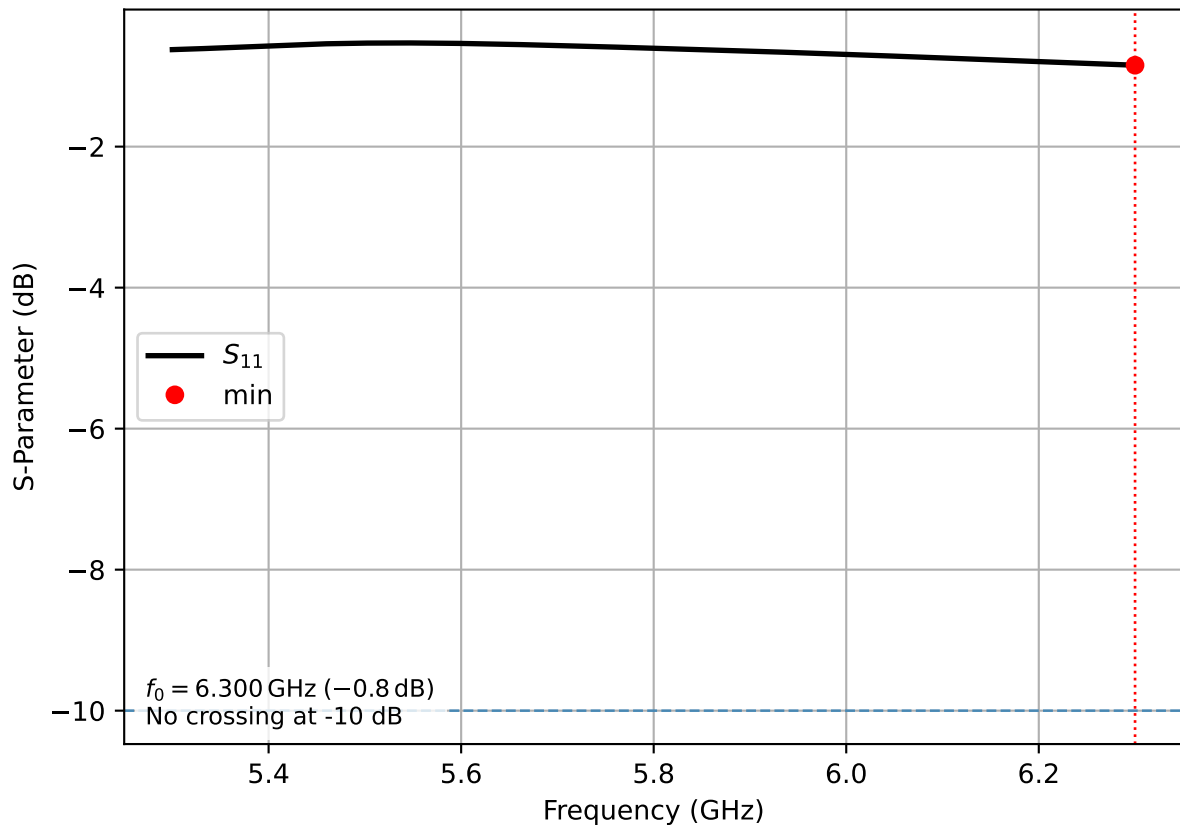
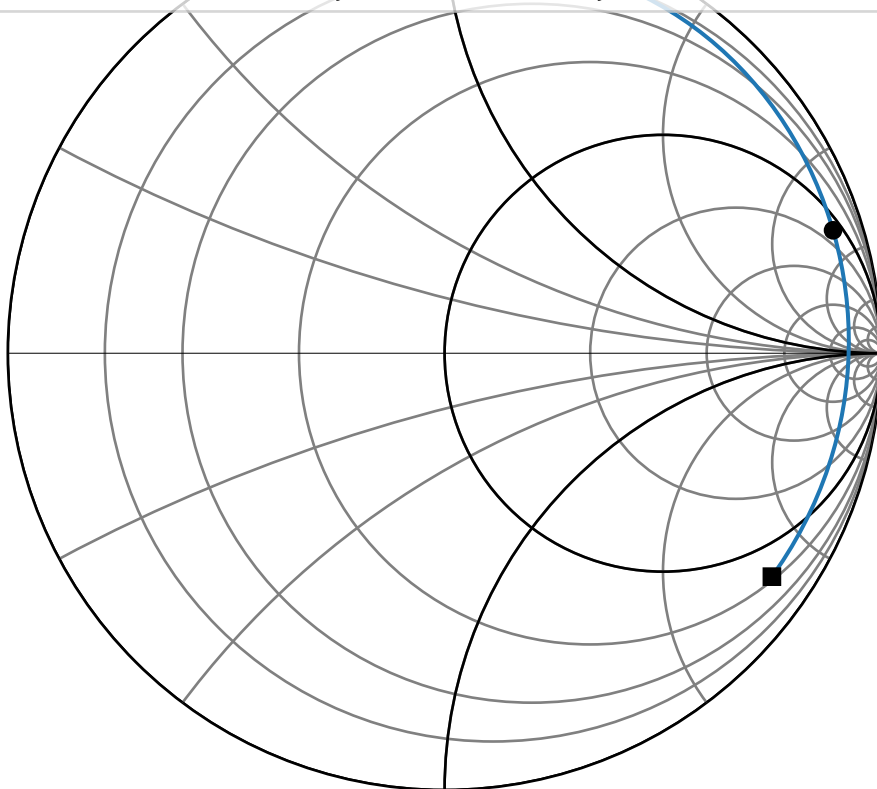


# Reflection Coefficient $S_{11}$

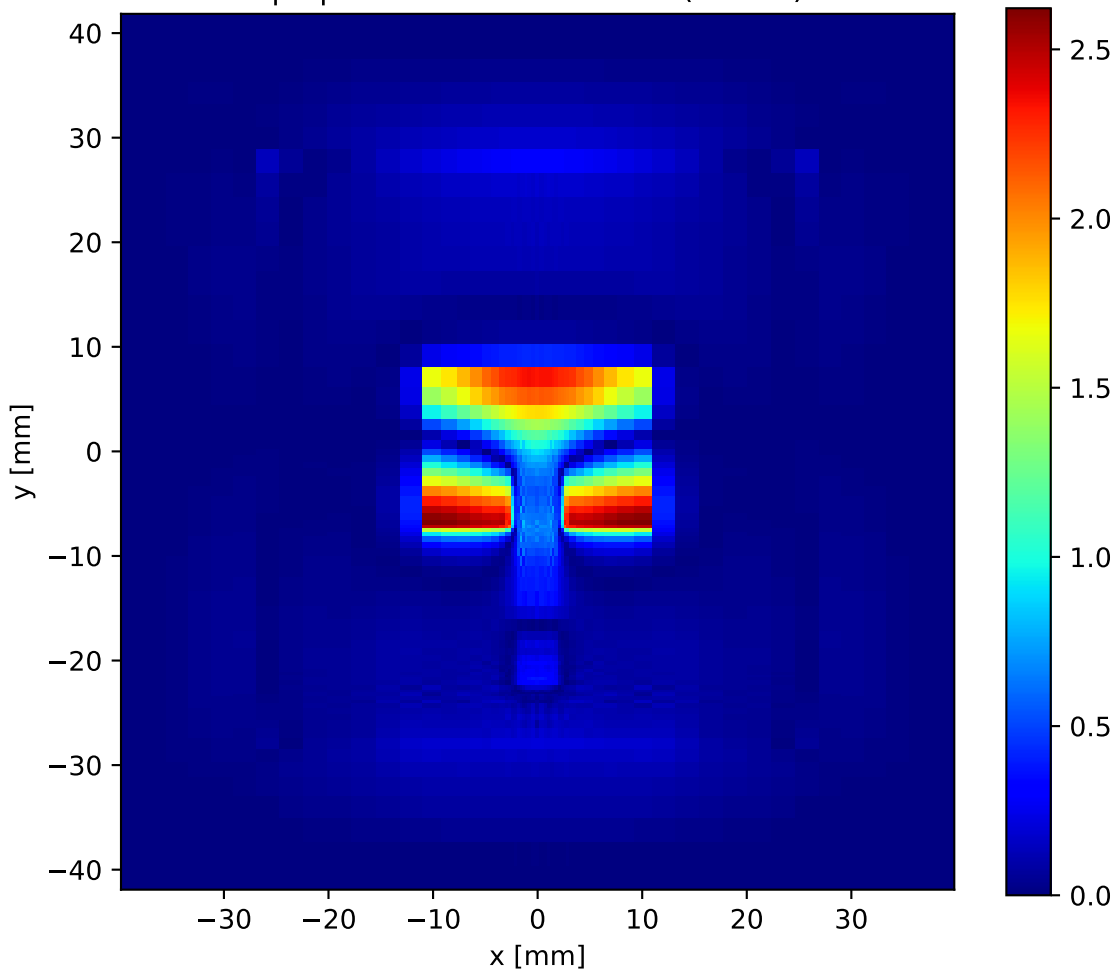


# Smith Chart

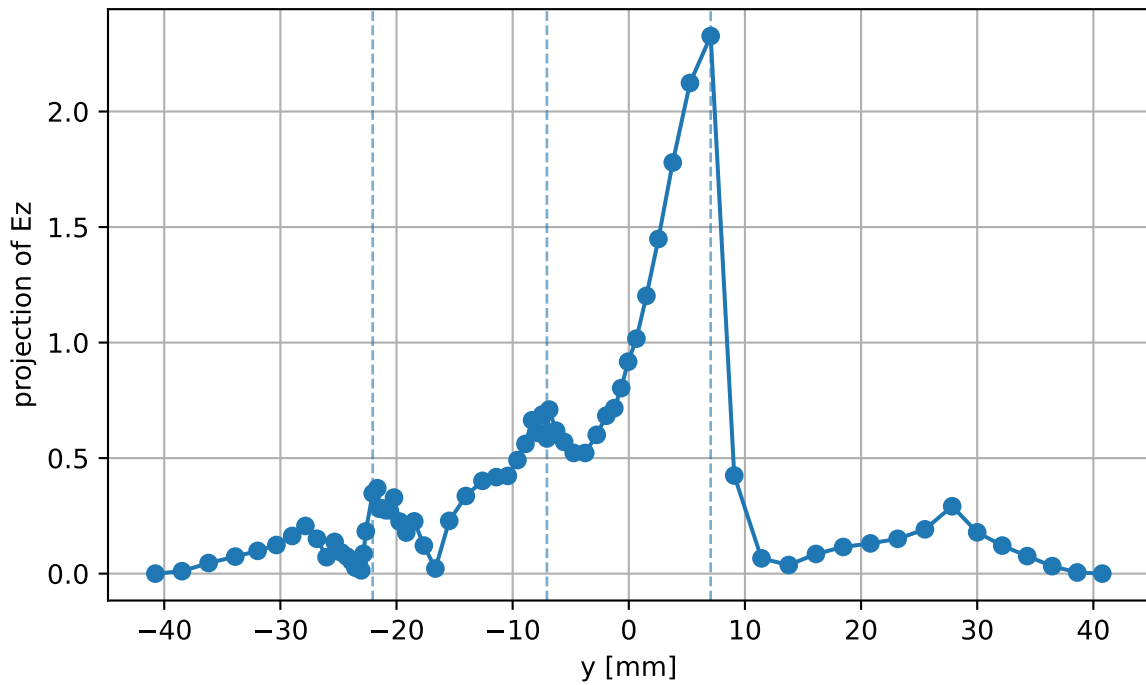
- S11 (Patch W=20.10 mm, L=14.10 mm)
- 5.80 GHz, S11=0.889+0.281j, R=71.02+307.75j, Gnorm=0.04-0.15j
- 6.30 GHz, S11=0.749-0.512j, R2=27.26-157.64j, G2norm=0.05+0.31j



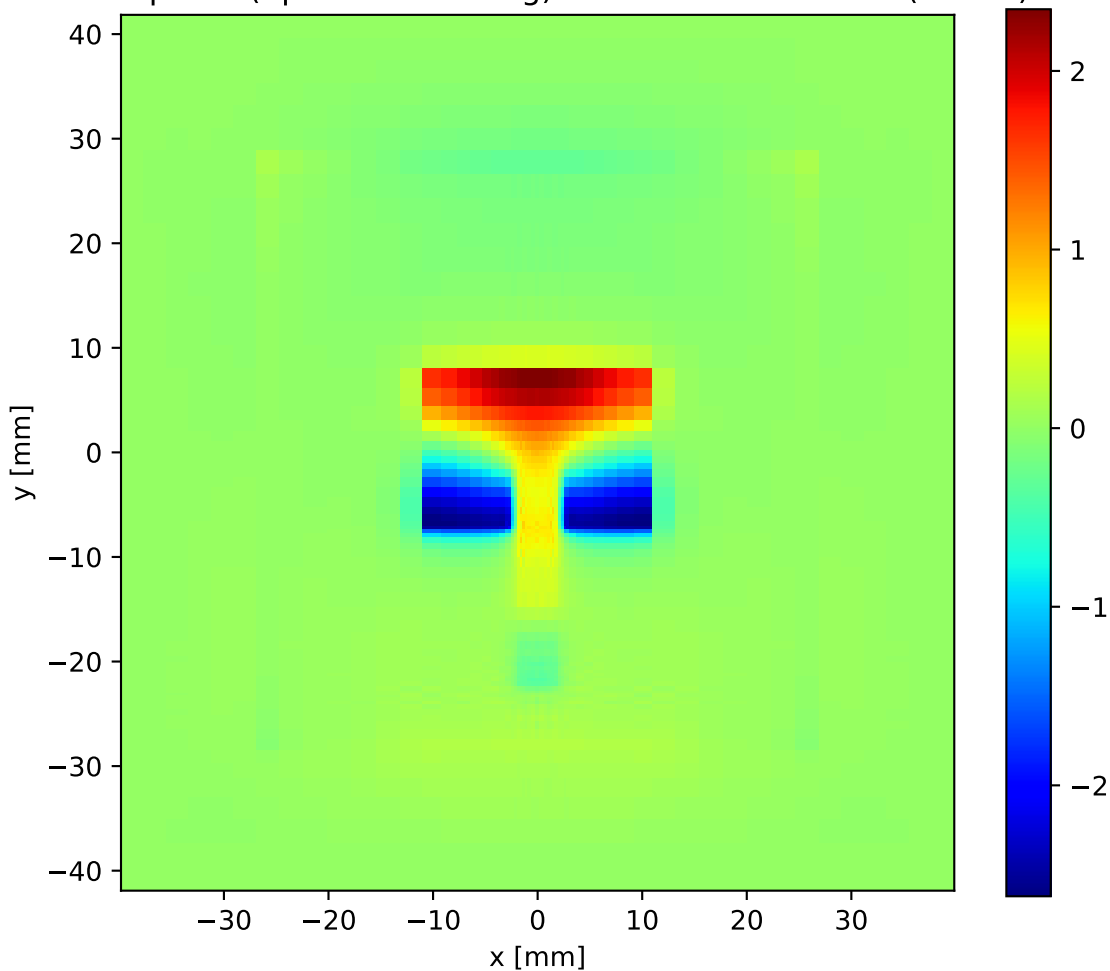
$|E_z|$  slice at  $z = 0.76$  mm (idx 15)



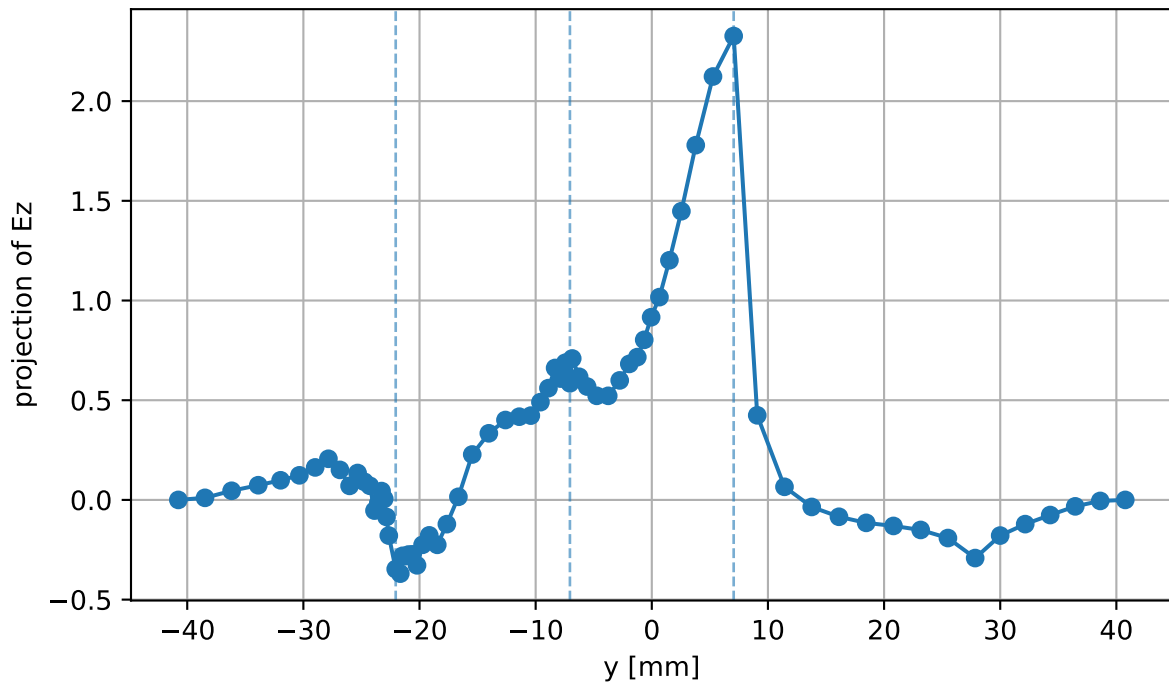
$|E_z|$  line cut along Y at  $x=0.00$  mm,  $z=0.76$  mm  
(idx  $x=30$ ,  $z=15$ )



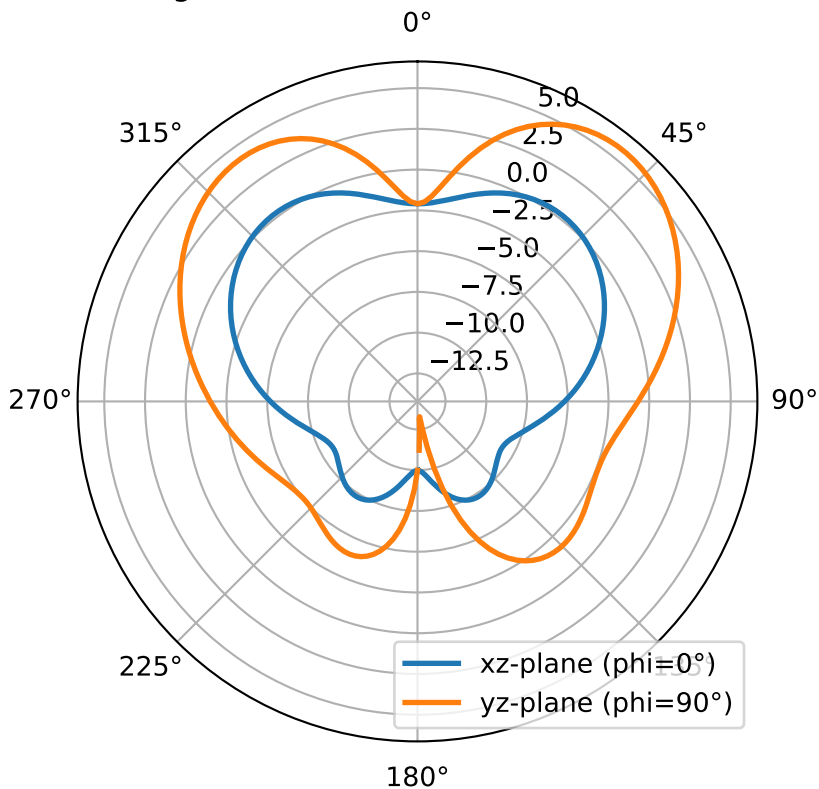
Ez snapshot (dphi=-179.62deg) slice at z = 0.76 mm (idx 15)



Ez snapshot (dphi=-179.62deg) line cut along Y at x=0.00 mm, z=0.76 mm  
(idx x=30, z=15)

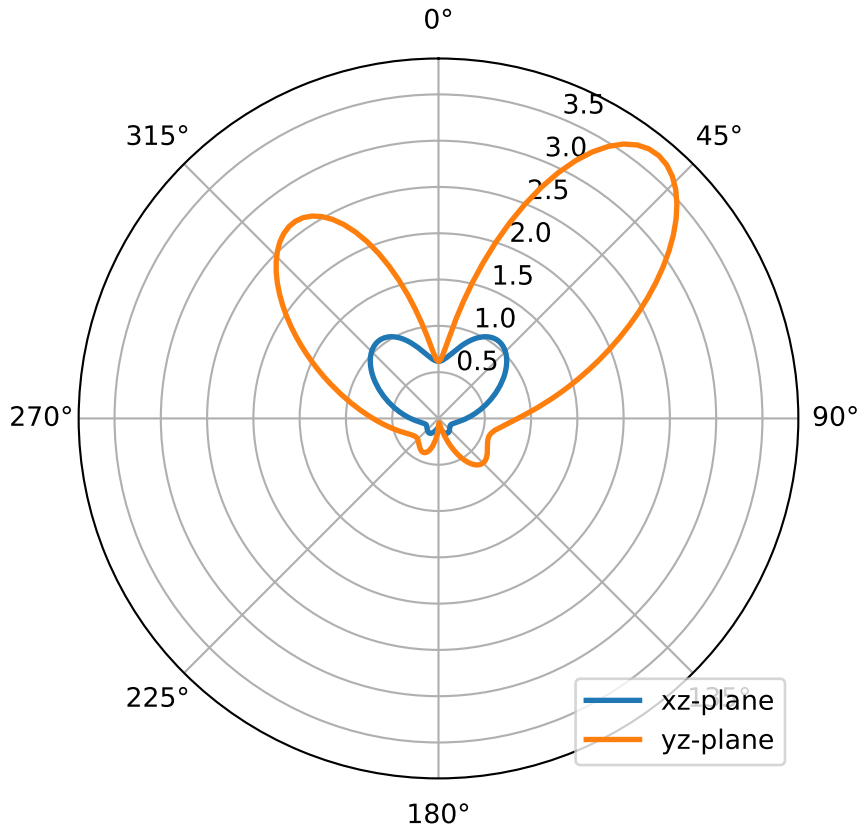


$f = 6.300 \text{ GHz}$  — Directivity (dB)  
 $D_{\text{max}} (\text{integrated}) \approx 5.69 \text{ dB}$ ,  $\text{nf2ff } D_{\text{max}} = 5.69 \text{ dB}$

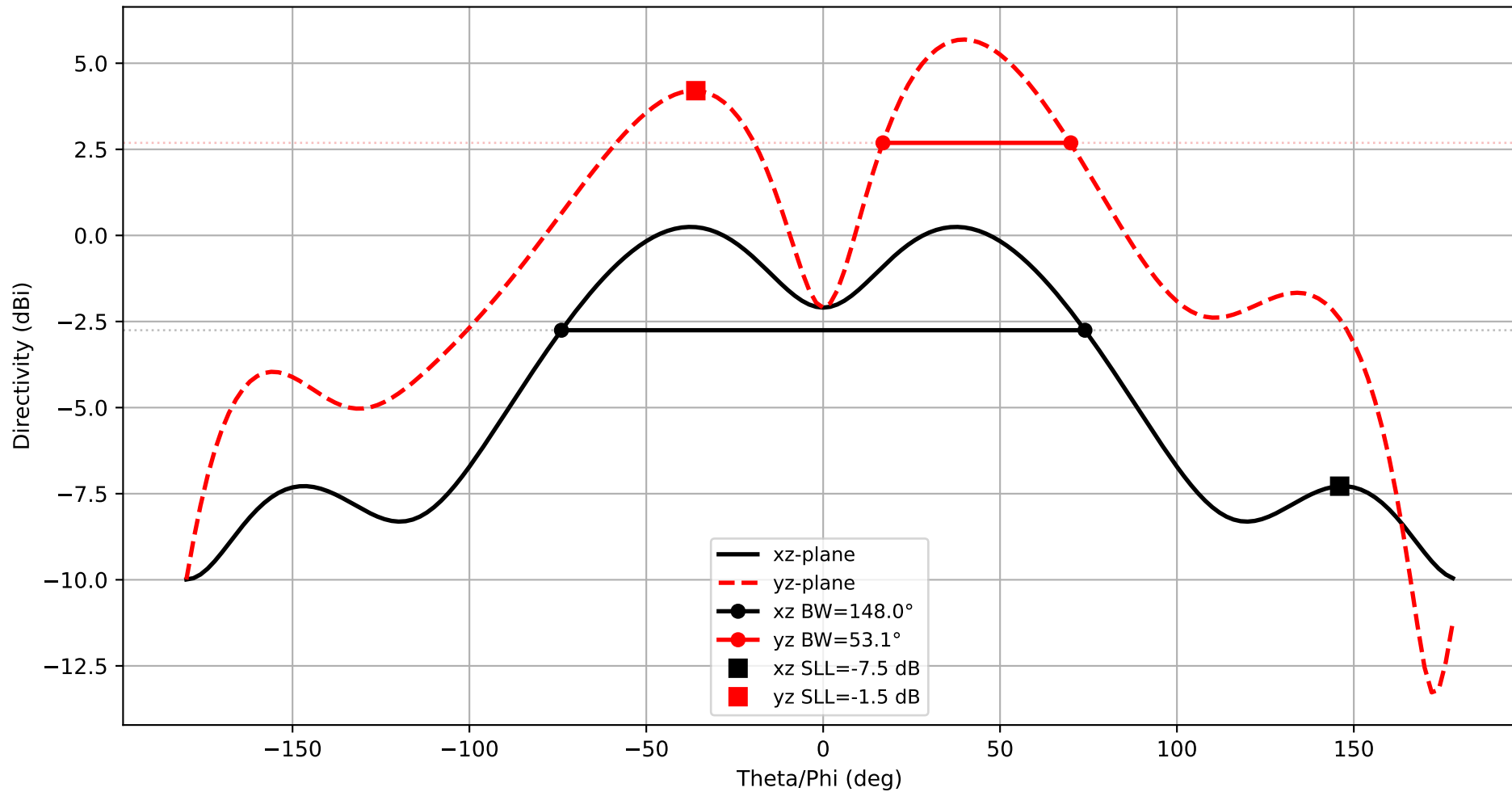




Frequency: 6.300 GHz — Directivity (linear). Dmax: 3.705



Frequency: 6.300 GHz  
xz-plane: HPBW=148.0°  
yz-plane: HPBW=53.1°



3D Directivity Pattern  
 $f = 6.300 \text{ GHz}$ ,  $D_{\text{max}} = 5.69 \text{ dBi}$

