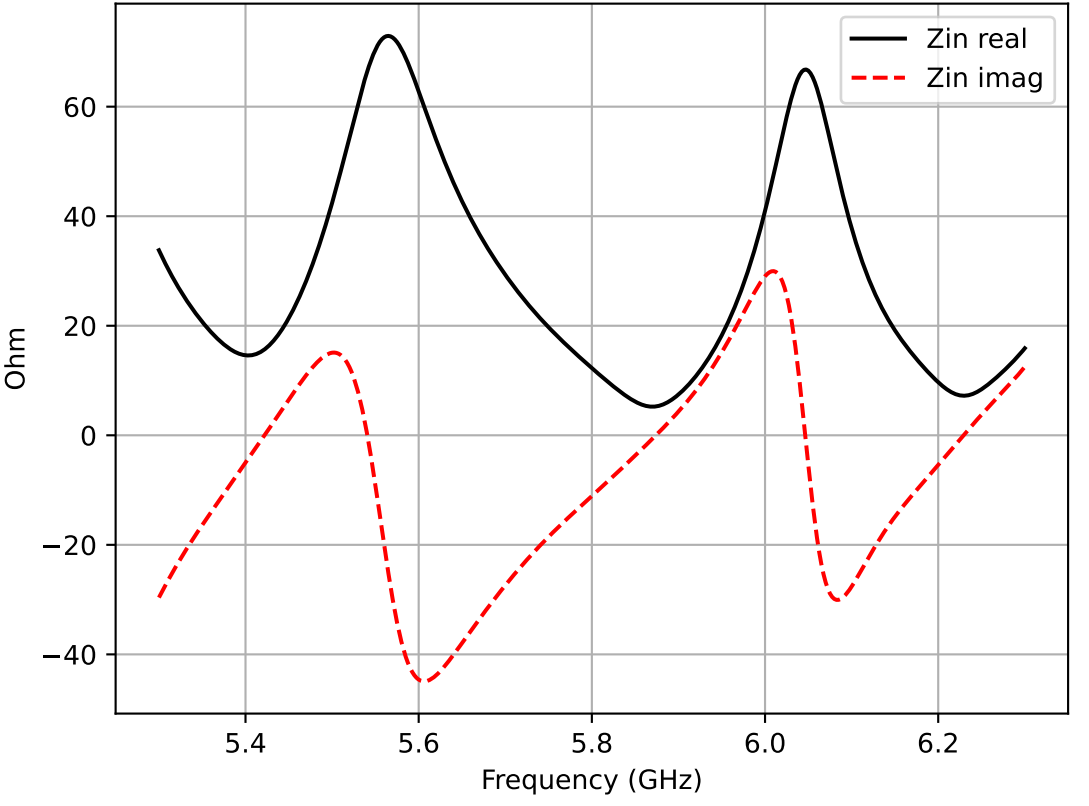
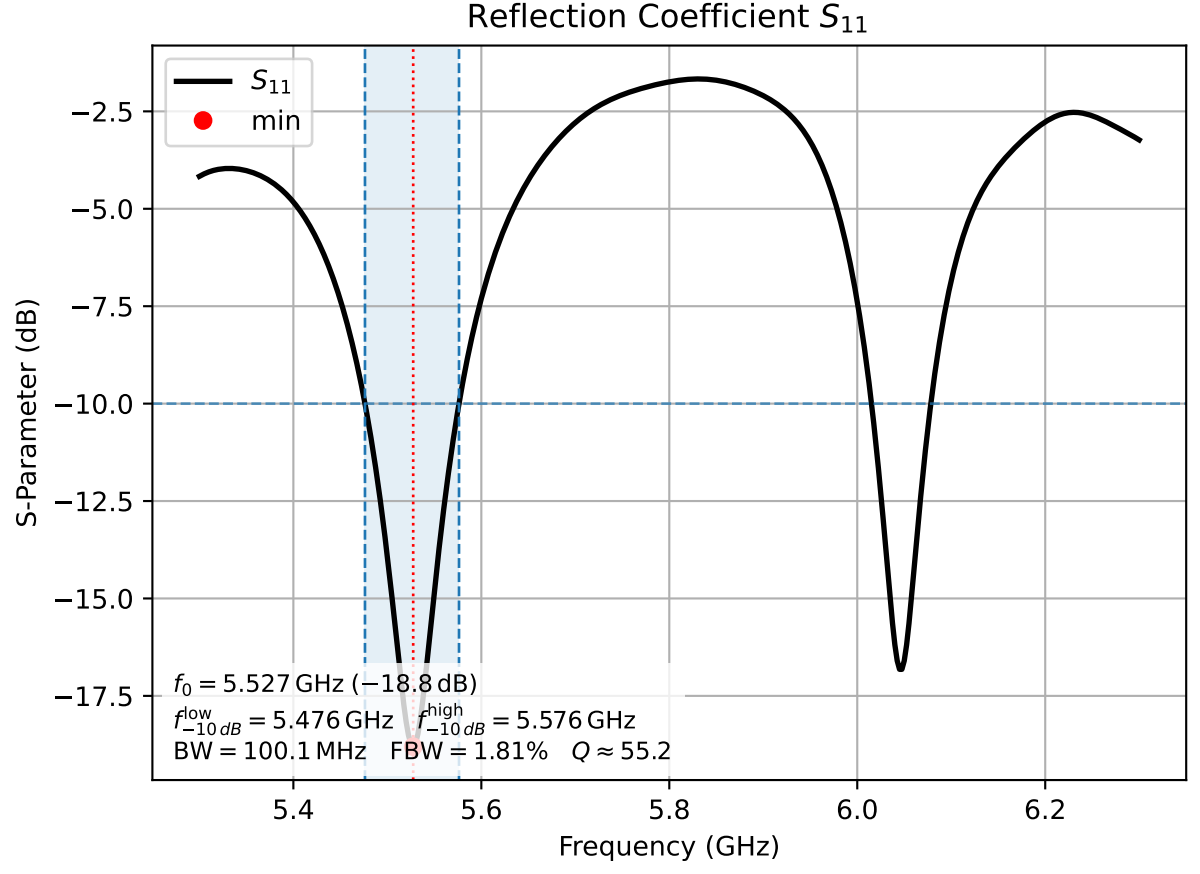
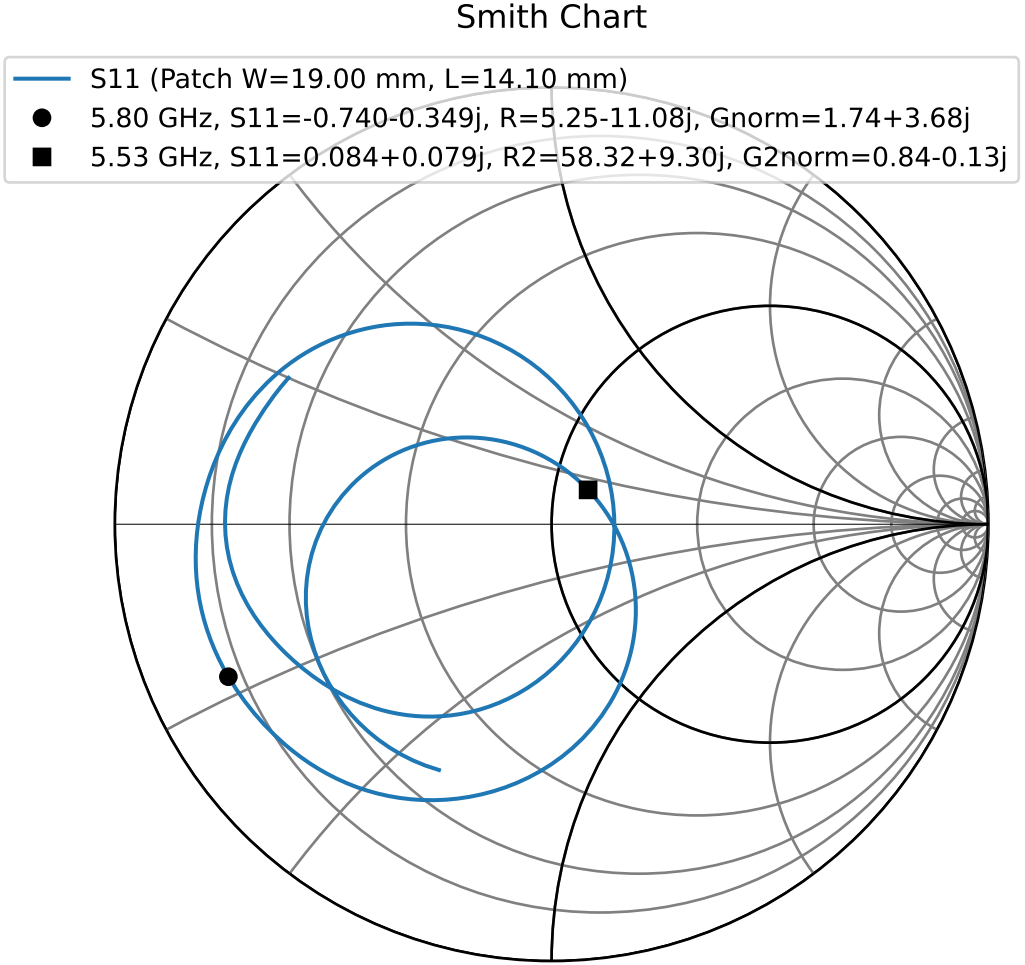
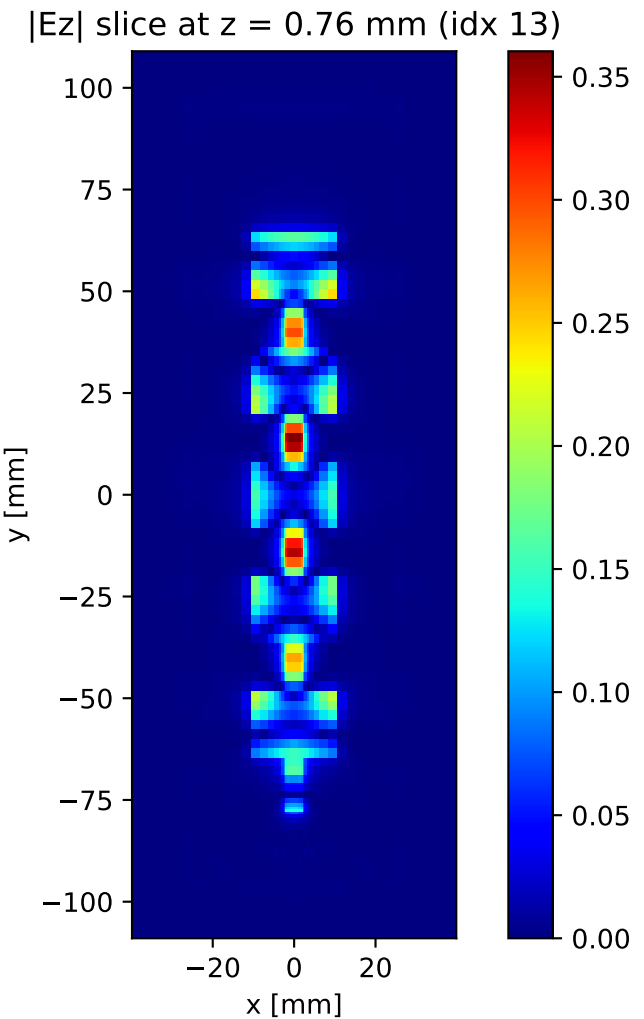
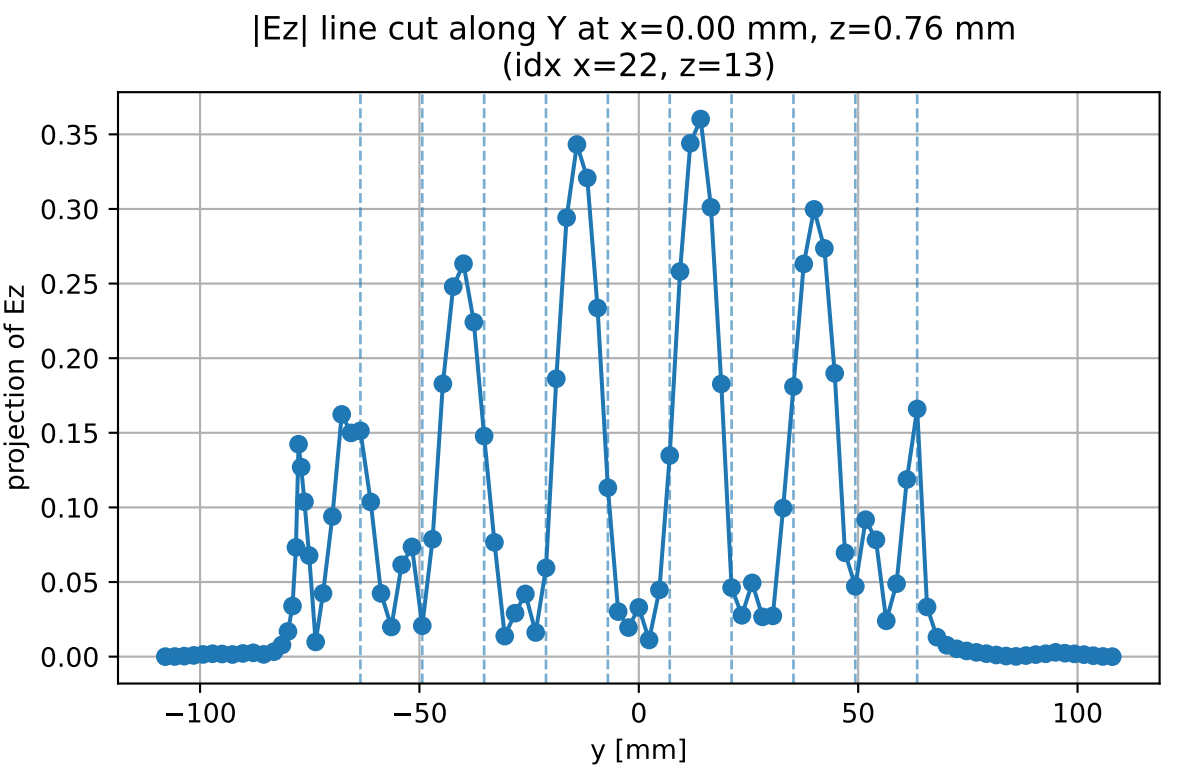
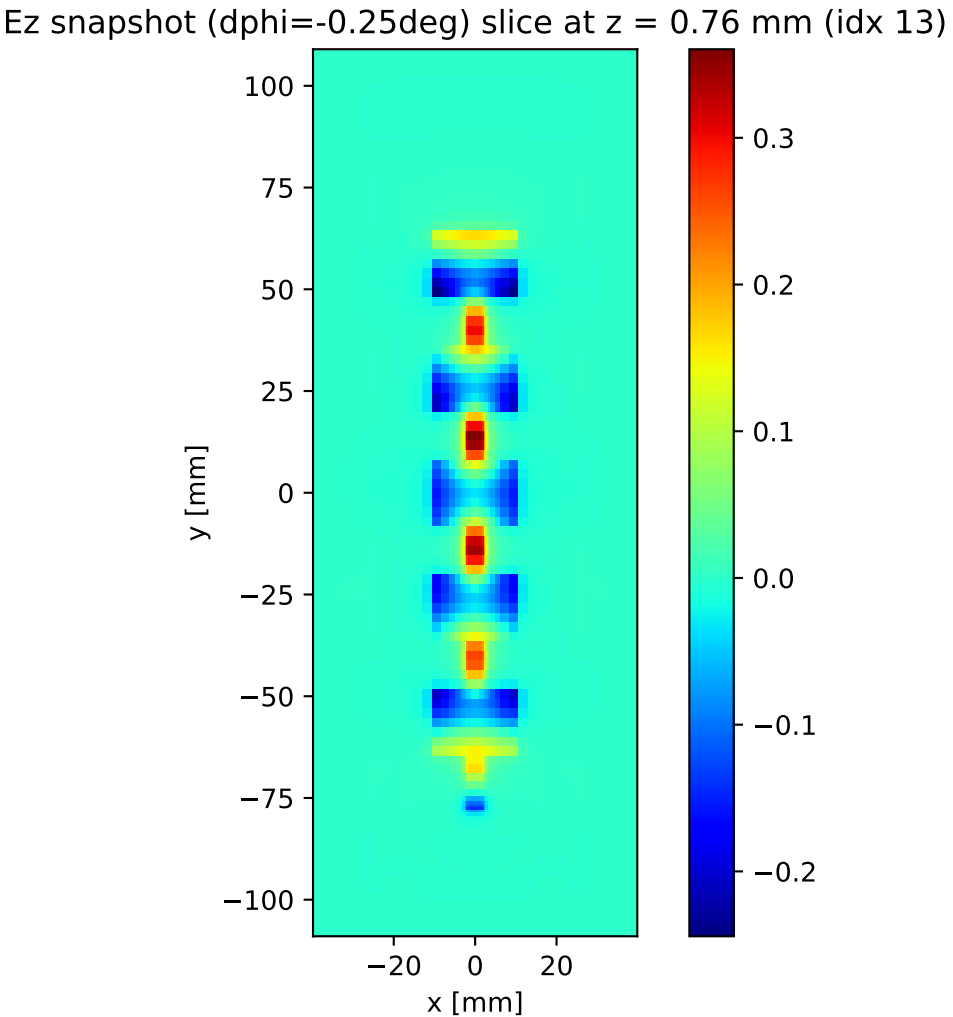

Zin real
Zin imag
60
40
20
0
−20
−40
Ohm
5.4
5.6
5.8
6.0
6.2
Frequency (GHz)

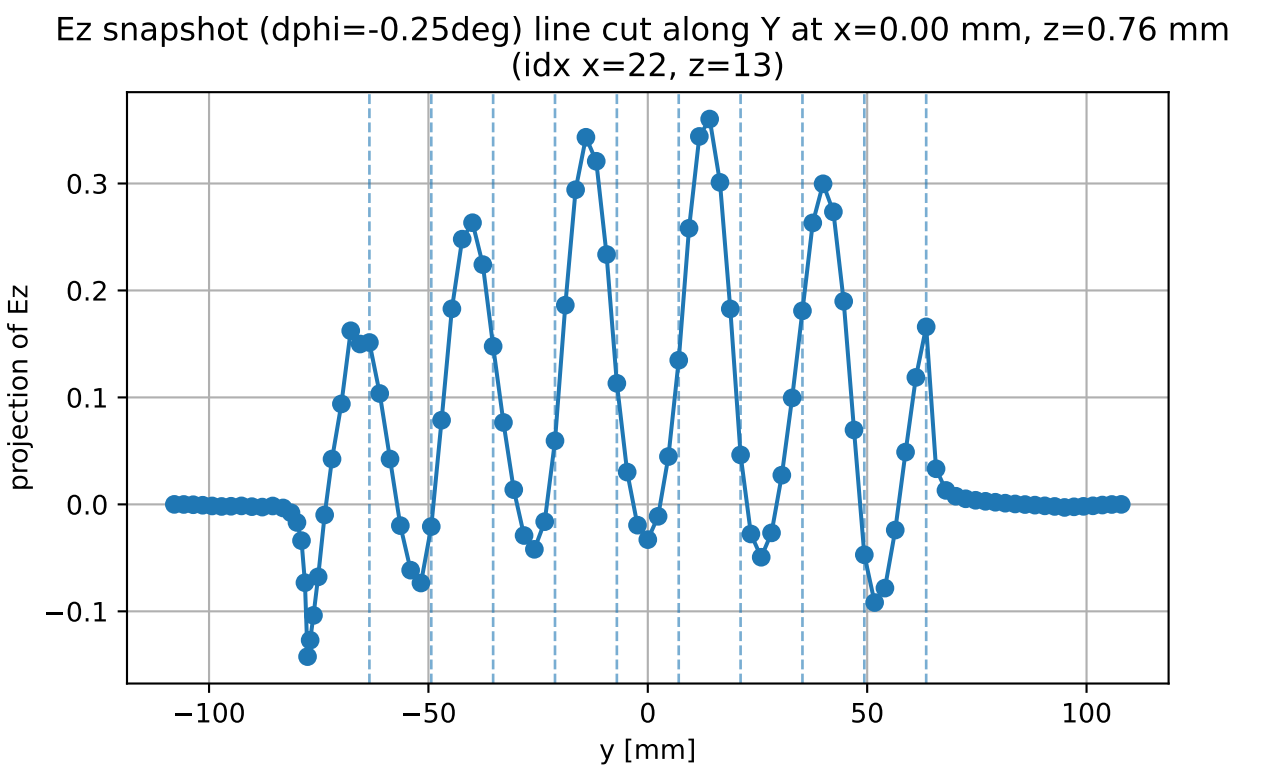

Reflection Coefficient S_{11}
S_{11}
min
−2.5
−5.0
−7.5
−10.0
−12.5
−15.0
−17.5
S-Parameter (dB)
5.4
5.6
5.8
6.0
6.2
Frequency (GHz)
$f_0 = 5.527\,\text{GHz}\ (-18.8\,\text{dB})$
$f^{\text{low}}_{-10\,dB} = 5.476\,\text{GHz}$ $f^{\text{high}}_{-10\,dB} = 5.576\,\text{GHz}$
$\text{BW} = 100.1\,\text{MHz}$ $\text{FBW} = 1.81\%$ $Q \approx 55.2$

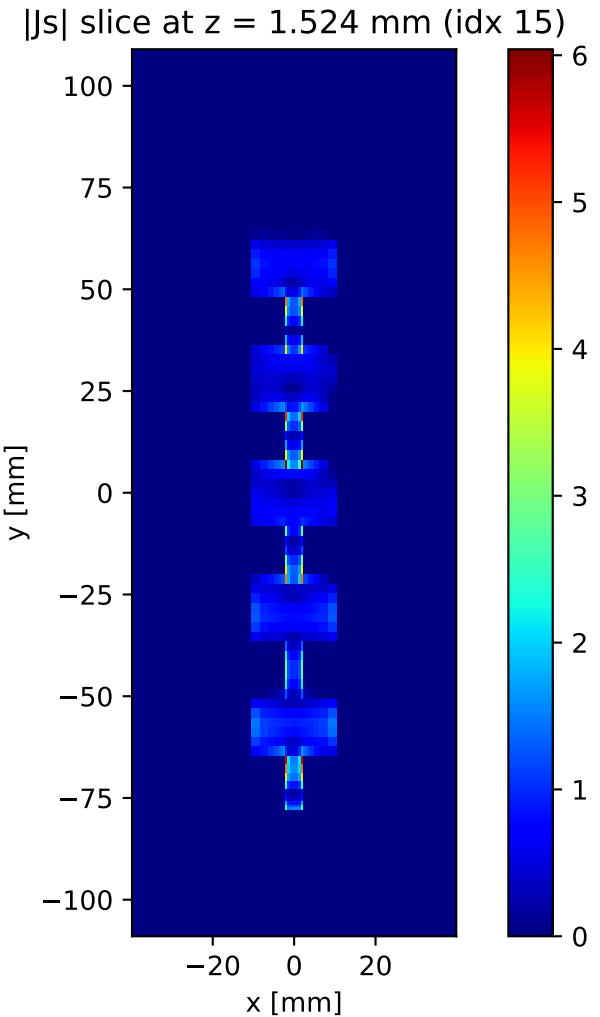

Smith Chart
S11 (Patch W=19.00 mm, L=14.10 mm)
5.80 GHz, S11=-0.740-0.349j, R=5.25-11.08j, Gnorm=1.74+3.68j
5.53 GHz, S11=0.084+0.079j, R2=58.32+9.30j, G2norm=0.84-0.13j

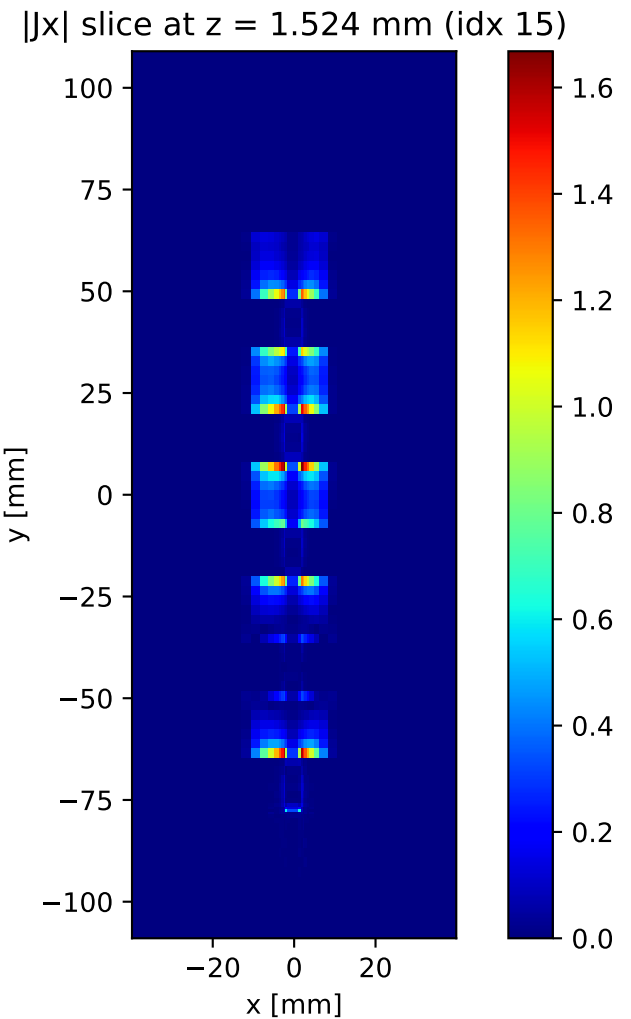

|Ez| slice at z = 0.76 mm (idx 13)
y [mm]
x [mm]
100
75
50
25
0
−25
−50
−75
−100
−20
0
20
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00

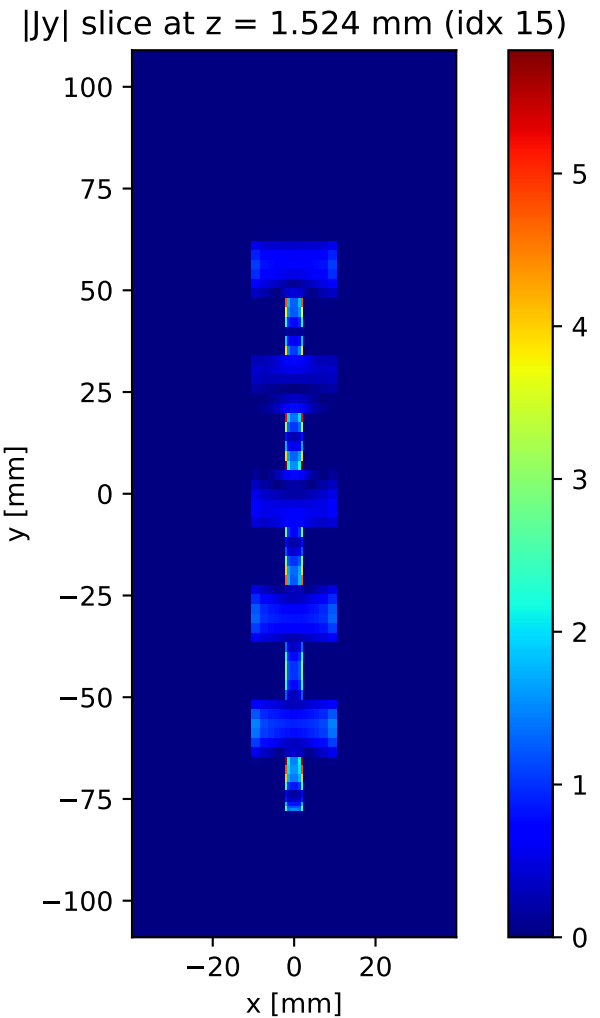

|Ez| line cut along Y at x=0.00 mm, z=0.76 mm
(idx x=22, z=13)
projection of Ez
y [mm]
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
−100
−50
0
50
100

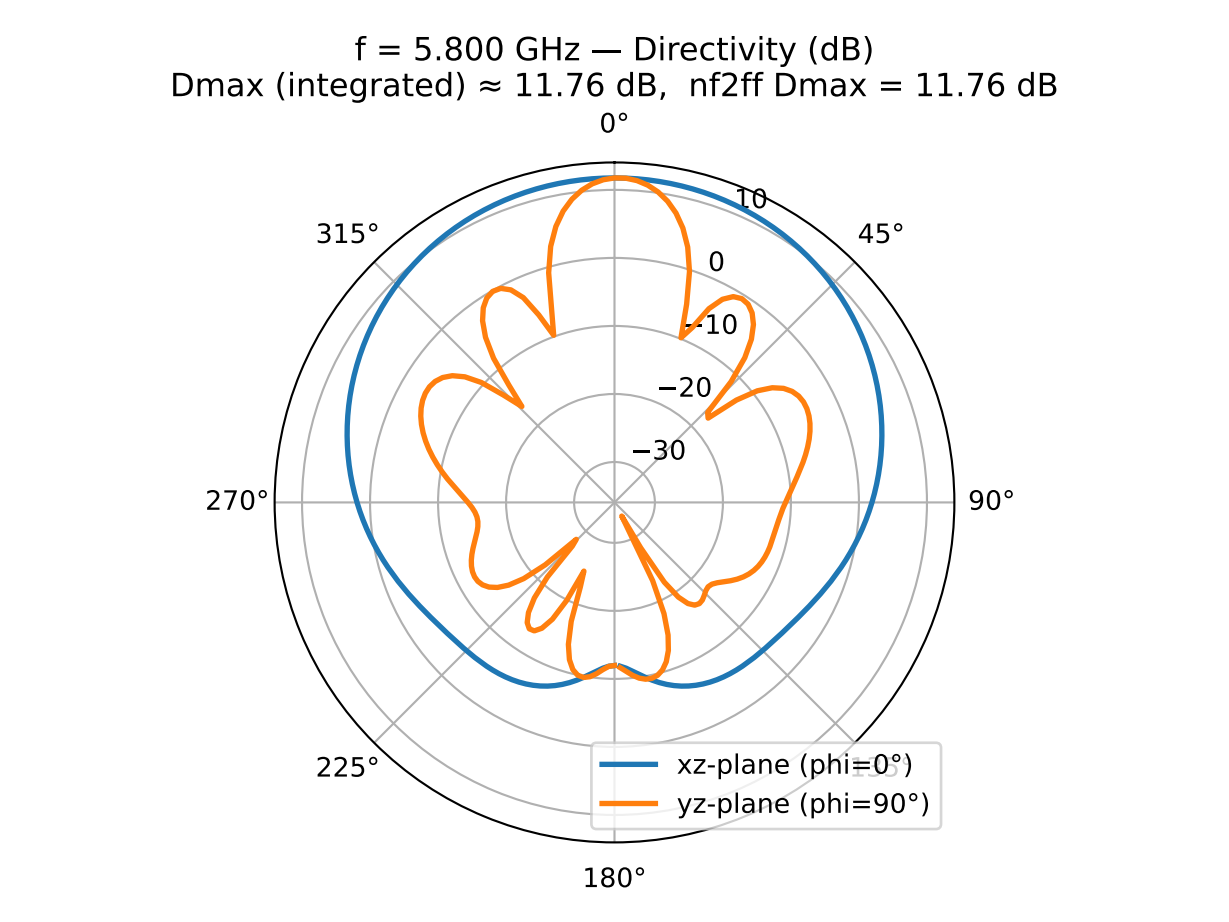

Ez snapshot (dphi=-0.25deg) slice at z = 0.76 mm (idx 13)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
0.3
0.2
0.1
0.0
−0.1
−0.2

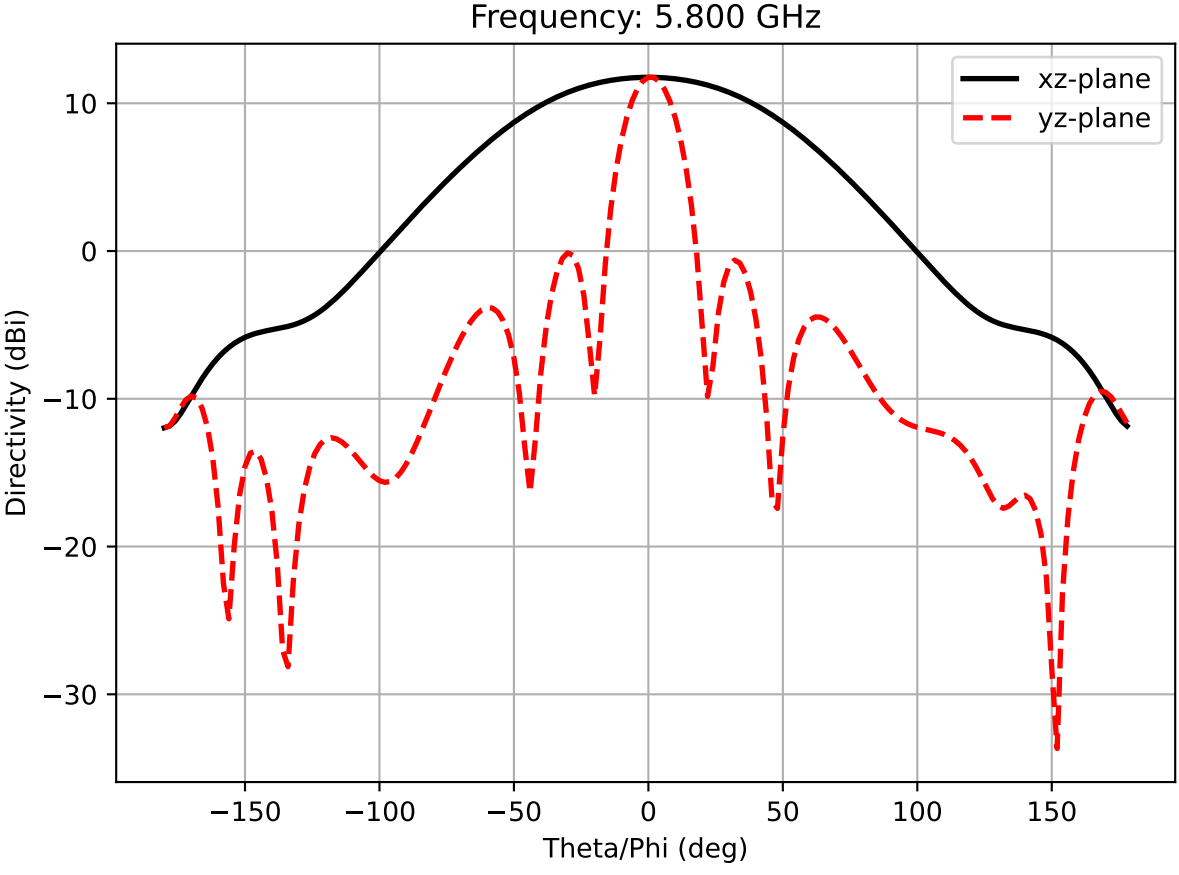

Ez snapshot (dphi=-0.25deg) line cut along Y at x=0.00 mm, z=0.76 mm
(idx x=22, z=13)
projection of Ez
0.3
0.2
0.1
0.0
−0.1
−100
−50
0
50
100
y [mm]

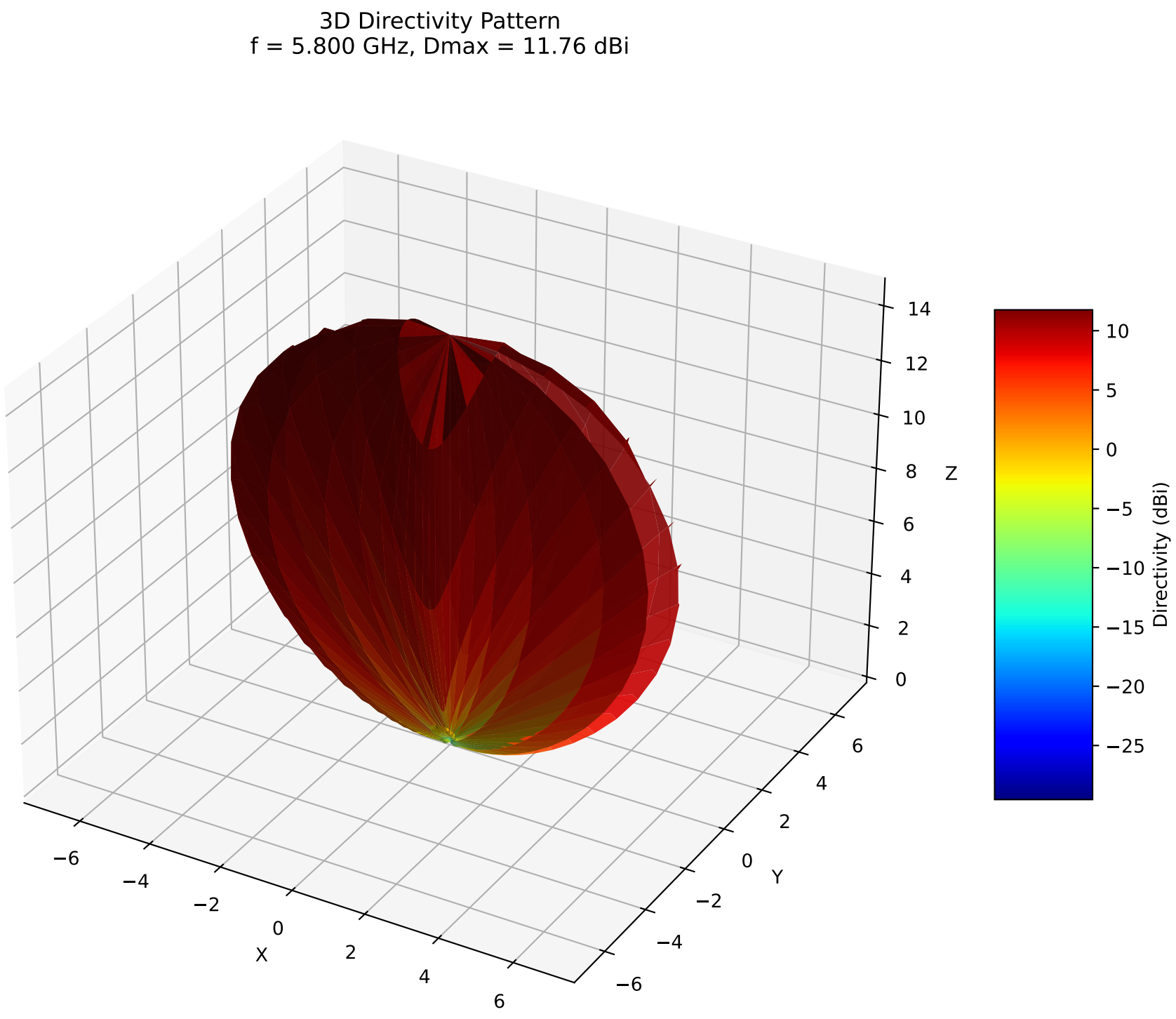

|Js| slice at z = 1.524 mm (idx 15)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
6
5
4
3
2
1
0


|Jx| slice at z = 1.524 mm (idx 15)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0


|Jy| slice at z = 1.524 mm (idx 15)
y [mm]
x [mm]
100
75
50
25
0
−25
−50
−75
−100
−20
0
20
5
4
3
2
1
0


f = 5.800 GHz — Directivity (dB)
Dmax (integrated) ≈ 11.76 dB, nf2ff Dmax = 11.76 dB
0°
45°
90°
180°
225°
270°
315°
10
0
−10
−20
−30
xz-plane (phi=0°)
yz-plane (phi=90°)


Frequency: 5.800 GHz
xz-plane
yz-plane
Directivity (dBi)
10
0
−10
−20
−30
−150
−100
−50
0
50
100
150
Theta/Phi (deg)


3D Directivity Pattern
f = 5.800 GHz, Dmax = 11.76 dBi
X
Y
Z
Directivity (dBi)