

1 Model jednoho monopólu:

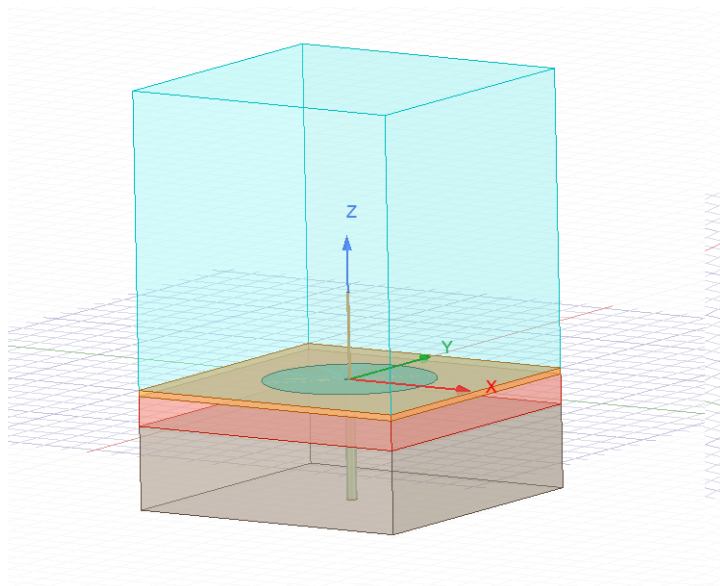


Figure 1: 3D model zkoumaného monopólu v blízkosti lidské tkáně

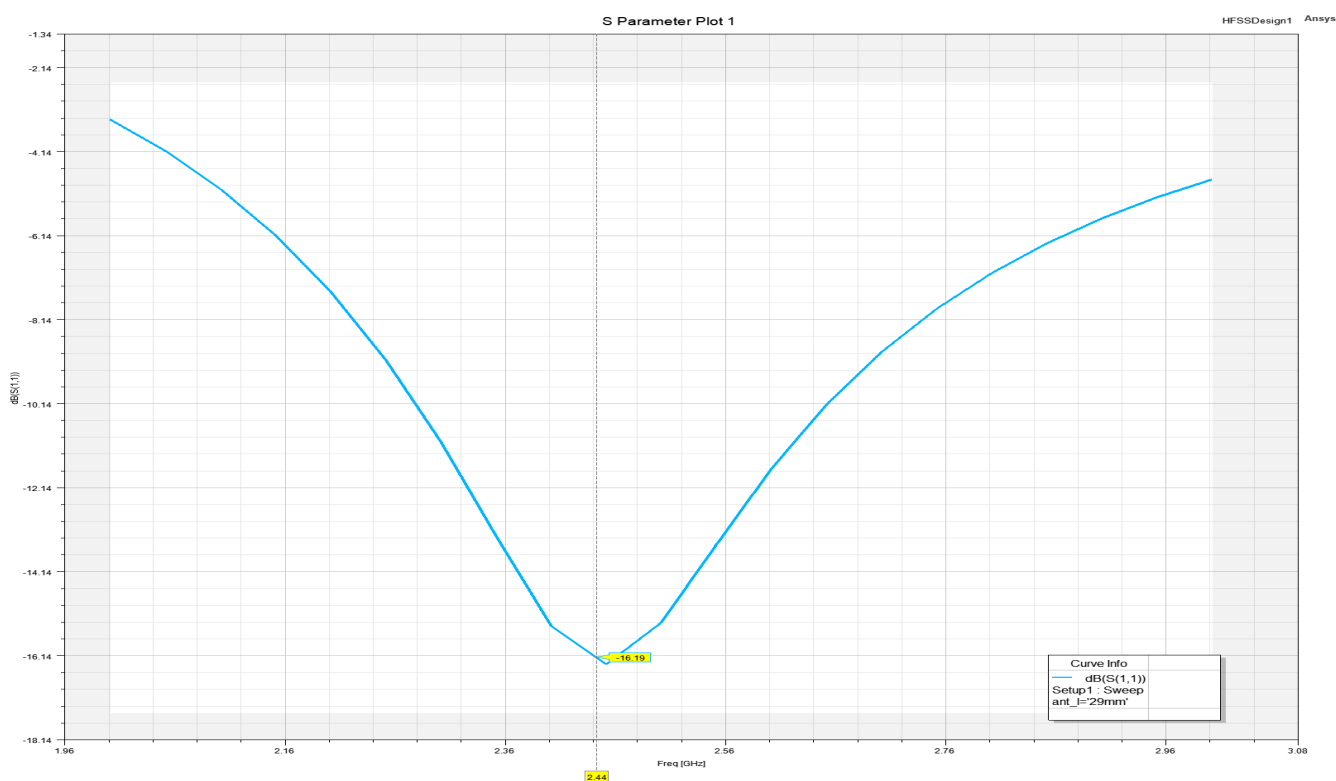


Figure 2: S11 parametr

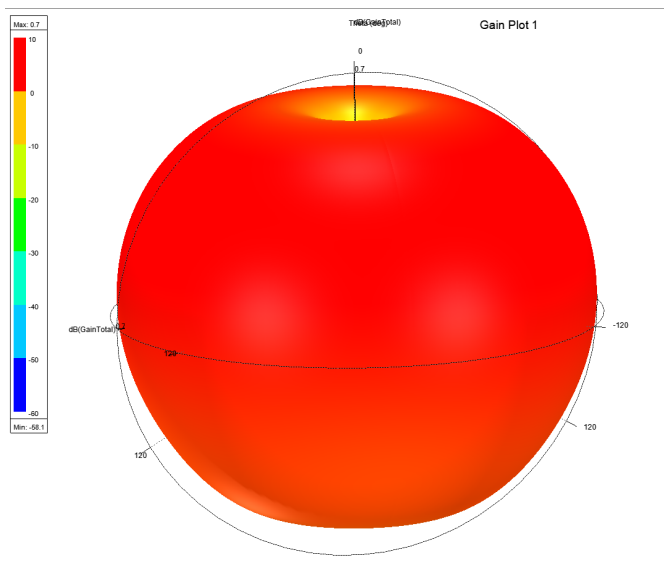


Figure 3: Vyzařování ve vzdáleném poli - zisk v dB

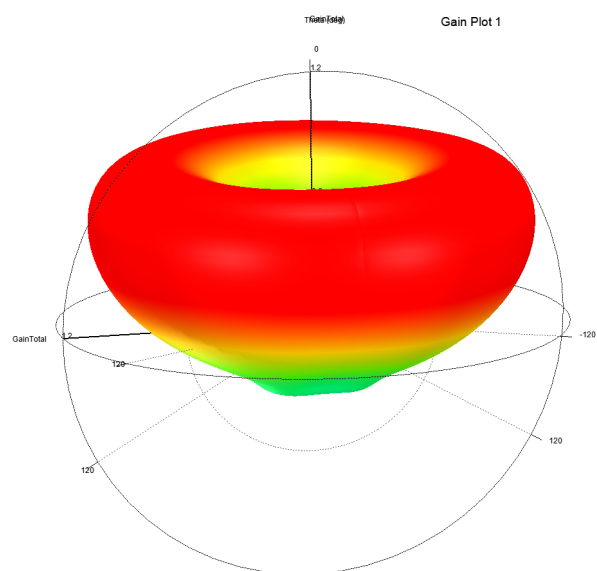


Figure 4: Vyzařování ve vzdáleném poli - zisk

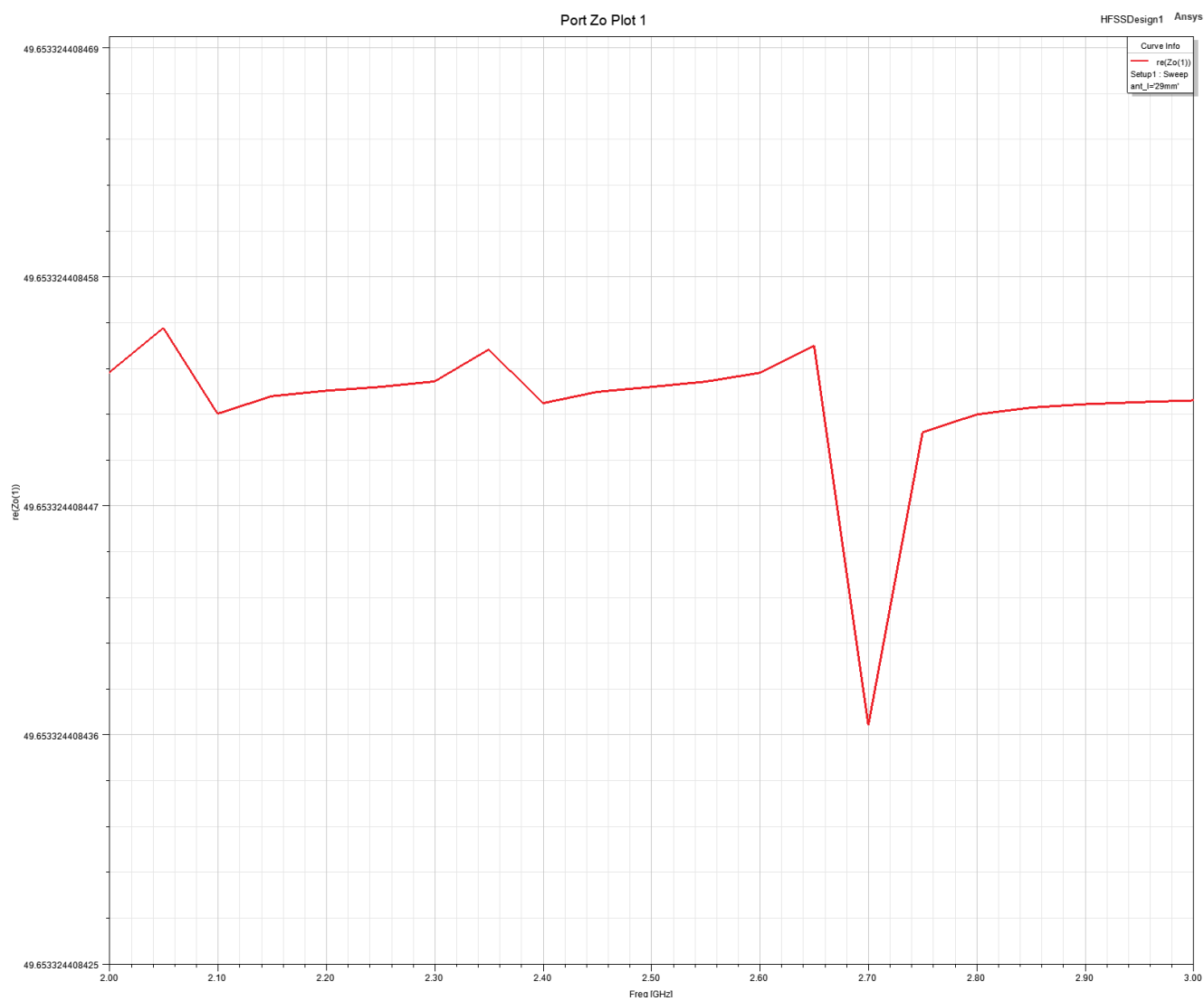


Figure 5: Charakteristická impedance koaxiálního kabelu

2 "Full" a "Symetry" model dvojice monopólů poblíž lidských zad

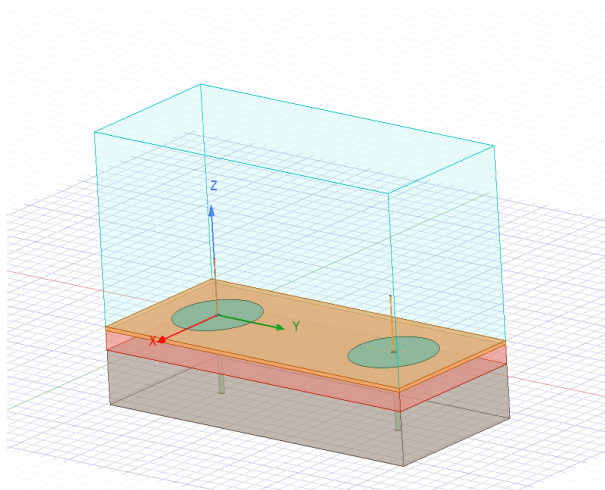


Figure 6: 3D - "Full" Model dvojice monopólů v blízkosti lidských zad

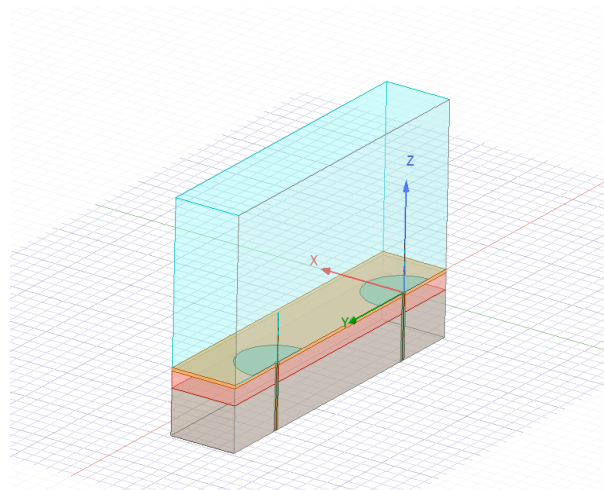


Figure 7: 3D - "Symetry" Model dvojice monopólů v blízkosti lidských zad

Simulation: Setup1

Design Variation: ant_d='150mm' ant_l='29mm' fat_t='10mm' muscle_t='28mm' phantom_w='100mm' skin_t='2mm'

Profile | Convergence | Matrix Data | Mesh Statistics

Task	Real Time	CPU Time	Memory	Information
Distributed Interpolati...				HFSS: Elapsed Time: 00:01:18 (Interpolating sweep)
Frequency Sweep				Elapsed time: 00:01:18
Simulation Summary:				
Design Validation				Elapsed time: 00:00:00, total memory: 82.8 MB
Initial Meshing				Elapsed time: 00:00:10, total memory: 131 MB
Adaptive Meshing				Elapsed time: 00:00:41, average memory/process: 3.8 GB, max memory/process: 3.8 GB, total number of processes: 1, total number of cores: 4
Frequency Sweep				Elapsed time: 00:01:18, average memory/process: 1.27 GB, max memory/process: 1.27 GB, total number of processes: 4, total number of cores: 4
				max solved tets: 80898, max matrix size: 492730, max bandwidth: 20.9
				Time: 10/25/2022 01:49:24, Status: Normal Completion
Total	00:00:39	00:01:08		Elapsed time : 00:02:10 , ComEngine Memory : 87.9 M

Figure 8: celkový čas analýzy za použití "full" modelu

Design Variation: ant_d='150mm' ant_l='29mm' fat_t='10mm' muscle_t='28mm' phantom_w='100mm' skin_t='2mm'

Profile | Convergence | Matrix Data | Mesh Statistics

Task	Real Time	CPU Time	Memory	Information
Distributed Interpolati...				HFSS: Elapsed Time: 00:00:25 (Interpolating sweep)
Frequency Sweep				Elapsed time: 00:00:25
Simulation Summary:				
Design Validation				Elapsed time: 00:00:00, total memory: 85.3 MB
Initial Meshing				Elapsed time: 00:00:06, total memory: 84.8 MB
Adaptive Meshing				Elapsed time: 00:00:16, average memory/process: 1.39 GB, max memory/process: 1.39 GB, total number of processes: 1, total number of cores: 4
Frequency Sweep				Elapsed time: 00:00:25, average memory/process: 506 MB, max memory/process: 508 MB, total number of processes: 4, total number of cores: 4
				max solved tets: 38448, max matrix size: 238154, max bandwidth: 20.7
				Time: 10/25/2022 10:11:03, Status: Normal Completion
Total				Elapsed time : 00:00:48 , ComEngine Memory : 90.2 M

Figure 9: celkový čas analýzy za použití "Symetry" modelu

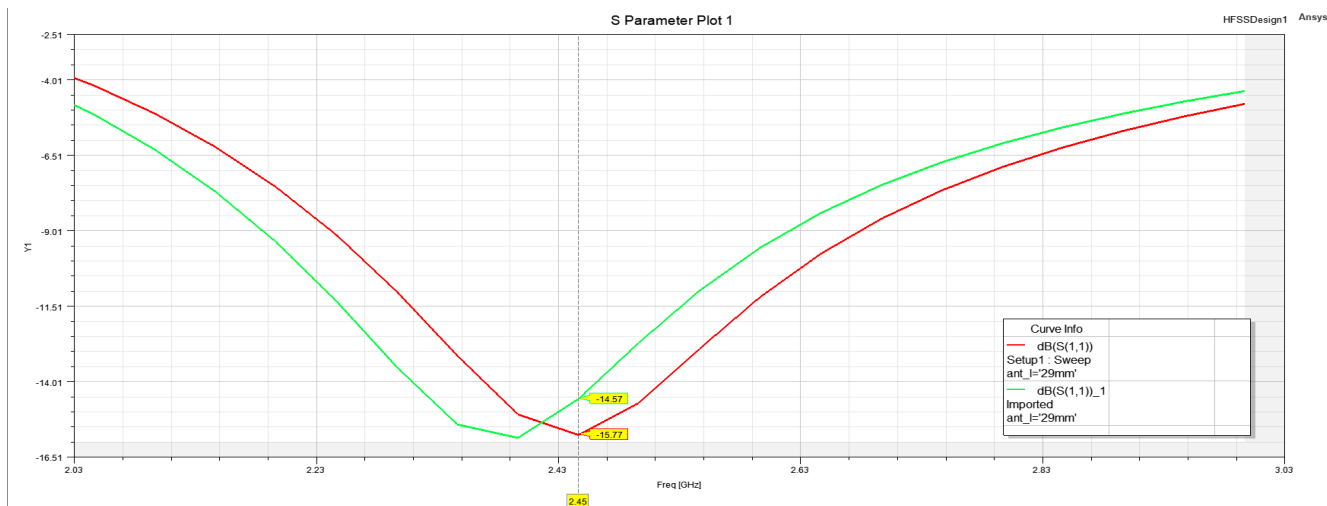


Figure 10: Porovnání S11 parametru při použití "full" (červeně) a "Symetry" (zeleně) modelu

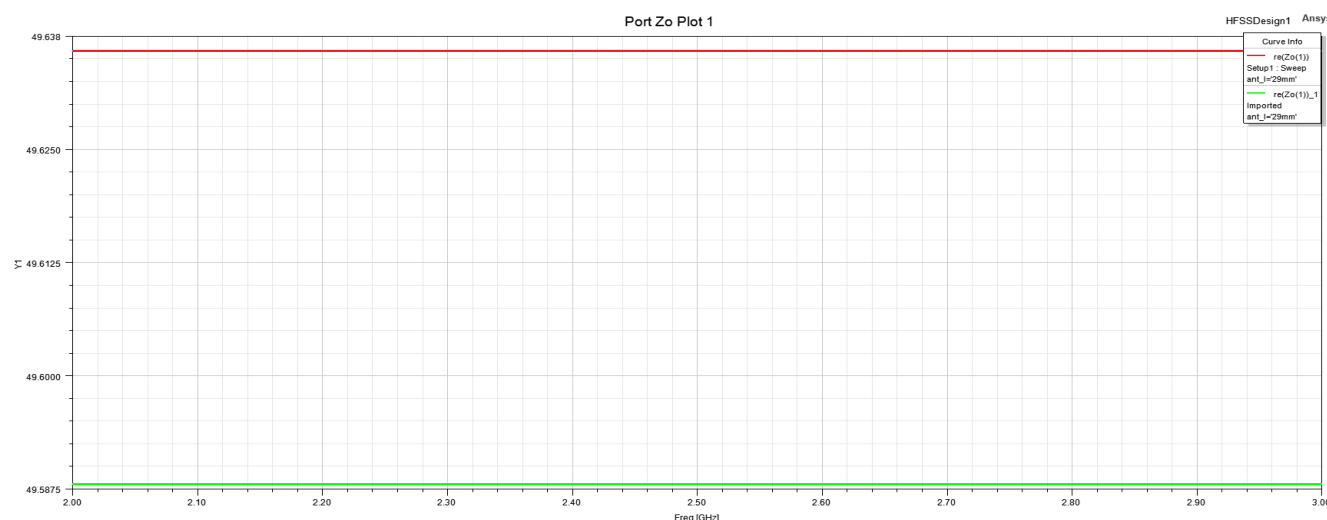


Figure 11: Porovnání char. impedance Z0 při použití "full" (červeně) a "Symetry" (zeleně) modelu

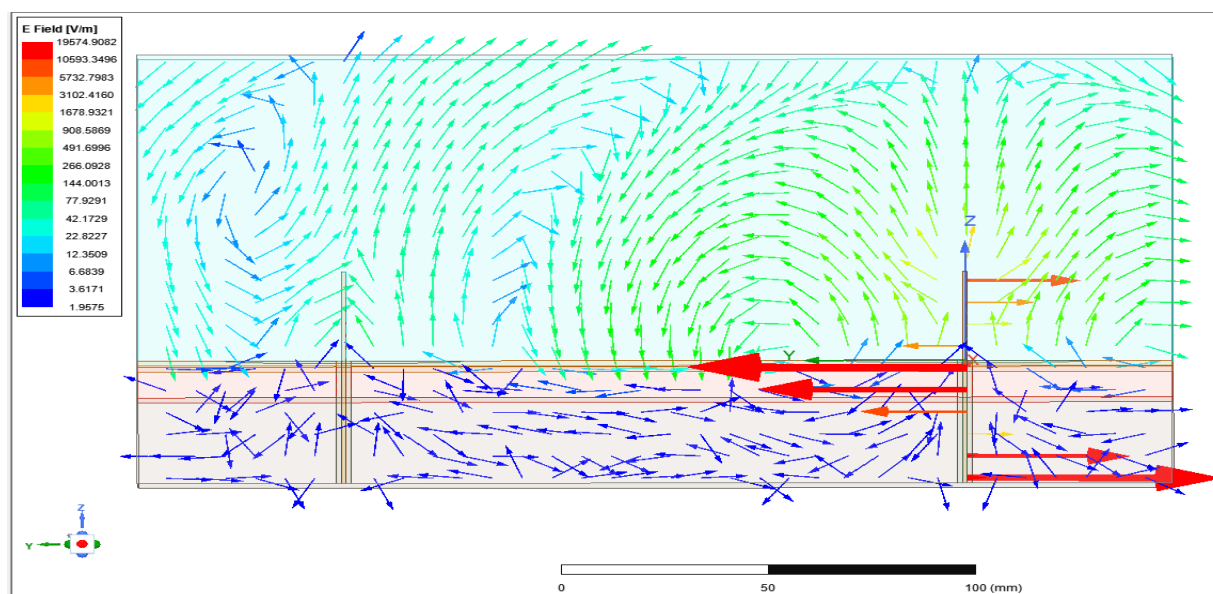


Figure 12: E-field v "symetry" modelu