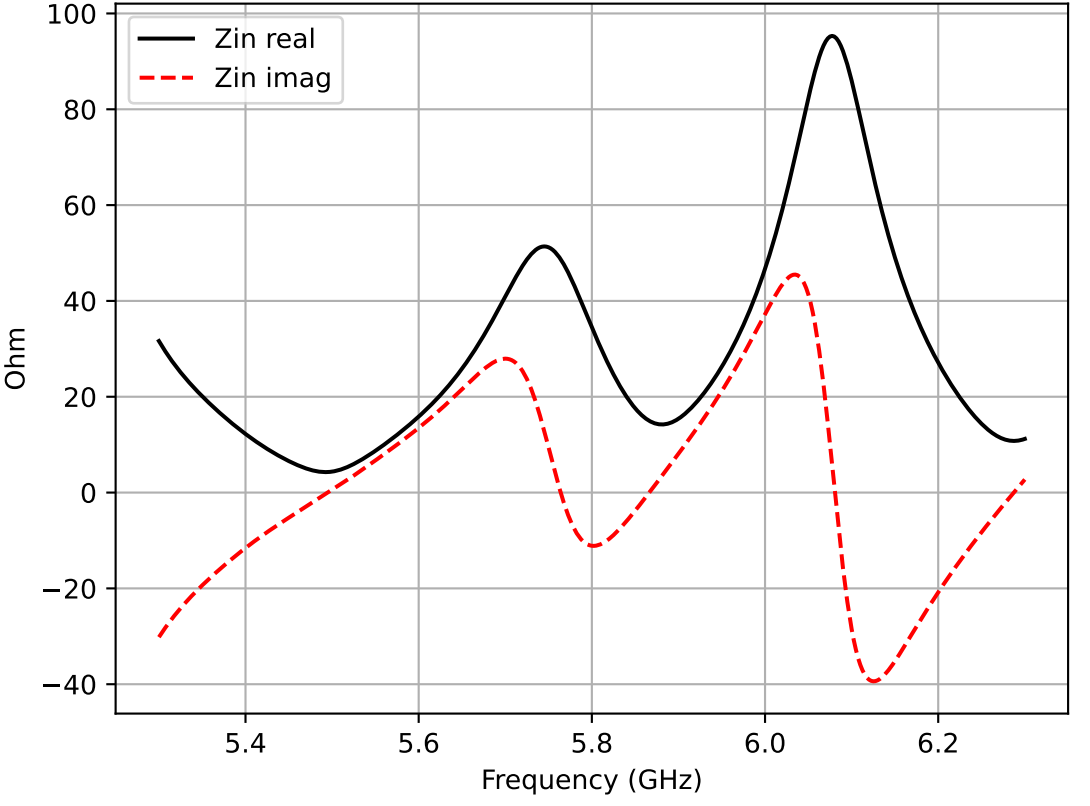
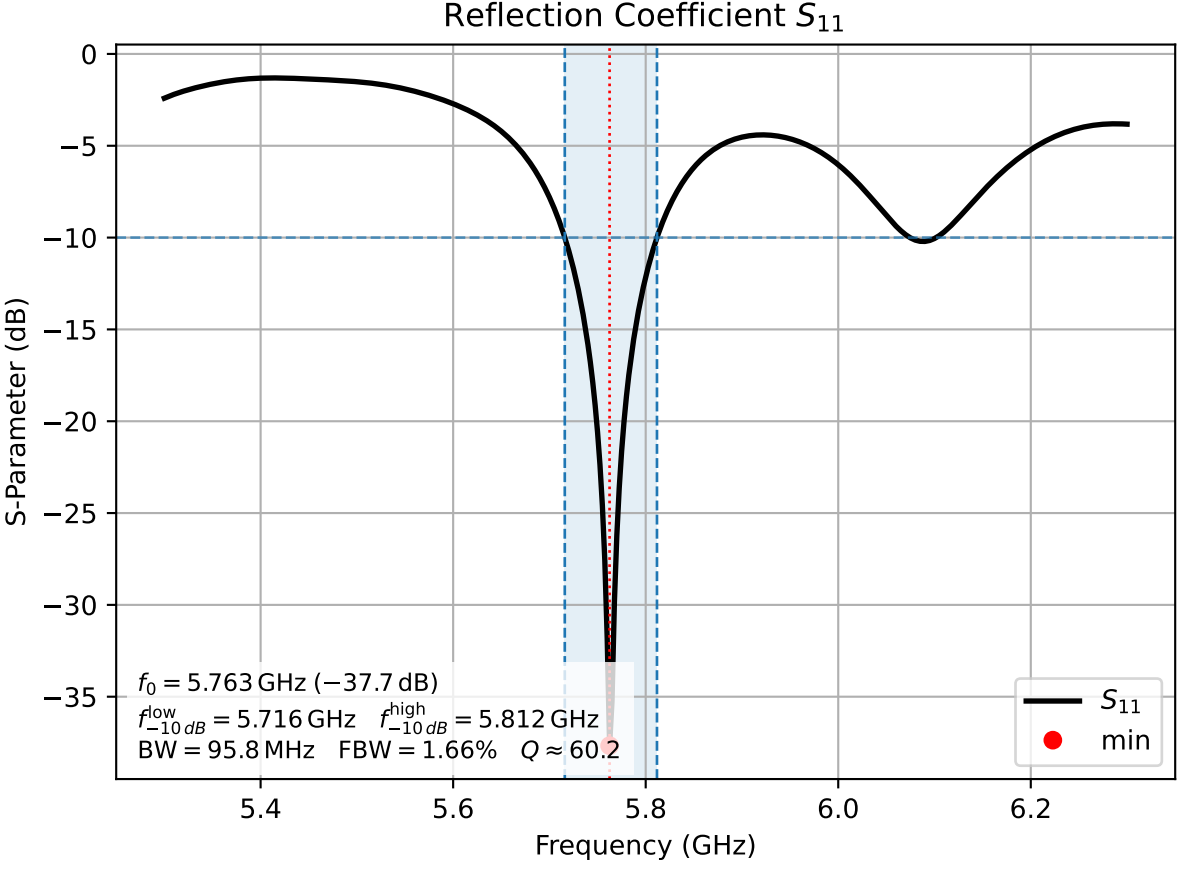
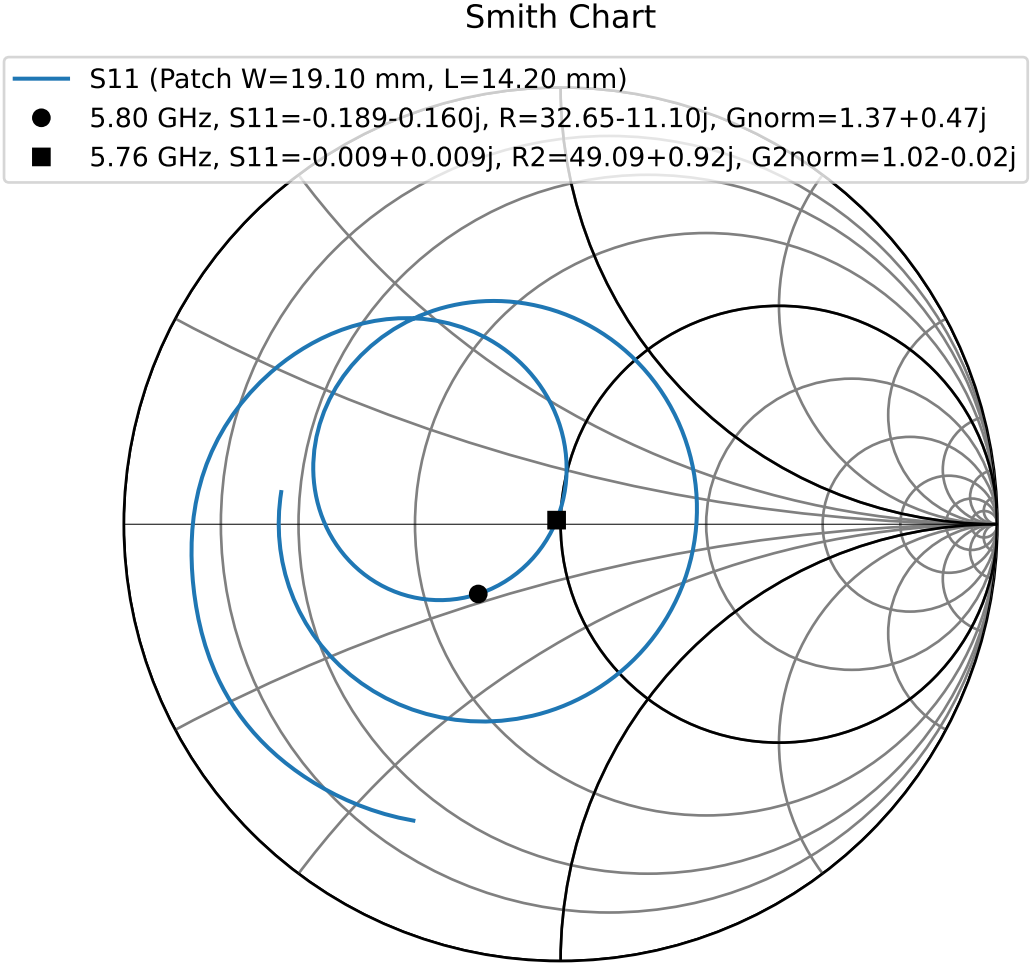
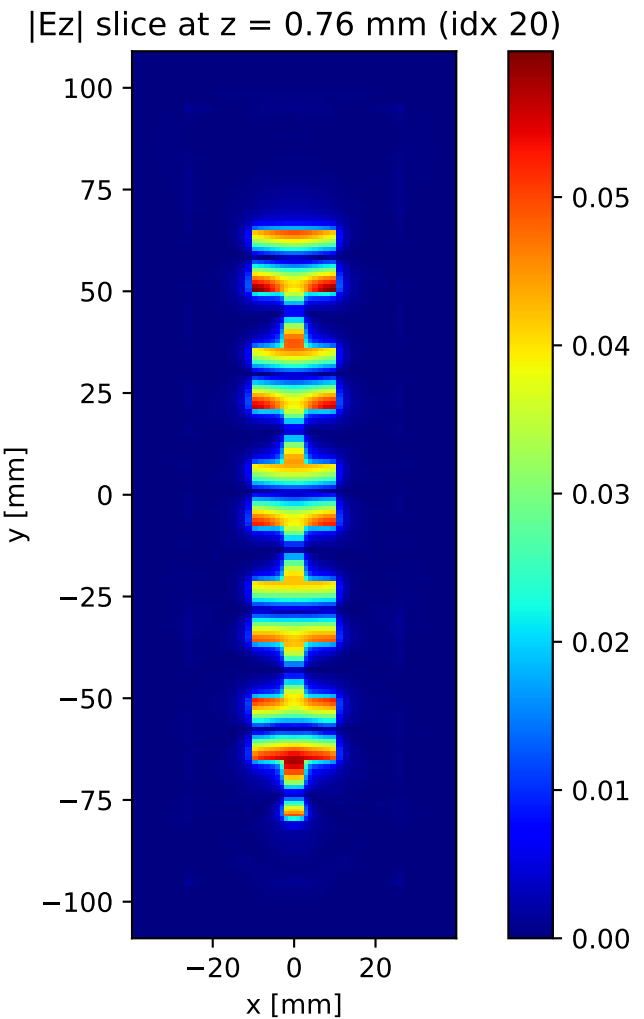
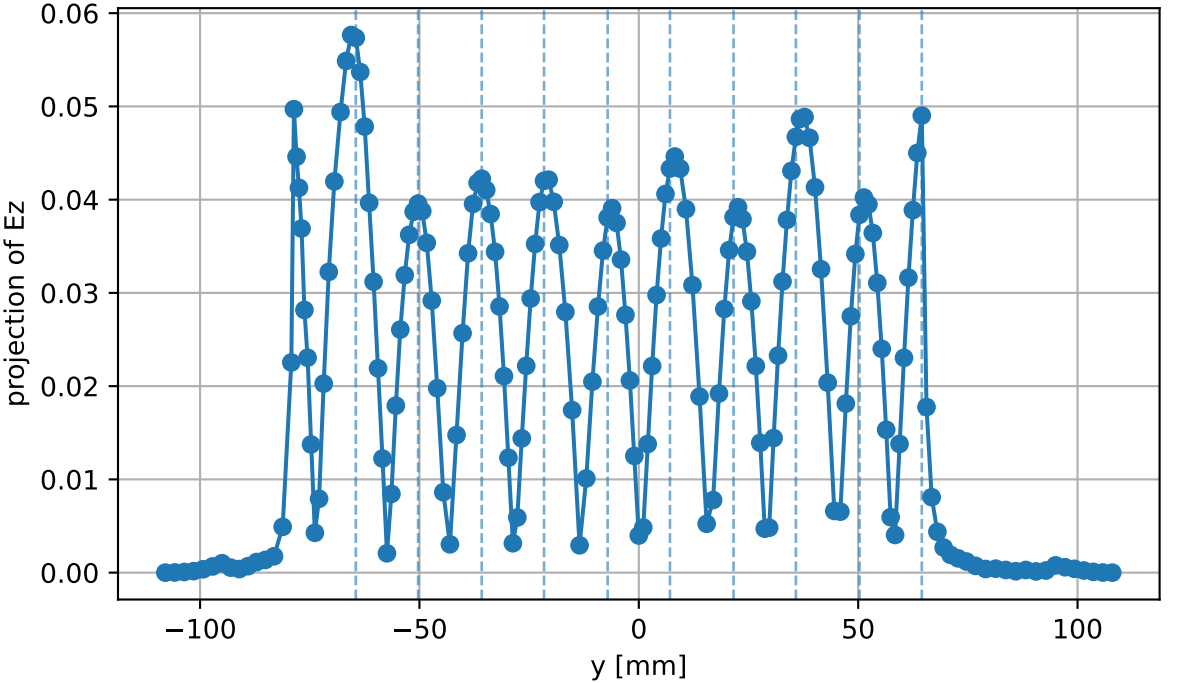
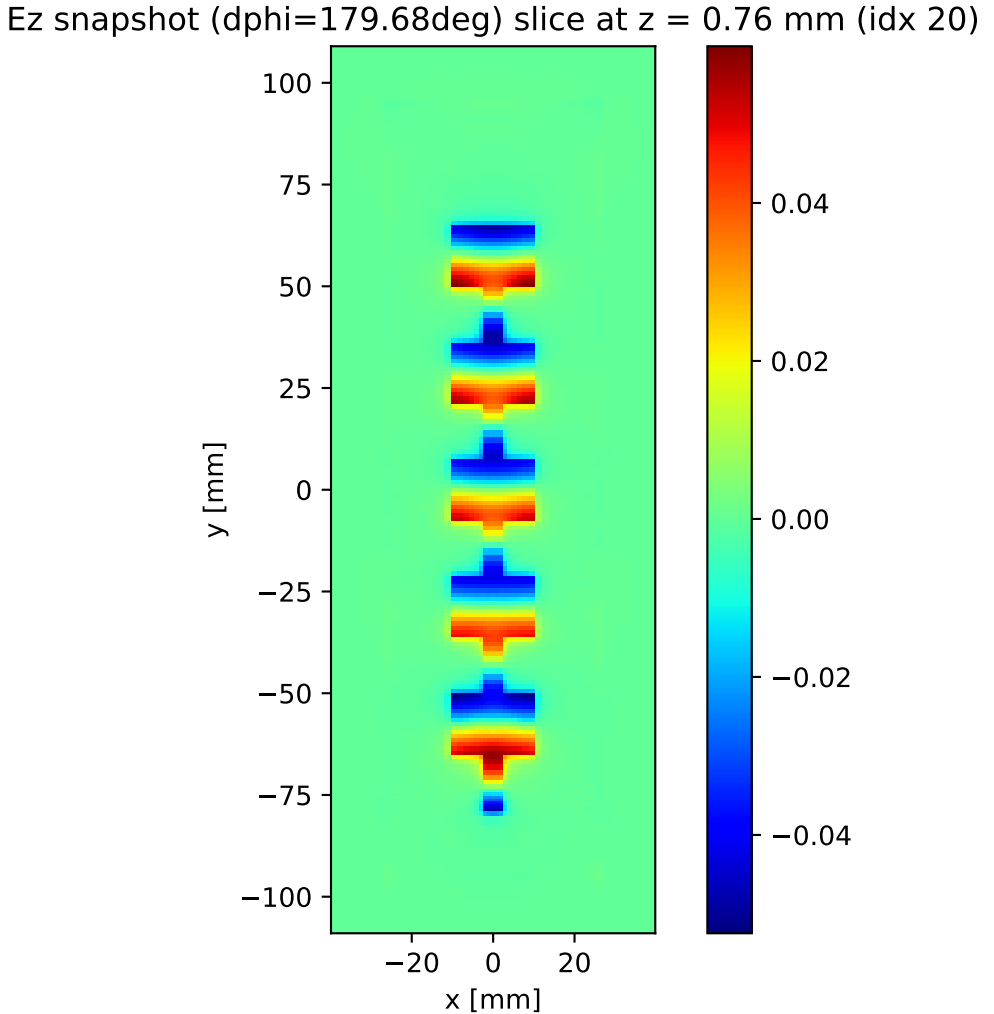

Zin real
Zin imag
100
80
60
40
20
0
−20
−40
Ohm
5.4
5.6
5.8
6.0
6.2
Frequency (GHz)

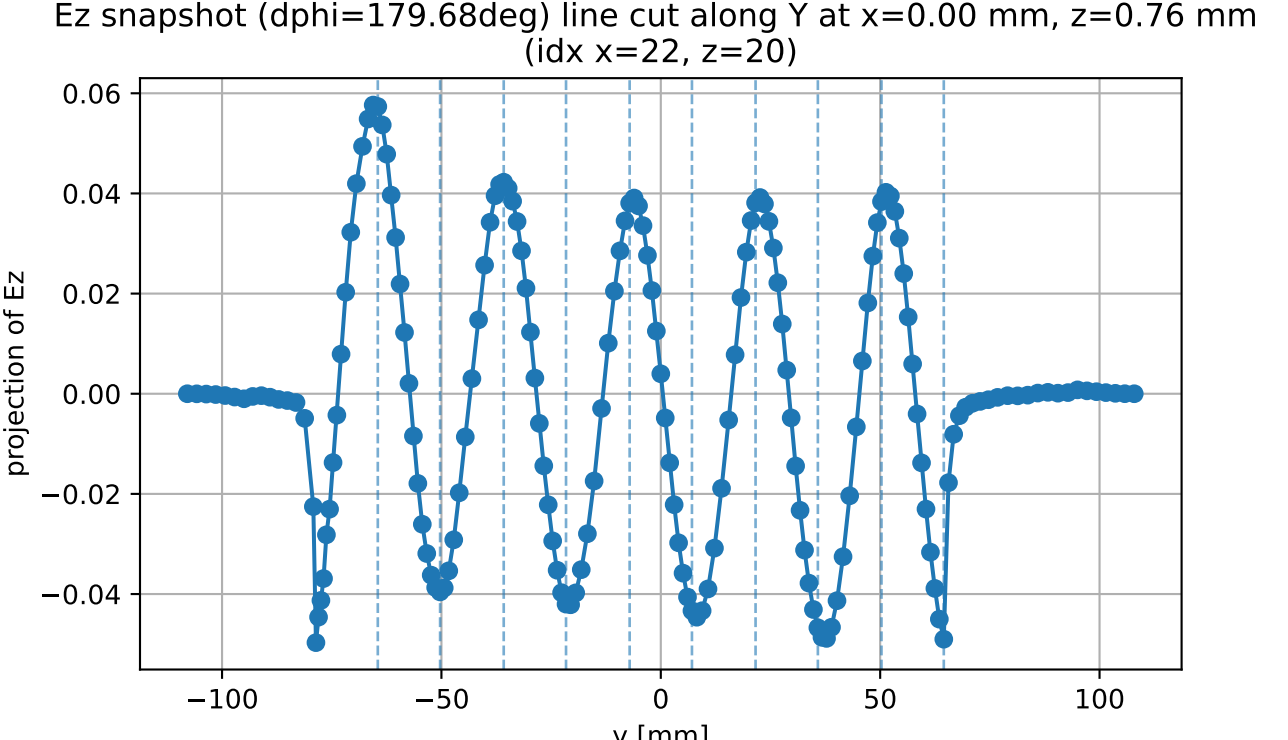

Reflection Coefficient S_{11}
S-Parameter (dB)
Frequency (GHz)
0
−5
−10
−15
−20
−25
−30
−35
5.4
5.6
5.8
6.0
6.2
$f_0 = 5.763\,\text{GHz}\ (-37.7\,\text{dB})$
$f^{\text{low}}_{-10\,dB} = 5.716\,\text{GHz}$ $f^{\text{high}}_{-10\,dB} = 5.812\,\text{GHz}$
$\text{BW} = 95.8\,\text{MHz}$ $\text{FBW} = 1.66\%$ $Q \approx 60.2$
S_{11}
min

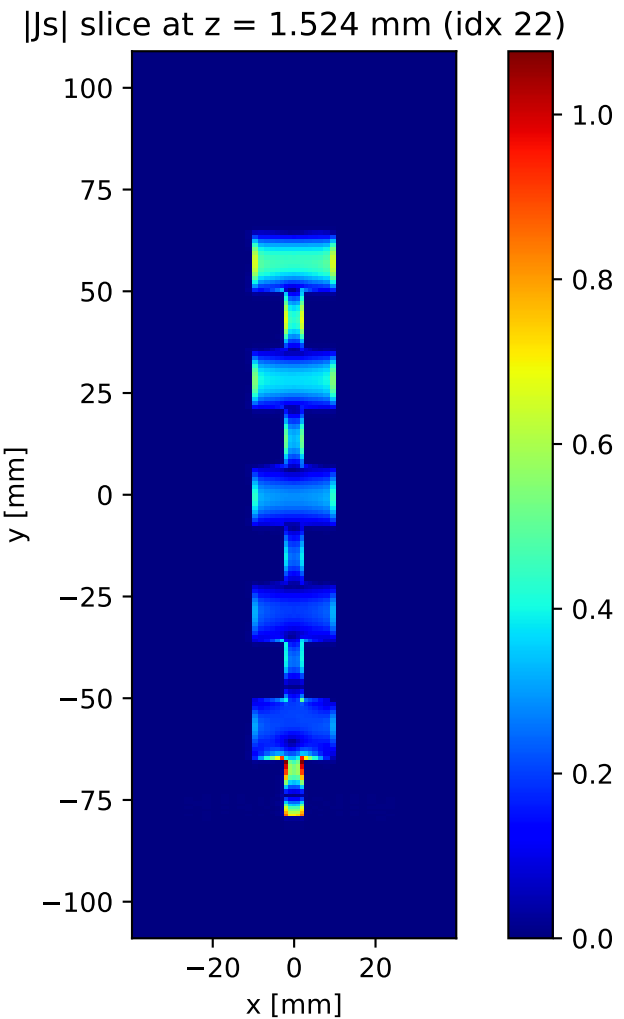

Smith Chart
S11 (Patch W=19.10 mm, L=14.20 mm)
5.80 GHz, S11=-0.189-0.160j, R=32.65-11.10j, Gnorm=1.37+0.47j
5.76 GHz, S11=-0.009+0.009j, R2=49.09+0.92j, G2norm=1.02-0.02j

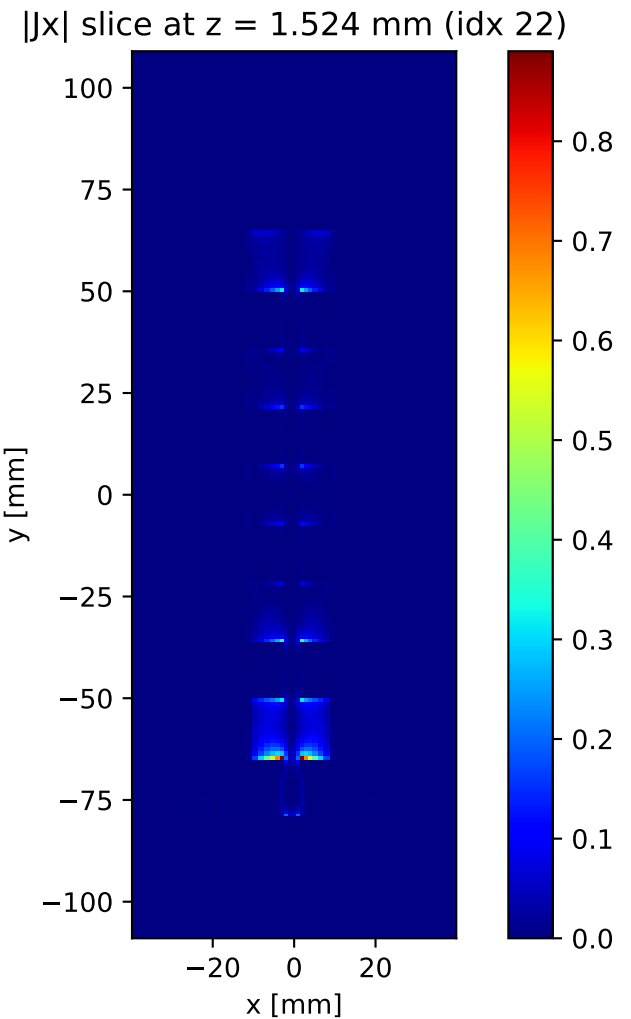

|Ez| slice at z = 0.76 mm (idx 20)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
0.05
0.04
0.03
0.02
0.01
0.00

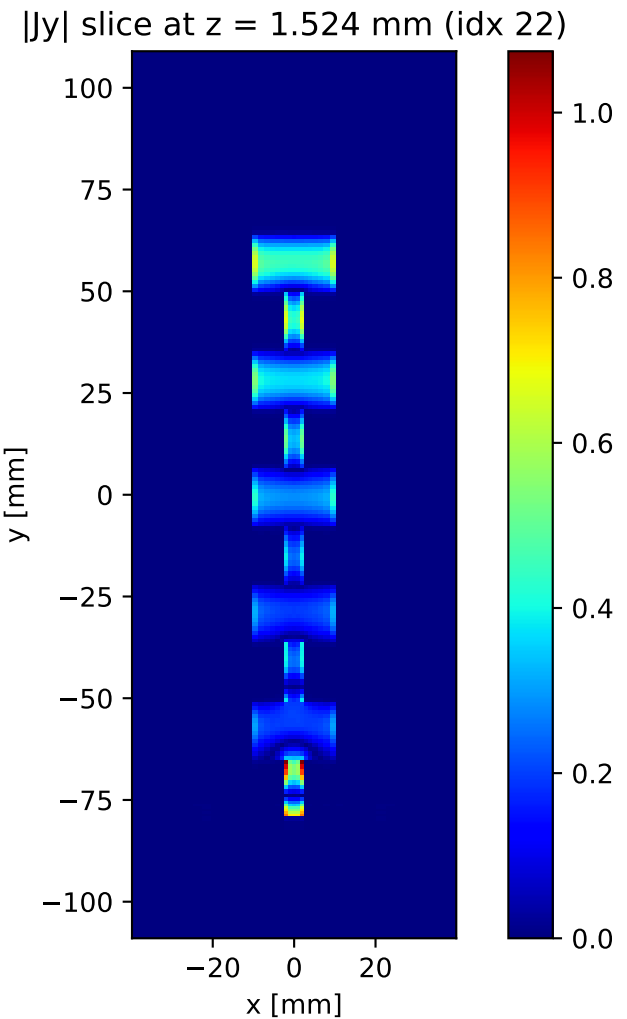

|Ez| line cut along Y at x=0.00 mm, z=0.76 mm
(idx x=22, z=20)
projection of Ez
y [mm]
0.06
0.05
0.04
0.03
0.02
0.01
0.00
−100
−50
0
50
100

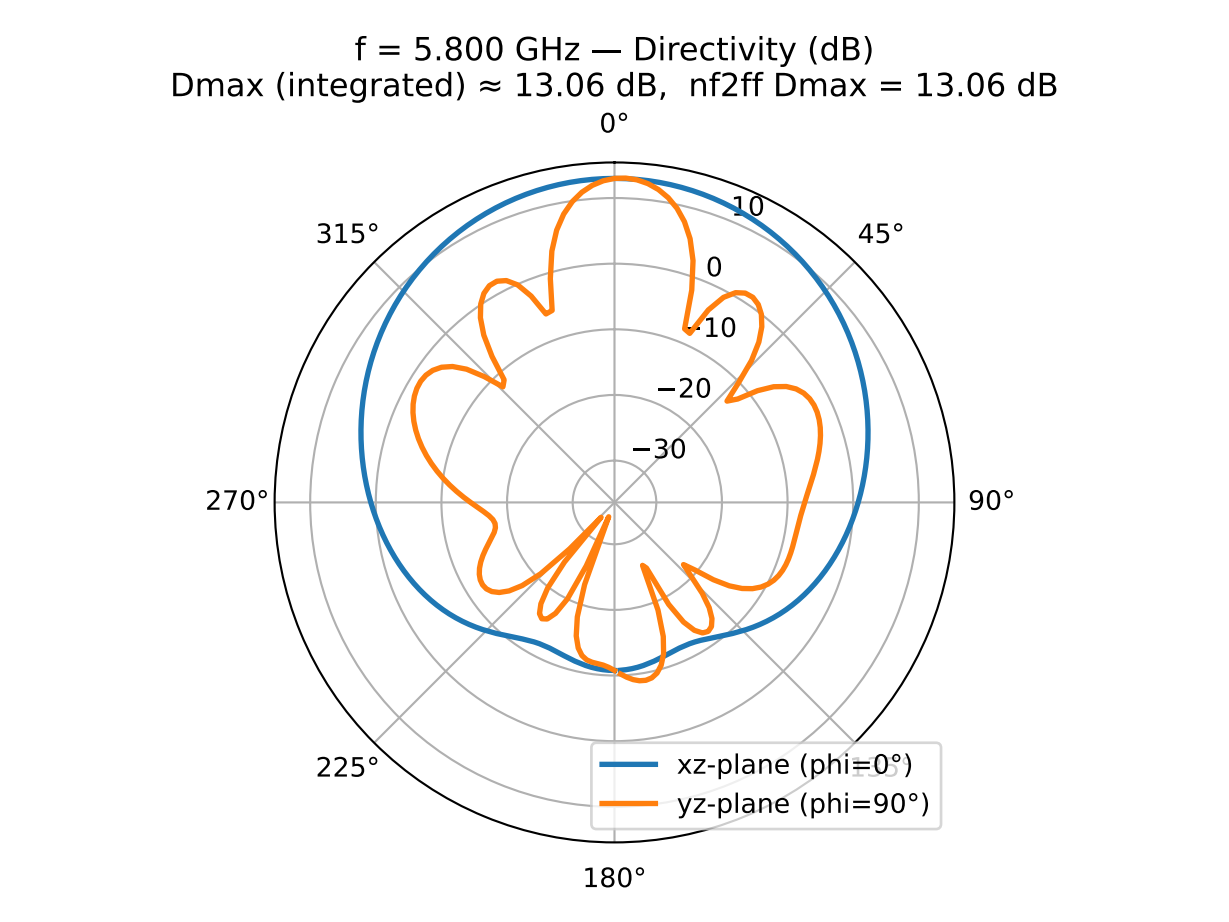

Ez snapshot (dphi=179.68deg) slice at z = 0.76 mm (idx 20)
y [mm]
x [mm]
100
75
50
25
0
−25
−50
−75
−100
−20
0
20
0.04
0.02
0.00
−0.02
−0.04

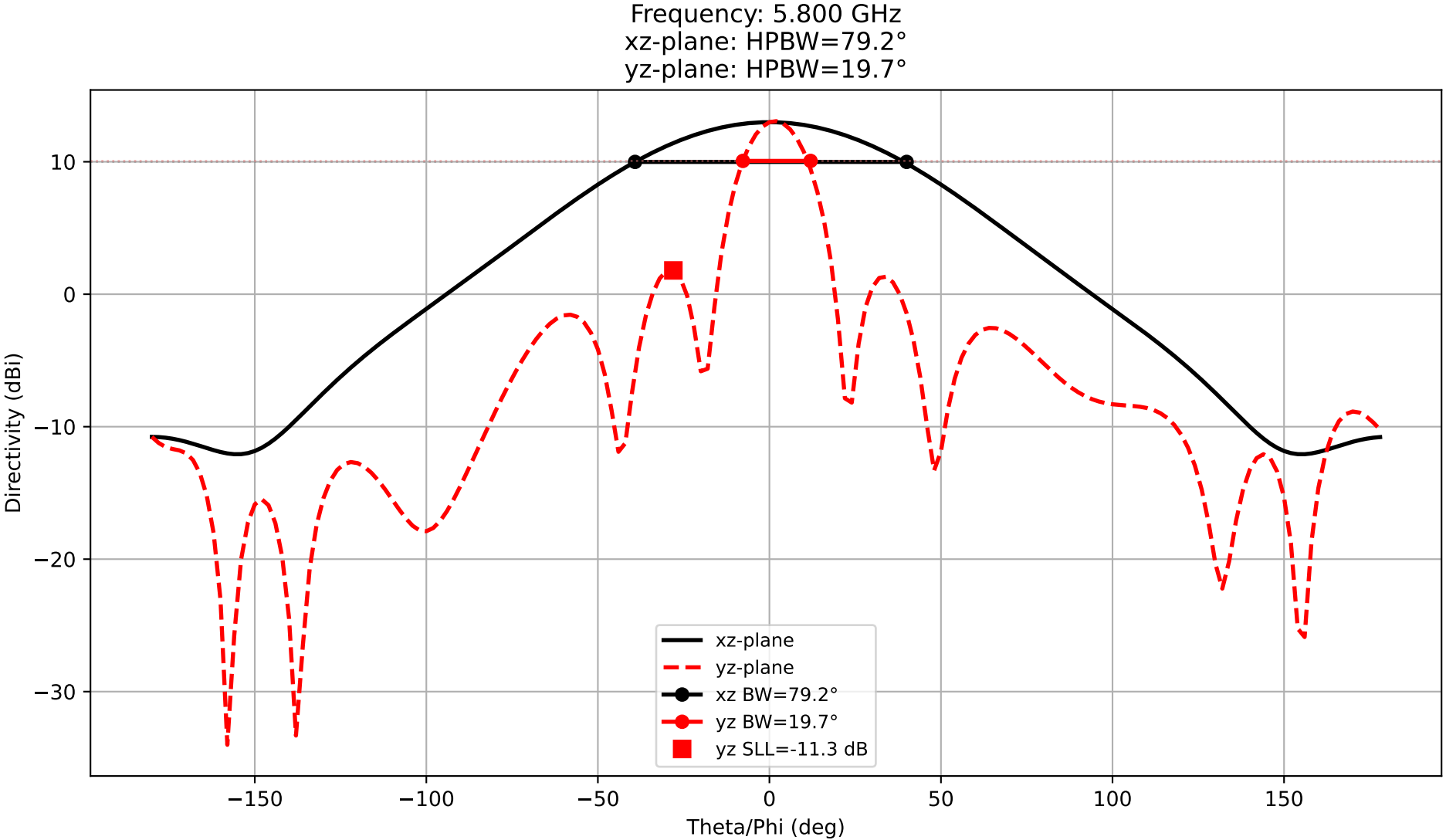

Ez snapshot (dphi=179.68deg) line cut along Y at x=0.00 mm, z=0.76 mm
(idx x=22, z=20)
projection of Ez
y [mm]
0.06
0.04
0.02
0.00
−0.02
−0.04
−100
−50
0
50
100

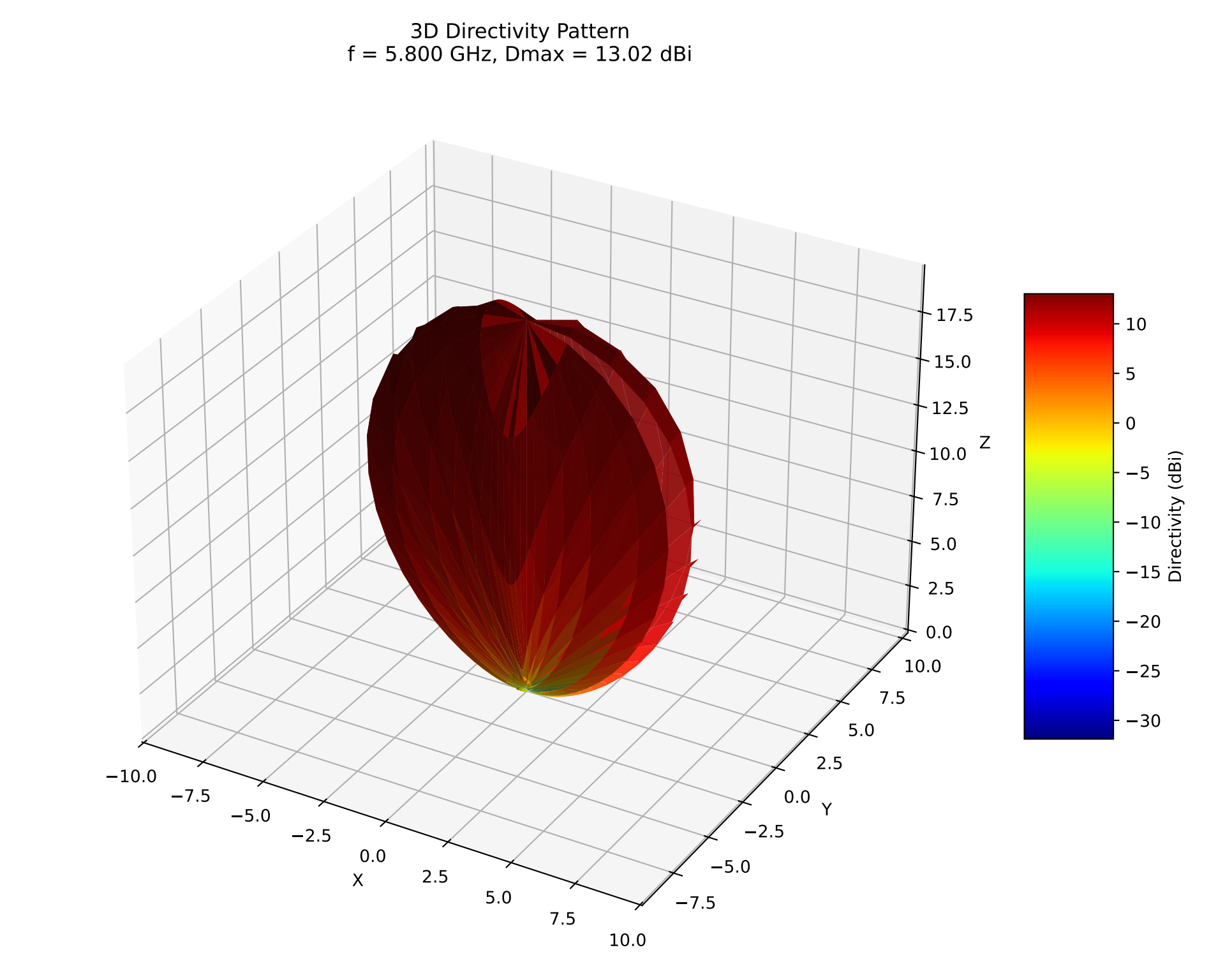

|Js| slice at z = 1.524 mm (idx 22)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
1.0
0.8
0.6
0.4
0.2
0.0


|Jx| slice at z = 1.524 mm (idx 22)
100
75
50
25
0
−25
−50
−75
−100
y [mm]
−20
0
20
x [mm]
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0


|Jy| slice at z = 1.524 mm (idx 22)
y [mm]
x [mm]
100
75
50
25
0
−25
−50
−75
−100
−20
0
20
1.0
0.8
0.6
0.4
0.2
0.0


f = 5.800 GHz — Directivity (dB)
Dmax (integrated) ≈ 13.06 dB, nf2ff Dmax = 13.06 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: HPBW=79.2°
yz-plane: HPBW=19.7°
Directivity (dBi)
10
0
−10
−20
−30
−150
−100
−50
0
50
100
150
Theta/Phi (deg)
xz-plane
yz-plane
xz BW=79.2°
yz BW=19.7°
yz SLL=-11.3 dB


3D Directivity Pattern
f = 5.800 GHz, Dmax = 13.02 dBi
X
Y
Z
Directivity (dBi)
−10.0
−7.5
−5.0
−2.5
0.0
2.5
5.0
7.5
10.0
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
10
5
0
−5
−10
−15
−20
−25
−30