

Ferguson EV2 phase Antenna Report



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Test date: 2026/06/25

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Testing Setup

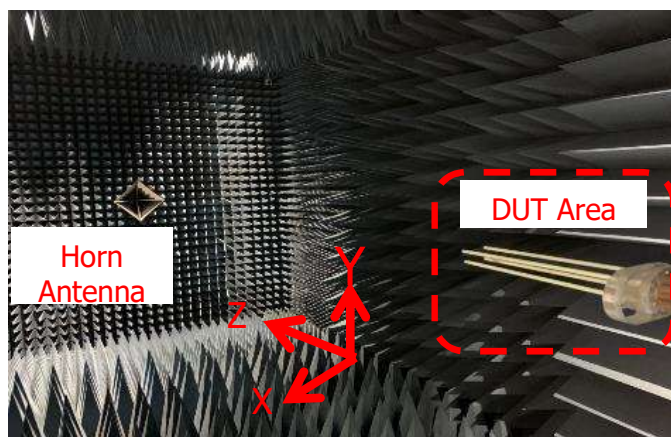
1. Equipment Setup - S parameter

- Test Procedure



- 1.1 Set start and stop frequency and Calibrate the NA with 50 ohm calibration kit
- 1.2 Connect the NA cable to DUT antenna via SMA or I-PAX connector.
- 1.3 Measure the DUT antenna performance in the free space and record the s11.

2. Testing Environment - Passive Testing

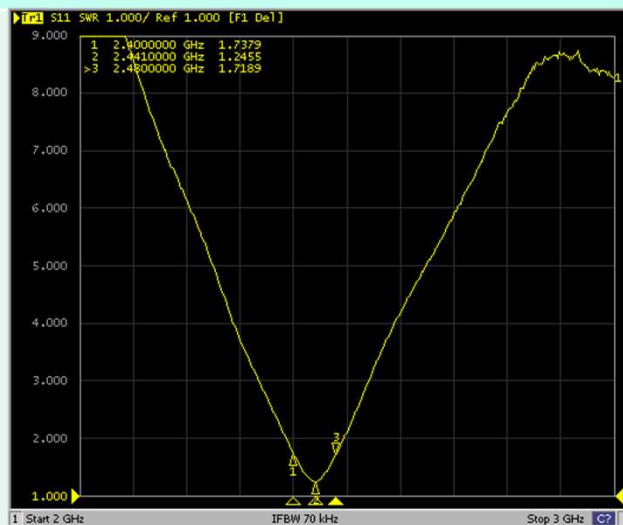


ETS-Lindgren AMS-8500

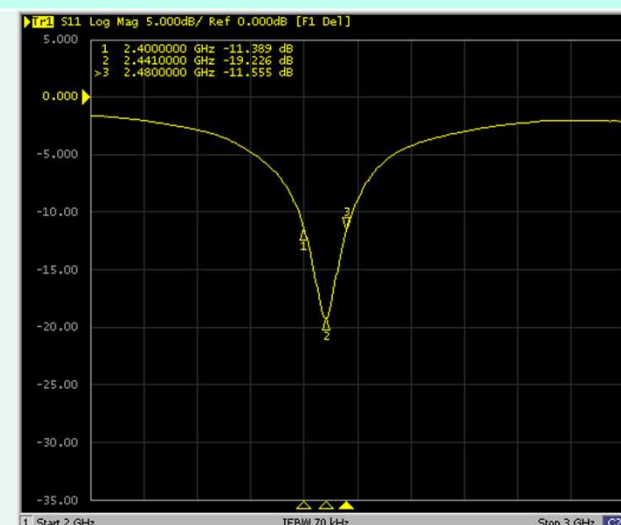
- Lab standard : 3D Chamber for CTIA standard
- Chamber size : 7.2 * 3.6 * 3.6(meter)
- Chamber type: Fully anechoic Chamber
- Chamber usable frequency range : 700~6000MHz
- Measurement instrument : Network Analyzer
- Measurement Software : EMQuest (ETS-Lindgren)
- Calibration Date:2026/03/20
- DUT : **Ferguson EV2 phase Sample**
- DUT Antenna type : PIFA

FreeSpace (Config. A(石墨黑)-2)

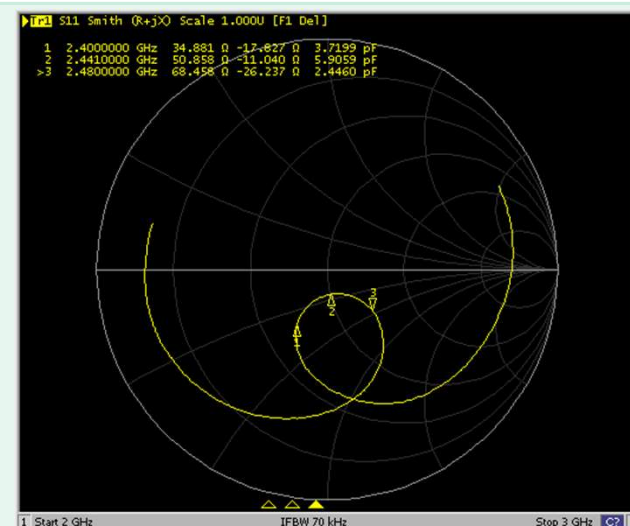
VSWR



Return Loss

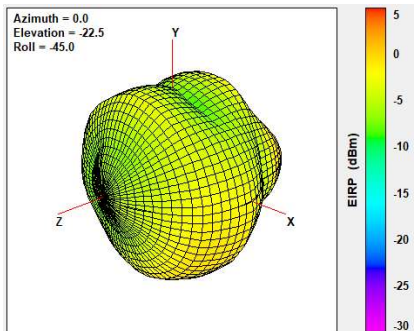
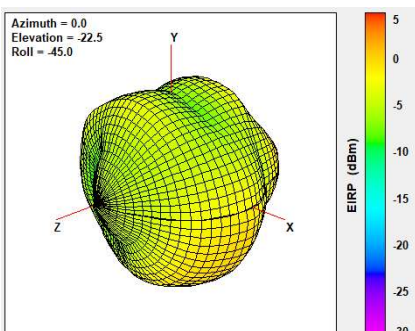
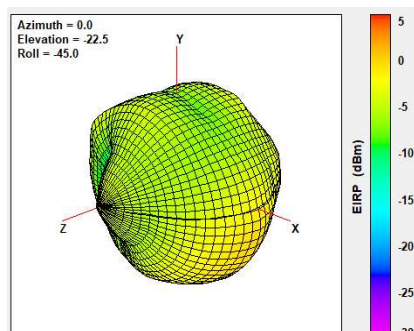


Smith Chart



Antenna Gain table& 3D Pattern

Frequency (MHz)	2400	2402	2441	2450	2480	2500
Average Gain (dBi)	-3.81	-3.71	-2.63	-3.13	-3.66	-3.73
Peak Gain (dBi)	2.27	2.39	3.20	3.04	2.41	2.35
Efficiency(%)	41.56	42.48	54.49	48.58	43.03	42.31
Average Efficiency (%)	45.40					

Frequency (MHz)	2402 MHz	2441 MHz	2480 MHz
2.4GHz			

Conclusion

This experiment tested four black and white accessory using an EV2 stage prototype. Antenna testing was conducted in free space, and the measured average antenna efficiency ranged from 44% to 46%.