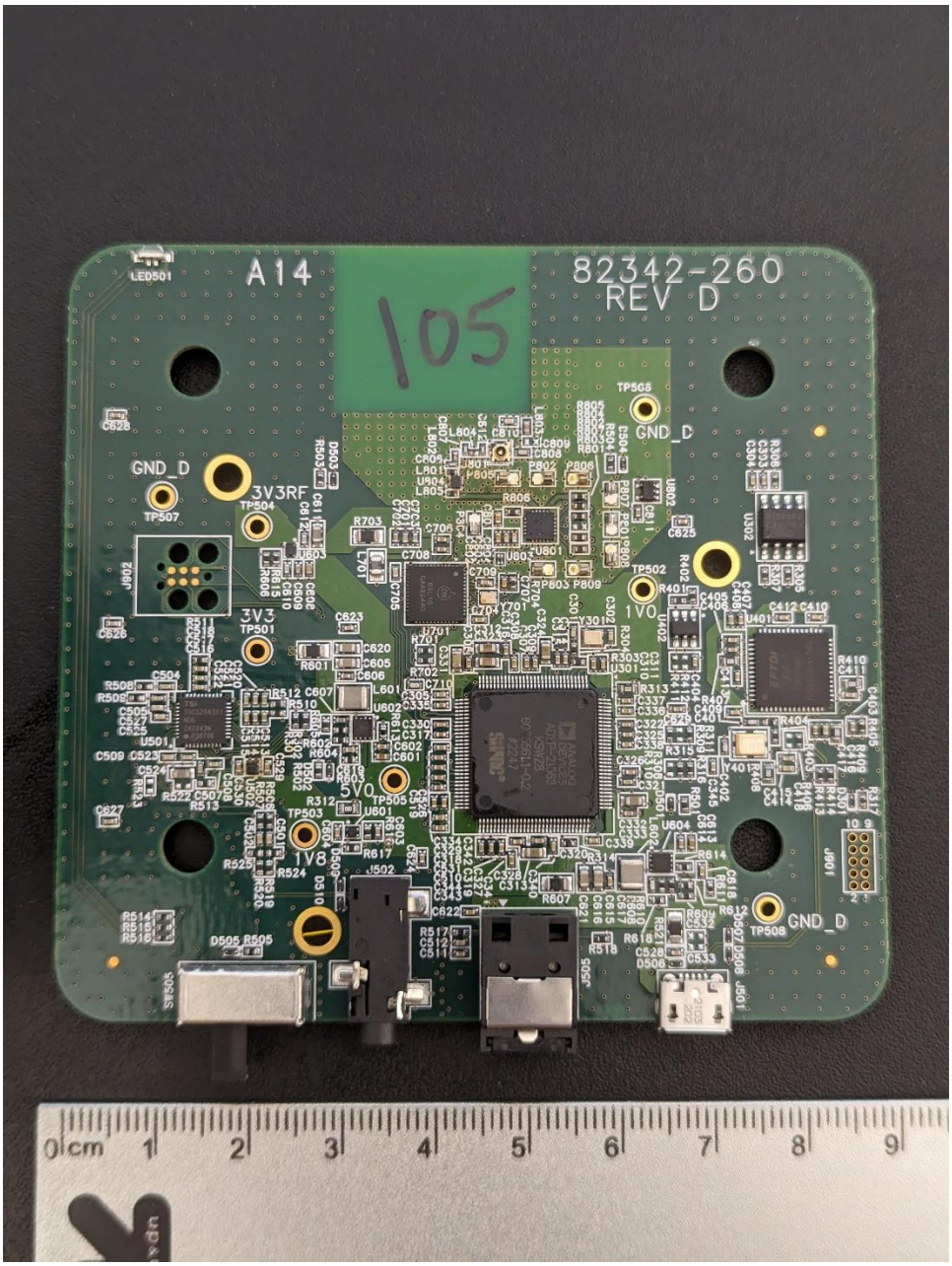
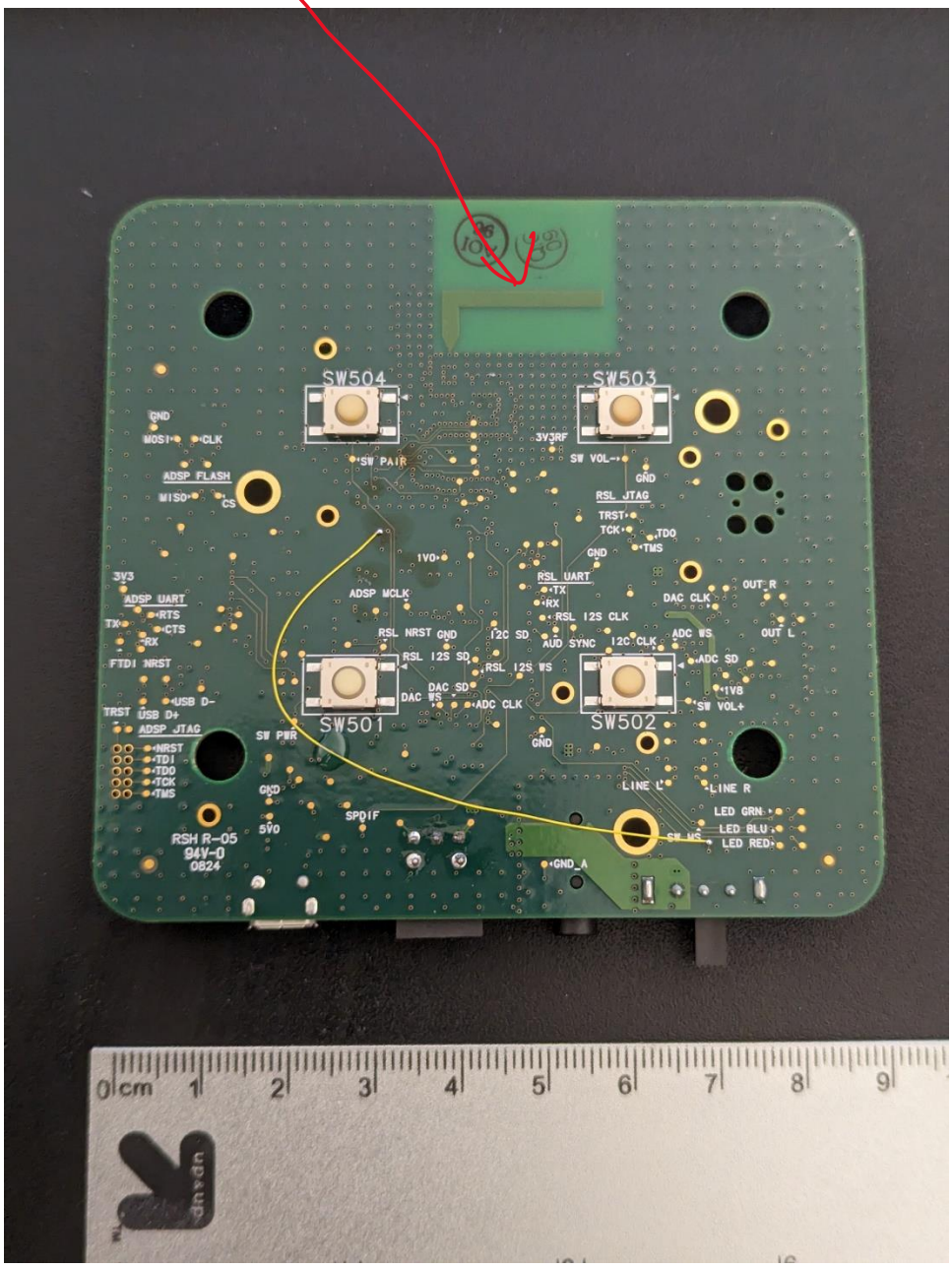
Starlink TV Antenna Description

2.4 GHz Bluetooth antenna

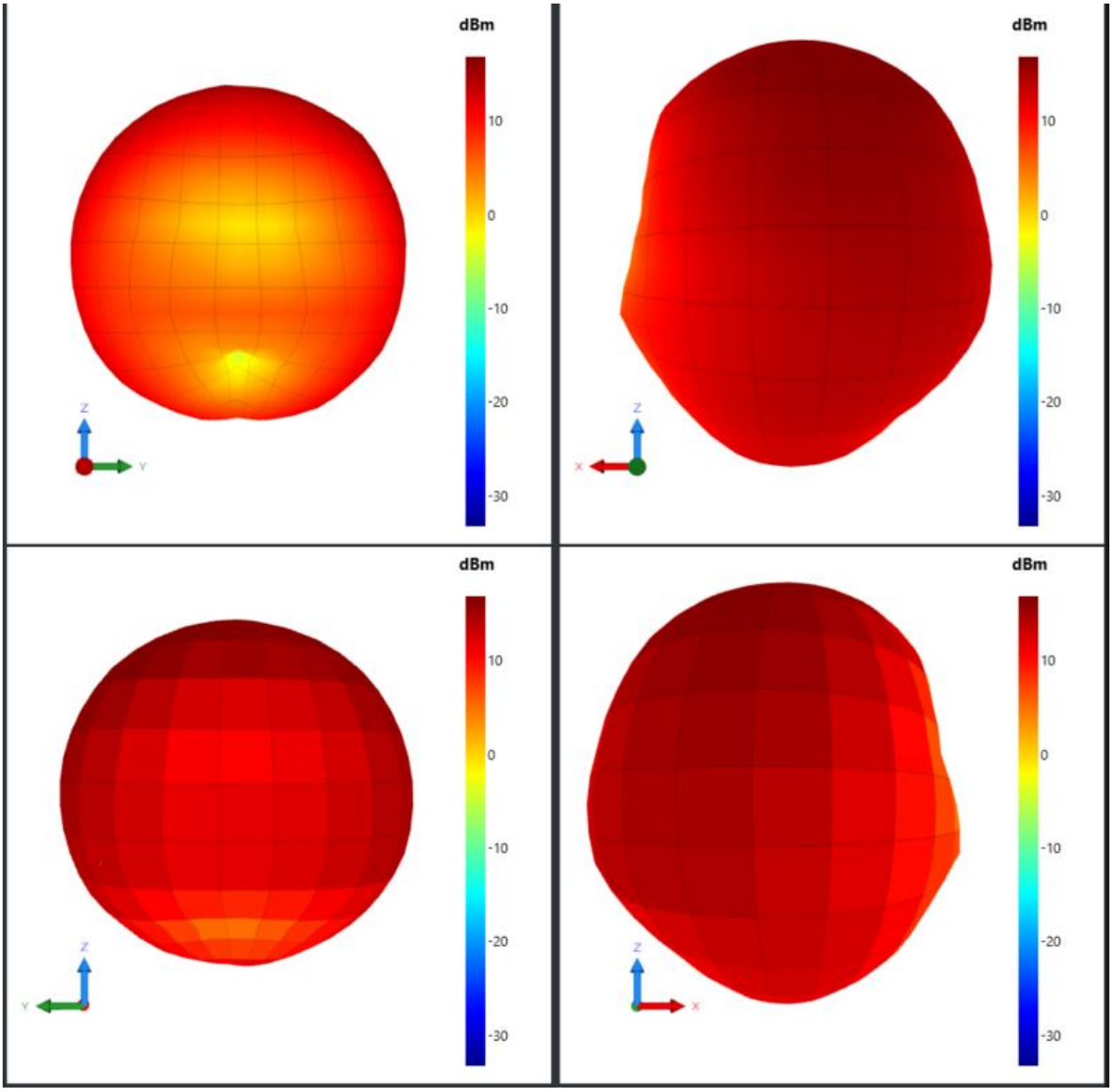
The Bluetooth 2.4 GHz antenna is a monopole printed on the PCB. The peak gain of the antenna in the assembled DUT is nominally +4.89dBi. Date of antenna pattern measurement: May 22, 2024

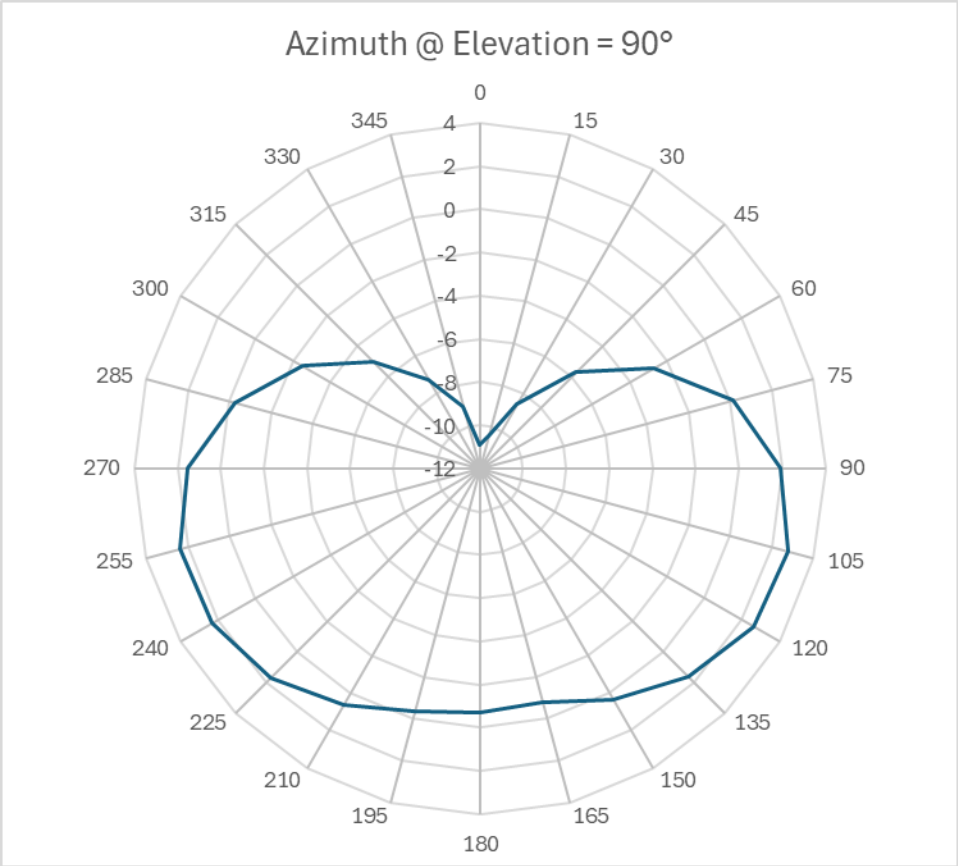


Antenna

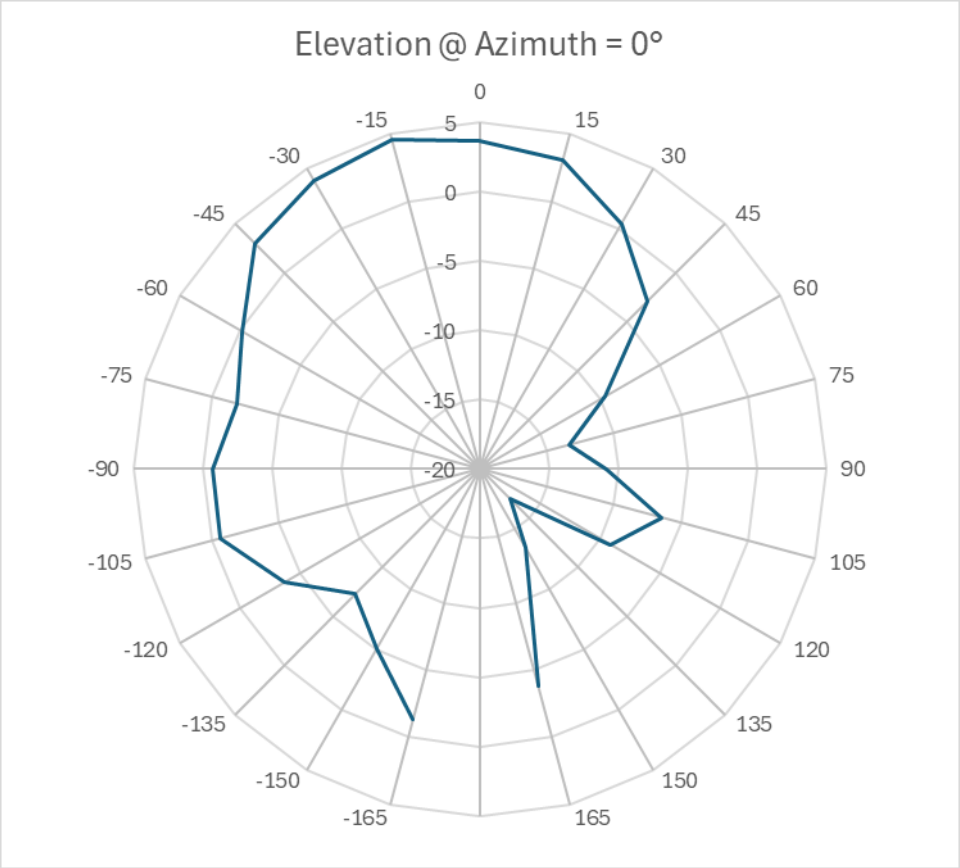

SW504
SW503
SW501
SW502
GND
MOSI
CLK
ADSP_FLASH
MISO
CS
SW_PAIR
3V3RF
SW_VOL-
GND
RSL_JTAG
TRST
TCK
TDO
TMS
GND
1V0
3V3
ADSP_UART
RTS
CTS
TX
RX
FTDI_NRST
ADSP_MCLK
RSL_NRST
GND
I2C_SD
AUD_SYNC
I2C_CLK
RSL_UART
TX
RX
RSL_I2S_CLK
DAC_CLK
OUT_R
ADC_WS
OUT_L
ADC_SD
1V8
SW_VOL+
RSL_I2S_SD
RSL_I2S_WS
DAC_SD
DAC_WS
ADC_CLK
USB_D-
TRST
USB_D+
ADSP_JTAG
NRST
TDI
TDO
TCK
TMS
SW_PWR
GND
5V0
SPDIF
GND
LINE_L
LINE_R
LED_GRN
LED_BLU
LED_RED
SW_MS
GND_A
RSH R-05
94V-0
0824
0 cm 1 2 3 4 5 6 7 8 9

Three-dimensional pattern (scale in dBm noted)





Gain units in dBi



Gain units in dBi

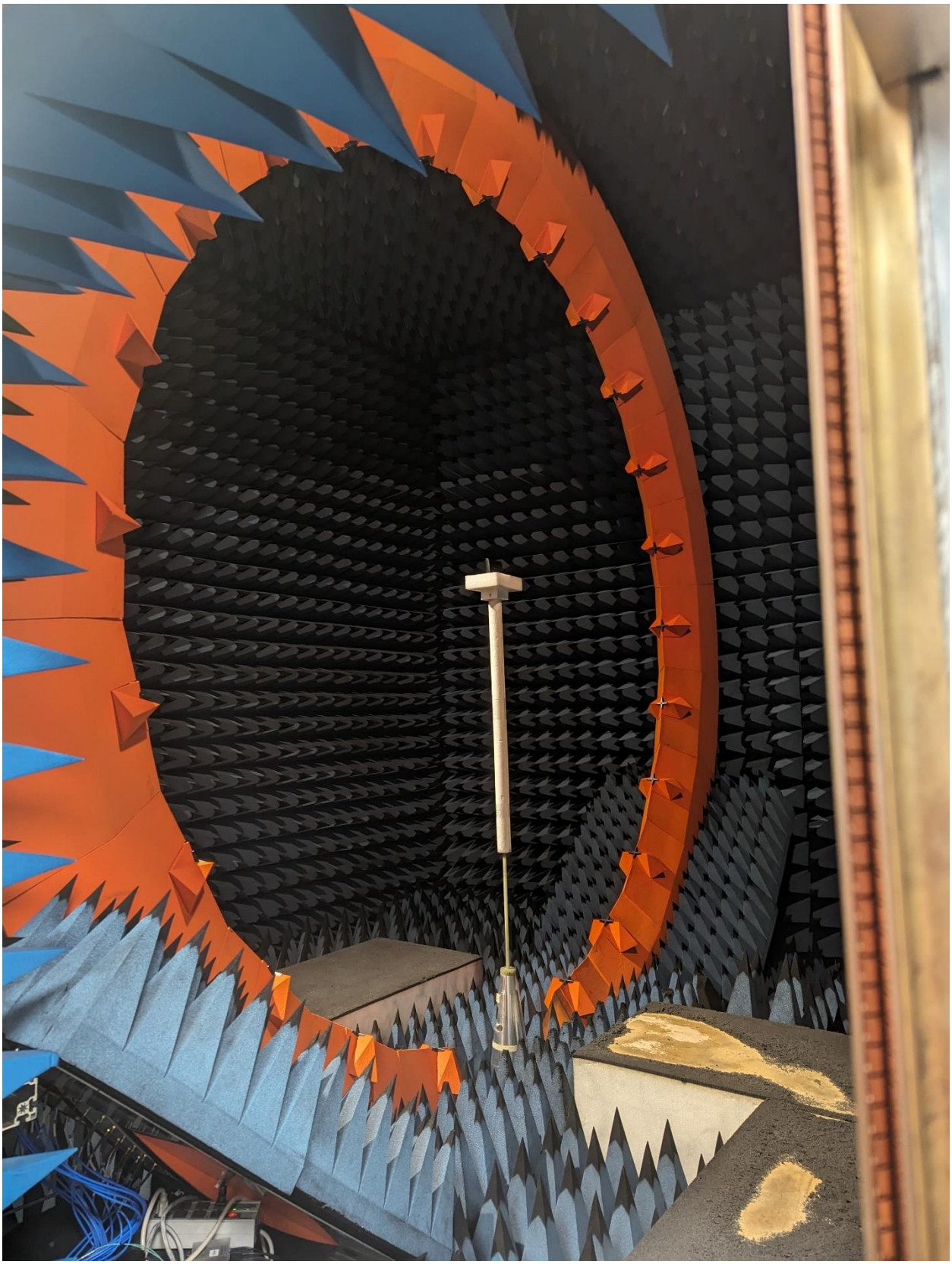
Antenna Pattern Measurement Information

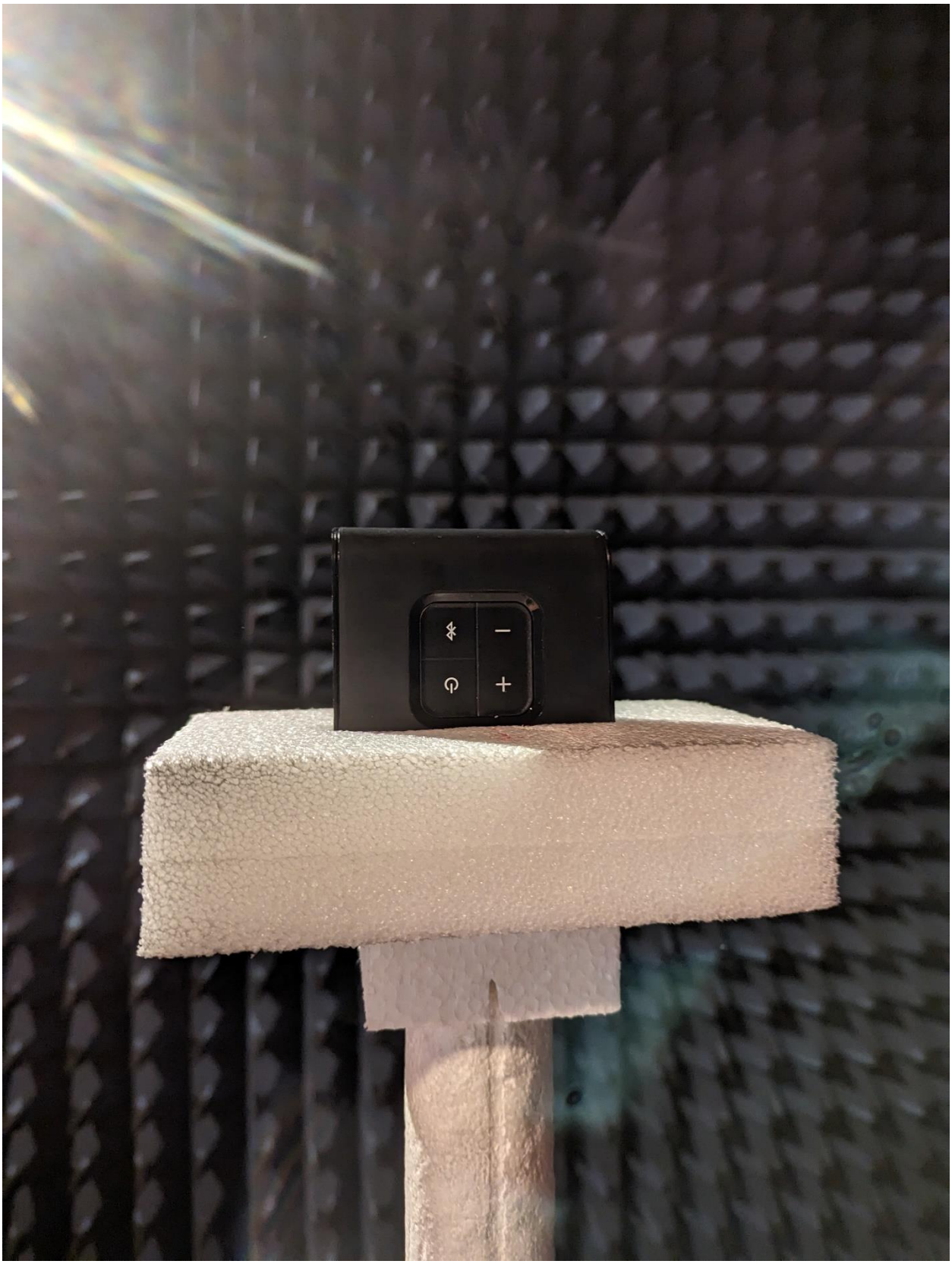
The antenna patterns shown above were measured using a MVG SG24L antenna test system, serial number ATL3843S located at Starkey Laboratories, Inc., 6600 Washington Avenue, South, Eden Prairie, MN 55344.

The system was calibrated on October 12, 2023, and due for calibration in October 2024.

Signal levels were measured using a Keysight N9020B MXA Signal Analyzer (Spectrum Analyzer). serial number MY63470227, calibrated on May 04, 2023, and due for calibration on May 04, 2025.

The antenna pattern plots in above are generated by the SG24L test system software.





Antenna Gain Measurement Information

The MVG SG24L antenna test system runs internal scripts that yield the maximum EIRP from each radiated power measurement. From there, the following equation could be used to calculate the antenna gain in dBi.

Max Antenna Gain = Max EIRP – Conducted Power

Where conducted power is measured near the antenna. Subtracting the conducted power from the EIRP value, yields the antenna gain as follows:

- Max Antenna Gain = +4.89dBi