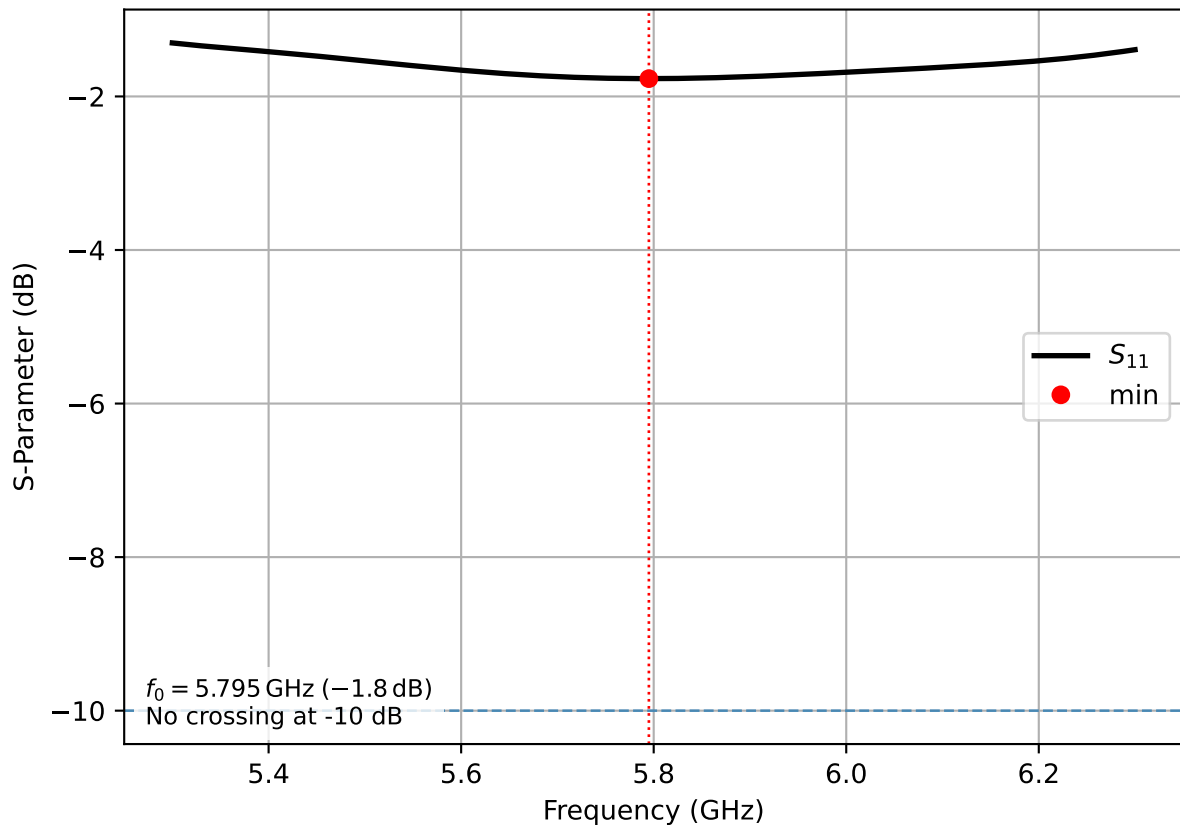


# Reflection Coefficient $S_{11}$

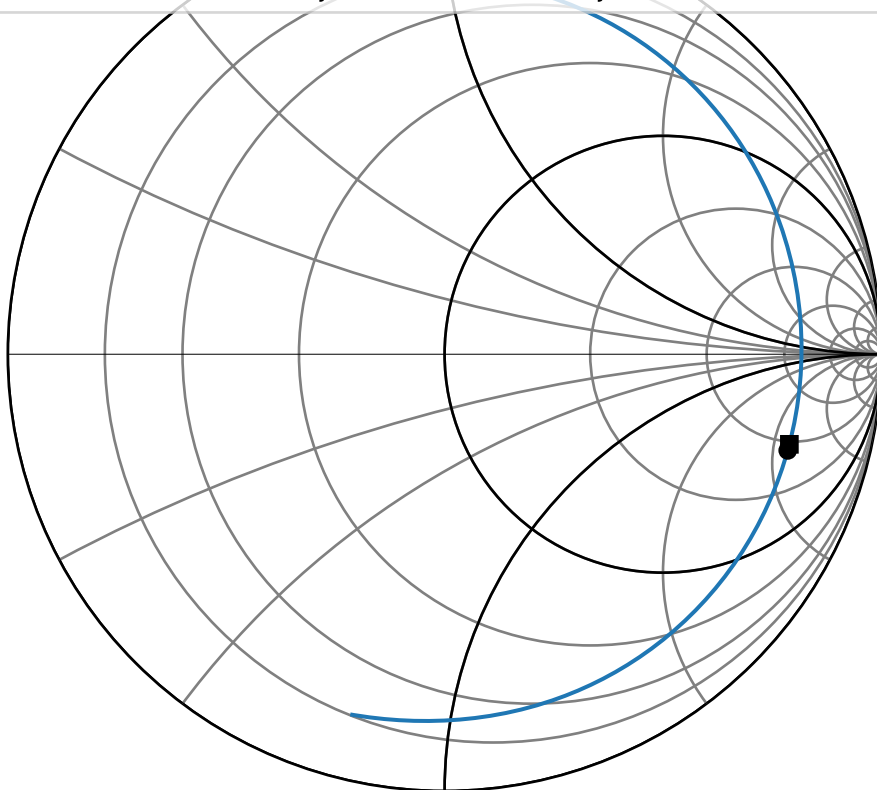


# Smith Chart

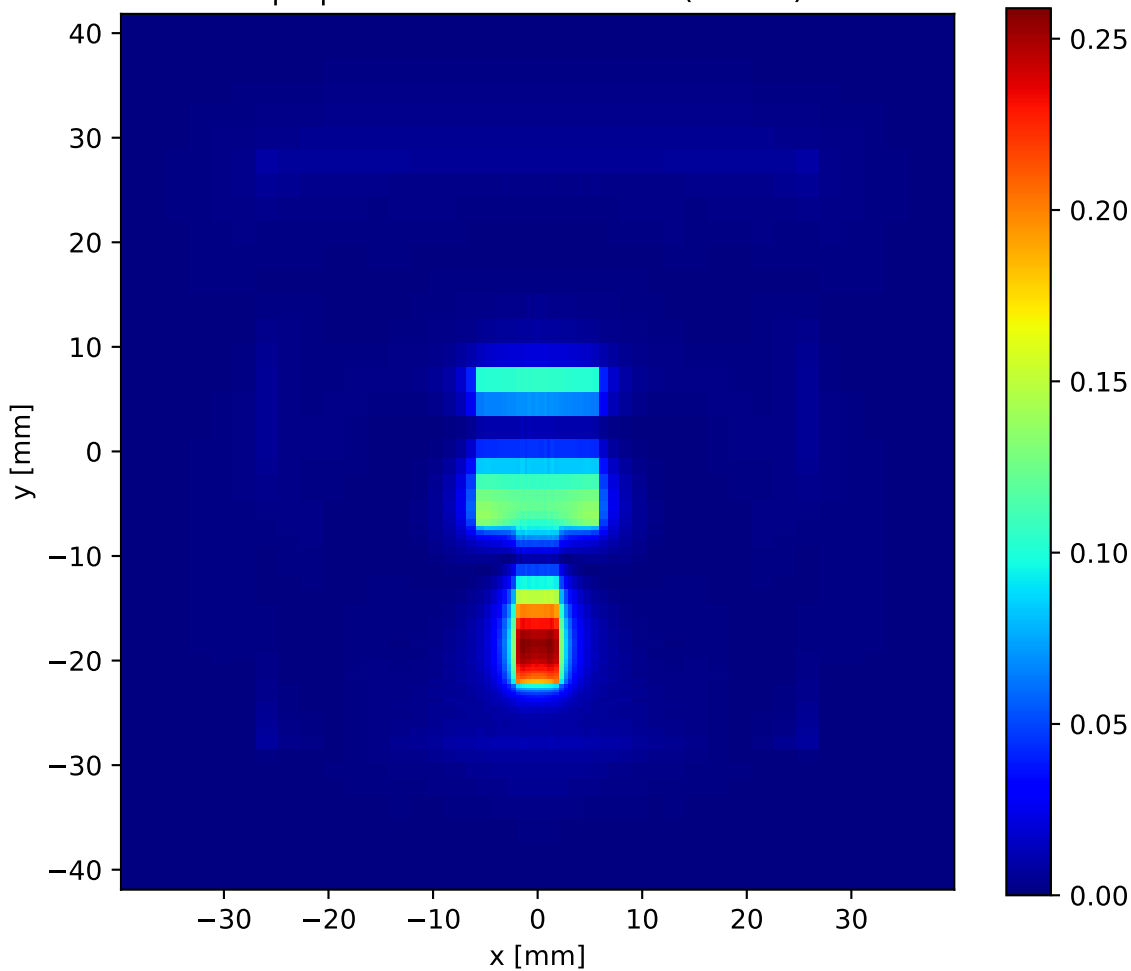
— S11 (Patch W=11.00 mm, L=13.80 mm)

● 5.80 GHz,  $S_{11}=0.786-0.220j$ ,  $R=177.02-233.08j$ ,  $G_{\text{norm}}=0.10+0.14j$

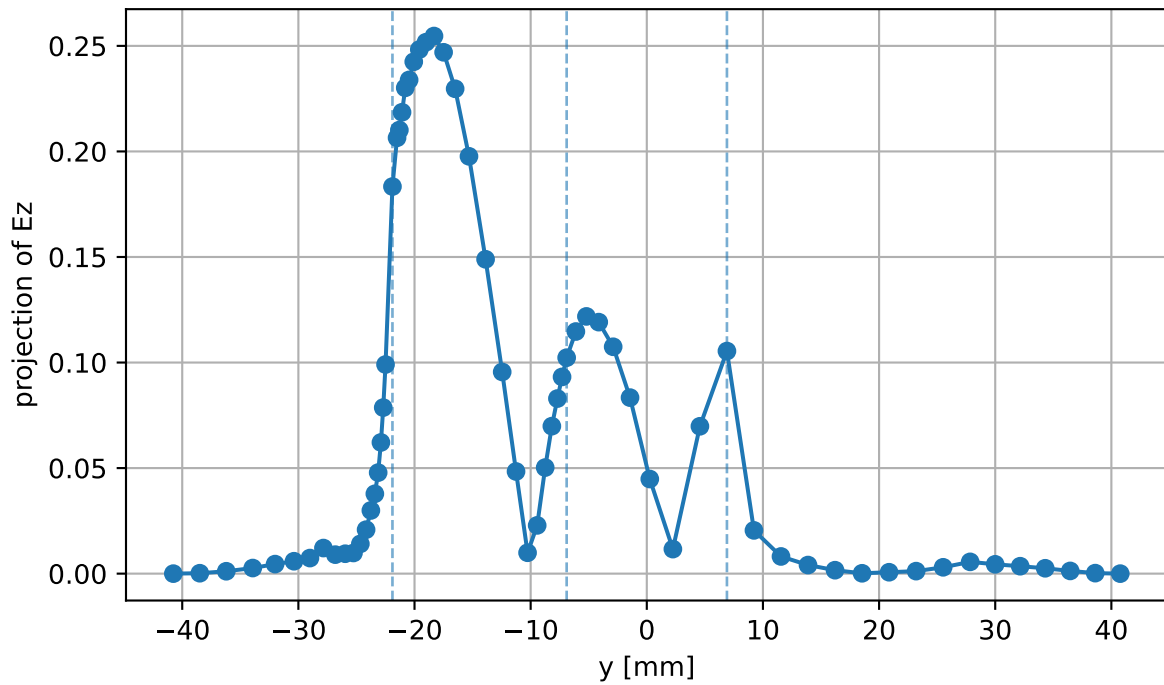
■ 5.79 GHz,  $S_{11}=0.789-0.206j$ ,  $R_2=192.37-237.27j$ ,  $G_2_{\text{norm}}=0.10+0.13j$



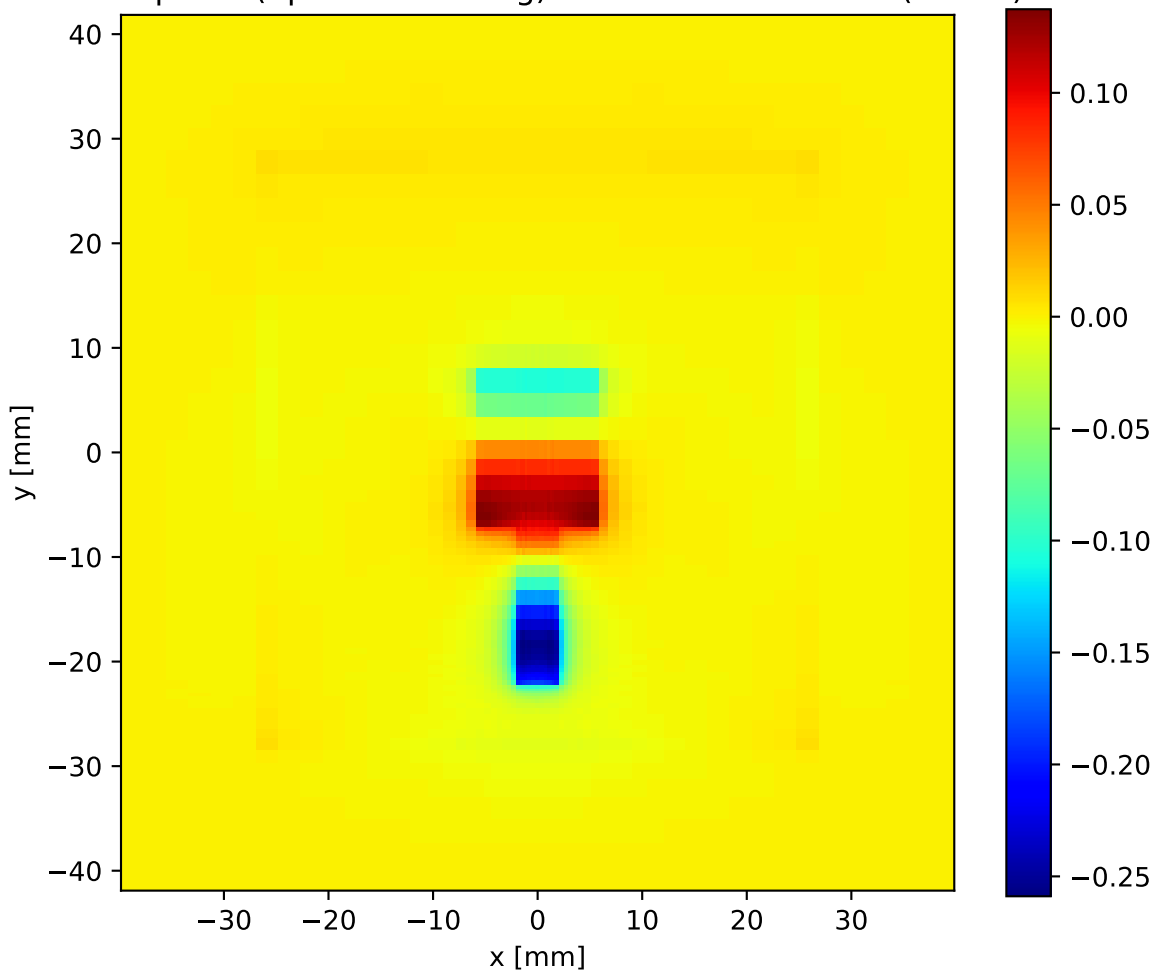
$|E_z|$  slice at  $z = 0.76$  mm (idx 15)



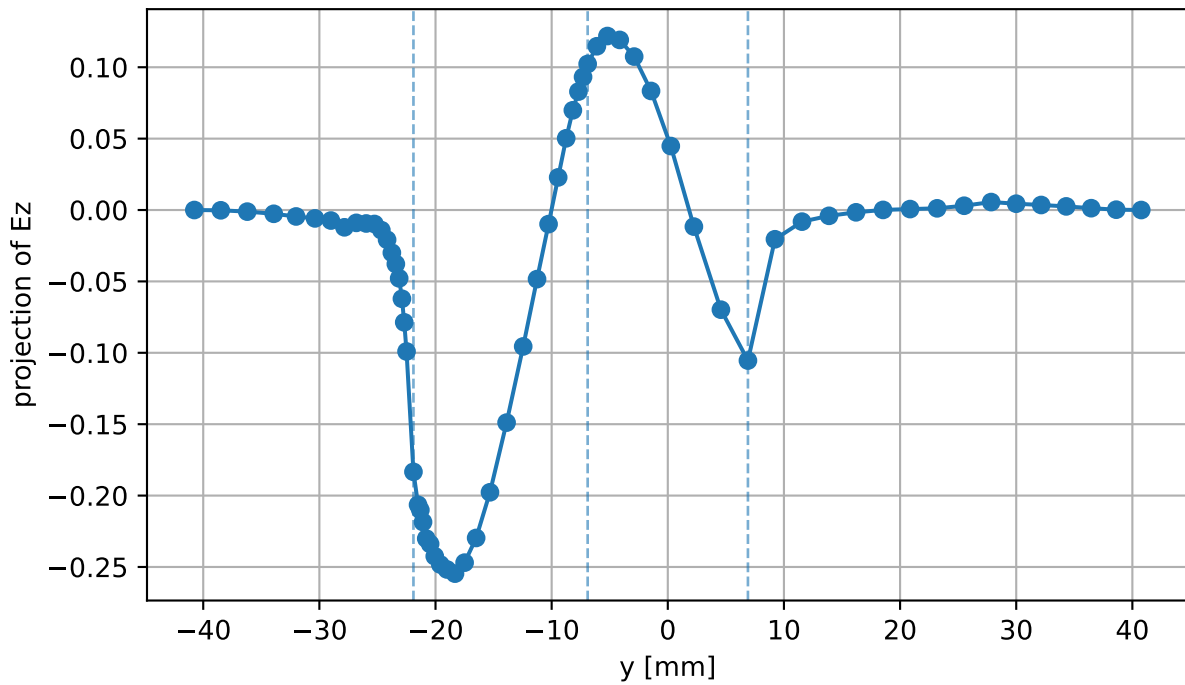
$|E_z|$  line cut along Y at  $x=0.00$  mm,  $z=0.76$  mm  
(idx  $x=31$ ,  $z=15$ )



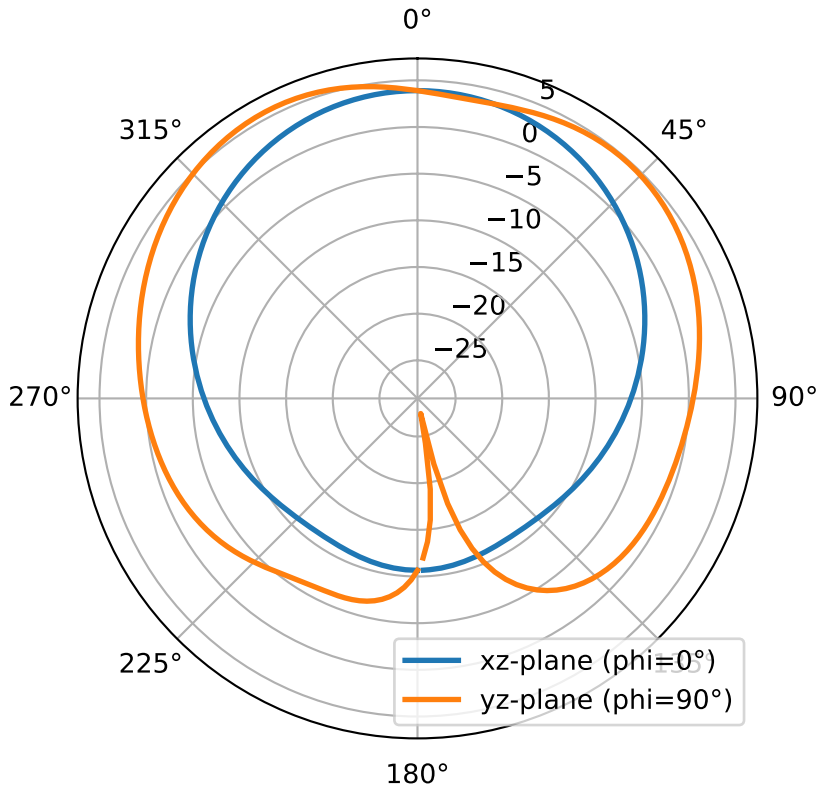
Ez snapshot (dphi=179.65deg) slice at z = 0.76 mm (idx 15)



Ez snapshot (dphi=179.65deg) line cut along Y at x=0.00 mm, z=0.76 mm  
(idx x=31, z=15)

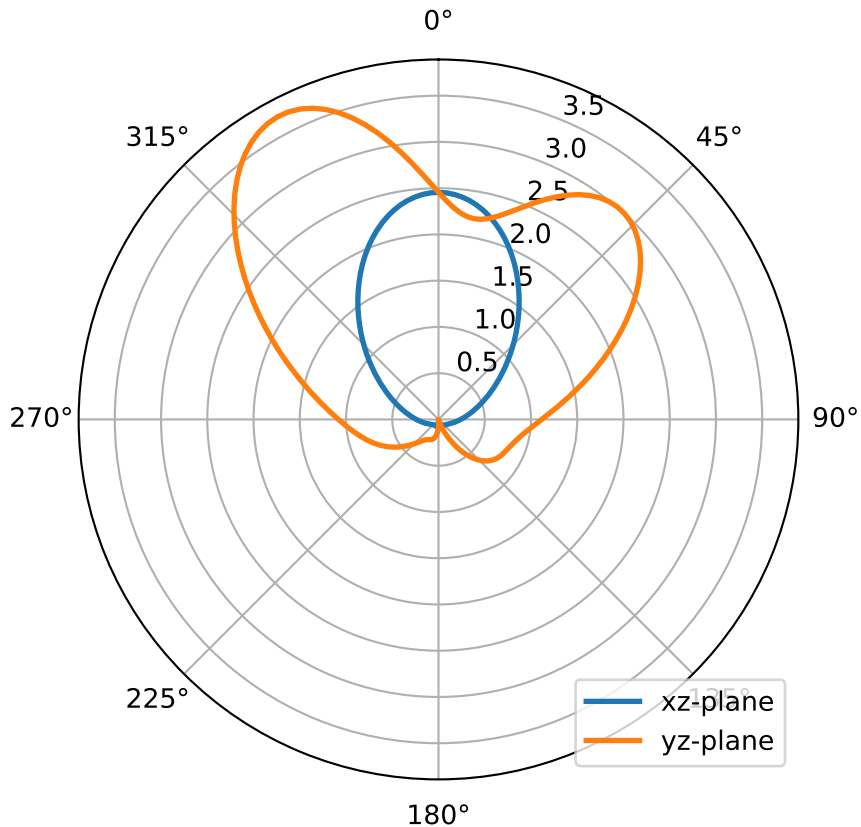


$f = 5.795 \text{ GHz}$  — Directivity (dB)  
 $D_{\text{max}} (\text{integrated}) \approx 5.69 \text{ dB}$ ,  $\text{nf2ff } D_{\text{max}} = 5.69 \text{ dB}$





Frequency: 5.795 GHz — Directivity (linear). Dmax: 3.706



Frequency: 5.795 GHz  
xz-plane: HPBW=86.6°  
yz-plane: HPBW=139.1°

