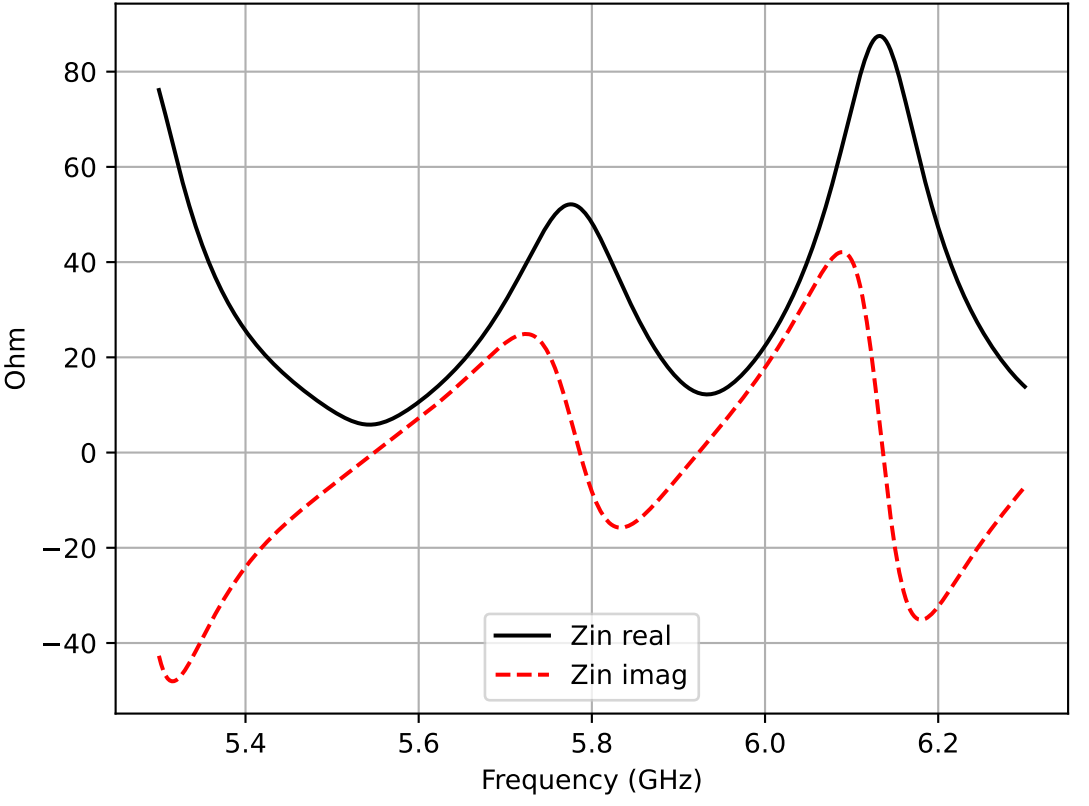
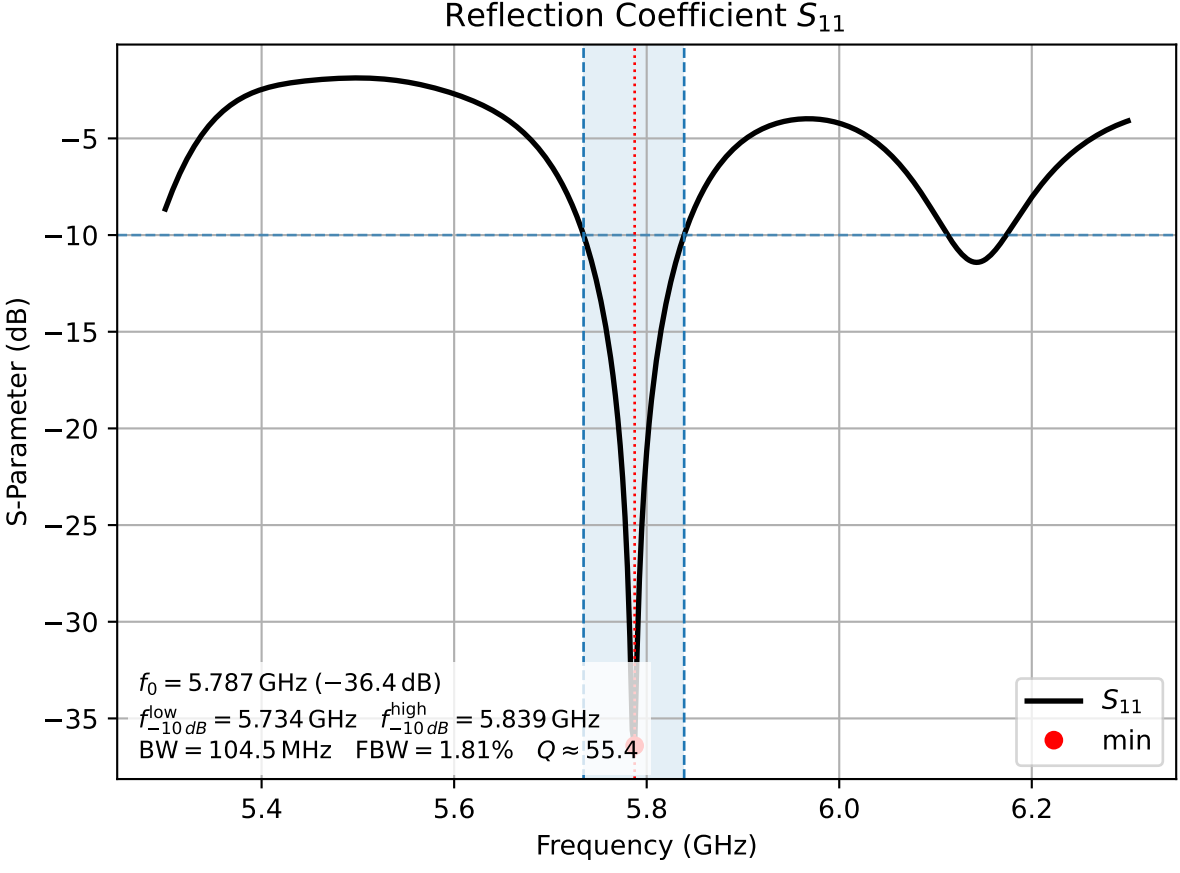
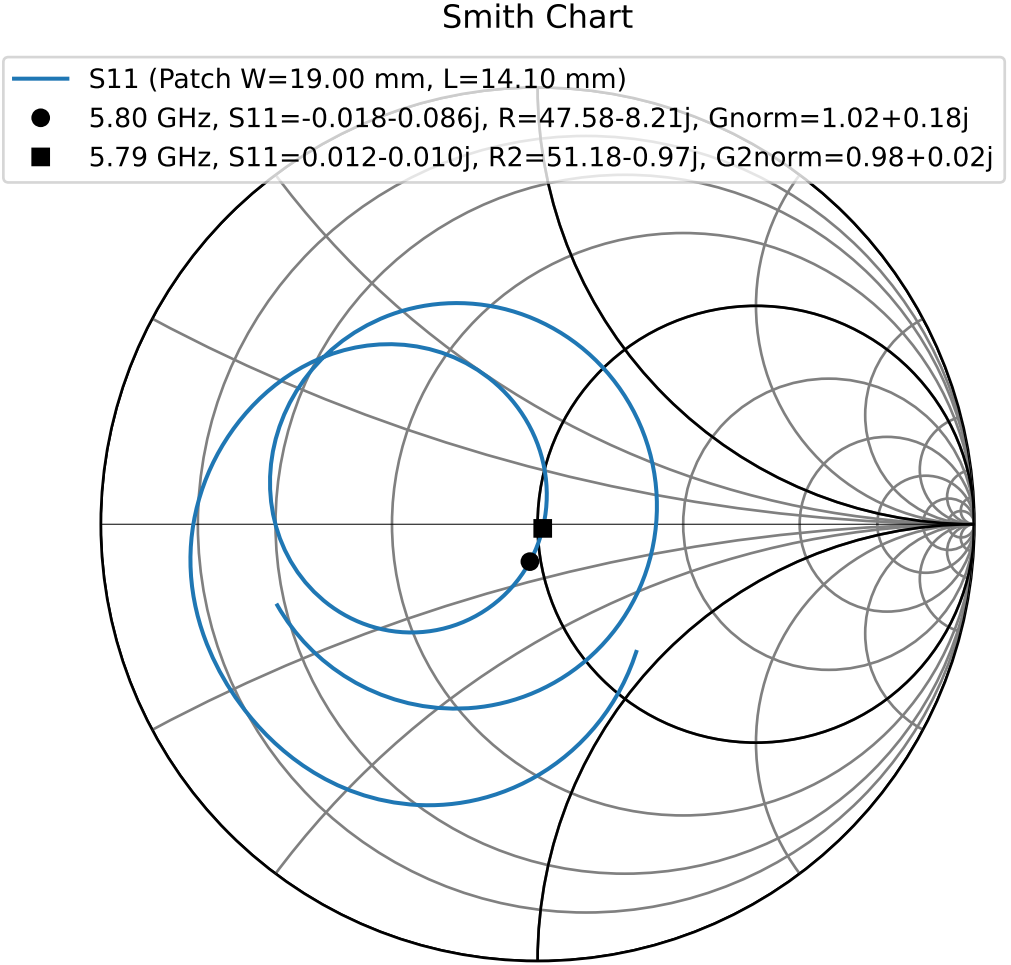
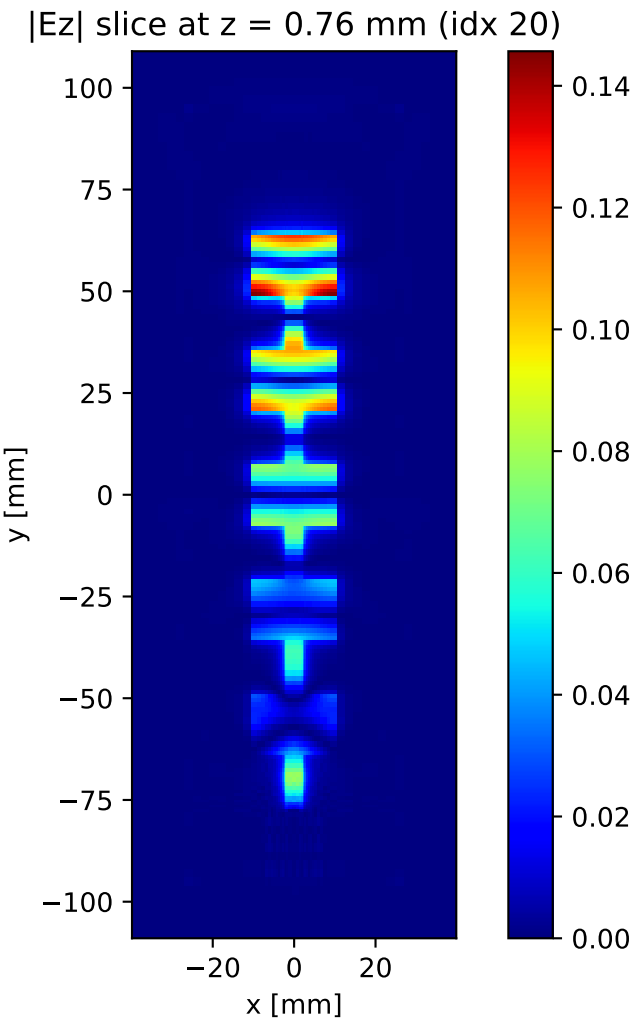
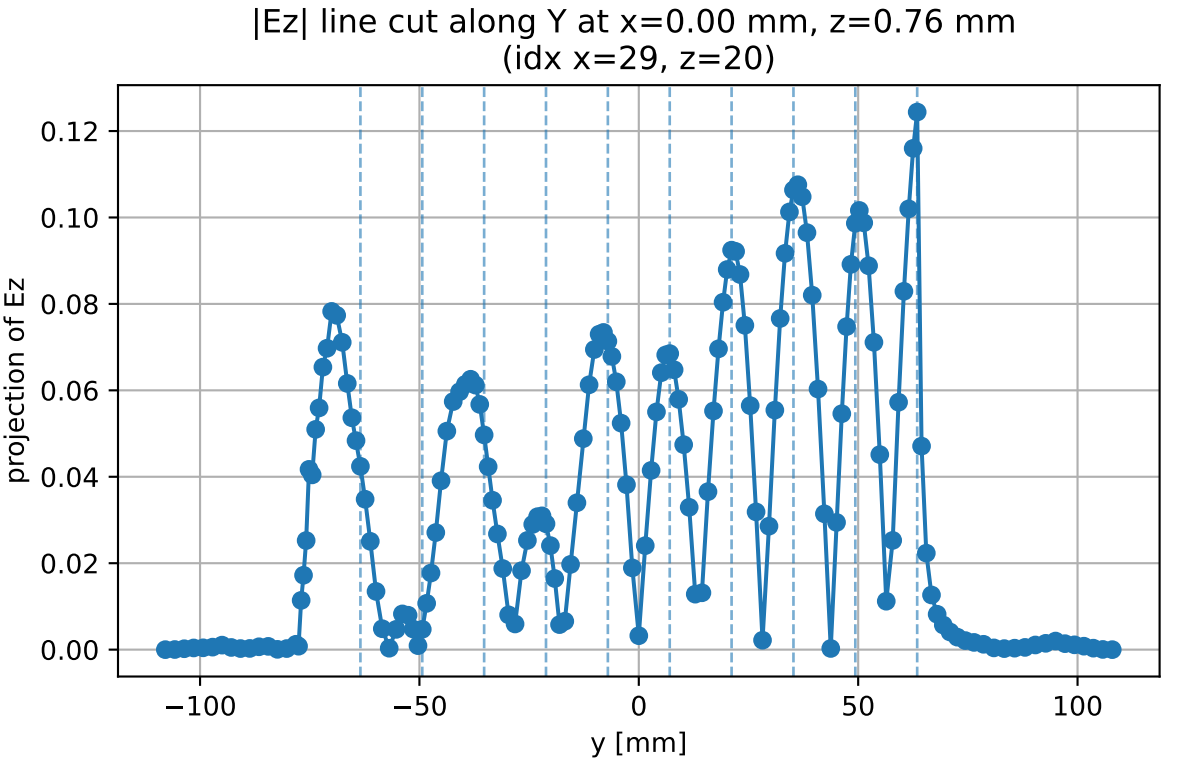
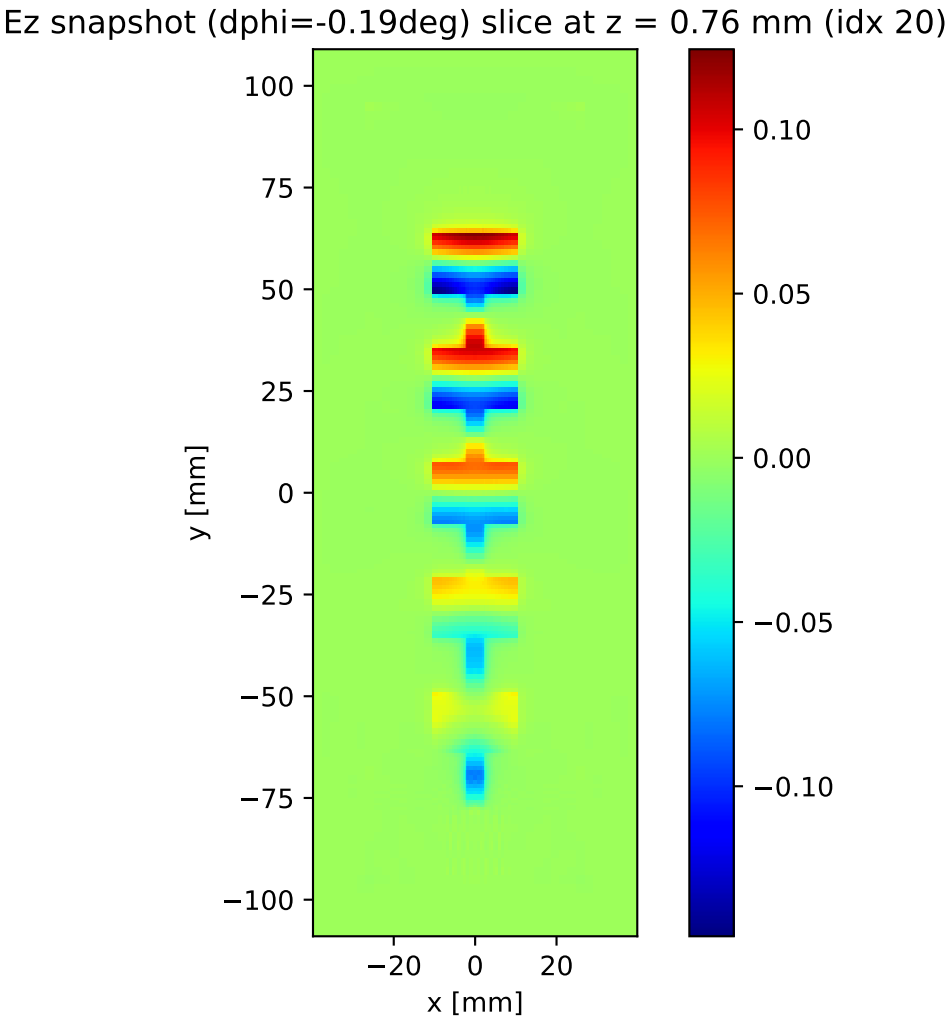

80
60
40
20
0
−20
−40
Ohm
5.4
5.6
5.8
6.0
6.2
Frequency (GHz)
Zin real
Zin imag

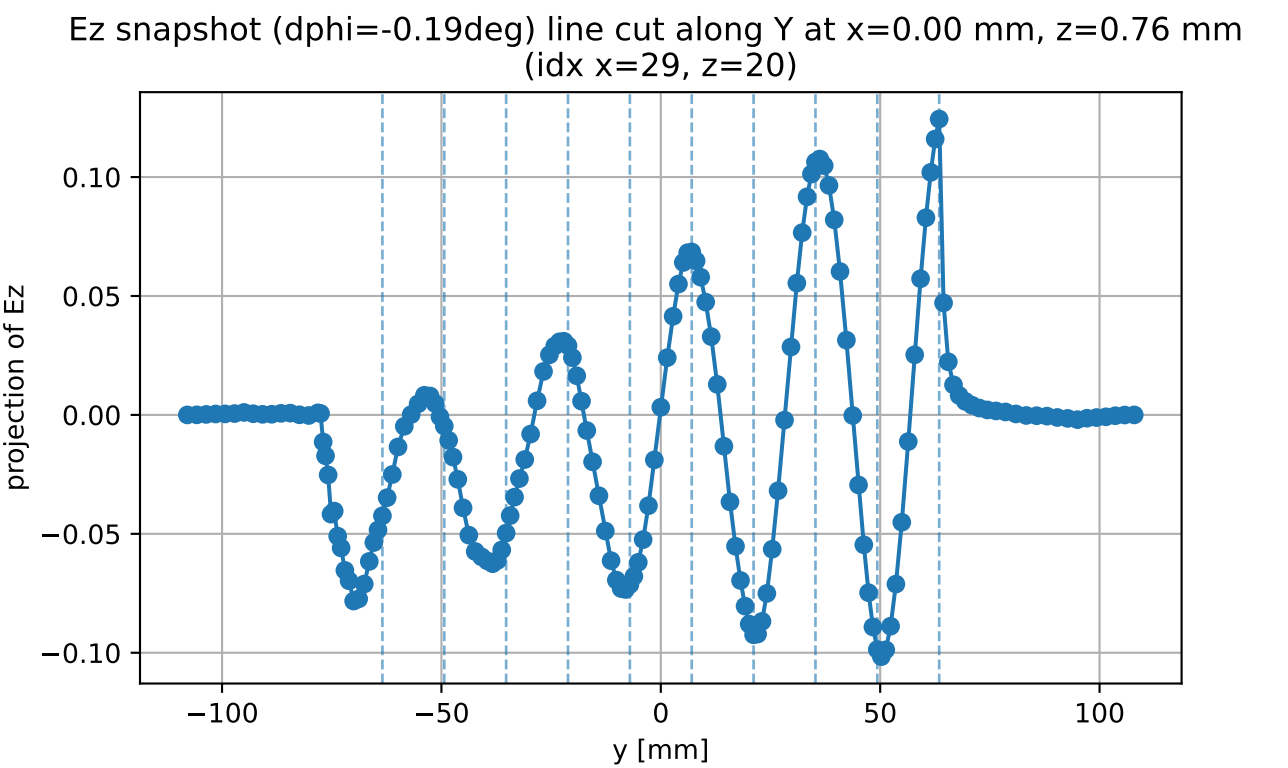

Reflection Coefficient S_{11}
S-Parameter (dB)
−5
−10
−15
−20
−25
−30
−35
5.4
5.6
5.8
6.0
6.2
Frequency (GHz)
$f_0 = 5.787\,\text{GHz}\ (-36.4\,\text{dB})$
$f^{\text{low}}_{-10\,dB} = 5.734\,\text{GHz}$ $f^{\text{high}}_{-10\,dB} = 5.839\,\text{GHz}$
$\text{BW} = 104.5\,\text{MHz}$ $\text{FBW} = 1.81\%$ $Q \approx 55.4$
S_{11}
min

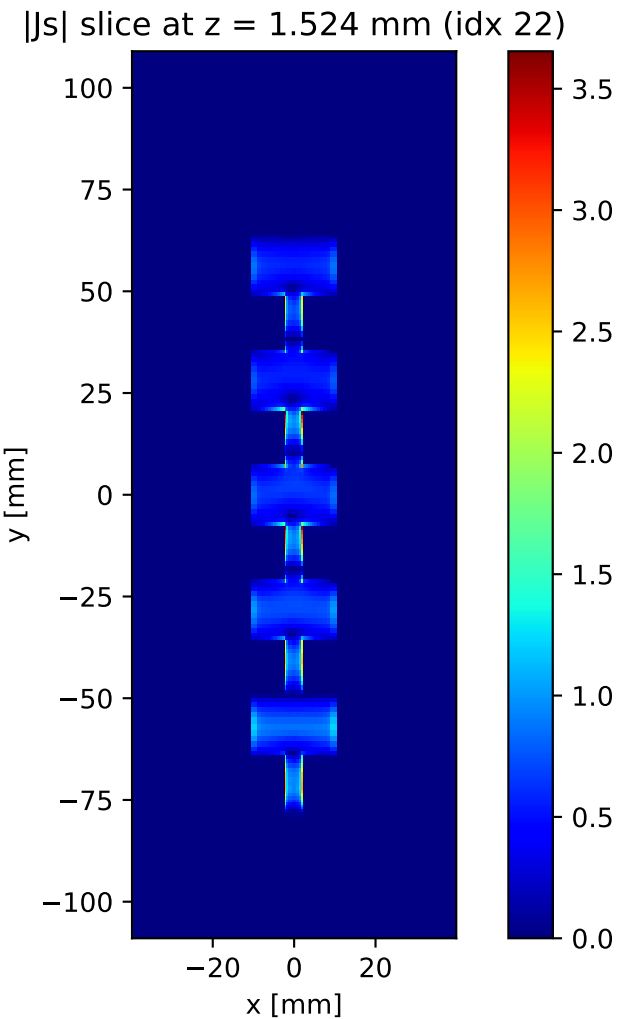

Smith Chart
S11 (Patch W=19.00 mm, L=14.10 mm)
5.80 GHz, S11=-0.018-0.086j, R=47.58-8.21j, Gnorm=1.02+0.18j
5.79 GHz, S11=0.012-0.010j, R2=51.18-0.97j, G2norm=0.98+0.02j

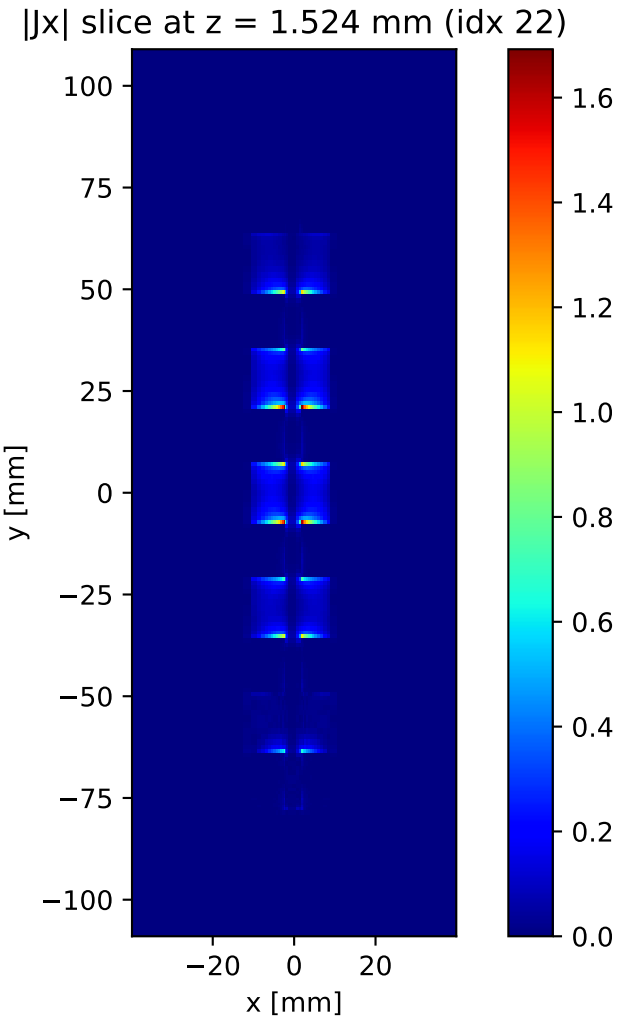

|Ez| slice at z = 0.76 mm (idx 20)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00

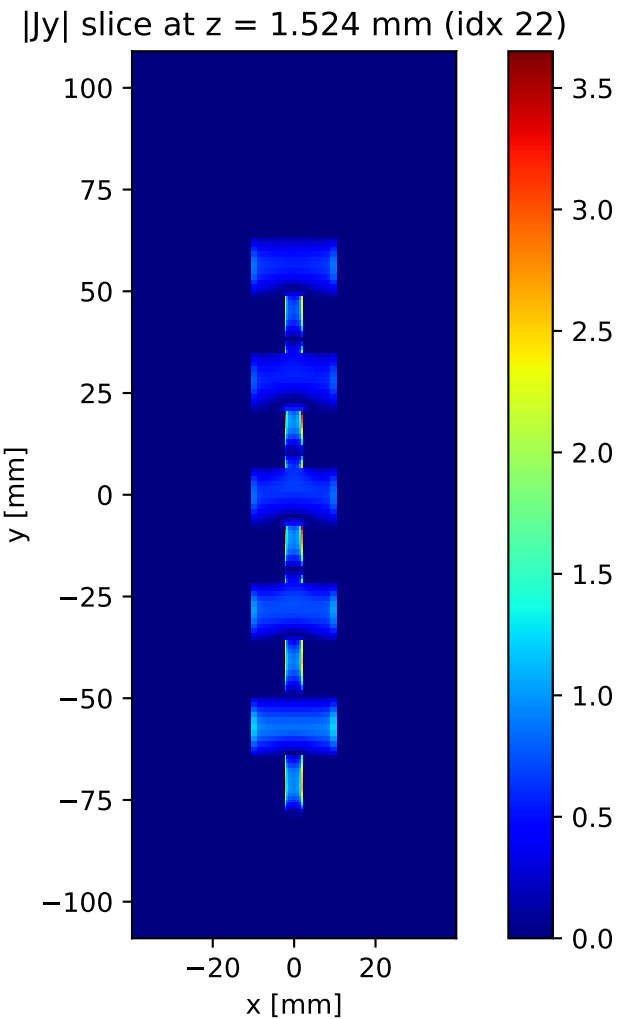

|Ez| line cut along Y at x=0.00 mm, z=0.76 mm
(idx x=29, z=20)
projection of Ez
0.12
0.10
0.08
0.06
0.04
0.02
0.00
−100
−50
0
50
100
y [mm]

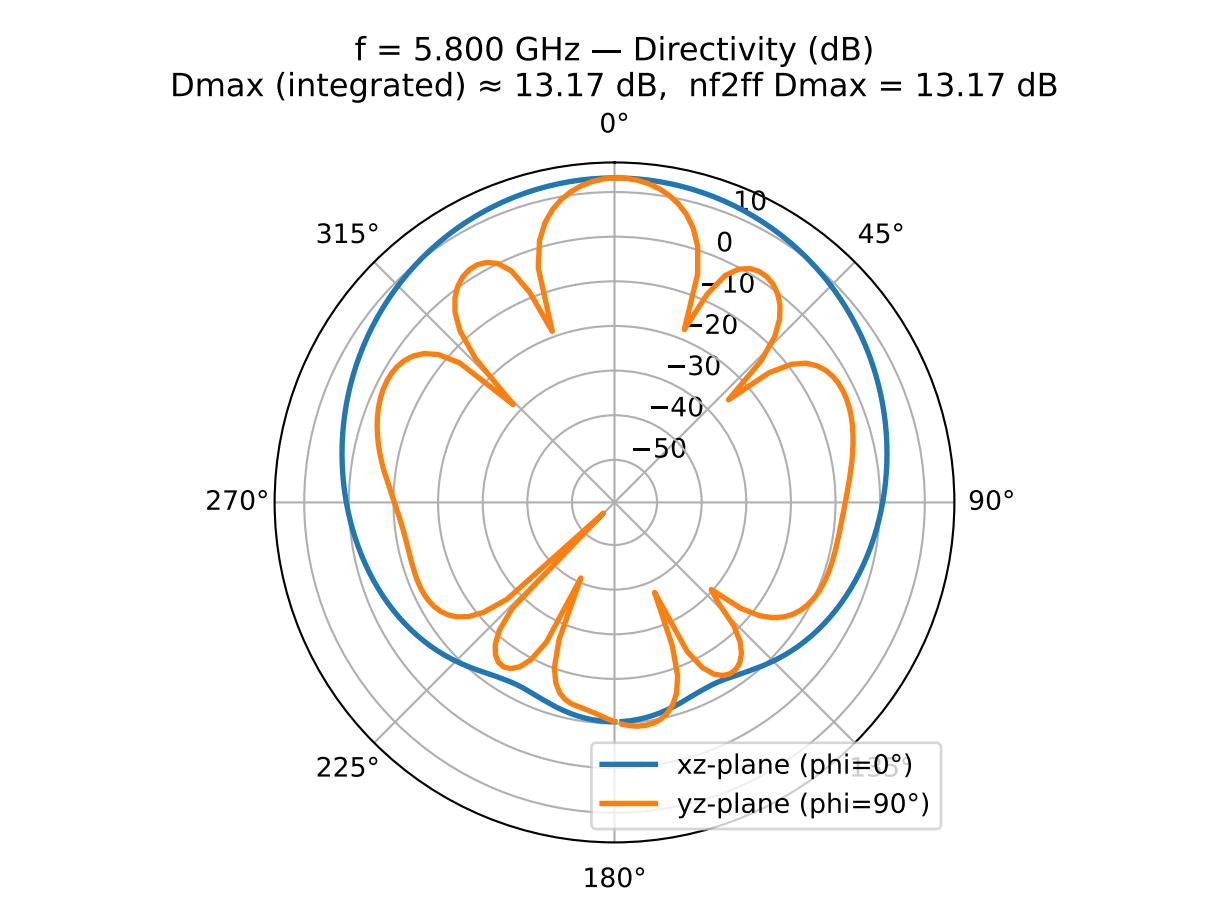

Ez snapshot (dphi=-0.19deg) slice at z = 0.76 mm (idx 20)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
0.10
0.05
0.00
−0.05
−0.10

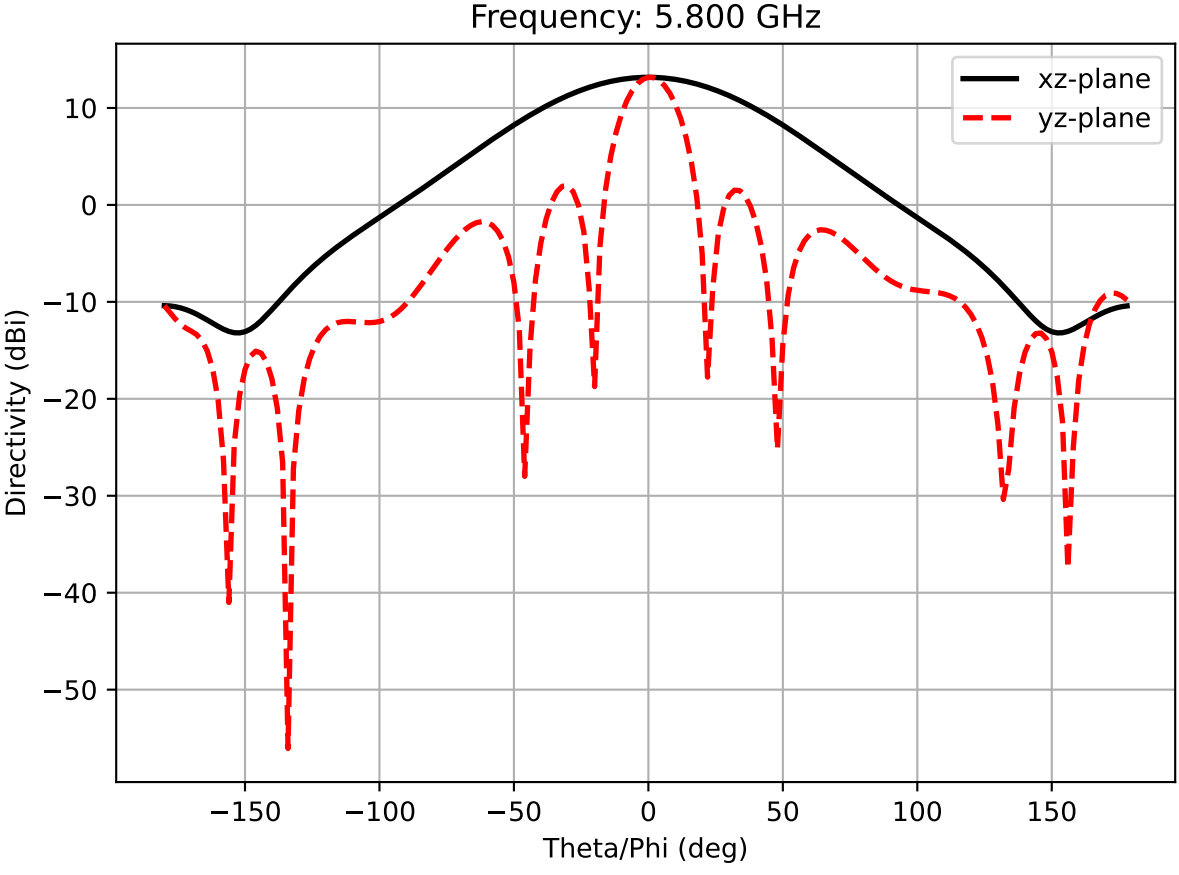

Ez snapshot (dphi=-0.19deg) line cut along Y at x=0.00 mm, z=0.76 mm
(idx x=29, z=20)
projection of Ez
0.10
0.05
0.00
−0.05
−0.10
−100
−50
0
50
100
y [mm]

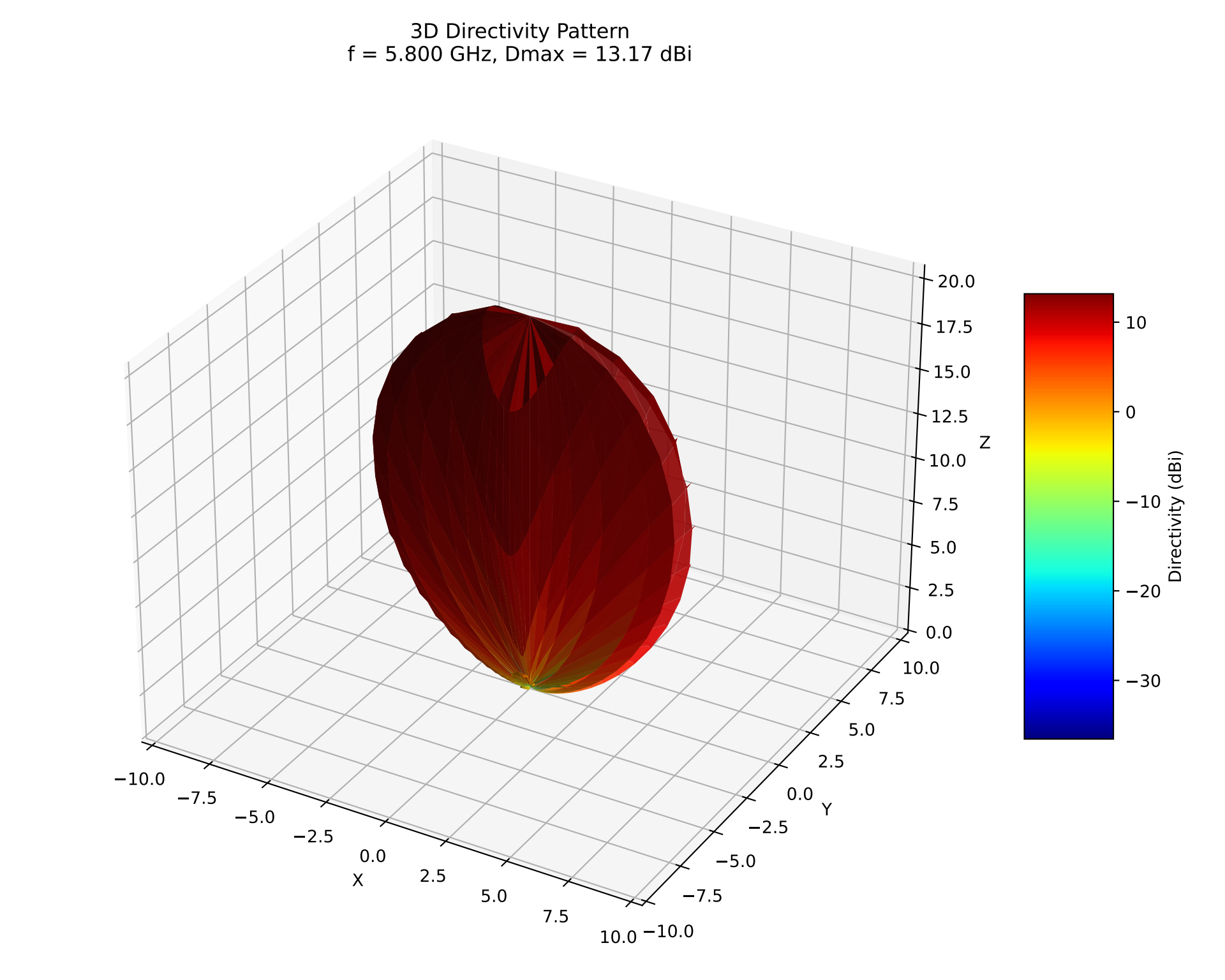

|Js| slice at z = 1.524 mm (idx 22)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0


|Jx| slice at z = 1.524 mm (idx 22)
y [mm]
x [mm]
100
75
50
25
0
−25
−50
−75
−100
−20
0
20
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 22)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0


f = 5.800 GHz — Directivity (dB)
Dmax (integrated) ≈ 13.17 dB, nf2ff Dmax = 13.17 dB
0°
45°
90°
225°
270°
315°
180°
10
0
−10
−20
−30
−40
−50
xz-plane (phi=0°)
yz-plane (phi=90°)


Frequency: 5.800 GHz
xz-plane
yz-plane
Directivity (dBi)
10
0
−10
−20
−30
−40
−50
−150
−100
−50
0
50
100
150
Theta/Phi (deg)


3D Directivity Pattern
f = 5.800 GHz, Dmax = 13.17 dBi
X
Y
Z
Directivity (dBi)
−10.0
−7.5
−5.0
−2.5
0.0
2.5
5.0
7.5
10.0
20.0
17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0
10
0
−10
−20
−30