



Stratocaster POC Antenna Evaluation

Feb. 3, 2026

Test personnel: Calvin

Benson

1. Measurement Information

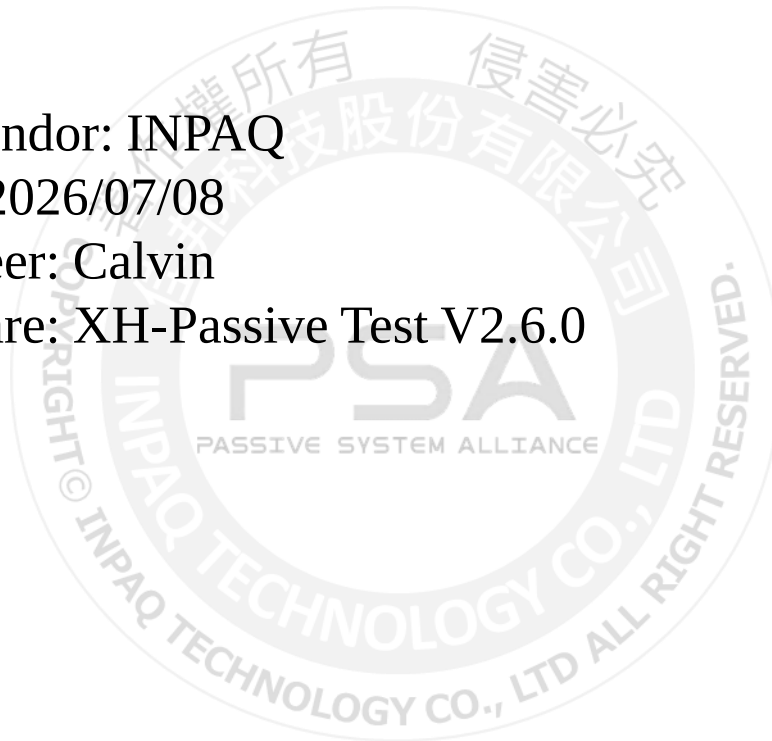
➤ Antenna Vendor Information

Antenna Vendor: INPAQ

Test Date: 2026/07/08

Test Engineer: Calvin

Test Software: XH-Passive Test V2.6.0



1. Measurement Information

➤ Applicable test methods

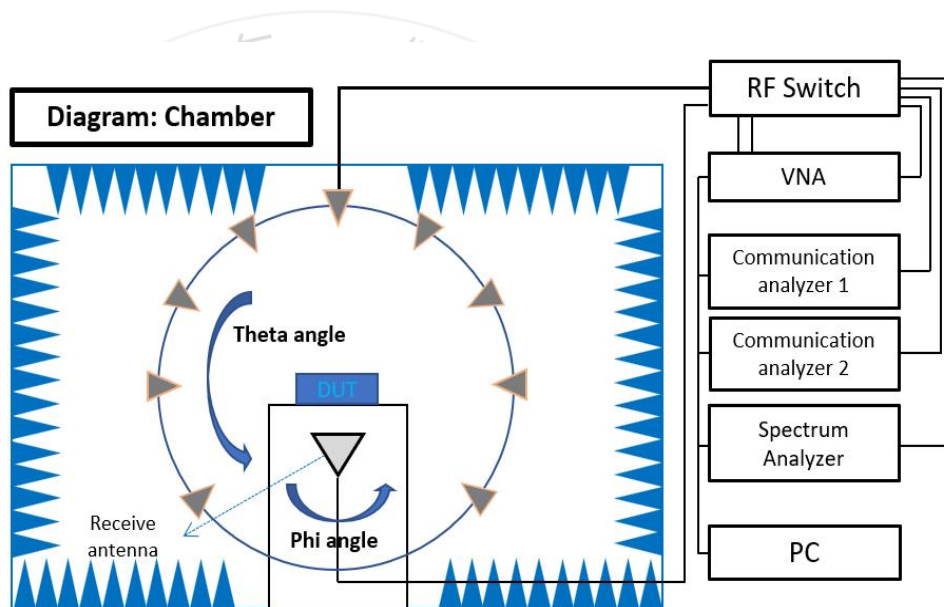
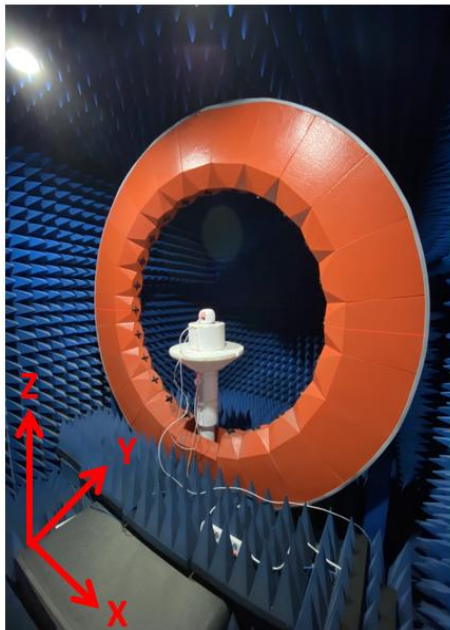
The MPS-4842 system is a fully enclosed 3D chamber, designed for the "Multi-Probe Test Method." A detailed description is provided below: ↻

In this measurement method, the DUT is placed at the center, and the lower axis rotates in the +Z direction, which is defined as the Phi angle. Data is captured every 15 degrees from the top (0 degrees) to the bottom (180 degrees) of the DUT. Typically, the EUT remains fixed on a turntable throughout the entire measurement process. Multiple probes measure from theta 0 degrees to 180 degrees, while the EUT undergoes a full 360-degree rotation in the phi axis. The measurement antennas (probes) are then repositioned to the next theta angle, and the process is repeated. ↻

↻	↻	θ -Axis ↻	Φ -Axis ↻	↻
Passive ↻	Step size ↻	15°~165° step: 15° ↻	0°~345° step: 15° ↻	↻
	N / M (Points) ↻	12 ↻	24 ↻	↻

1. Measurement Information

➤ Setup of chamber



Equipment	Spectrum Analyzer	Communication analyzer	VNA	RF Switch	Power Amplifier
Brand	Keysight (N9020B)	R&S(CMW500) 、 ANRITSU(MT8000A) 、 (MT8862A)	Keysight (E5070C)	TEMRADIO	XH-IOE

1. Measurement Information

➤ Equipment list

ID#	Device	Type/Model	Serial#	Manufacturer	Cal Date	Cal. Due Date
0135	Chamber	MPS-4842	4842	XH-IOE	2026-4-14	2027-4-14
0136	Switch systems	NA	NA	XH-IOE	N/A	N/A
0147	Measurement SW	NA	NA	XH-IOE	N/A	N/A
0530	Spectrum Analyzer	(N9020B)	MY59050565	Keysight	2025-12-02	2027-12-24
1033	Communication analyzer 1	CMW-500	1201.0002k50	R&S	2026-03-13	2027-03-13
1076	Communication analyzer 2	MT8000A	6272368783	ANRITSU	2026-5-13	2027-05-13
0993	Communication analyzer 3	MT8862A	6262115497	ANRITSU	2025-12-24	2026-12-24
0325	Cable 2.5m – 30MHz to 18 GHz	0500990992500KE	19.23.395	Radial	2025-02-13	2028-03-13
0141	Cable 1.2m – 18 to 40 GHz	UFA147A-0-0480-200200	MFR60637-59609-072	Micro-coax	2025-06-26	2028-07-26
0334	Cable 1m – 1GHz to 18GHz	UFA147A	NA	Utilflex	2025-06-25	2028-07-25
0859	Cable 2m – 26.5GHz to 40GHz	794-9191-2000A	E00327	Atem	2025-05-26	2028-05-26
0206	Cable 1m 30 MHz – 18GHz	UFB311A-0-0590-50U50U	MFR 64637-59609-060	Micro-coax	2025-05-25	2028-05-25
0263	Cable 7m DC-18 GHz	0501051057000GX	19.35.850	Radial	2025-05-26	2028-07-26
0369	Cable 7m – 18GHz to 40GHz	R286304009		Radial	2025-05-25	2028-05-25
0371	Cable 1.5m – DC-18GHz	CBL-1.5M-SMSM+	202879	Mini-Circuits	2025-05-26	2028-05-26
1099	Temp & Humidity Logger	RA12E-TH-RAS	RA12-D0EB1A	Avtech	2026-02-15	2027-02-15

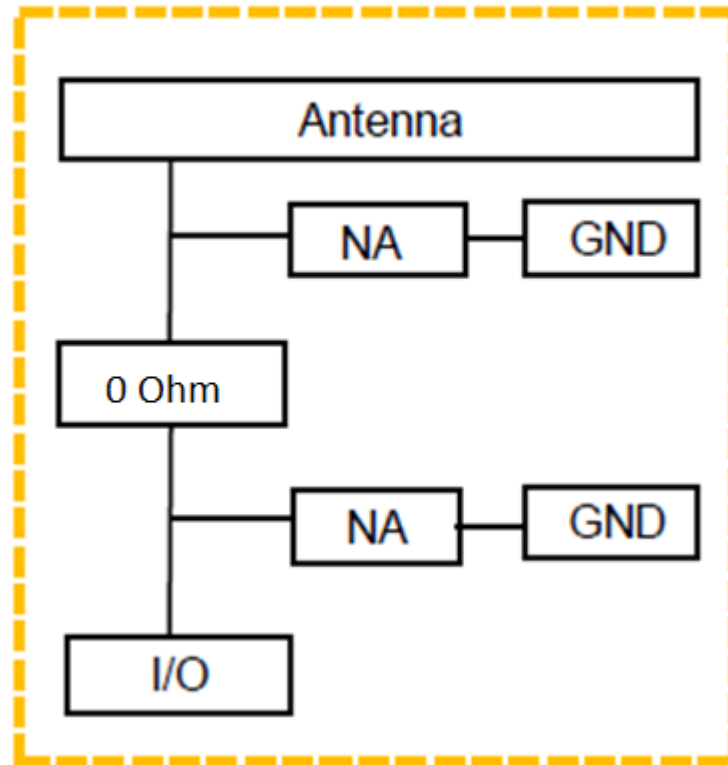
Purpose

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

POC Sample Antenna Matching

- Antenna Matching

Matching values

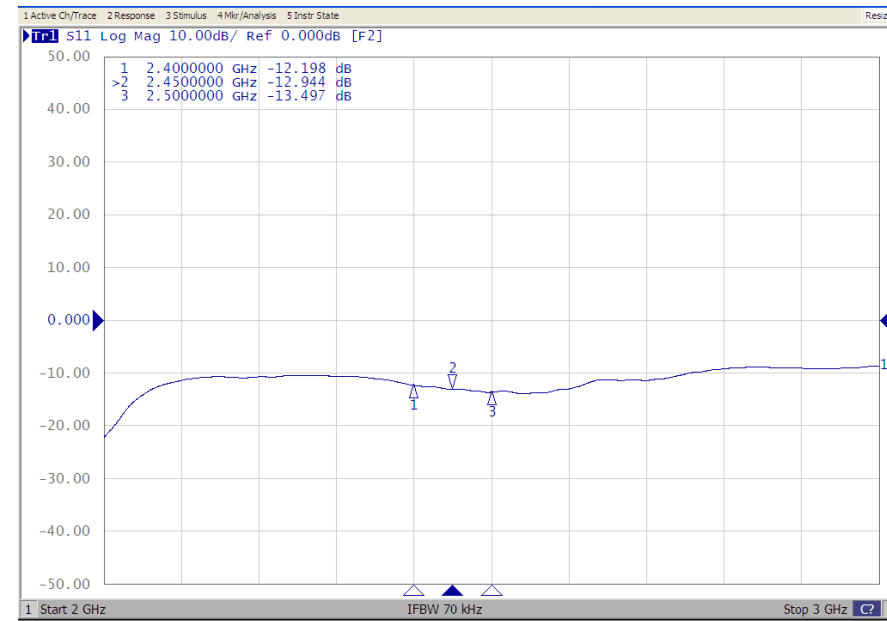


POC Sample Antenna Performance

- S-parameter



Free space

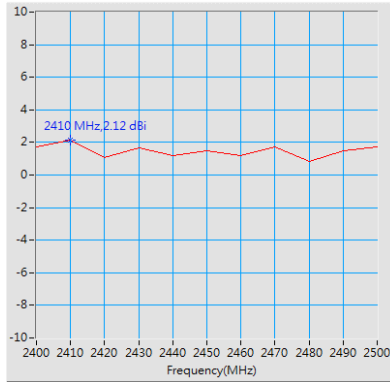
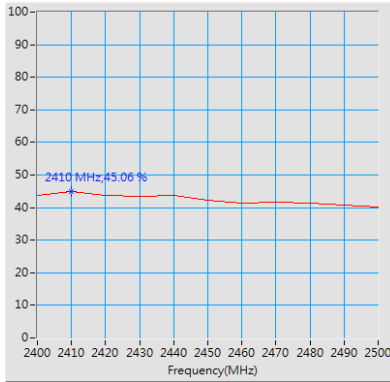
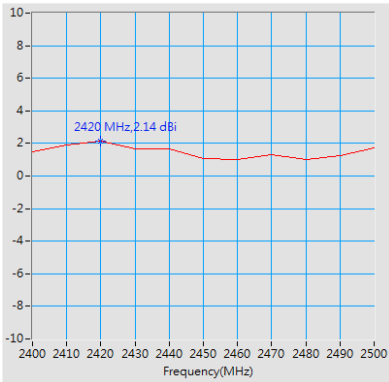
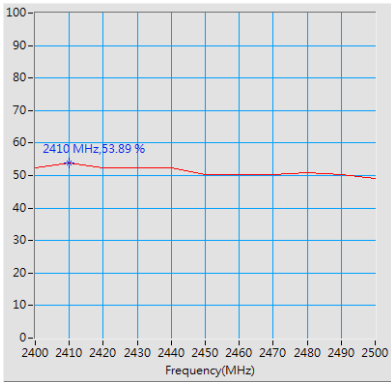


Head

POC Sample Antenna Performance

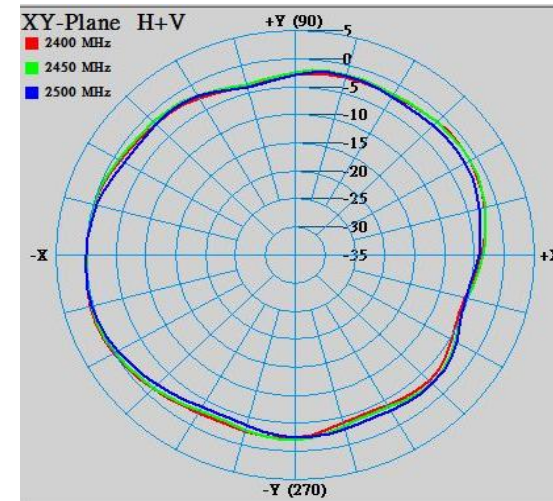
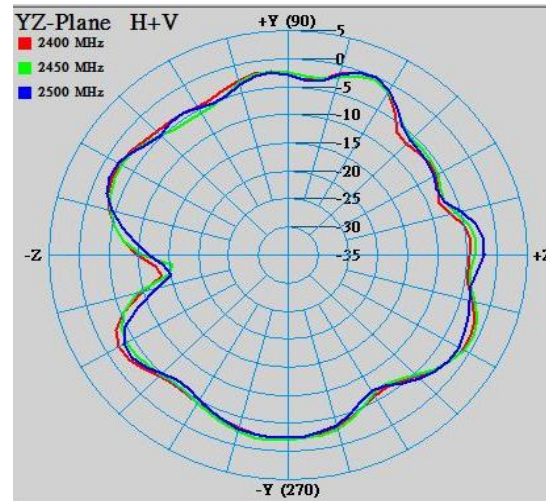
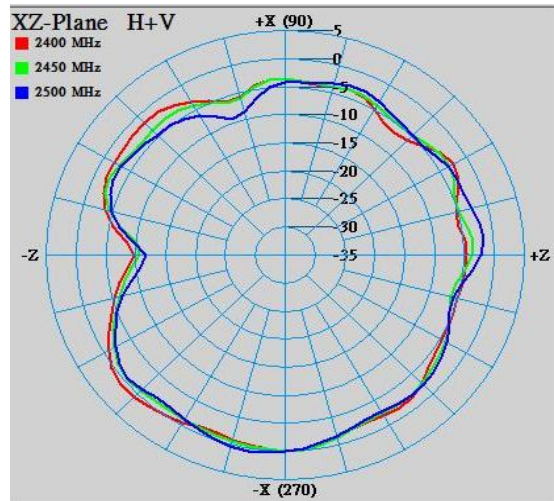
- Antenna radiated gain table

	Free space		Head	
Frequency(MHz)	Efficiency(%)	Peak Gain(dBi)	Efficiency(%)	Peak Gain(dBi)
2400	52.4	1.52	43.9	1.74
2450	50.28	1.05	42.19	1.5
2480	50.74	1.13	41.07	1.24



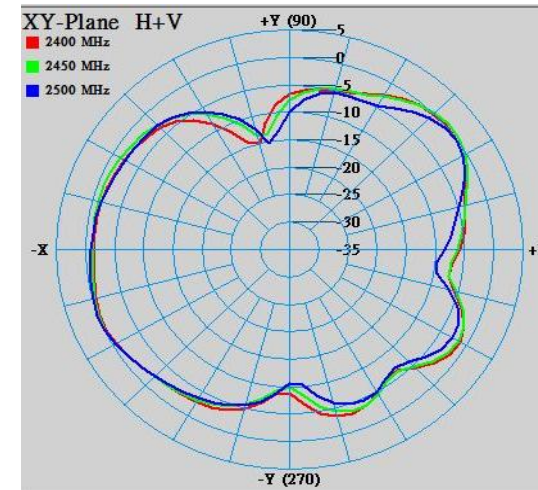
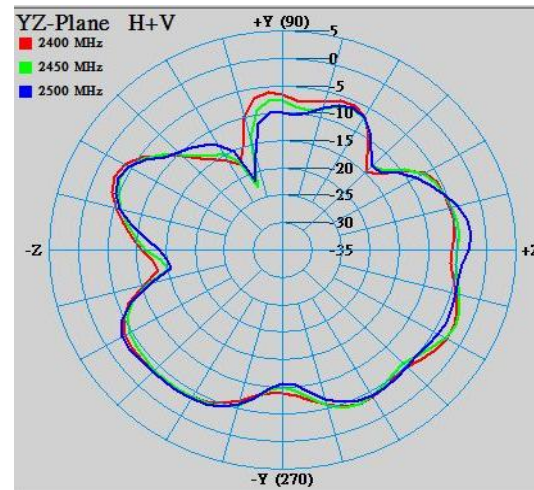
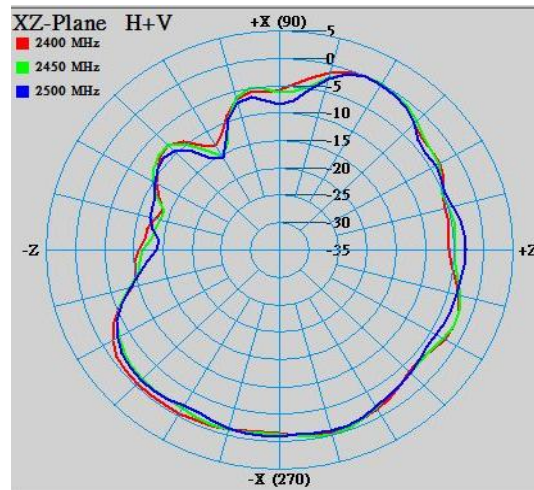
POC Sample Antenna Performance

- 2D Radiation Pattern
- Free space



POC Sample Antenna Performance

- 2D Radiation Pattern
- Head



Summary

- The measurement results show an **antenna efficiency >50%** and **peak gain <3 dBi** in free space and efficiency drop around 9% on phantom head, indicating that the antenna performance meets the expected requirements.

A photograph of a recording studio. The walls are covered in blue and red acoustic foam panels. Two large white speakers are mounted on the walls. In the foreground, three grey armchairs are arranged in a semi-circle. The floor is covered in blue carpeting. The word "Thanks" is written in white text in the center of the image.

Thanks