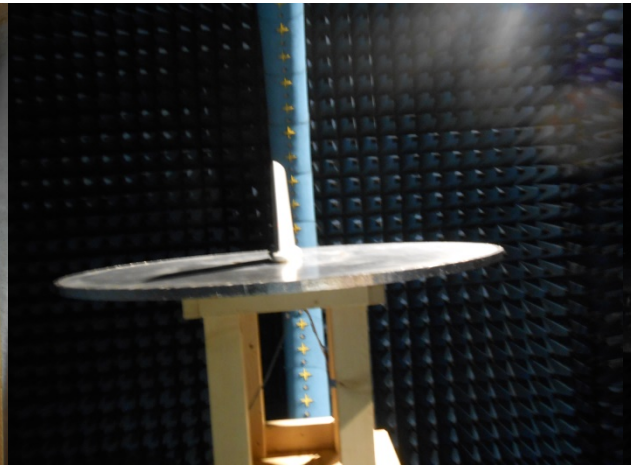
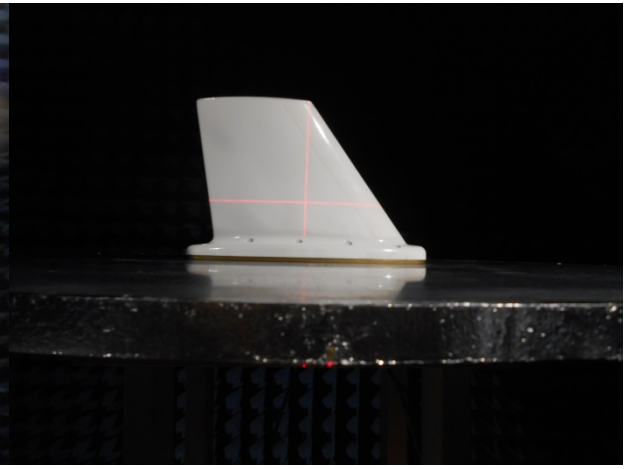
# FDQ Pattern Test Results

2016-09-26

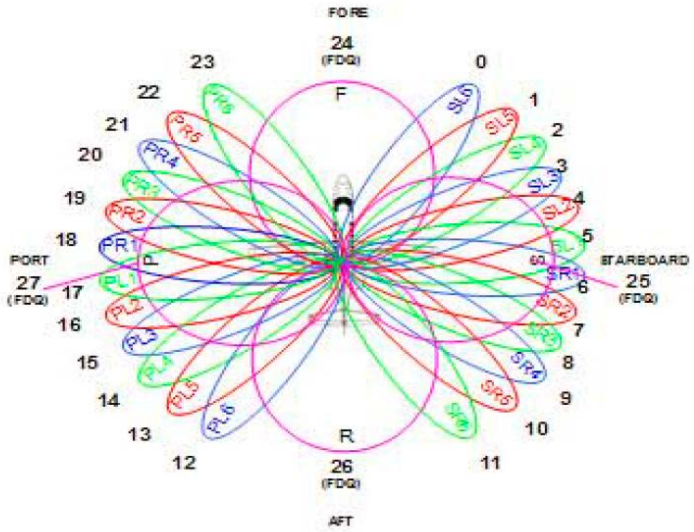
# Test Article and Test setup

- FDQ AT2450-2 S/N 3025
  - Phase 2 Design
- FDQ was mounted and tested on 3’10” diameter circular ground plane
- Tx and Rx Ports were used for all pattern measurements



# FDQ Beam Number Definition




- Antenna Test GUI software was used to select FDQ beams
- Patterns were measured for Beams 24-27
  - Beam 24 = Forward
  - Beam 25 = Starboard
  - Beam 26 = Aft
  - Beam 27 = Port

# Measured Antenna Peak Gain Summary

TX Beams

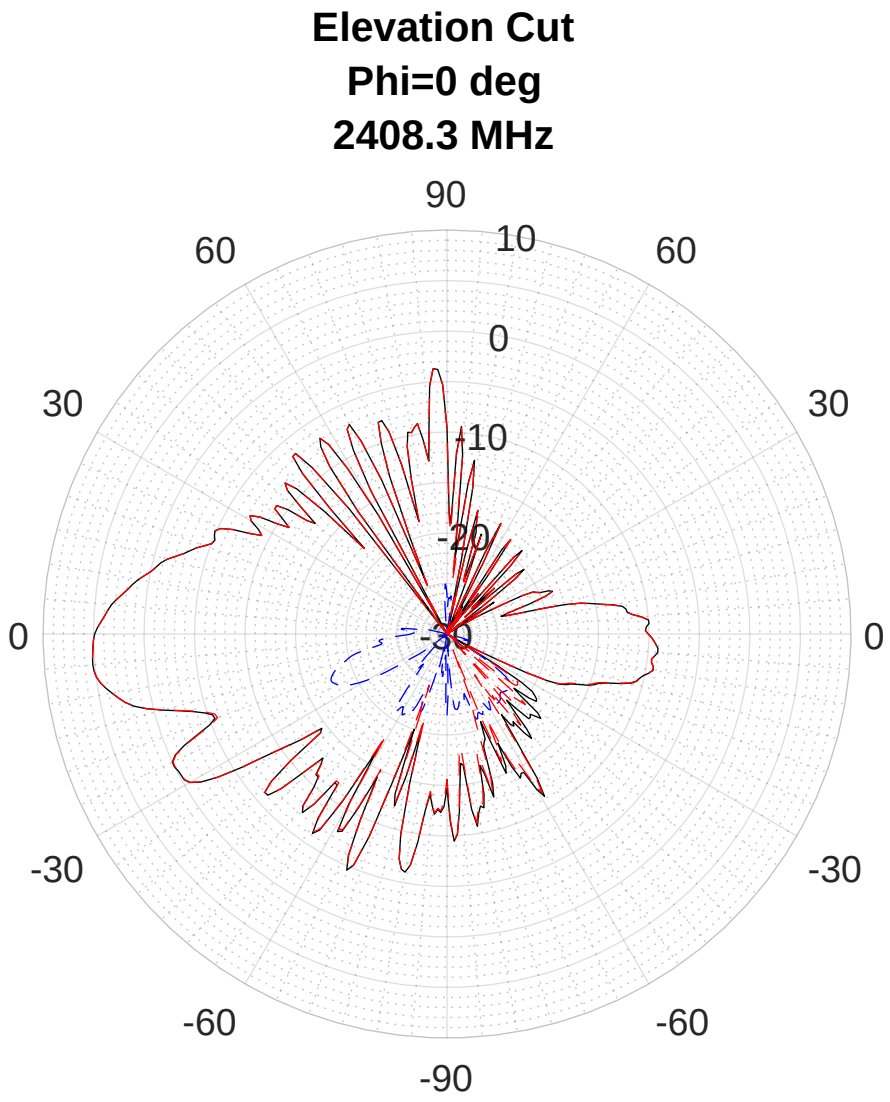
| | | Fore | Starboard | Aft | Port |
|---|---|---|---|---|---|
| Channel | Frequency | 24 | 25 | 26 | 27 |
| A | 2408.3 | 5.20 | 4.24 | 5.30 | 3.29 |
| | 2412.8 | 5.12 | 4.05 | 5.35 | 3.29 |
| | 2417.3 | 4.94 | 3.98 | 5.23 | 3.18 |
| B | 2418.3 | 4.60 | 3.29 | 4.97 | 2.56 |
| | 2422.8 | 4.67 | 3.65 | 5.04 | 3.03 |
| | 2427.3 | 4.05 | 2.66 | 4.49 | 2.14 |
| C | 2428.3 | 4.53 | 2.47 | 4.99 | 1.97 |
| | 2432.8 | 4.82 | 2.81 | 5.35 | 2.38 |
| | 2437.3 | 4.41 | 2.39 | 4.91 | 2.04 |

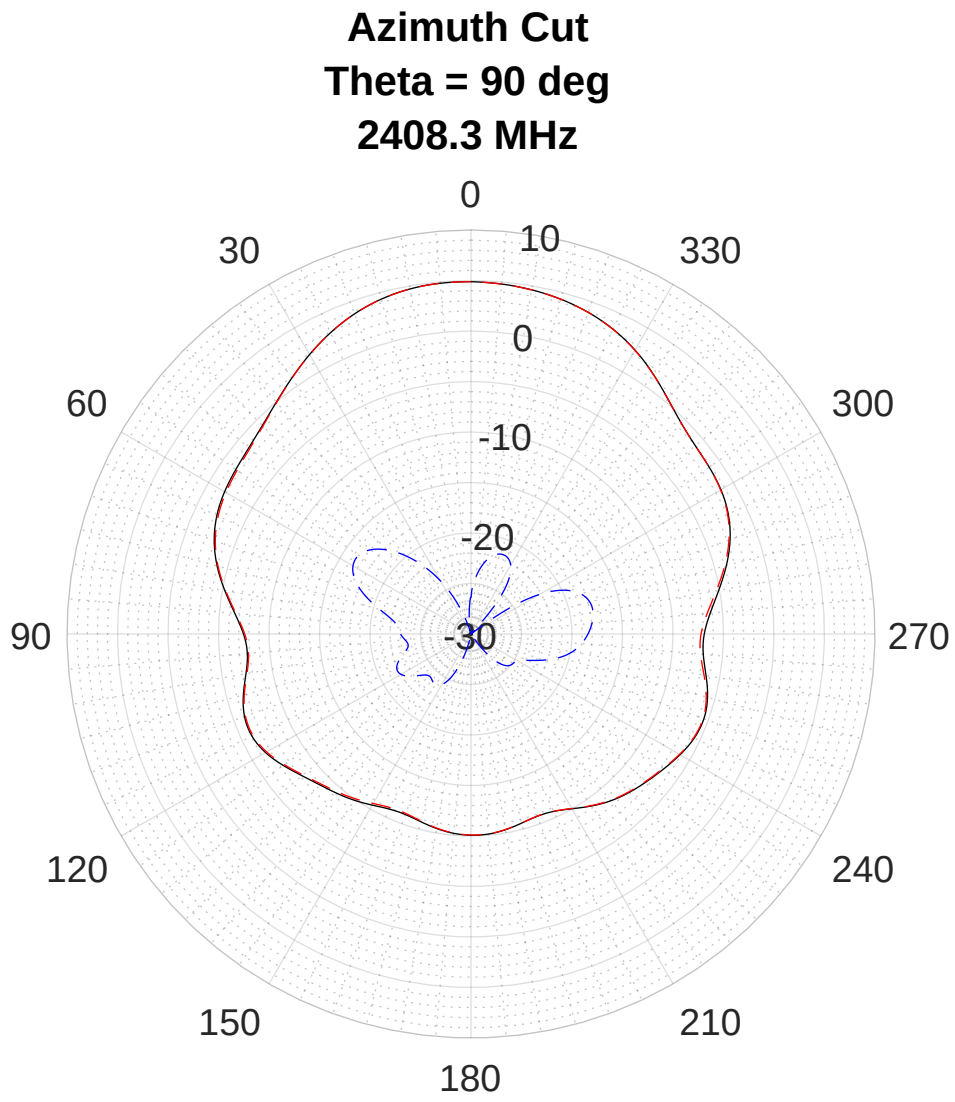
RX Beams

| | | Fore | Starboard | Aft | Port |
|---|---|---|---|---|---|
| Channel | Frequency | 24 | 25 | 26 | 27 |
| A | 2446.2 | 25.50 | 24.00 | 25.84 | 23.80 |
| | 2450.7 | 25.61 | 24.53 | 25.96 | 24.40 |
| | 2455.2 | 24.76 | 23.76 | 25.15 | 23.80 |
| B | 2456.2 | 25.95 | 24.73 | 26.33 | 24.62 |
| | 2460.7 | 27.19 | 26.64 | 27.57 | 26.52 |
| | 2465.2 | 27.69 | 26.92 | 28.19 | 27.01 |
| C | 2466.2 | 25.70 | 23.83 | 26.20 | 23.92 |
| | 2470.7 | 26.21 | 24.69 | 26.71 | 24.79 |
| | 2475.2 | 26.59 | 25.24 | 27.08 | 25.34 |

**PATTERN**
**SAMPLES**

# FDQ 3025, Tx, Channel 1, 2408.3 MHz, Beam No 24

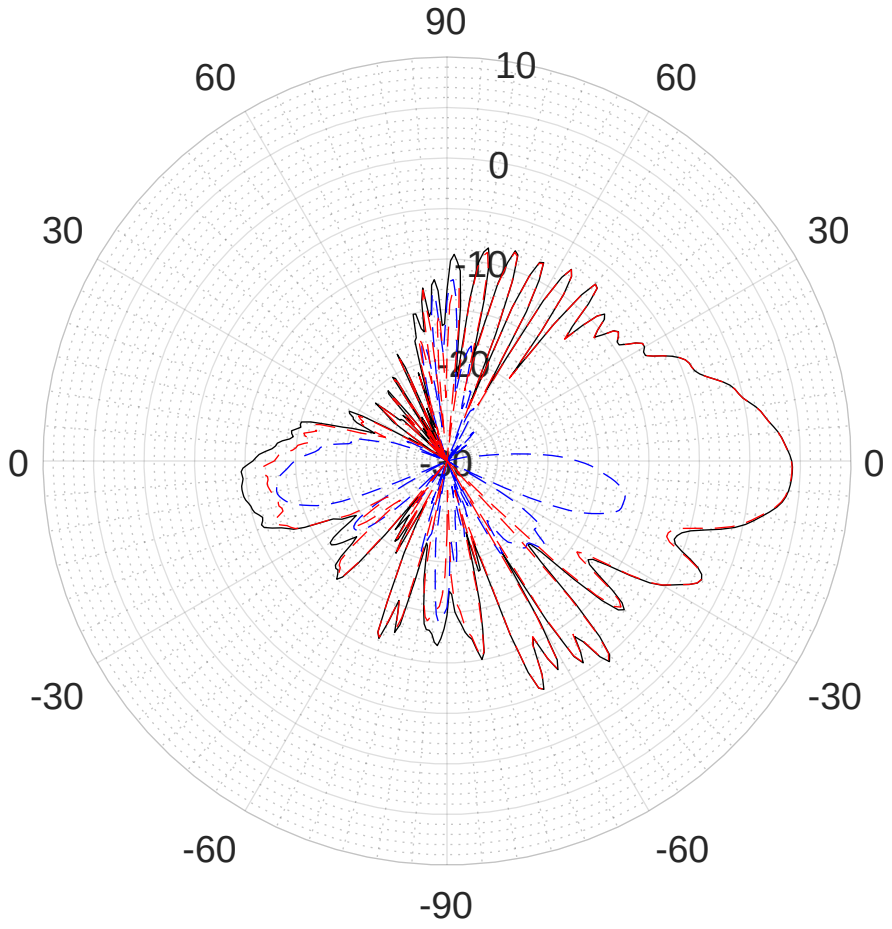


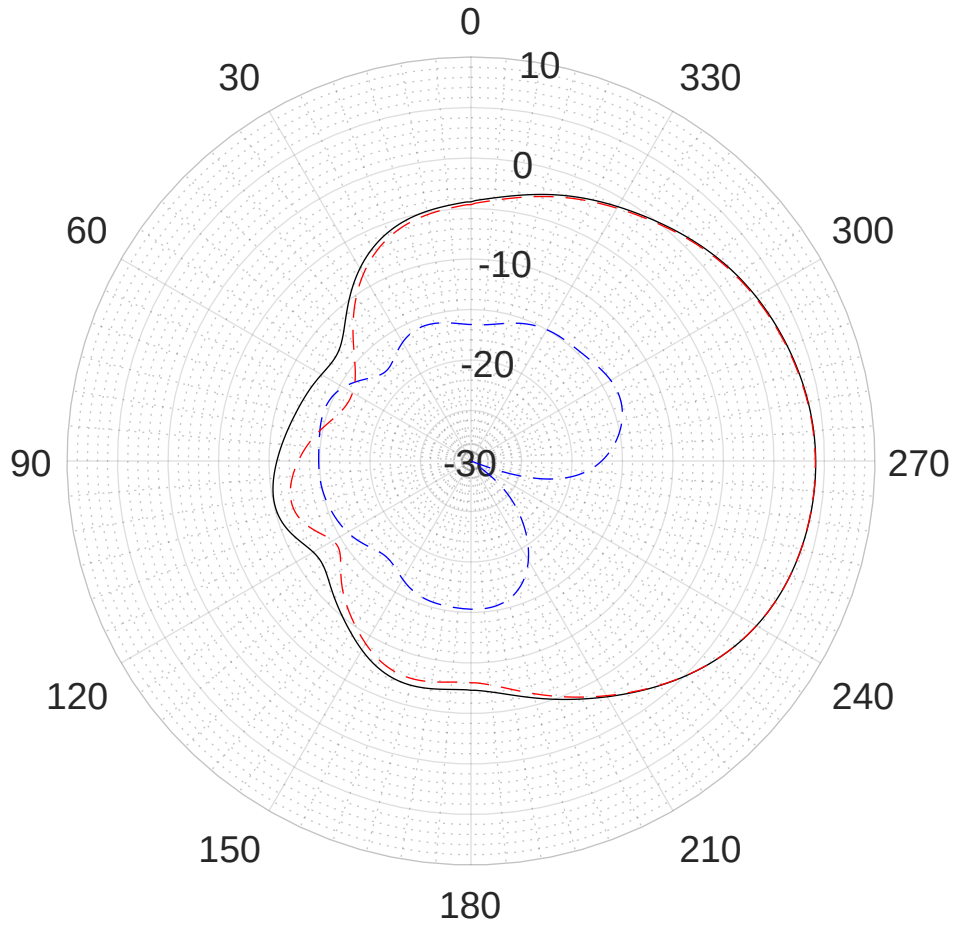

FDQ3025_TX_CH1_BN24-F2408.3.txt

# FDQ 3025, Tx, Channel 1, 2408.3 MHz, Beam No 25

**Elevation Cut**
**Phi=270 deg**
**2408.3 MHz**




**Azimuth Cut**
**Theta = 90 deg**
**2408.3 MHz**




FDQ3025_TX_CH1_BN25-F2408.3.txt