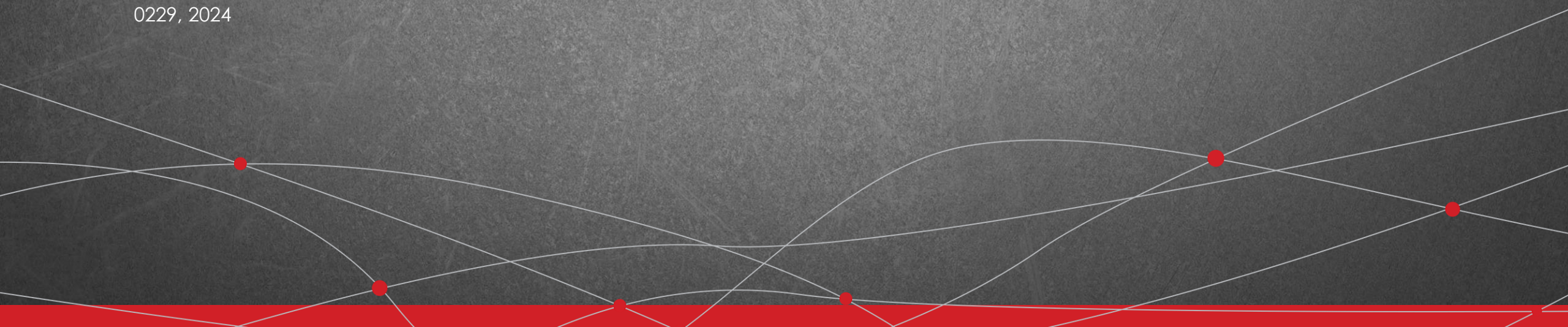




Shrui RF DVT Antenna report

0229, 2024



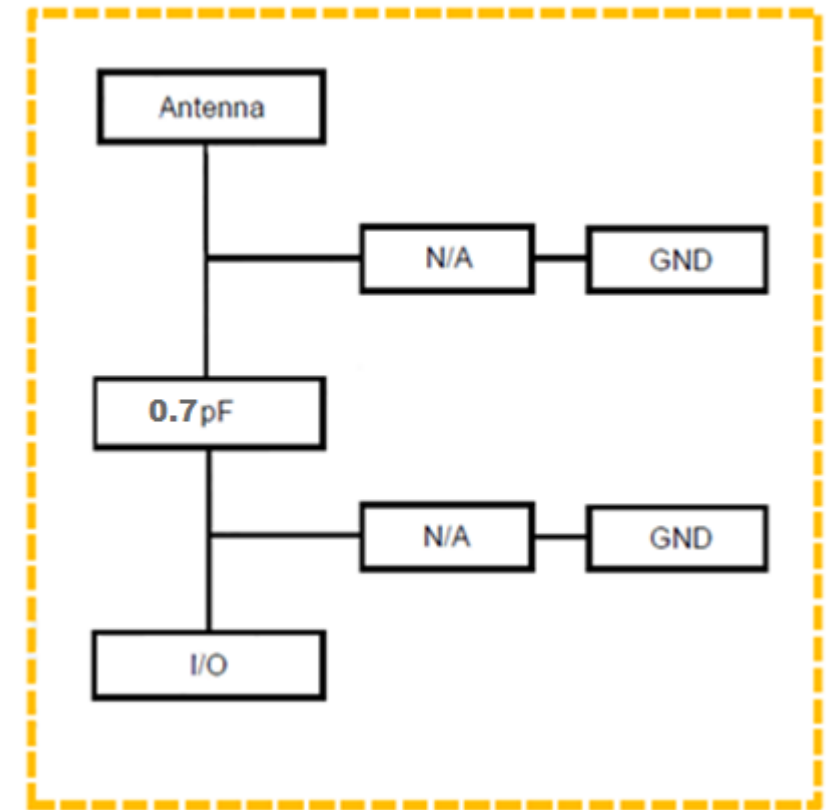
Pictures of Antenna placement

Chip Antenna

- Antenna position : place on the PCBA main board.
- Chip antenna dimension : 3 mm * 1.6 mm
- Clearance area : 7 mm * 15 mm (105mm^2)

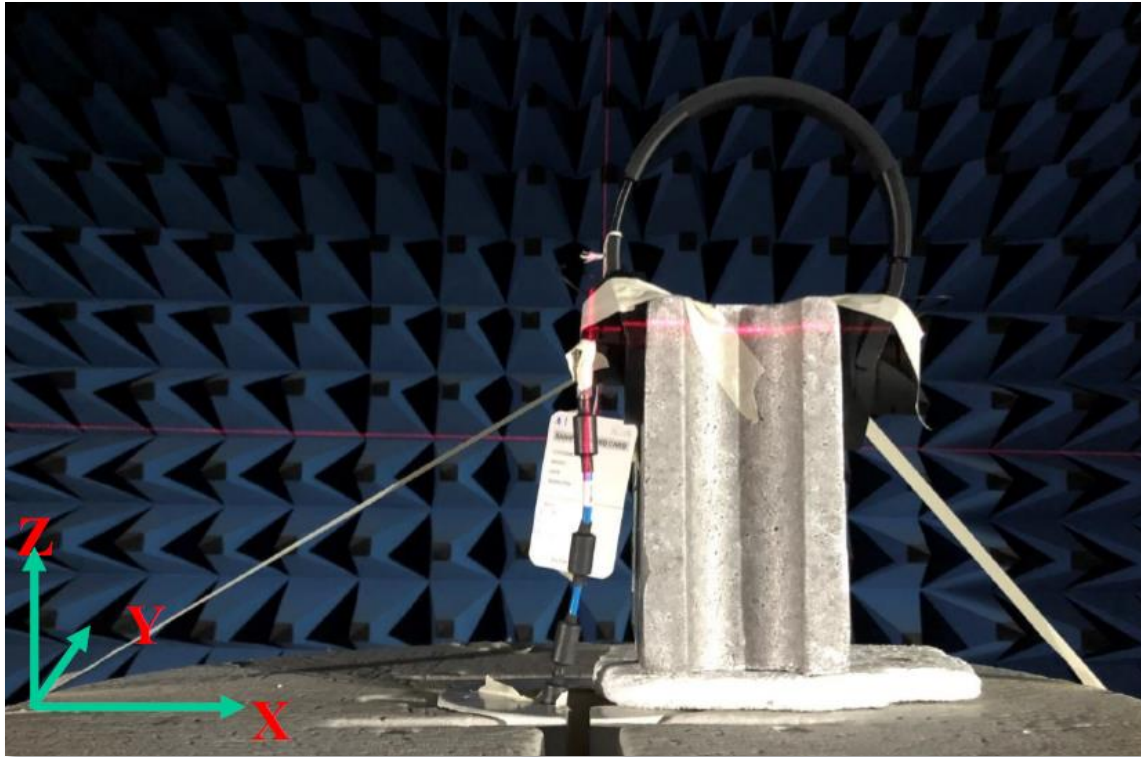


Matching values

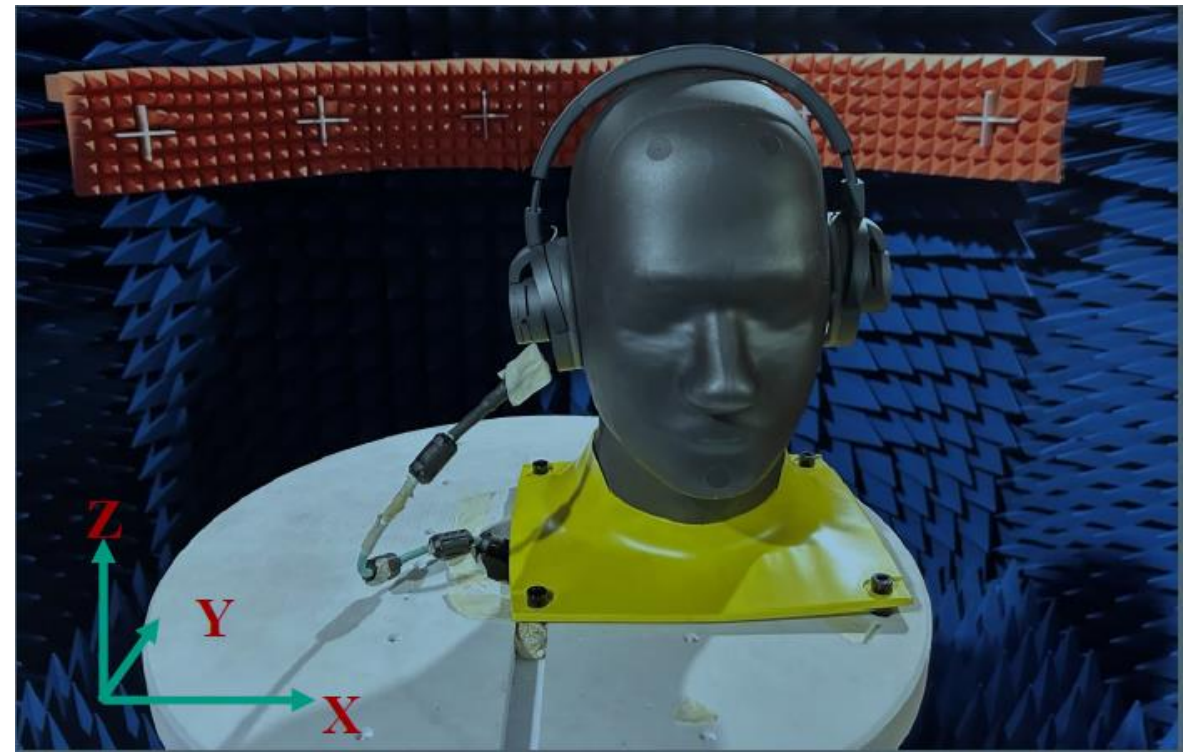


Measurement Photo

Free space



On head

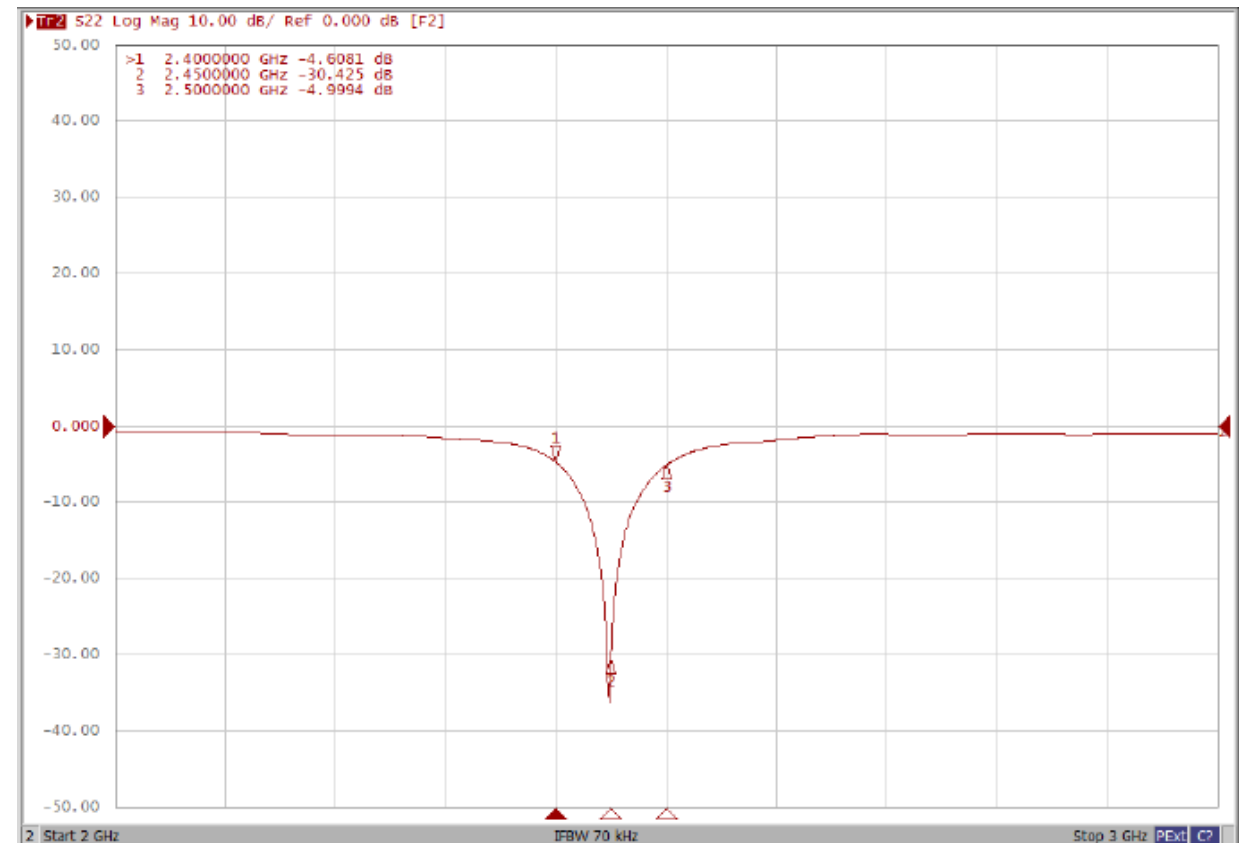
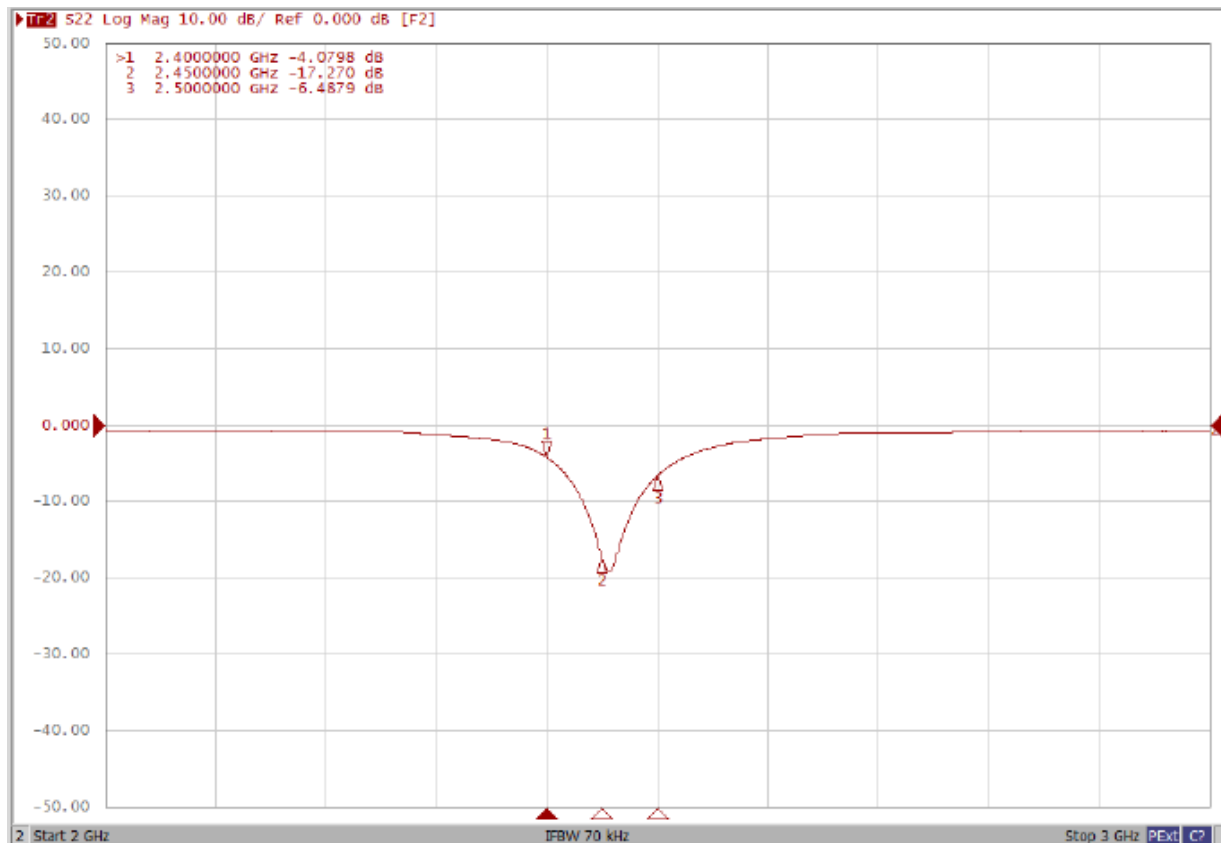


S11 Return Loss for BT after tuning

- BT return loss > 5 dB after tuning

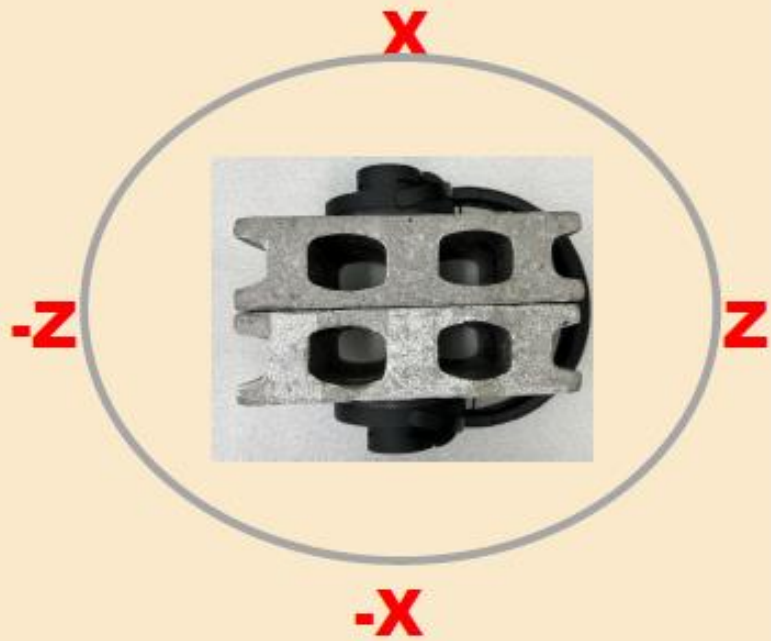
Free space

On head

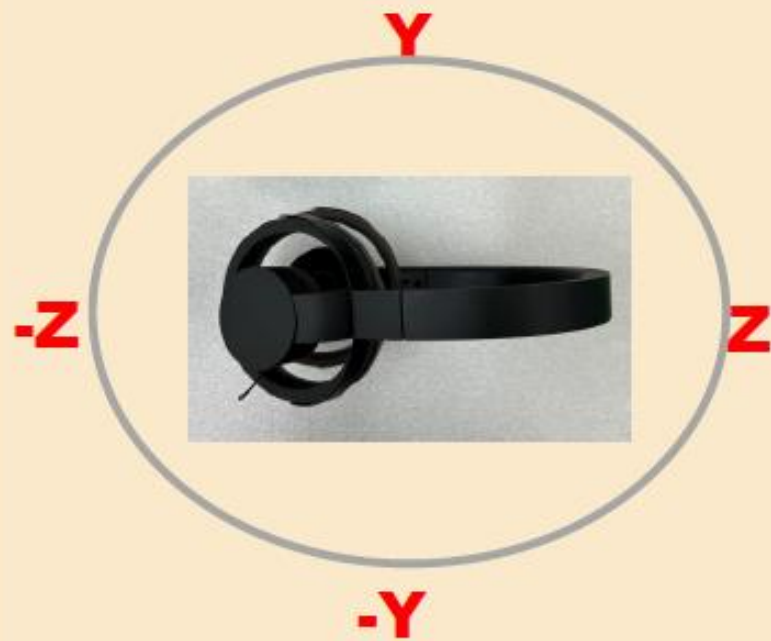


3 Views of Antenna

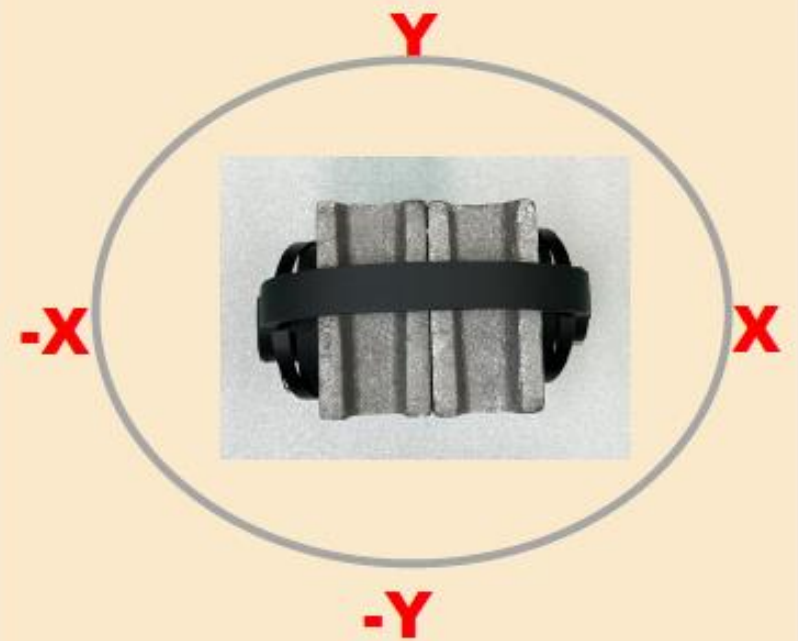
X-Z plane



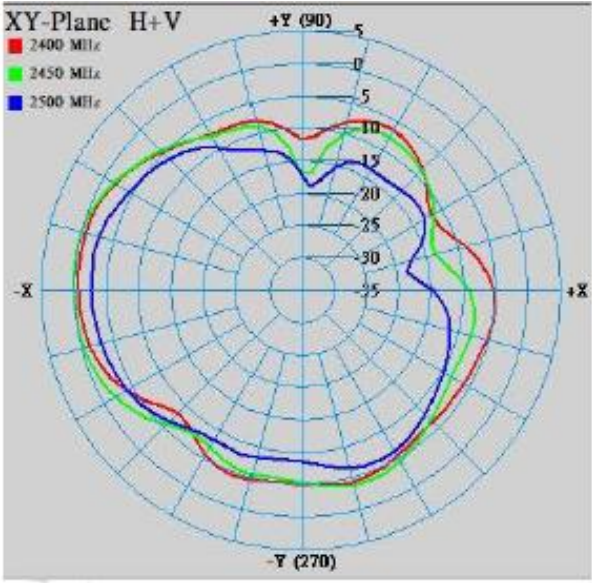
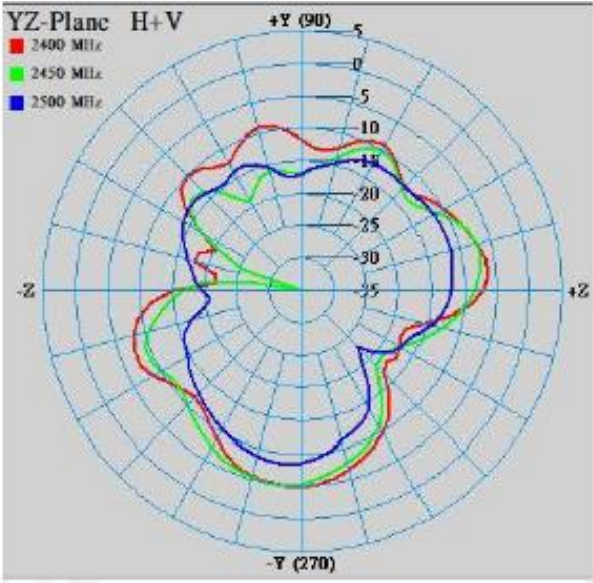
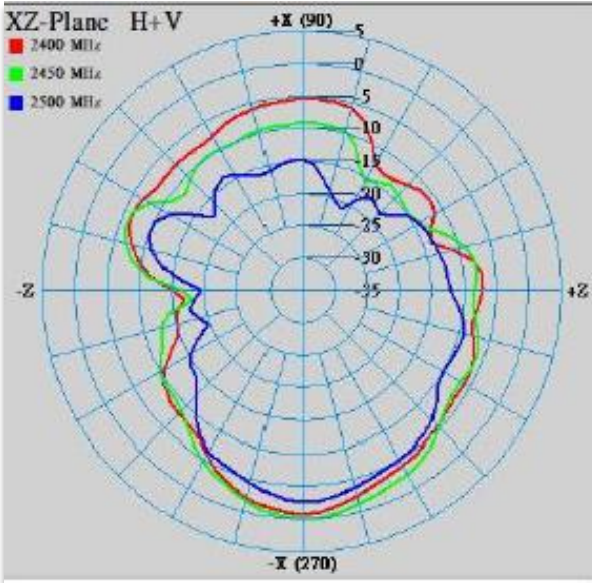
Y-Z plane



X-Y plane



BT 2D Radiation Patterns in Free space



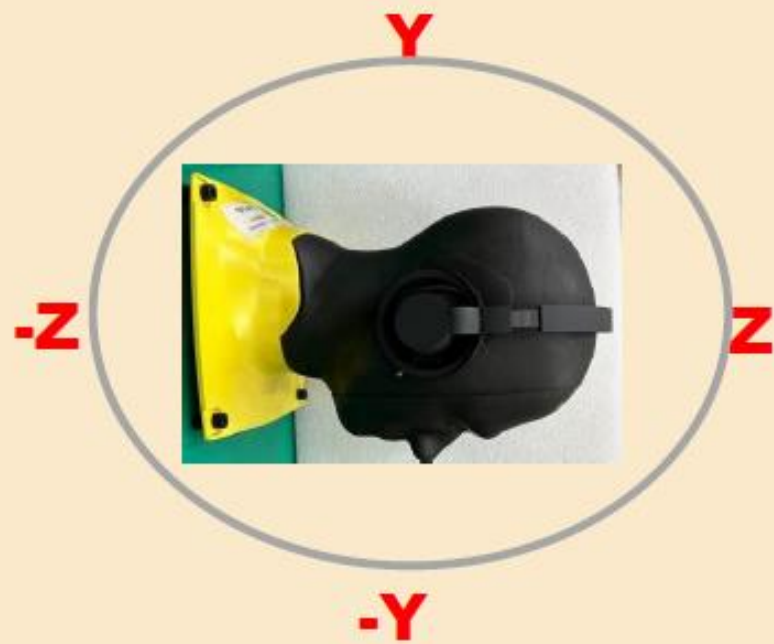
Head	ZS plane		ZY plane		XY plane	
	Frequency (MHz)	Max Value (dB)	Average (dB)	Max Value (dB)	Average (dB)	Max Value (dB)
2400	-0.77	-6.32	-4.99	-9.63	-0.63	-4.94
2450	-0.04	-6.34	-5.05	-10.51	0.07	-4.90
2500	-2.77	-9.30	-8.39	-13.02	-2.70	-7.41

3 Views of Antenna

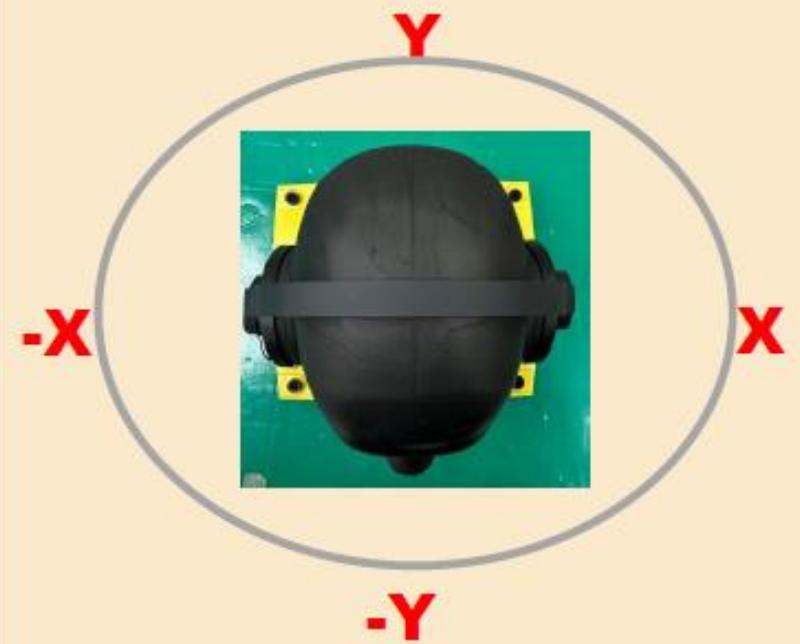
X-Z plane



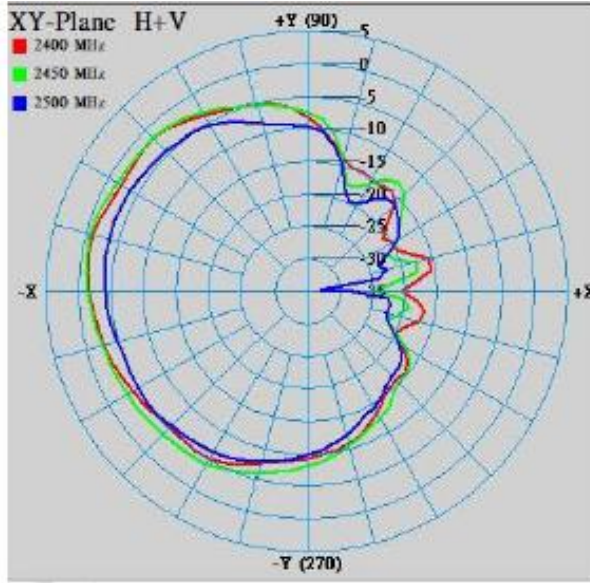
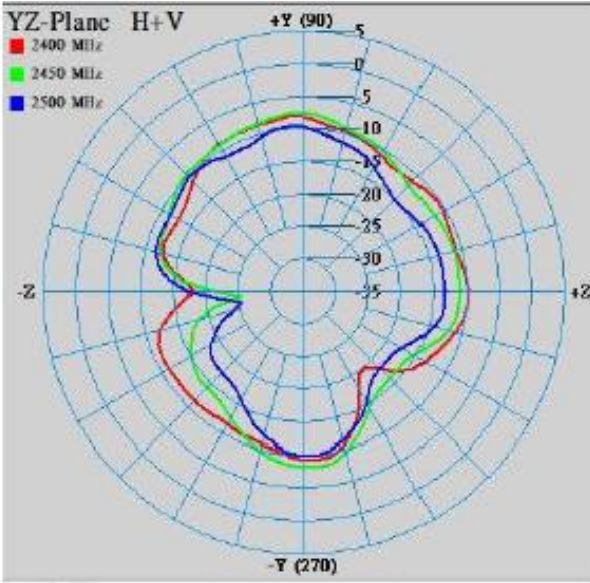
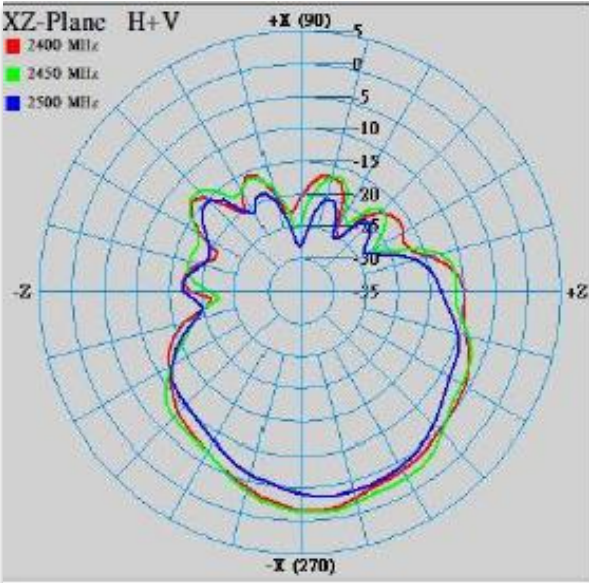
Y-Z plane



X-Y plane



BT 2D Radiation Patterns on Head



Head	ZS plane		ZY plane		XY plane	
	Max Value (dB)	Average (dB)	Max Value (dB)	Average (dB)	Max Value (dB)	Average (dB)
Frequency (MHz)						
2400	-1.47	-8.29	-8.13	-11.06	-0.97	-6.28
2450	-1.21	-7.85	-7.42	-11.09	-0.73	-5.74
2500	-3.52	-9.98	-9.53	-12.97	-3.65	-8.13

Antenna performance summary

Antenna Performance

Return loss : > 5dB

Efficiency : 21% DUT and 16% DUT on head.

Peakgain : 0.1~-1.5dBi

		DVT	
	Band	Free space	Head phantom
Return loss (dB)	2.4G	> 5	> 5
Efficiency(%)	2.4G	> 21.8	> 15.2
	2.45G	> 21.2	> 16.8
	2.48G	> 20.3	> 15.5
Peak gain(dBi)	2.4G	< -0.6	< -0.9
	2.45G	< 0.1	< -0.7
	2.48G	< -0.9	< -1.5

A 3D rendered recording studio. The walls are covered in blue and red acoustic foam panels. Two large speakers are positioned on stands in the background. In the foreground, three grey, curved chairs are arranged in a semi-circle. A desk with a lamp and keyboard is visible on the left. The floor is dark blue with a patterned carpet. The text "Customizable Section Heading Example" is overlaid in the center in white.

Customizable Section Heading Example