



Cactus DVT Antenna Evaluation

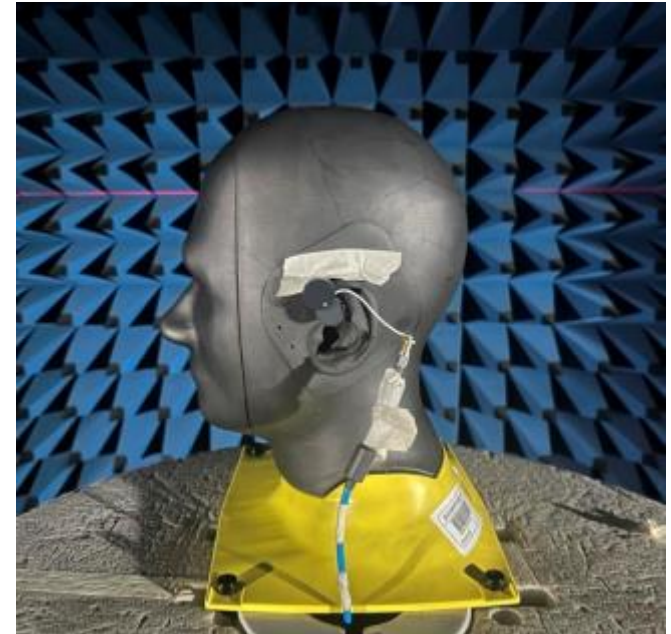
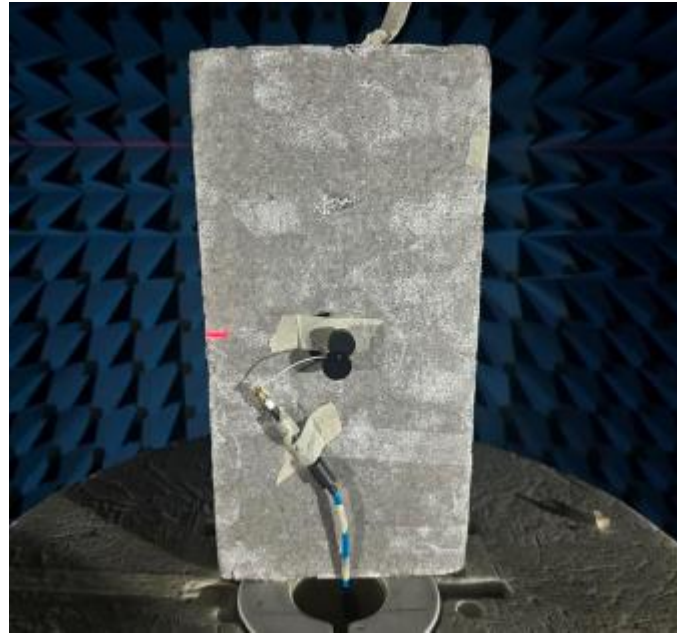
July 22, 2024

Benson

A decorative graphic at the bottom of the slide consisting of several white, curved lines that intersect and form a network-like pattern. Small red dots are placed at various points along these lines, creating a series of nodes. The background is a dark, textured grey, and a solid red horizontal bar runs across the very bottom of the image.

DVT Sample Description

- DVT sample
- DVT PCBA
- Free space and phantom head setup



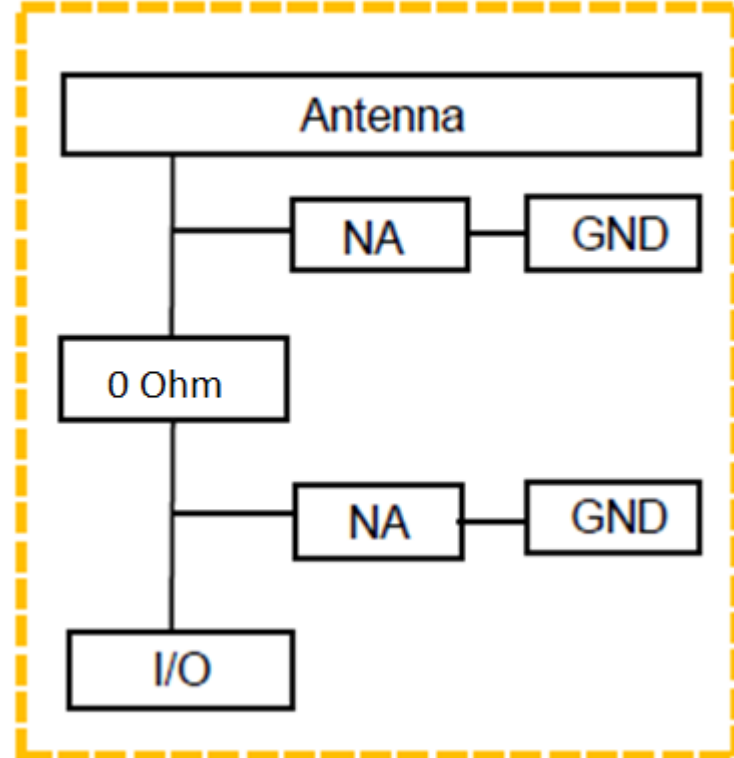
Purpose

- **Measure the DVT sample antenna performance and verify the results.**

Cactus DVT Sample Antenna Matching

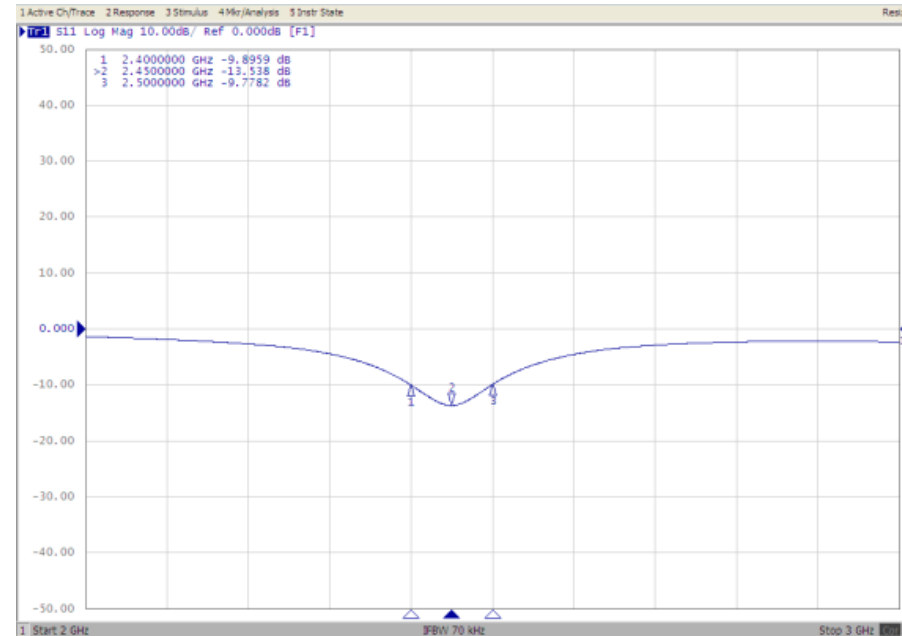
- Antenna Matching

Matching values



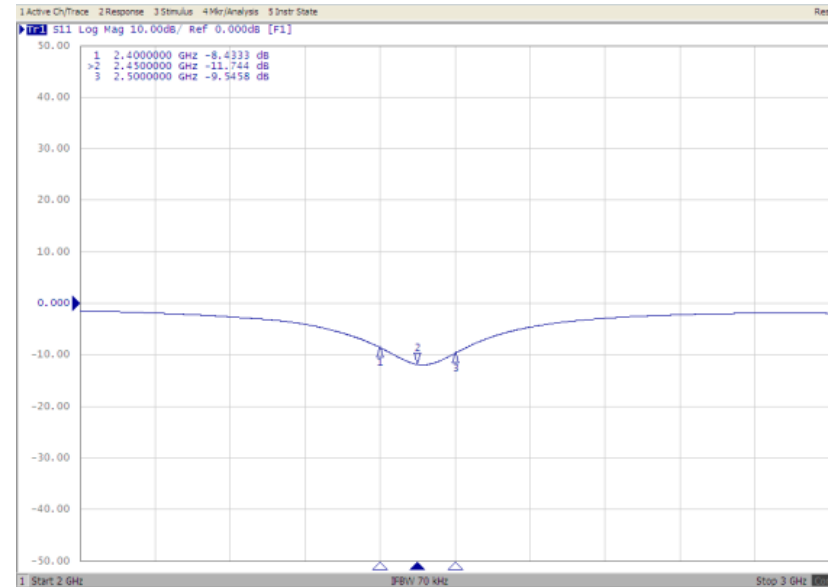
Cactus DVT Sample Antenna Performance

- S-parameter(Free space)



Cactus DVT Sample Antenna Performance

- S-parameter(Phantom head)



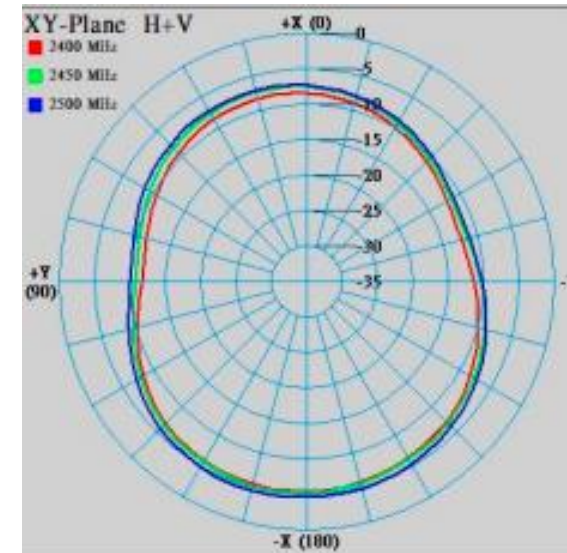
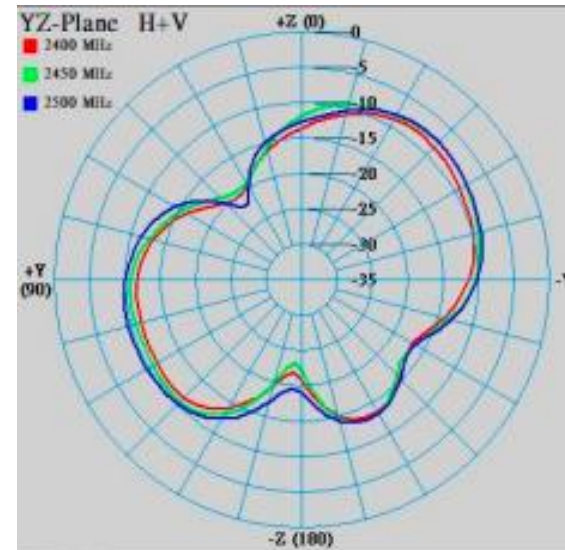
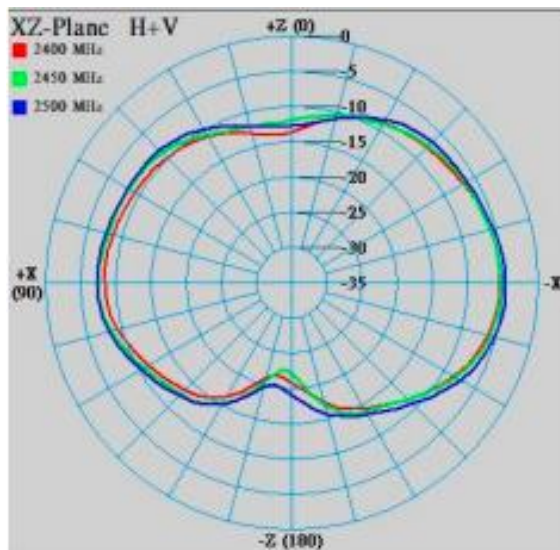
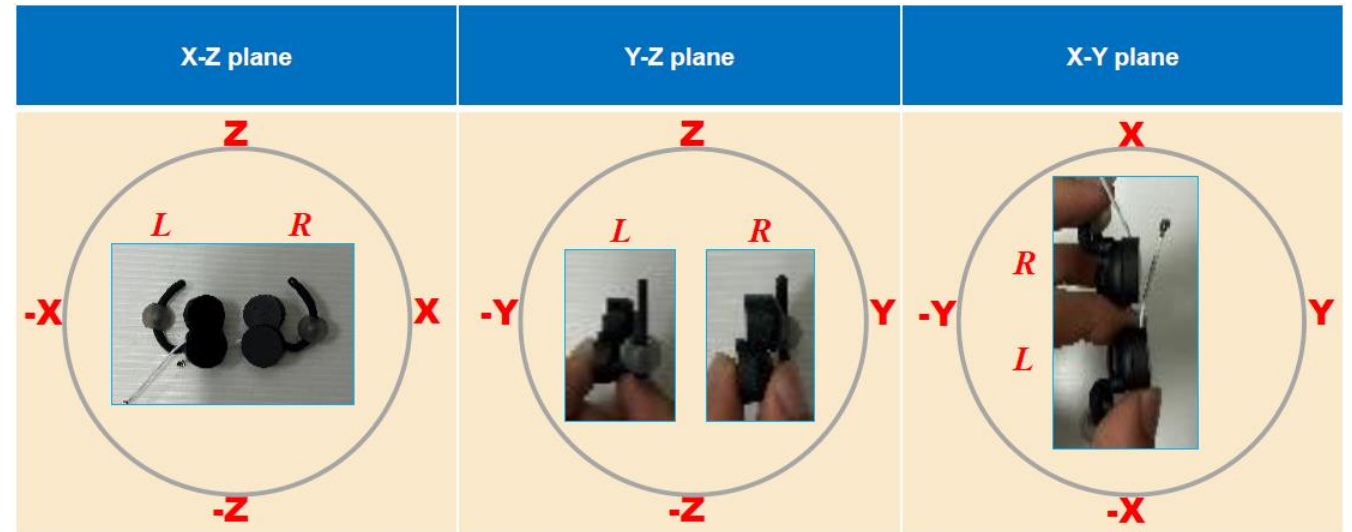
Cactus DVT Sample Antenna Performance

- **Antenna radiated gain table**

Frequency (MHz)	Free space		On phantom head	
	Efficiency(%)	Peak Gain(dBi)	Efficiency(%)	Peak Gain(dBi)
2400	9.47	-6.11	8.57	-6.7
2450	13.05	-4.86	10.73	-5.85
2500	13.86	-4.47	10.32	-5.96

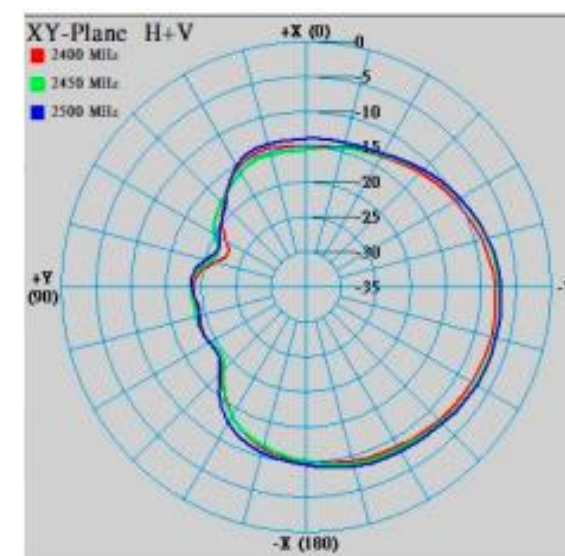
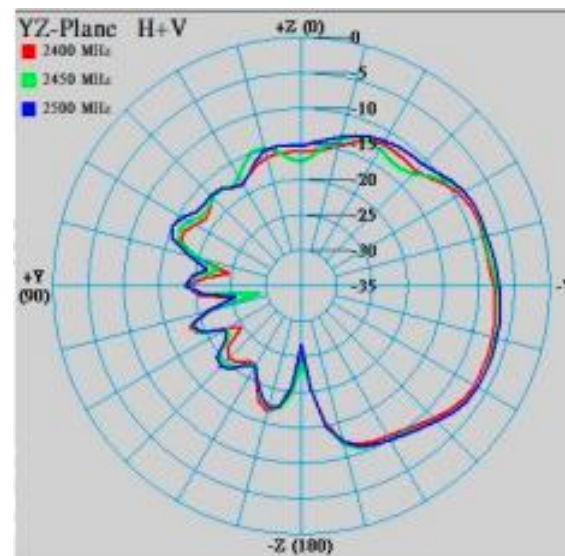
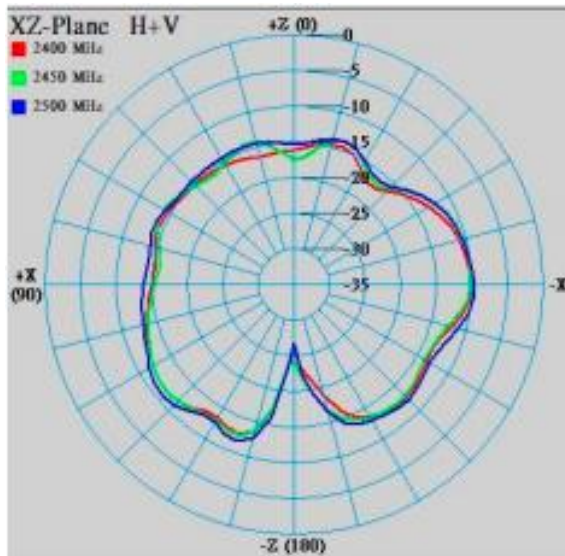
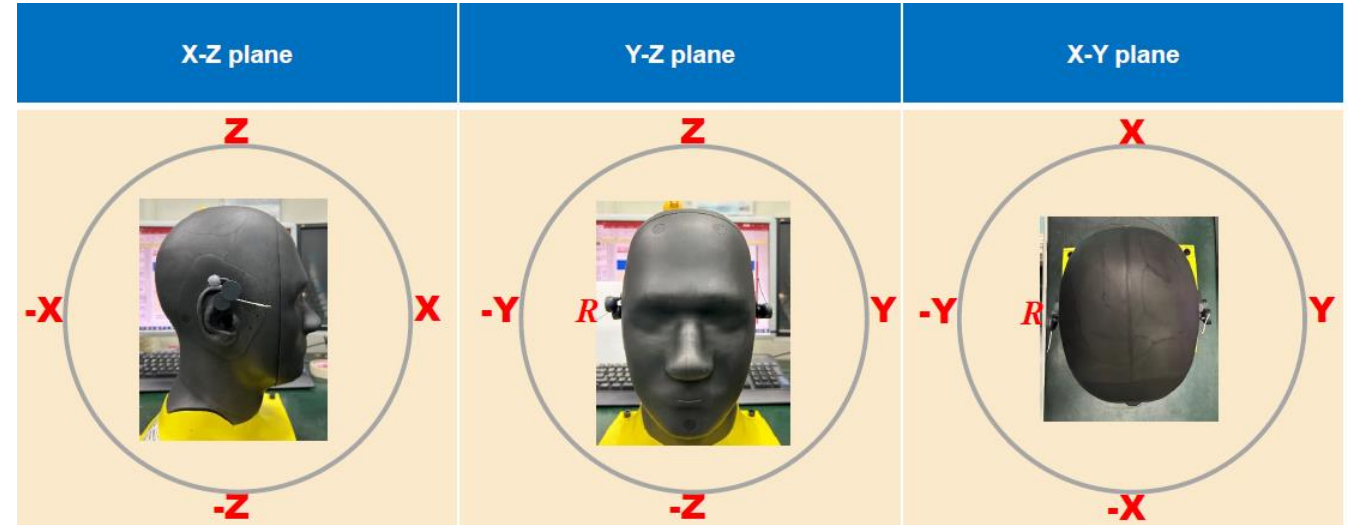
Cactus DVT Sample Performance

- 2D Radiation Pattern
- Free space



Cactus DVT Sample Performance

- 2D Radiation Pattern
- Phantom head



Summary

- The antenna efficiency can reach maximum 11.12% on phantom head and 14.15% in free space.
- The antenna performance of DVT sample can meet the estimate result.

A recording studio with blue and red acoustic panels, two large speakers, and three grey chairs. The room is dimly lit with blue and red spotlights. The walls are covered in blue and red acoustic foam panels. Two large speakers are positioned on stands in the background. Three grey chairs are arranged in a semi-circle in the foreground. A desk with a keyboard and a lamp is visible on the left side.

Thanks