4.853
0°
45°
90°
225°
180°
270°
315°
1
2
4
5
xz-plane
yz-plane


Frequency: 5.777 GHz
xz-plane: HPBW=75.5°
yz-plane: HPBW=94.8°
Directivity (dBi)
0
−10
−20
−30
−150
−100
−50
0
50
100
150
Theta/Phi (deg)
xz-plane
yz-plane
xz BW=75.5°
yz BW=94.8°