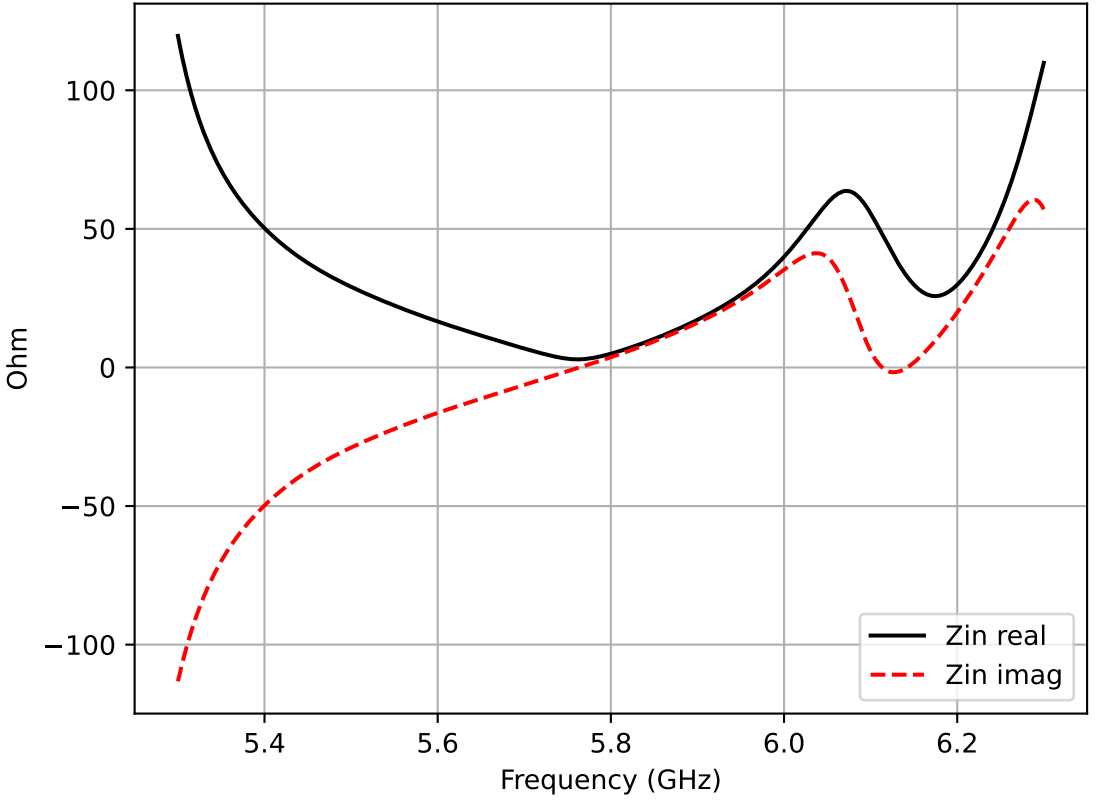
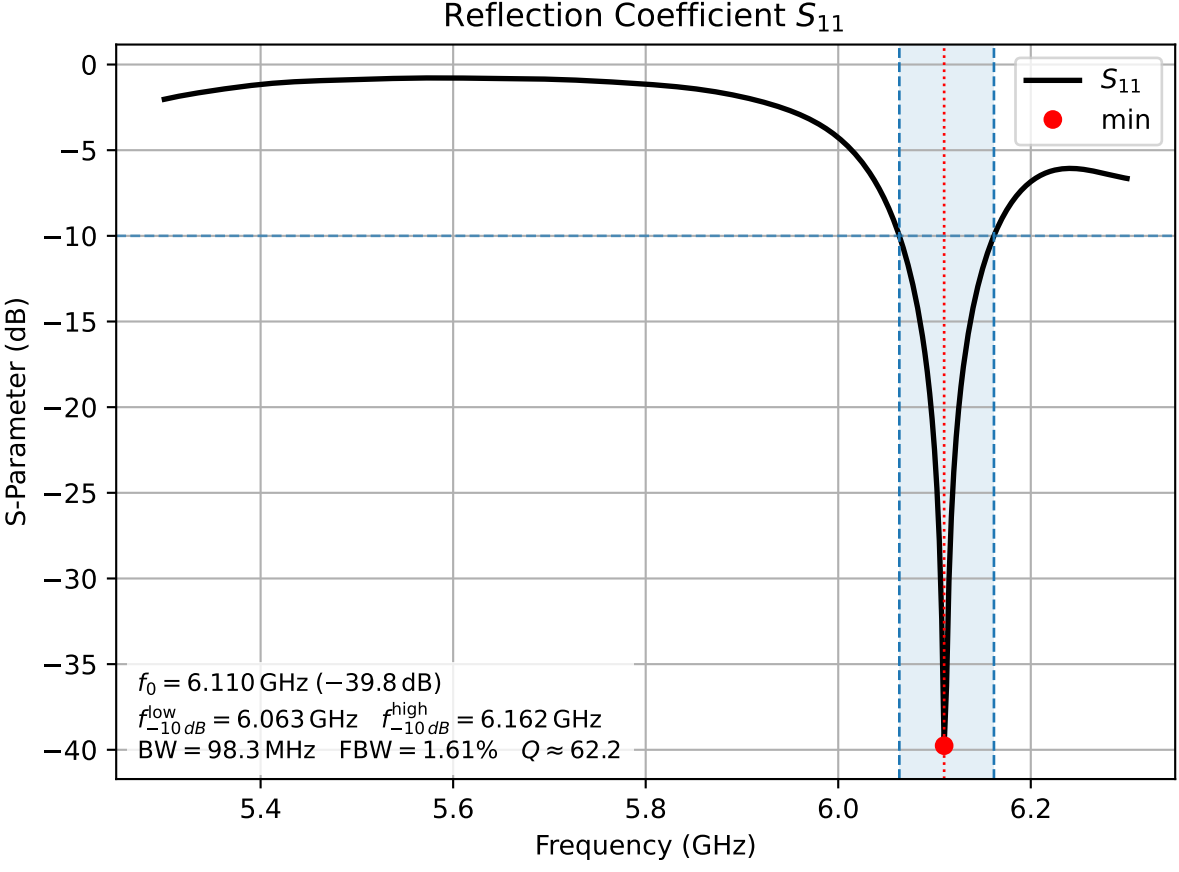
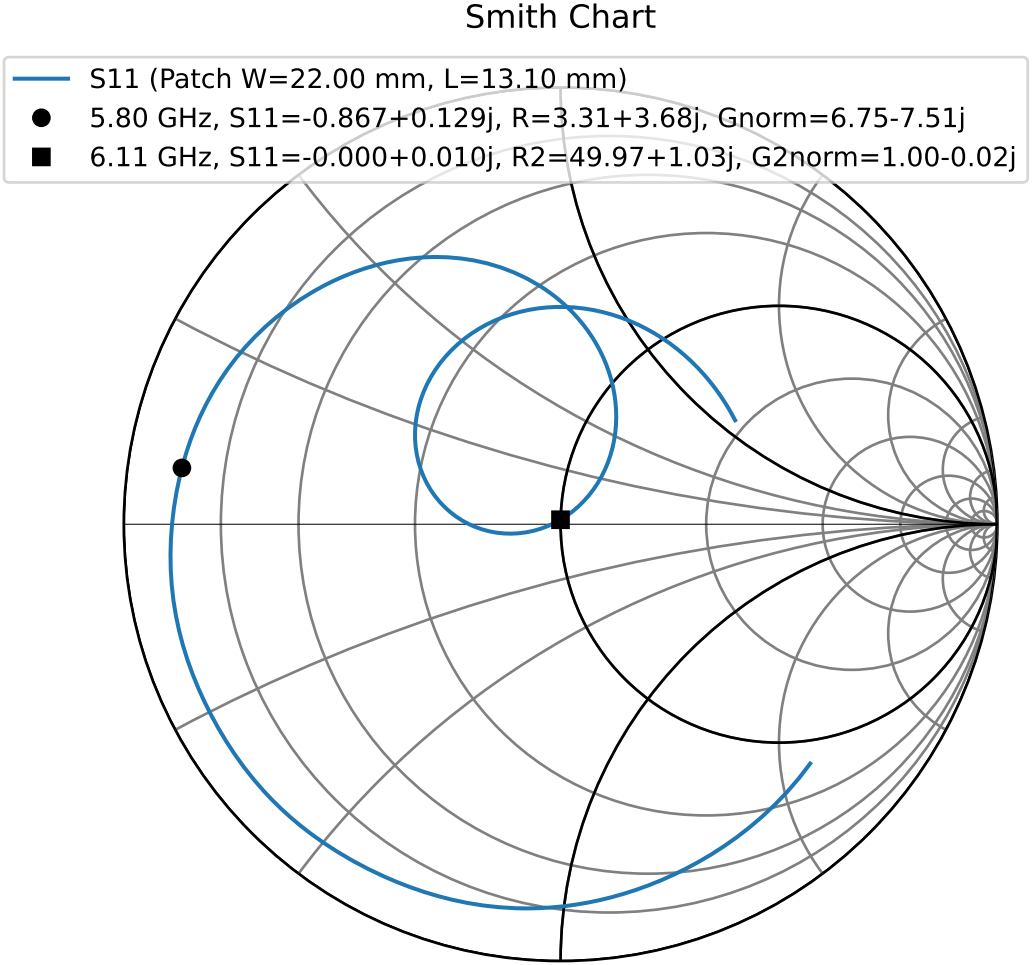
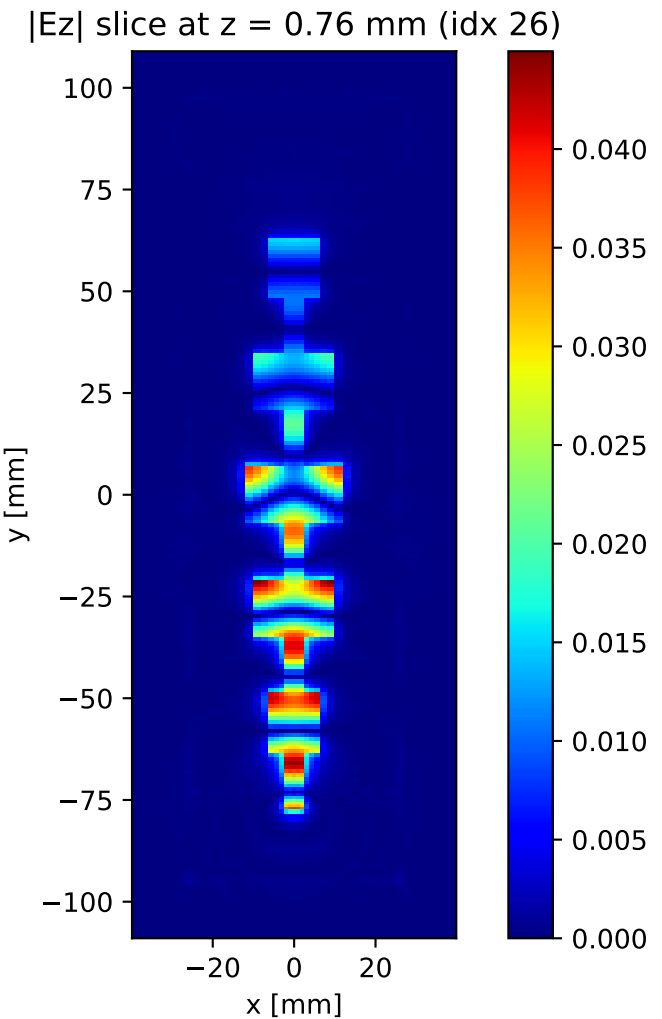
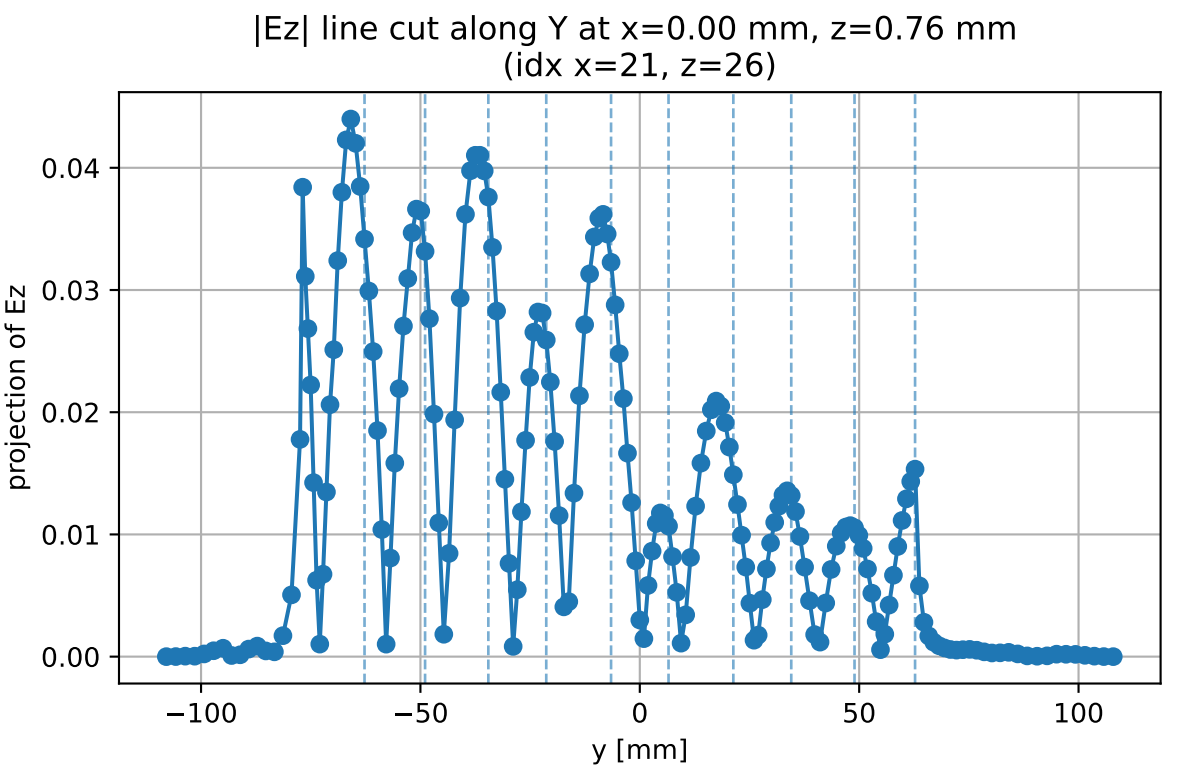
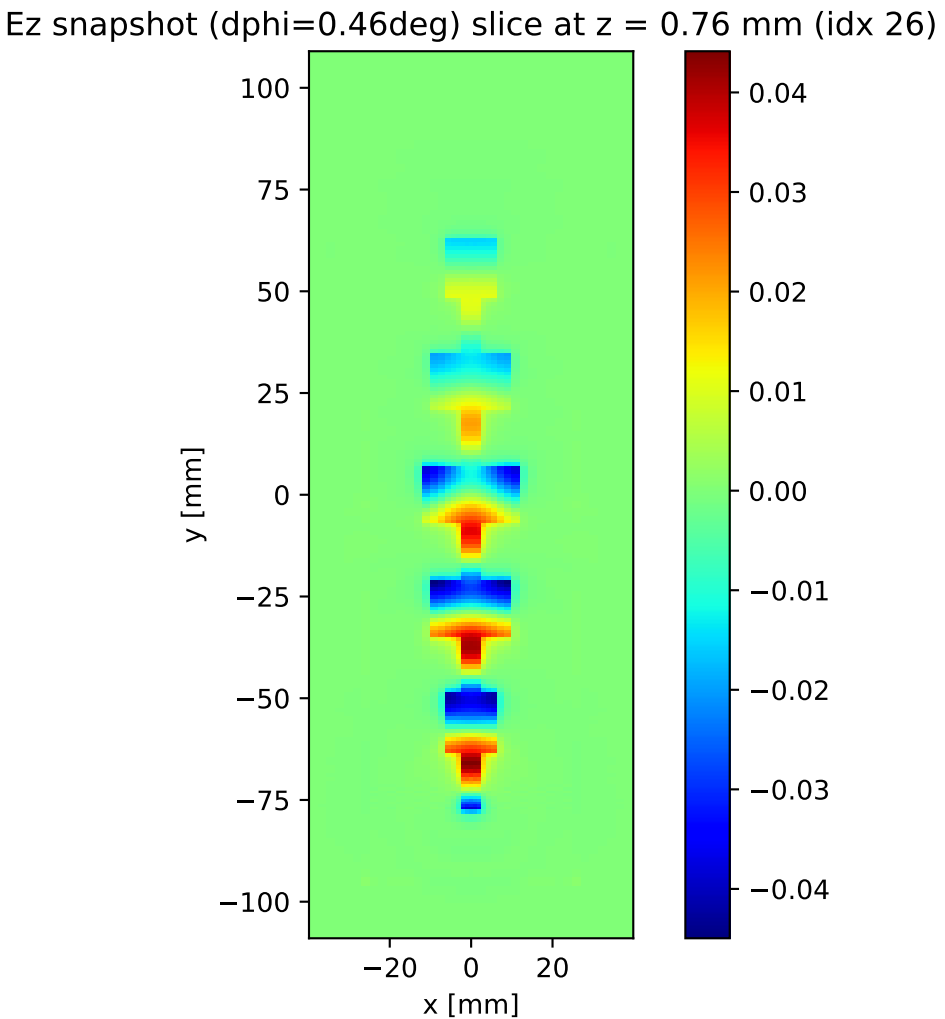

100
50
0
−50
−100
Ohm
5.4
5.6
5.8
6.0
6.2
Frequency (GHz)
Zin real
Zin imag

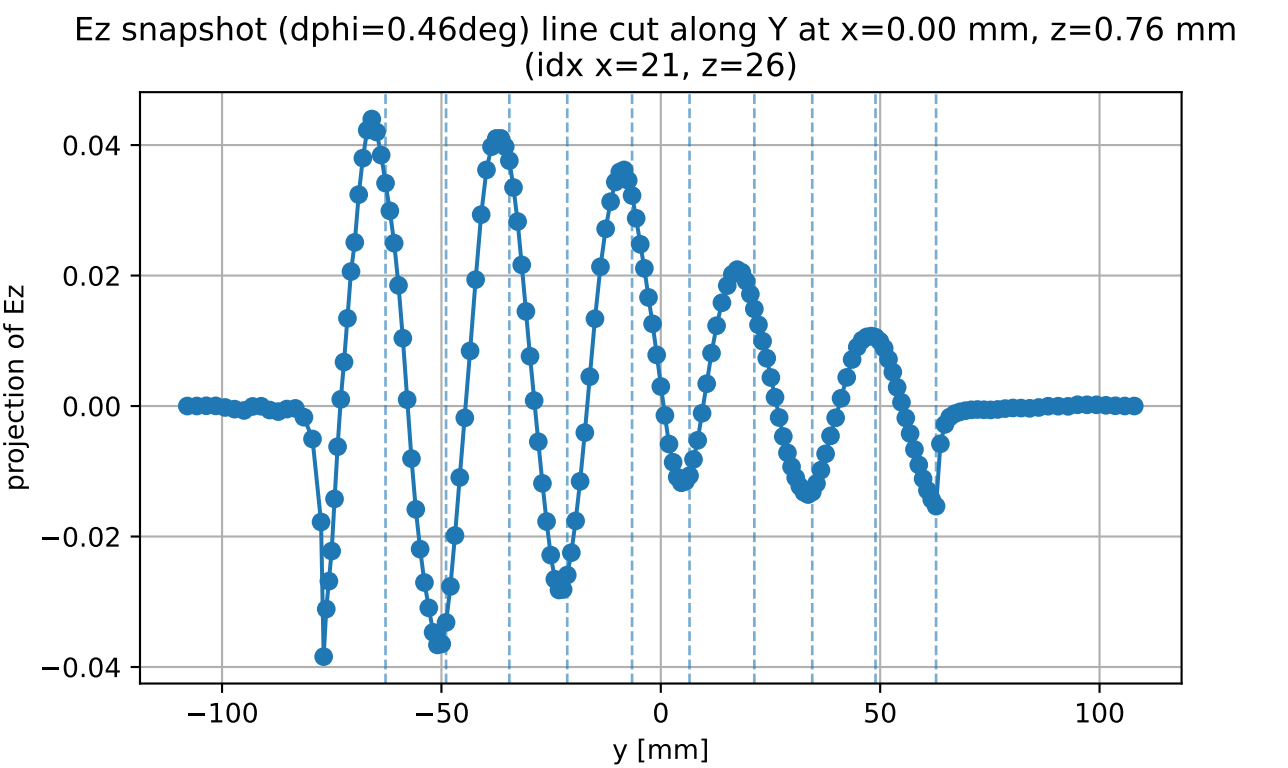

Reflection Coefficient S_{11}
S_{11}
min
S-Parameter (dB)
Frequency (GHz)
0
−5
−10
−15
−20
−25
−30
−35
−40
5.4
5.6
5.8
6.0
6.2
$f_0 = 6.110\,\text{GHz}\ (-39.8\,\text{dB})$
$f^{\text{low}}_{-10\,dB} = 6.063\,\text{GHz}$ $f^{\text{high}}_{-10\,dB} = 6.162\,\text{GHz}$
$\text{BW} = 98.3\,\text{MHz}$ $\text{FBW} = 1.61\%$ $Q \approx 62.2$

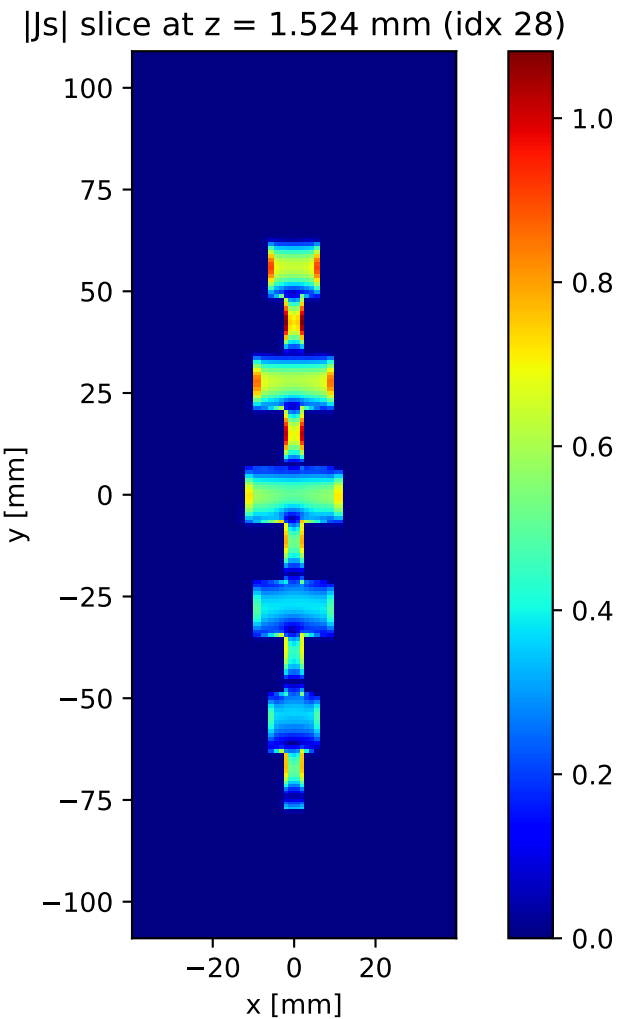

Smith Chart
S11 (Patch W=22.00 mm, L=13.10 mm)
5.80 GHz, S11=-0.867+0.129j, R=3.31+3.68j, Gnorm=6.75-7.51j
6.11 GHz, S11=-0.000+0.010j, R2=49.97+1.03j, G2norm=1.00-0.02j

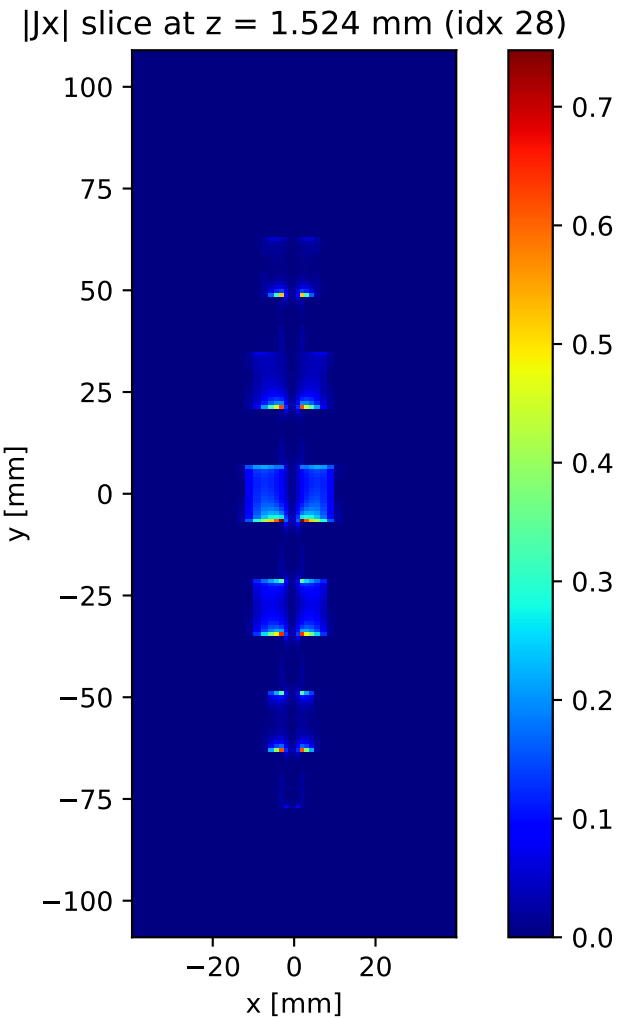

|Ez| slice at z = 0.76 mm (idx 26)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000

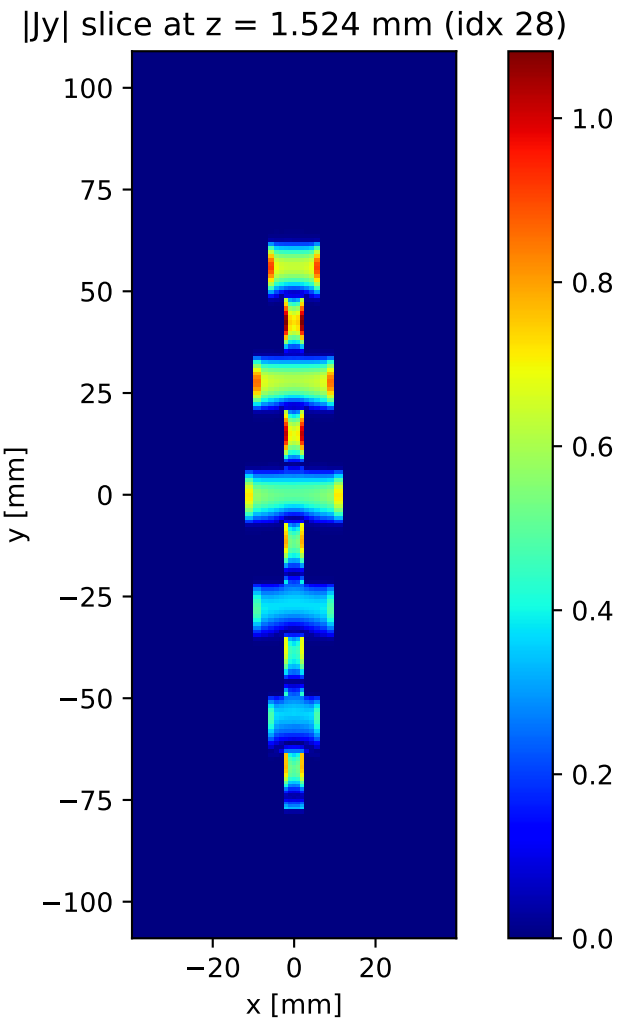

|Ez| line cut along Y at x=0.00 mm, z=0.76 mm
(idx x=21, z=26)
projection of Ez
0.00
0.01
0.02
0.03
0.04
−100
−50
0
50
100
y [mm]

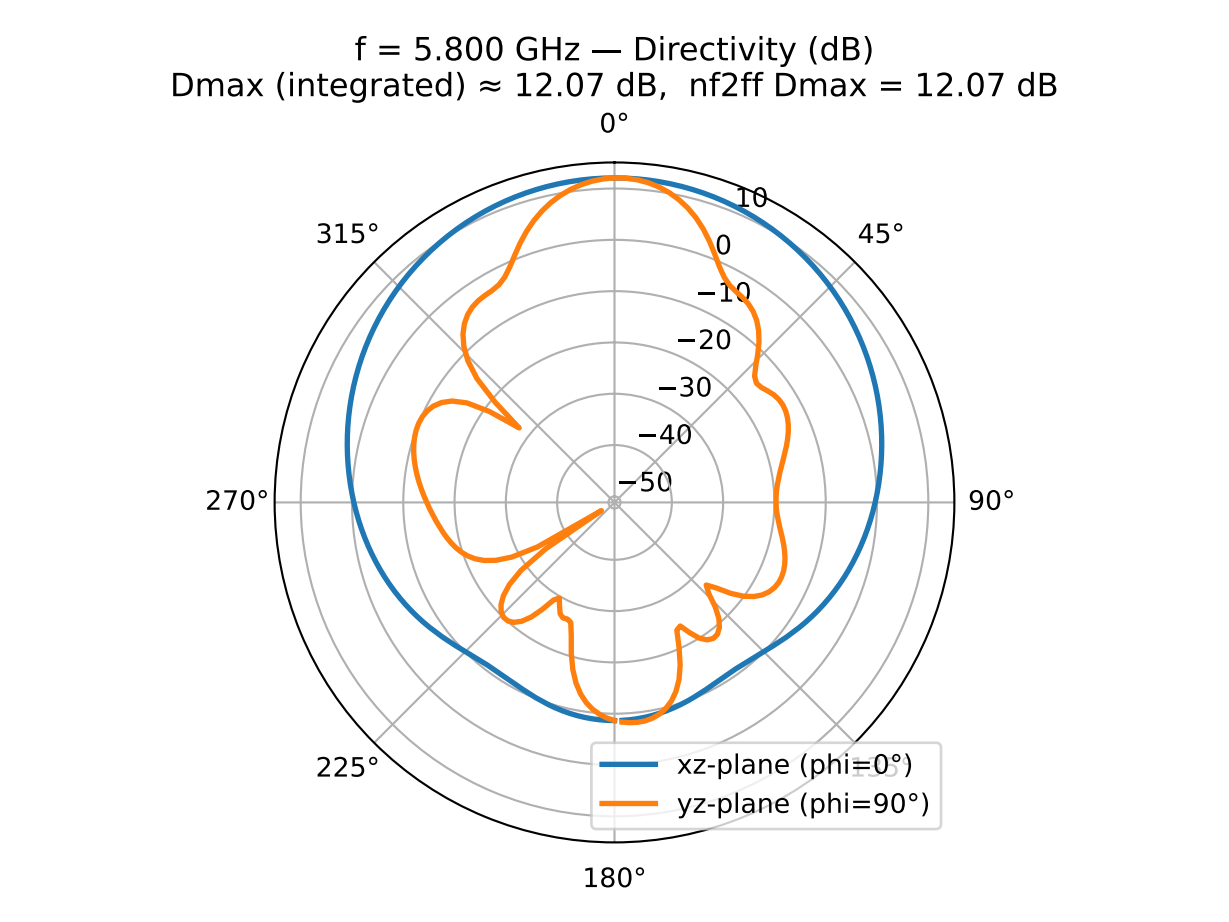

Ez snapshot (dphi=0.46deg) slice at z = 0.76 mm (idx 26)
y [mm]
x [mm]
100
75
50
25
0
−25
−50
−75
−100
−20
0
20
0.04
0.03
0.02
0.01
0.00
−0.01
−0.02
−0.03
−0.04

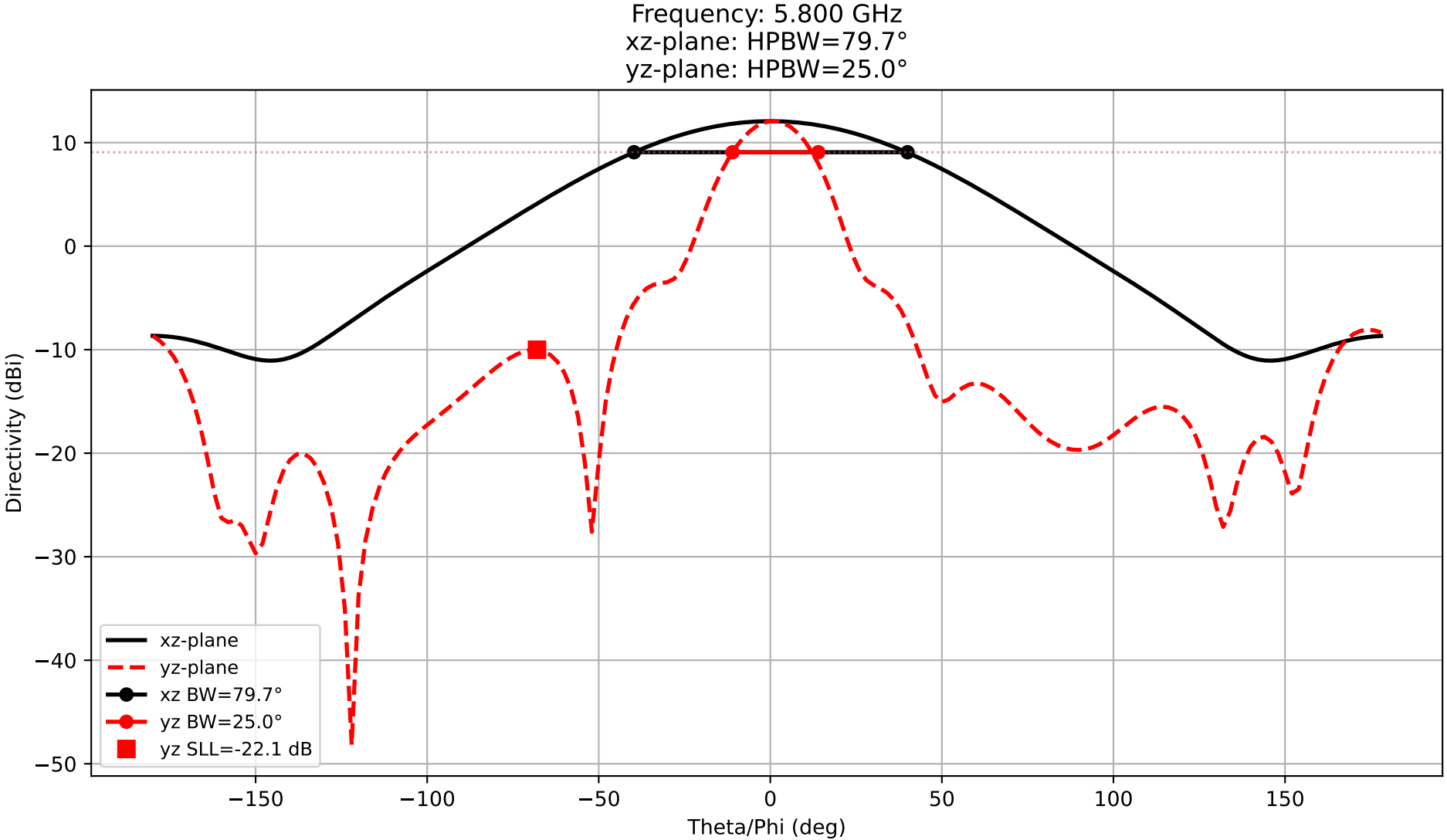

Ez snapshot (dphi=0.46deg) line cut along Y at x=0.00 mm, z=0.76 mm
(idx x=21, z=26)
projection of Ez
0.04
0.02
0.00
−0.02
−0.04
−100
−50
0
50
100
y [mm]

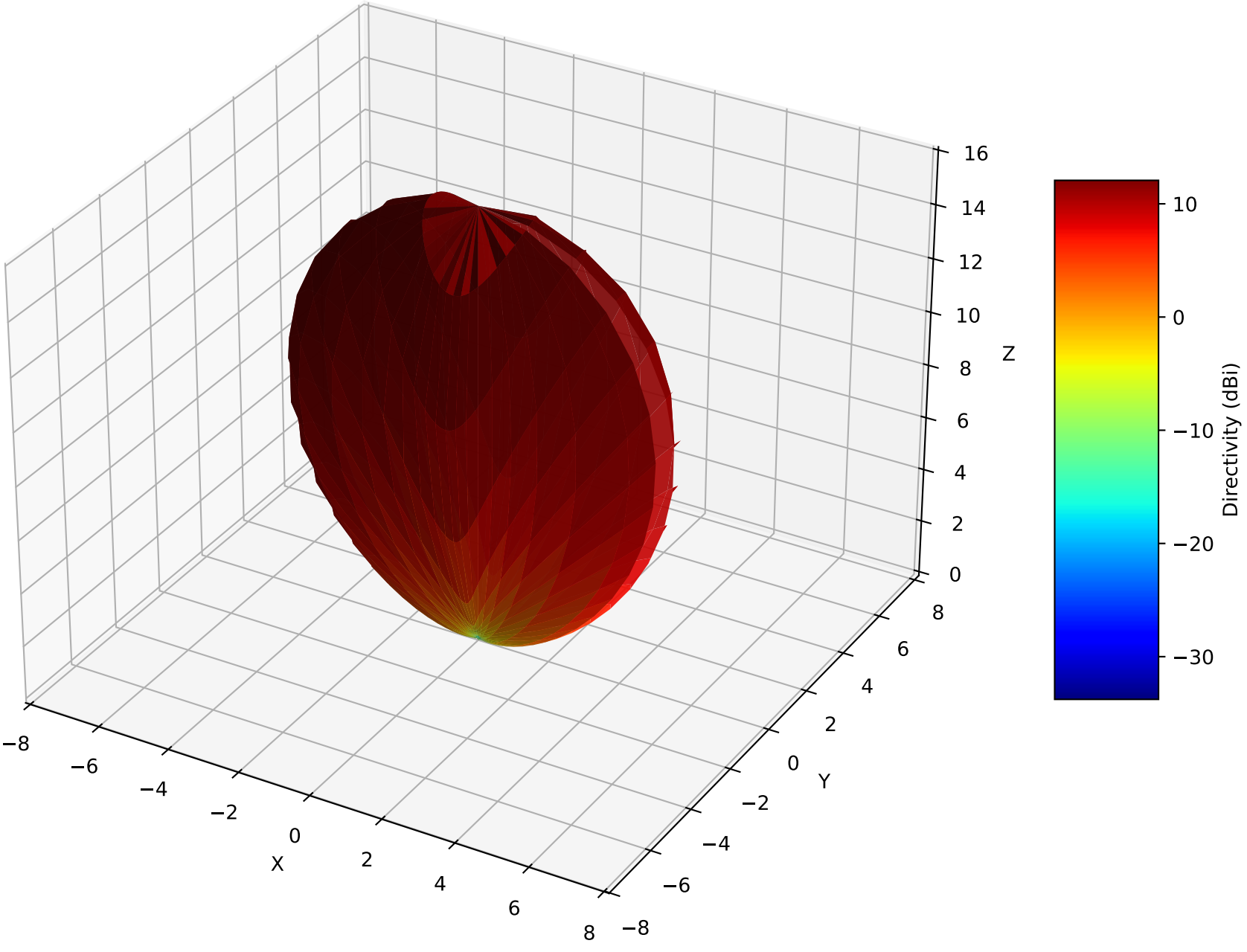

|Js| slice at z = 1.524 mm (idx 28)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
1.0
0.8
0.6
0.4
0.2
0.0


|Jx| slice at z = 1.524 mm (idx 28)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0


|Jy| slice at z = 1.524 mm (idx 28)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
1.0
0.8
0.6
0.4
0.2
0.0


f = 5.800 GHz — Directivity (dB)
Dmax (integrated) ≈ 12.07 dB, nf2ff Dmax = 12.07 dB
0°
45°
90°
180°
225°
270°
315°
10
0
−10
−20
−30
−40
−50
xz-plane (phi=0°)
yz-plane (phi=90°)


Frequency: 5.800 GHz
xz-plane: HPBW=79.7°
yz-plane: HPBW=25.0°
Directivity (dBi)
Theta/Phi (deg)
10
0
−10
−20
−30
−40
−50
−150
−100
−50
0
50
100
150
xz-plane
yz-plane
xz BW=79.7°
yz BW=25.0°
yz SLL=-22.1 dB


3D Directivity Pattern
f = 5.800 GHz, Dmax = 12.07 dBi
X
Y
Z
Directivity (dBi)