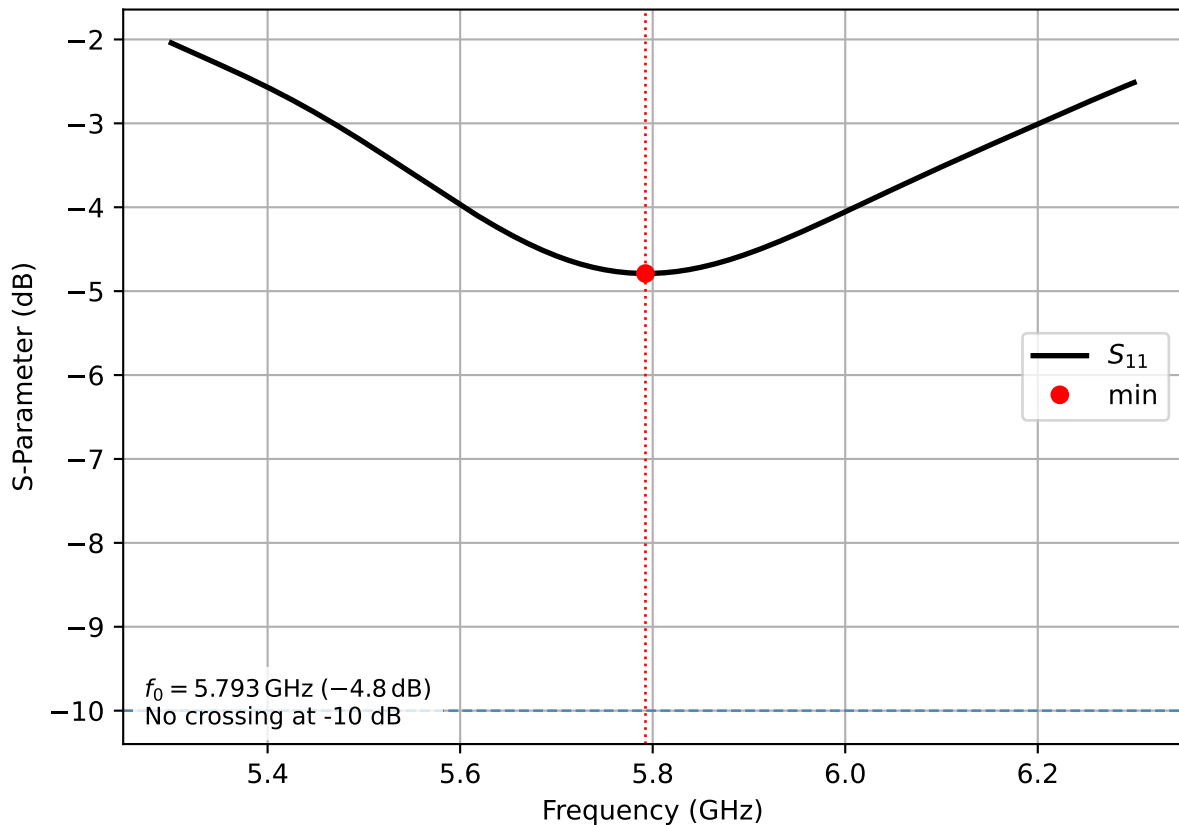


# Reflection Coefficient $S_{11}$

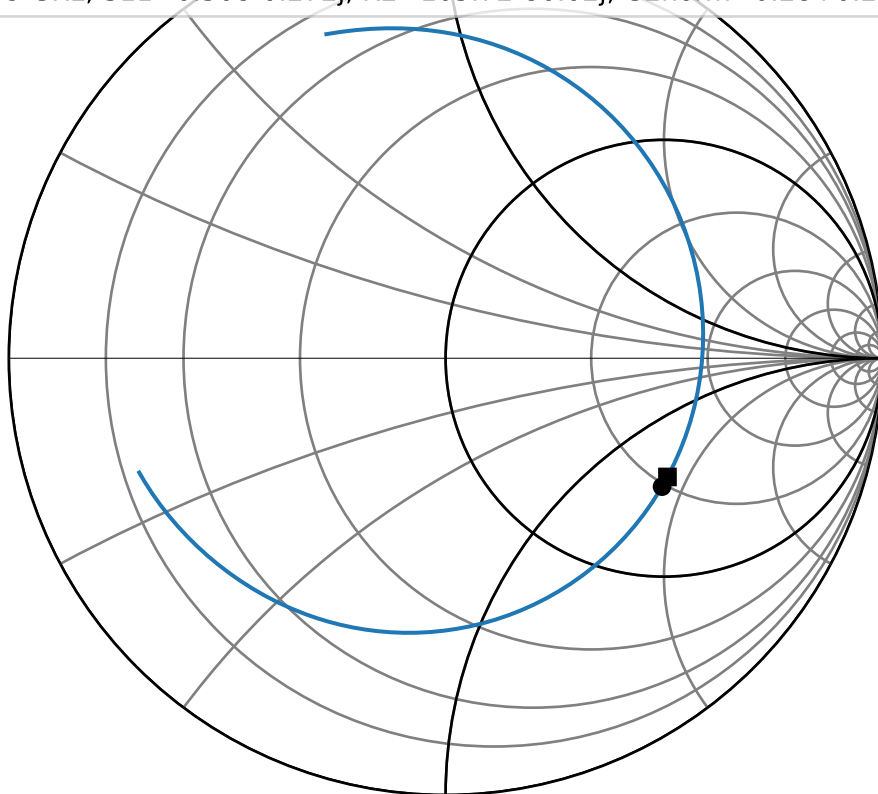


# Smith Chart

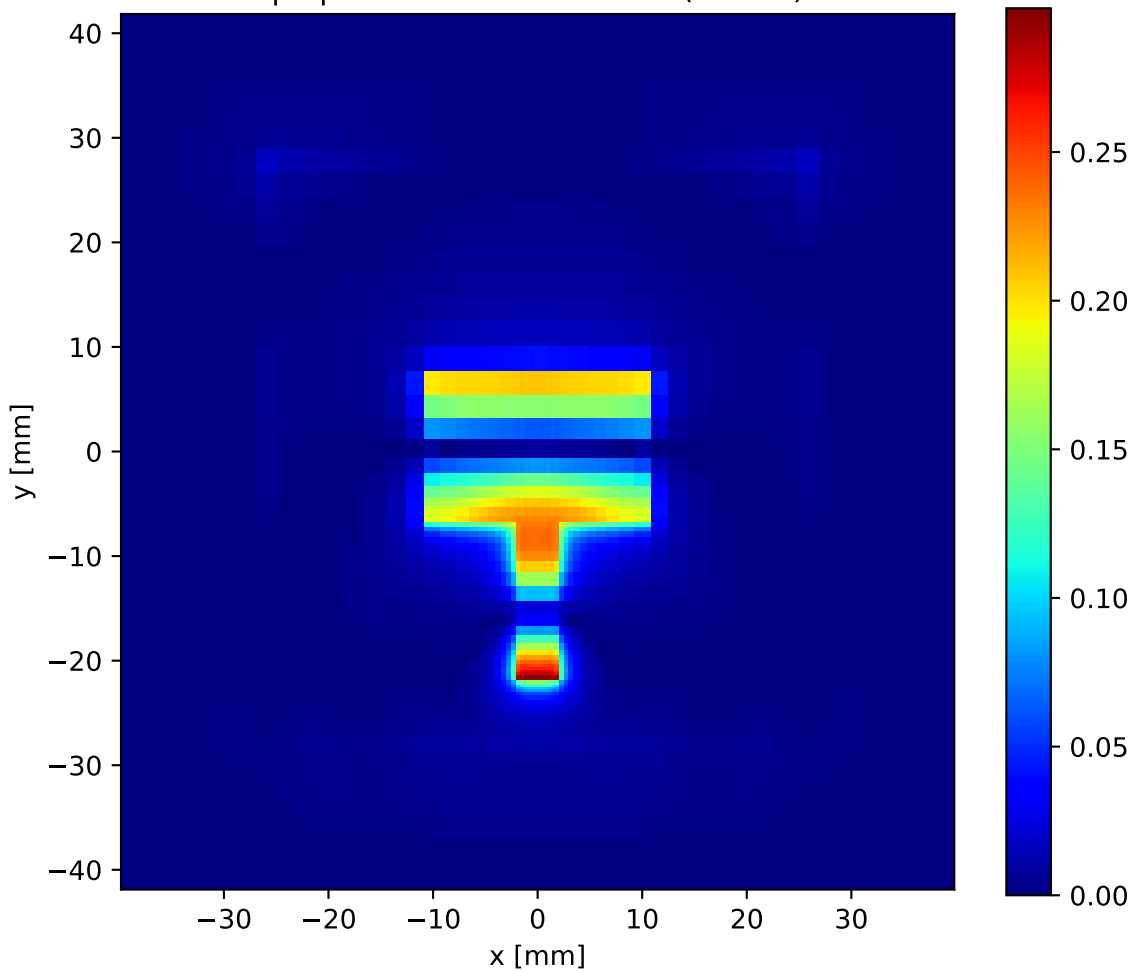
— S11 (Patch W=20.10 mm, L=13.10 mm)

● 5.80 GHz,  $S_{11}=0.496-0.294j$ ,  $R=97.98-86.24j$ ,  $G_{\text{norm}}=0.29+0.25j$

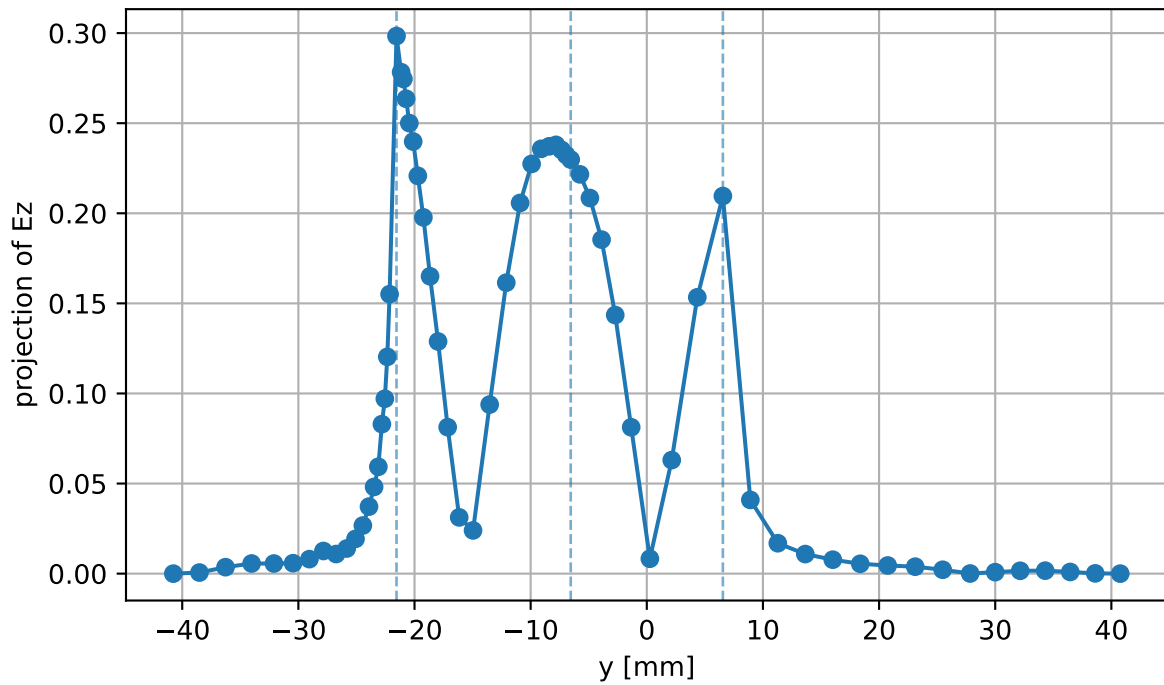
■ 5.79 GHz,  $S_{11}=0.508-0.272j$ ,  $R_2=105.72-86.02j$ ,  $G_{2\text{norm}}=0.28+0.23j$



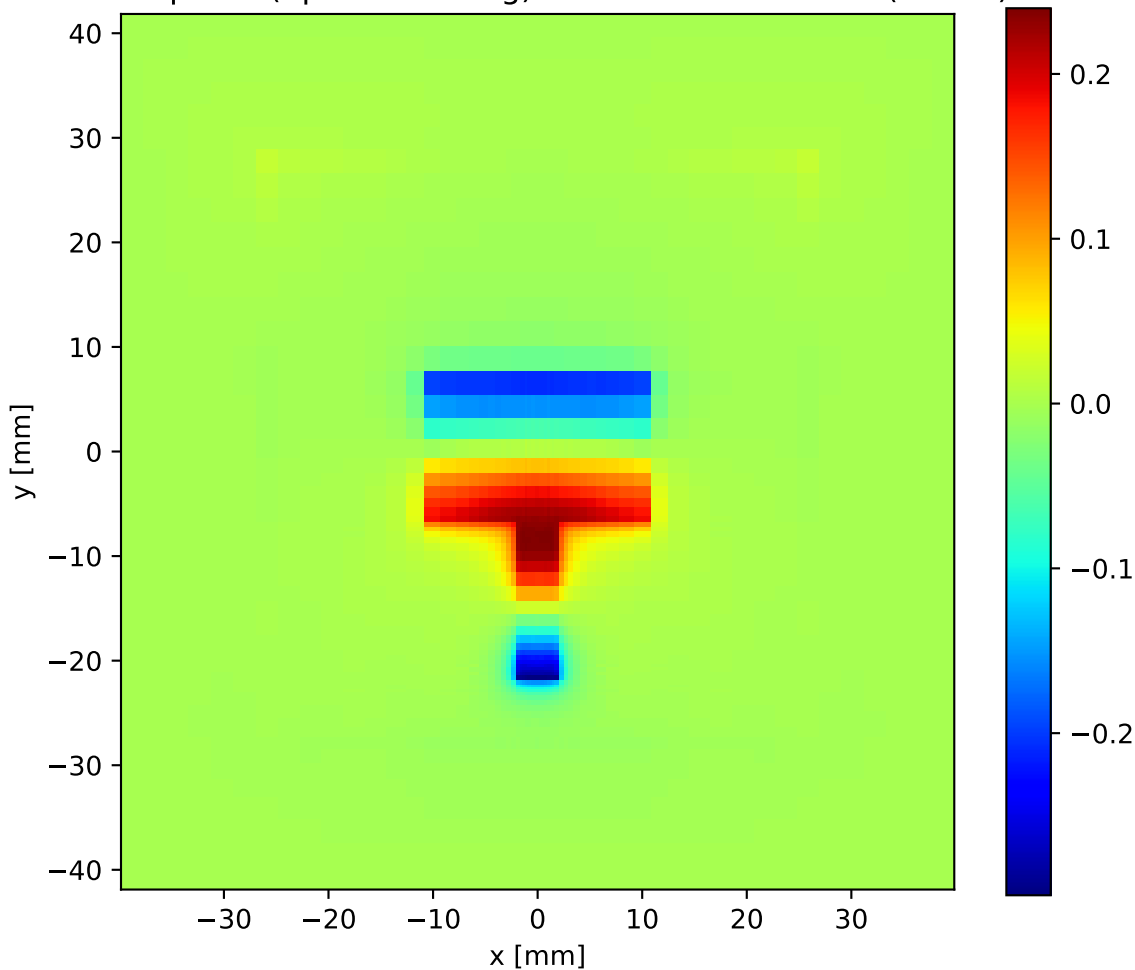
$|E_z|$  slice at  $z = 0.76$  mm (idx 15)



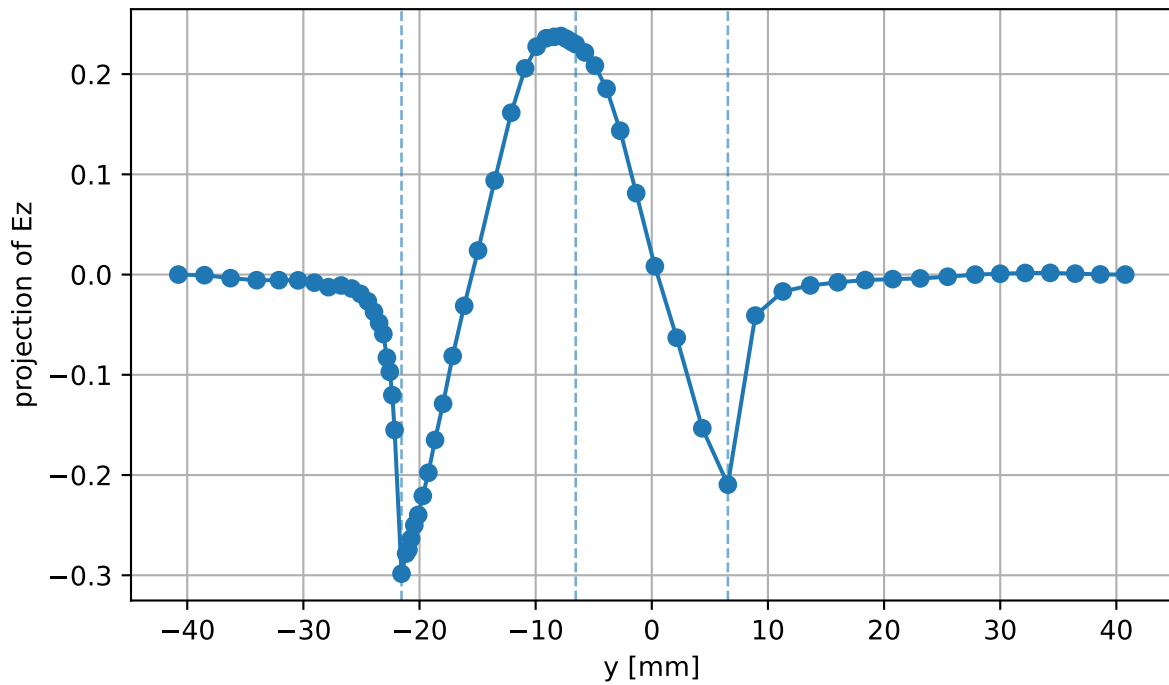
$|E_z|$  line cut along Y at  $x=0.00$  mm,  $z=0.76$  mm  
(idx x=30, z=15)



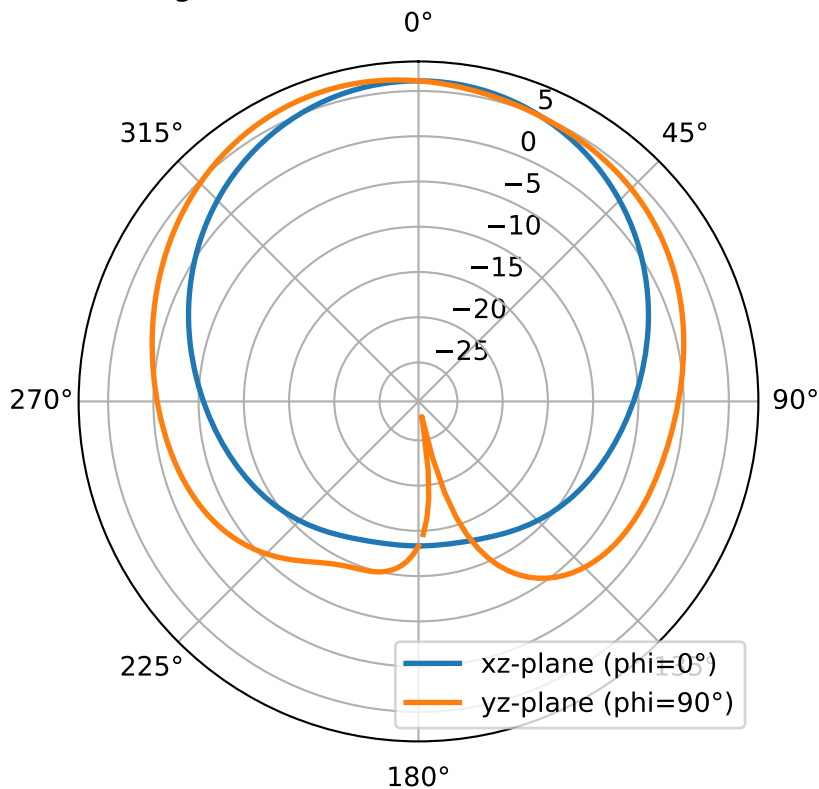
Ez snapshot (dphi=-0.45deg) slice at z = 0.76 mm (idx 15)



Ez snapshot (dphi=-0.45deg) line cut along Y at x=0.00 mm, z=0.76 mm  
(idx x=30, z=15)

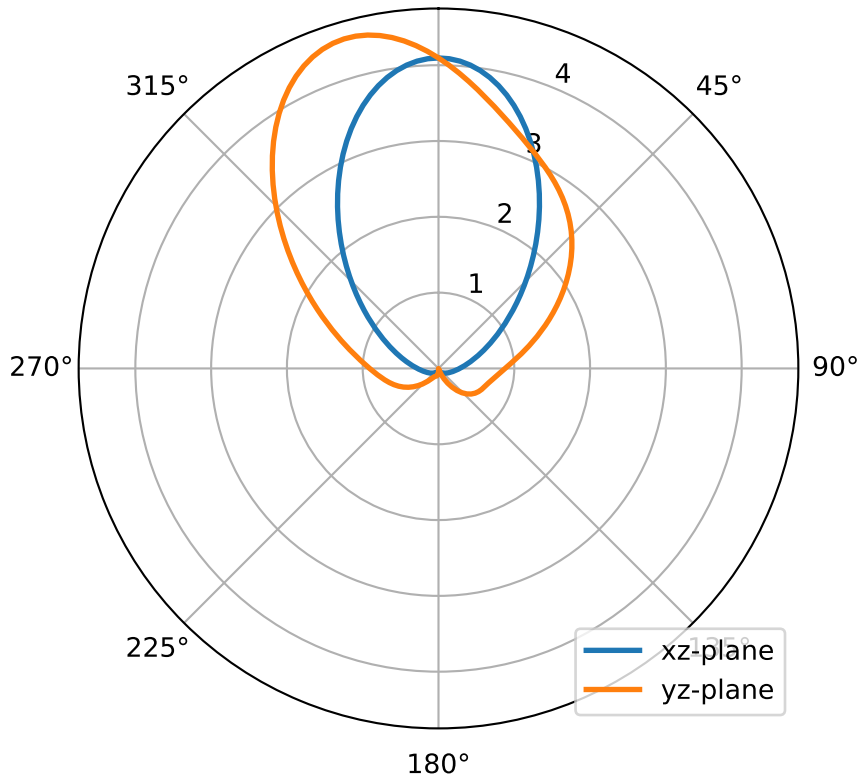


$f = 5.793 \text{ GHz}$  — Directivity (dB)  
 $D_{\text{max}} (\text{integrated}) \approx 6.55 \text{ dB}$ ,  $\text{nf2ff } D_{\text{max}} = 6.55 \text{ dB}$





Frequency: 5.793 GHz — Directivity (linear). Dmax: 4.522



Frequency: 5.793 GHz  
xz-plane: HPBW=78.5°  
yz-plane: HPBW=107.7°

