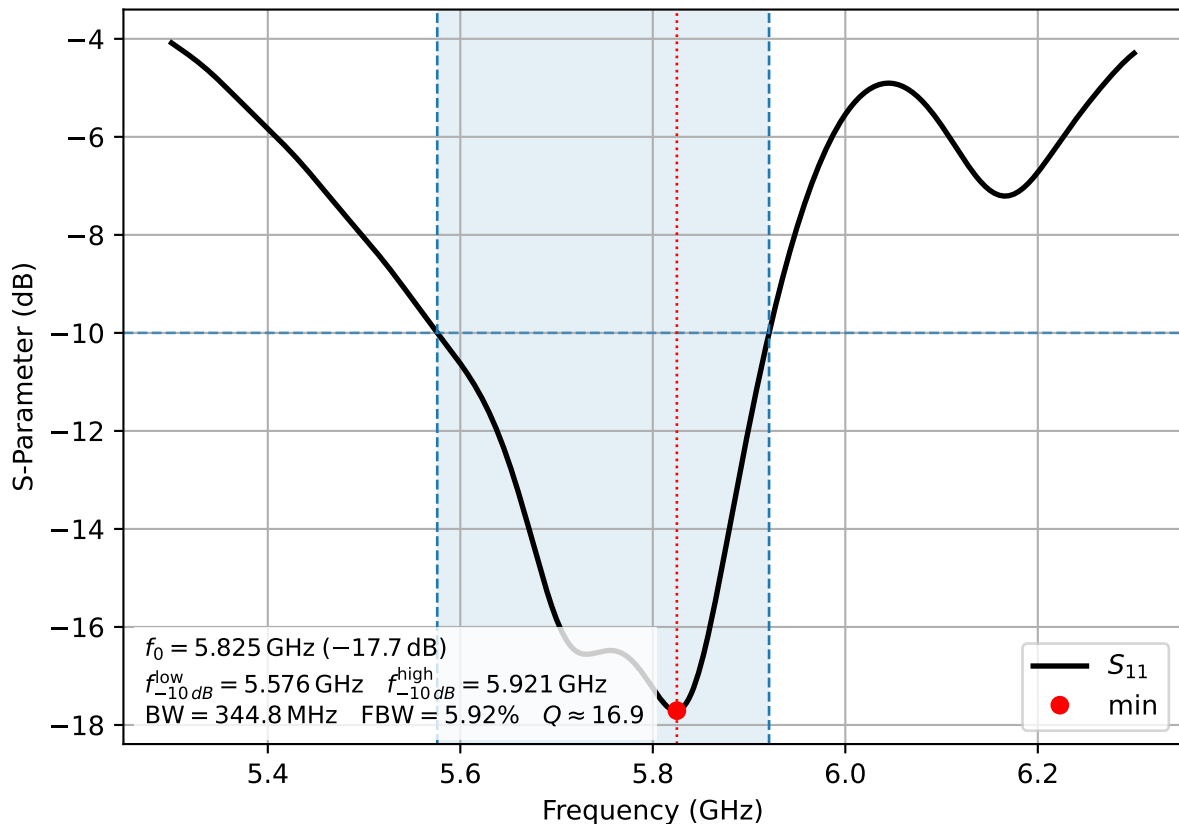
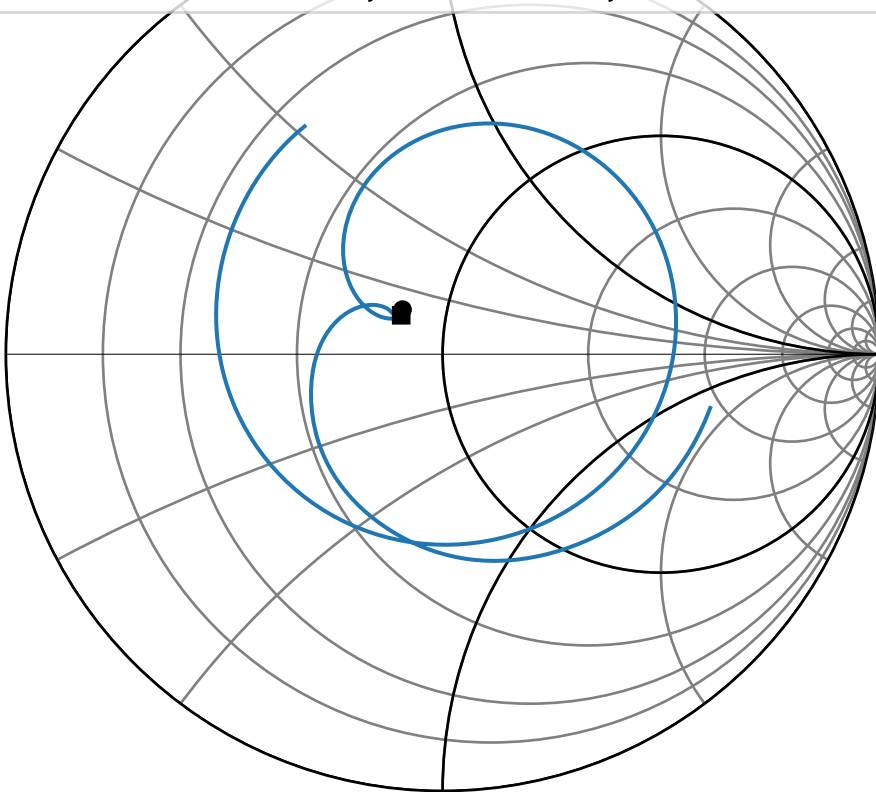


# Reflection Coefficient $S_{11}$

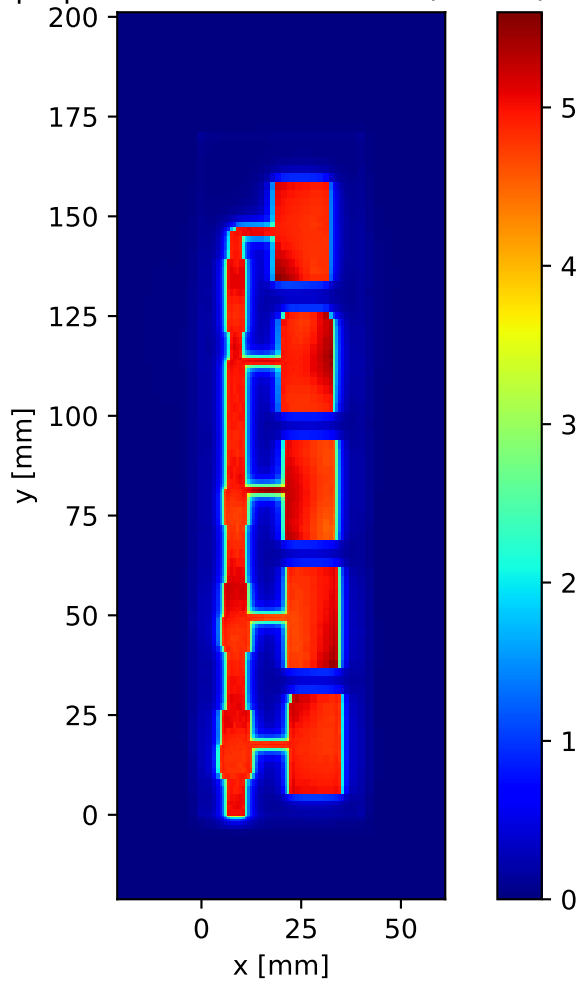


# Smith Chart

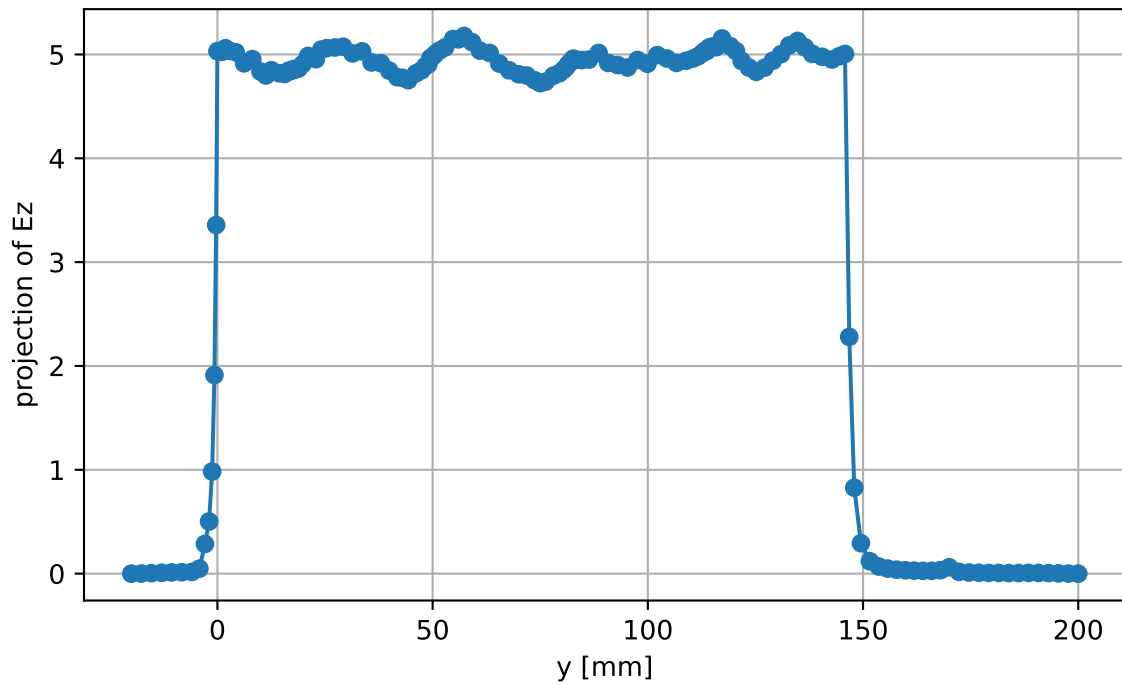
- S11 (Patch W=20.10 mm, L=10.70 mm)
- 5.80 GHz, S11=-0.092+0.102j, R=40.80+8.50j, Gnorm=1.17-0.24j
- 5.83 GHz, S11=-0.095+0.089j, R2=40.74+7.40j, G2norm=1.19-0.22j



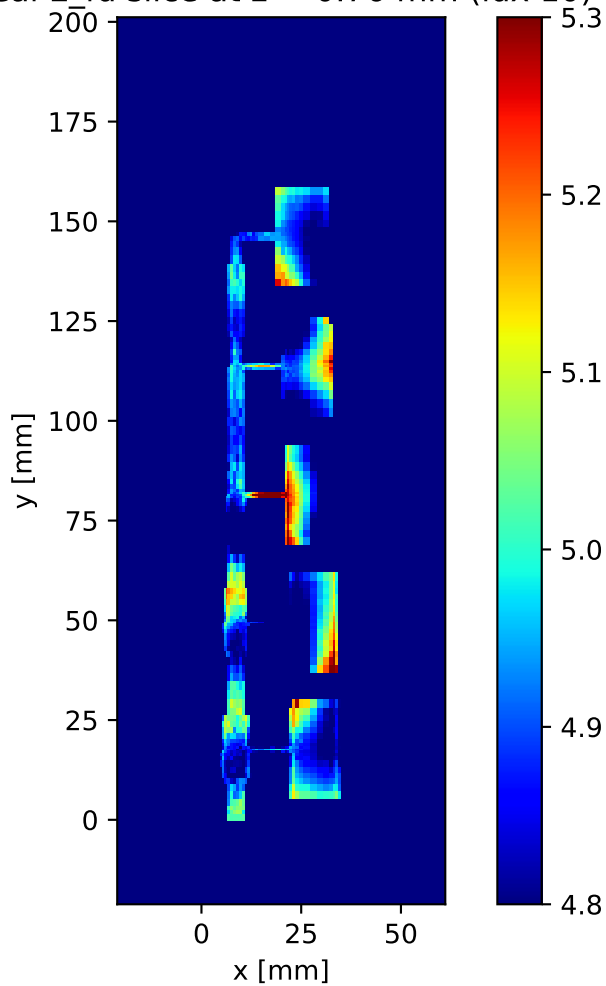
$|E_z|$  slice at  $z = 0.76$  mm (idx 10)



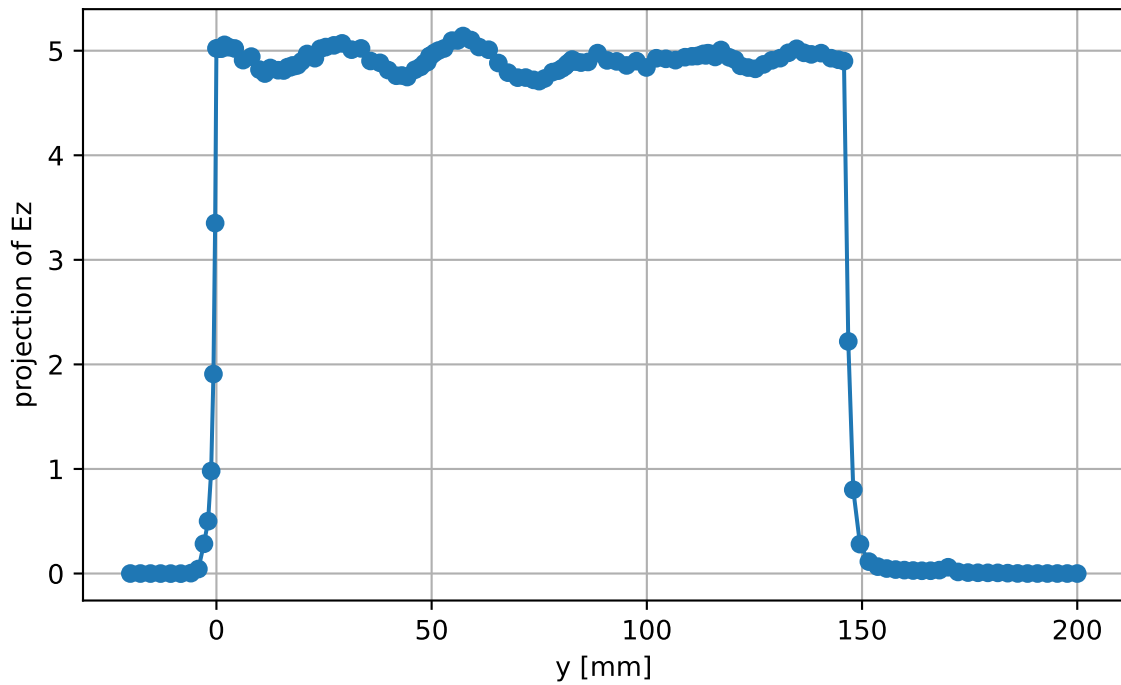
$|E_z|$  line cut along Y at  $x=8.20$  mm,  $z=0.76$  mm  
(idx  $x=19$ ,  $z=10$ )



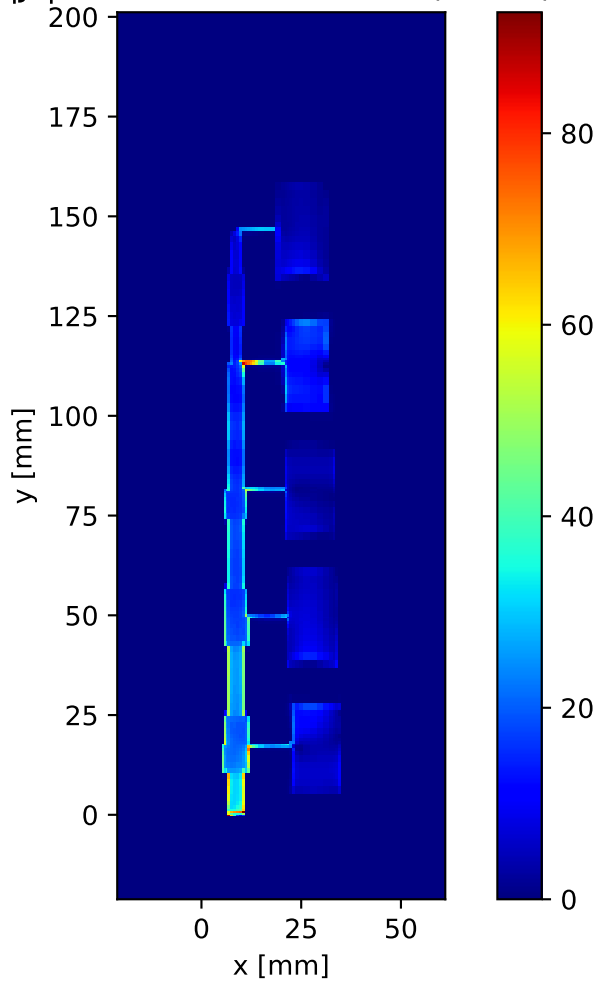
Real E<sub>fd</sub> slice at z = 0.76 mm (idx 10)



Real  $E_{fd}$  line cut along Y at  $x=8.20$  mm,  $z=0.76$  mm  
(idx  $x=19$ ,  $z=10$ )

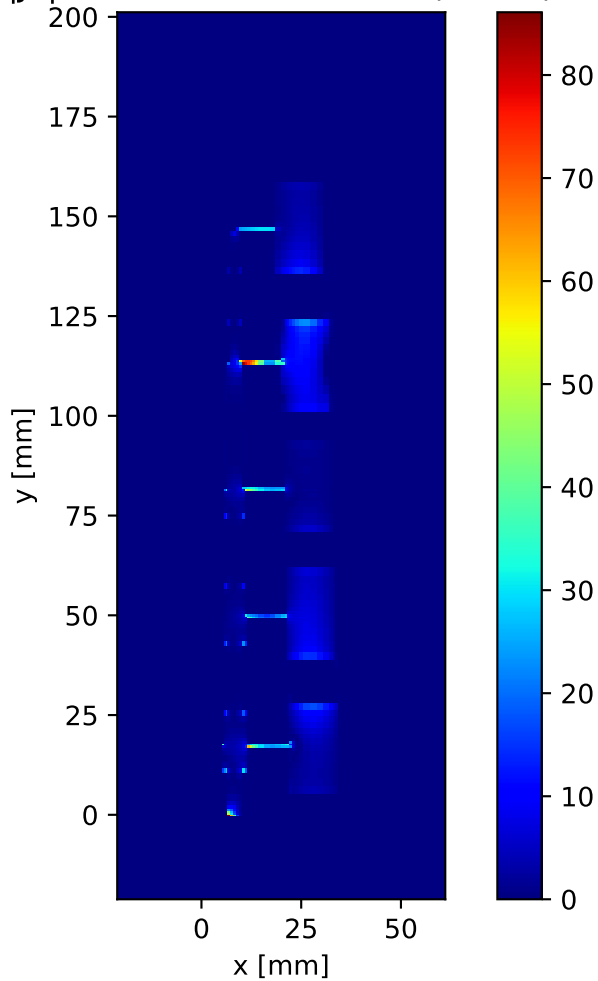


$|J_s|$  slice at  $z = 1.525$  mm (idx 12)

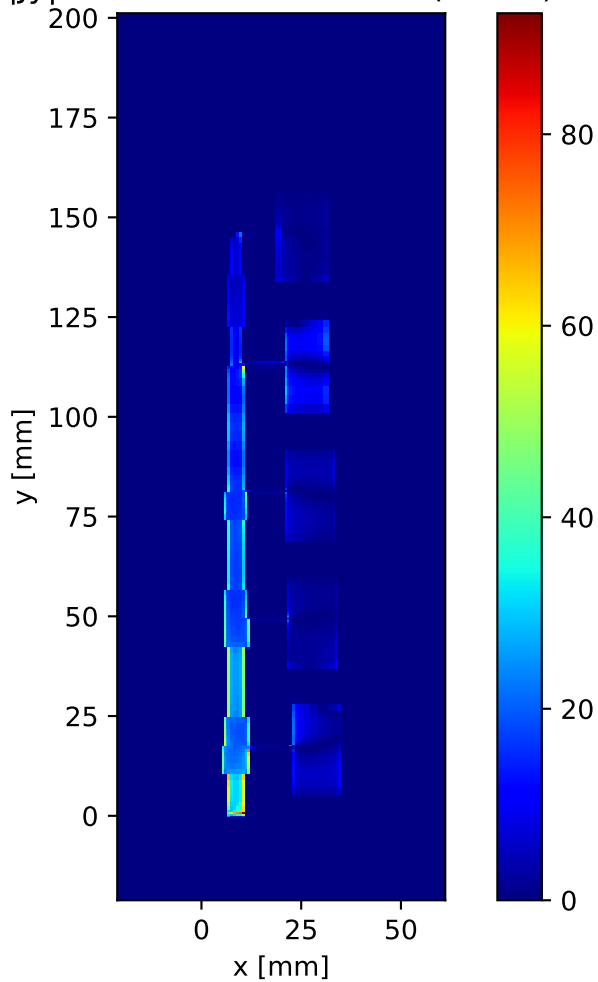




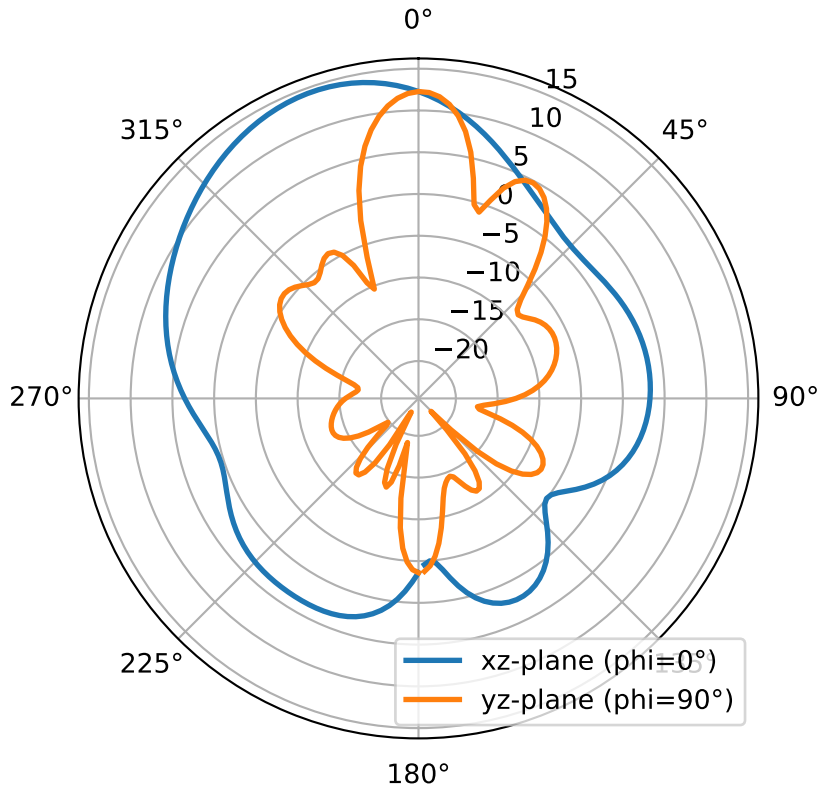
$|j_x|$  slice at  $z = 1.525$  mm (idx 12)



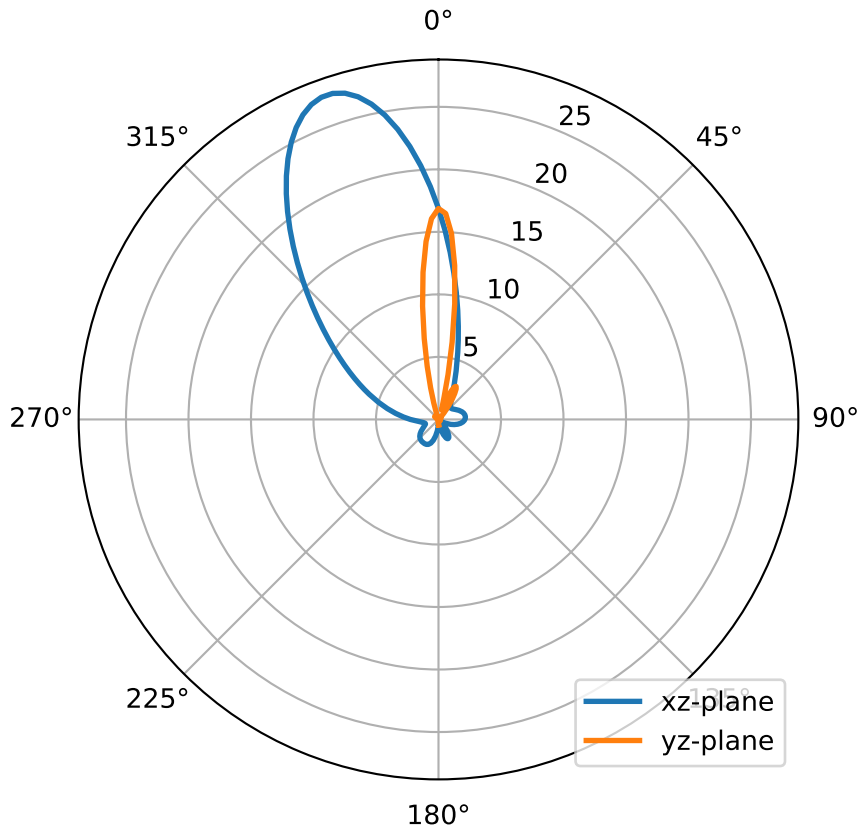
$|j_y|$  slice at  $z = 1.525$  mm (idx 12)



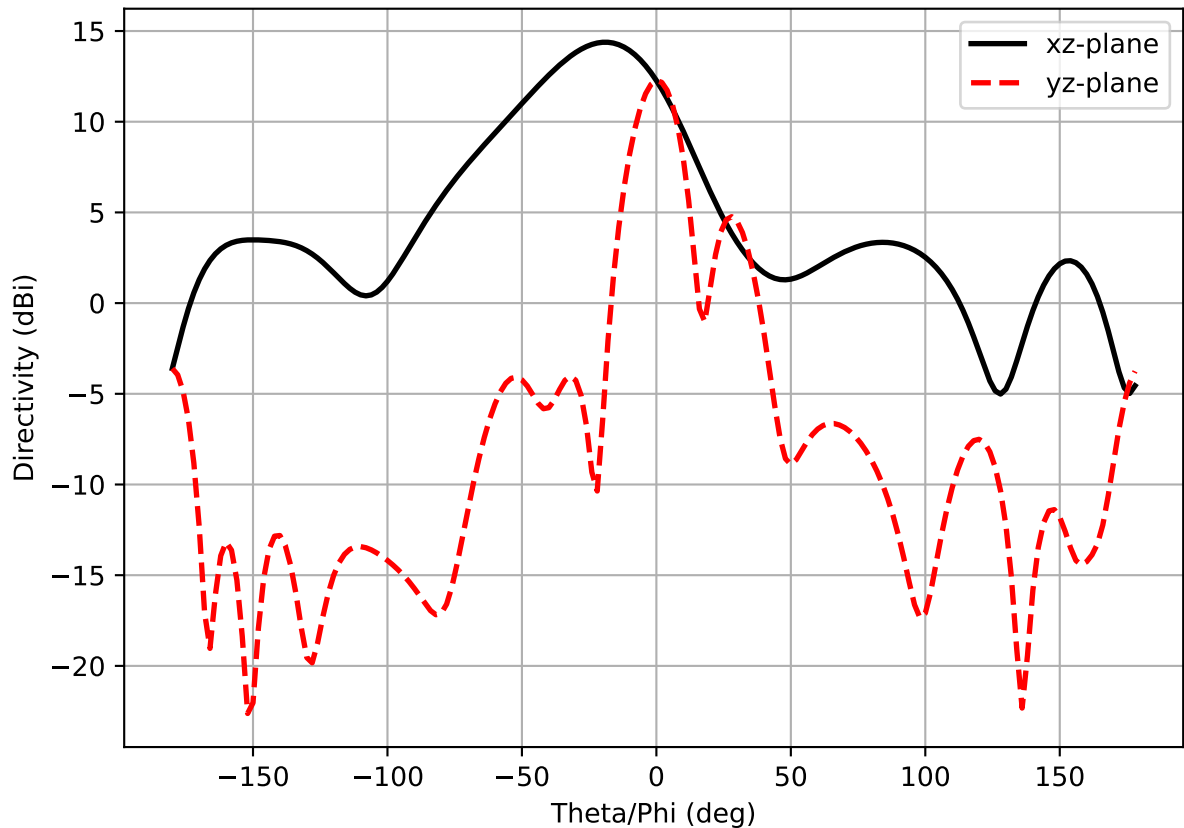
$f = 5.800 \text{ GHz}$  — Directivity (dB)  
 $D_{\text{max}} (\text{integrated}) \approx 14.38 \text{ dB}$ ,  $\text{nf2ff } D_{\text{max}} = 14.38 \text{ dB}$



Frequency: 5.800 GHz — Directivity (linear). Dmax: 27.418



Frequency: 5.800 GHz



3D Directivity Pattern  
 $f = 5.800$  GHz,  $D_{\max} = 14.38$  dBi

