



TAOGLAS®



Datasheet

Synergy Interceptor 11 in 1 Antenna

Part No:
MA1511.IK.001

Description:

- 1*Active GNSS with RG-174 & SMA(M)
- 4*5G/4G MIMO with RG-174 & SMA(M)
- 6*Wi-Fi MIMO with RG-174 & RP-SMA(M)

Features:

- 4 x 5G/4G MIMO Antenna
- 6 x Wi-Fi 2.4GHz/5GHz MIMO Antenna
- 1 x Active GPS/GLONASS/BeiDou Antenna Front End GNSS SAW Filter
- Designed for mounting on the roof of Ford Interceptor Vehicles
- IP67 Rated Waterproof
- High Efficiency/Peak Gain Outdoor Antenna
- Cable: 300mm RG-174 with 4700mm TGC-200
- Connectors: SMA(M) / RP-SMA(M)
- RoHS & REACH Compliant

| | |
|-----------------------------------|----|
| 1. Introduction | 3 |
| 2. Specifications | 4 |
| 3. Active Antenna Characteristics | 10 |
| 4. Antenna Characteristics | 16 |
| 5. Radiation Patterns | 24 |
| 6. Mechanical Drawing | 78 |
| 7. Packaging | 79 |
| Changelog | 80 |

Taoglas makes no warranties based on the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Taoglas reserves all rights to this document and the information contained herein. Reproduction, use or disclosure to third parties without express permission is strictly prohibited.



1. Introduction



The Taoglas Synergy MA1511.IK.001 is an 11-in-1 next-generation permanent mount antenna for vehicle roof applications specifically the Ford Interceptor. It has a fully IP67 rated waterproof robust ABS enclosure and base. The 11 antennas inside support 5G/4G, GPS/GLONASS/BeiDou, Wi-Fi (2.4GHz/5GHz). This outstanding patent-pending antenna delivers powerful MIMO antenna technology for 5G/4G, Wi-Fi 2.4/5.8GHz 802.11n and the emerging 802.11ac, and an optimized GPS/GLONASS/BeiDou patch antenna for location. The 5G/4G antennas also include backward compatibility to work at most worldwide 2G and 3G bands.

Typical Applications:

- Next Generation OEM Automotive Connectivity
- Multimedia, Navigation and Telematics Systems
- V2V, V2X and Fleet Management Applications
- Real-time HD Video Streaming
- First Net Responder Routers

The MA1511 Synergy is ideal for applications that require highly sophisticated antennas for real-time streaming applications that demand high-speed video uplink and downlink into the cabin of the vehicle. These challenges are resolved by the highly efficient, high gain MIMO antennas, with high isolation, all of which is necessary to achieve the required signal to noise ratio and throughput.

The MA1511 can also be customized for your particular wireless application and frequency band, subject to NRE and MOQ. There are 10x 300mm RG-316 cables, terminating in SMA(M) connectors for 5G/4G MIMO 4X4, and RP SMA(M) for Wi-Fi MIMO 6X4. There is a 300mm RG-174 cable for GNSS terminating in an SMA(M) connector.

All cable lengths and connector types are customizable. The Synergy can be supplied with low loss TGC-200 cable extensions for longer cable runs. Contact your regional Taoglas customer services team for details and support.

2. Specifications

| GNSS Frequency Bands Covered | | | | | | | |
|------------------------------|-------------------------------|---------------------------|------------------|--------------------|------------------|---------------|------------------|
| GPS/QZSS | L1 1575.42MHz | L2 1227.6MHz | L5 1176.45MHz | L6 1278.75MHz | | | |
| | ■ | □ | □ | □ | | | |
| GLONASS | L5R 1176.45MHz | L3PT 1201.5MHz | L2PT 1246MHz | L1CR 1575.42MHz | L1PT 1602MHz | | |
| | □ | □ | □ | ■ | ■ | | |
| Galileo | E5a 1176.45MHz | E5b 1201.5MHz | E4 1215MHz | E3 1256MHz | E6 1278.75MHz | E2 1561MHz | L1 1575.42MHz |
| | □ | □ | □ | □ | □ | ■ | ■ |
| BeiDou | B1 1561MHz | B2 1207.14MHz | B3 1268.52MHz | | | | |
| | ■ | □ | □ | | | | |
| Compass | E5B(B2)/ E6(B3) 1268.56MHz | E2(B1) 1561MHz | | | | | |
| | □ | ■ | | | | | |
| SBAS | Omnistar 1542.5MHz | WAAS/EGN OS 1575.42MHz | | | | | |
| | □ | ■ | | | | | |

| GNSS Electrical | | | |
|---|--------|---------|-------|
| Frequency (MHz) | 1561 | 1575.42 | 1602 |
| VSWR (max.) | 2.5 | 2.5 | 2.5 |
| Passive Antenna Efficiency (%) (Without cable loss) | 40.02 | 48.39 | 44.29 |
| Passive Antenna Gain at Zenith (dBic) (Without cable loss) | 3.75 | 4.44 | 4.54 |
| Axial Ratio (dB) | 20 | 11 | 15 |
| Polarization | RHCP | | |
| Impedance | 50Ω | | |
| Cable | RG-174 | | |
| Connector | SMA(M) | | |

| LNA and Filter Electrical Properties | | | |
|--|-------------|----------------|-------------|
| Frequency (MHz) | 1561 | 1575.42 | 1602 |
| VSWR (max.) | 2.0:1 | 2.0:1 | 2.0:1 |
| Gain@1.8V (dBic) | 28.8 dB | 28.8 dB | 28 dB |
| Gain@3.0V (dBic) | 29 dB | 29 dB | 28.3 dB |
| Gain@5.5V (dBic) | 29.6 dB | 29.4 dB | 28.7 dB |
| Noise@1.8V (dB) | 2.8 dB | 2.3 dB | 2.8 dB |
| Noise@3.0V (dB) | 2.8 dB | 2.2 dB | 2.8 dB |
| Noise@5.5V (dB) | 2.9 dB | 2.3 dB | 2.8 dB |
| Power consumption@1.8V (mA) | 8.7 mA | | |
| Power consumption@3.0V (mA) | 9.0 mA | | |
| Power consumption@5.5V (mA) | 11 mA | | |
| Total Specification (Through Antenna, SAW Filter and LNA) | | | |
| Frequency (MHz) | 1561 | 1575.42 | 1602 |
| Gain@3V (dBic) | 31.7 ± 3 | 32.4 ± 3 | 32.4 ± 3 |
| Output Impedance | 50Ω | | |

| 5G/4G Antenna | | | | | | | | | | | |
|-------------------|----|---------------|-------------|-------------|---------------|---------------|---------------|---------------|---------------|-----------------------|--------------------|
| Frequency (MHz) | | 5G NR Band 71 | LTE700 | GSM 850/900 | 5G NR Band | DCS | PCS | UMTS1 | LTE2600 | 5G NR Band 77, 78, 79 | LTE5200/Wi-Fi 5800 |
| | | 617 ~698 | 698 ~824 | 824 ~960 | 1427 ~1518 | 1710 ~1880 | 1850 ~1990 | 1920 ~2170 | 2300 ~2690 | 3300 ~3800 | 5150 ~5925 |
| Efficiency (%) | | | | | | | | | | | |
| MIMO 1 | 5m | 30.79 | 30.39 | 34.96 | 39.48 | 46.48 | 32.68 | 32.15 | 43.45 | 49.25 | 49.39 |
| MIMO 2 | 5m | 18.62 | 31.96 | 30.24 | 43.80 | 42.07 | 37.06 | 38.94 | 44.95 | 31.36 | 44.49 |
| MIMO 3 | 5m | 30.07 | 30.40 | 32.11 | 47.07 | 42.70 | 34.09 | 33.14 | 41.63 | 49.49 | 20.60 |
| MIMO 4 | 5m | 21.05 | 30.90 | 32.56 | 38.32 | 42.80 | 39.73 | 38.88 | 43.70 | 29.88 | 48.09 |
| Average Gain (dB) | | | | | | | | | | | |
| MIMO 1 | 5m | -5.12 | -5.17 | -4.56 | -4.04 | -3.33 | -4.86 | -4.93 | -3.62 | -3.08 | -3.06 |
| MIMO 2 | 5m | -7.30 | -4.95 | -5.19 | -3.59 | -3.76 | -4.31 | -4.10 | -3.47 | -5.04 | -3.52 |
| MIMO 3 | 5m | -5.22 | -5.17 | -4.93 | -3.27 | -3.70 | -4.67 | -4.80 | -3.81 | -3.06 | -6.86 |
| MIMO 4 | 5m | -6.77 | -5.10 | -4.87 | -4.17 | -3.69 | -4.01 | -4.10 | -3.59 | -5.25 | -3.18 |
| Peak Gain (dBi) | | | | | | | | | | | |
| MIMO 1 | 5m | -0.08 | 1.04 | 2.03 | 2.94 | 4.55 | 2.93 | 3.20 | 4.96 | 5.82 | 5.90 |
| MIMO 2 | 5m | -0.58 | 0.49 | 1.42 | 3.76 | 3.31 | 2.32 | 3.75 | 4.84 | 3.77 | 5.89 |
| MIMO 3 | 5m | 0.25 | 1.44 | 1.63 | 3.47 | 3.77 | 2.45 | 3.00 | 5.06 | 5.99 | 5.57 |
| MIMO 4 | 5m | -0.20 | 1.13 | 2.93 | 2.52 | 3.61 | 2.79 | 3.97 | 4.76 | 2.91 | 6.28 |
| Impedance | | 50 Ω | | | | | | | | | |
| Polarization | | Linear | | | | | | | | | |
| Radiation Pattern | | Omni | | | | | | | | | |
| Max. input power | | 2W | | | | | | | | | |

| Wi-Fi MIMO | | | |
|--------------------------|----|------------------|------------------|
| Frequency (MHz) | | 2400~2500 | 5150~5850 |
| Efficiency (%) | | | |
| MIMO 1 | 5m | 33.16 | 42.72 |
| MIMO 2 | 5m | 47.59 | 47.92 |
| MIMO 3 | 5m | 35.95 | 35.76 |
| MIMO 4 | 5m | 32.75 | 39.08 |
| MIMO 5 | 5m | 47.06 | 46.93 |
| MIMO 6 | 5m | 32.50 | 42.13 |
| Average Gain (dB) | | | |
| MIMO 1 | 5m | -4.79 | -3.69 |
| MIMO 2 | 5m | -3.22 | -3.19 |
| MIMO 3 | 5m | -4.44 | -4.47 |
| MIMO 4 | 5m | -4.85 | -4.08 |
| MIMO 5 | 5m | -3.27 | -3.29 |
| MIMO 6 | 5m | -4.88 | -3.75 |
| Peak Gain (dBi) | | | |
| MIMO 1 | 5m | 2.11 | 5.78 |
| MIMO 2 | 5m | 3.12 | 7.03 |
| MIMO 3 | 5m | 2.16 | 5.30 |
| MIMO 4 | 5m | 3.22 | 5.43 |
| MIMO 5 | 5m | 2.47 | 6.55 |
| MIMO 6 | 5m | 2.24 | 5.96 |
| Impedance | | 50 Ω | |
| Polarization | | Linear | |
| Radiation Pattern | | Omni | |
| Max. input power | | 2W | |

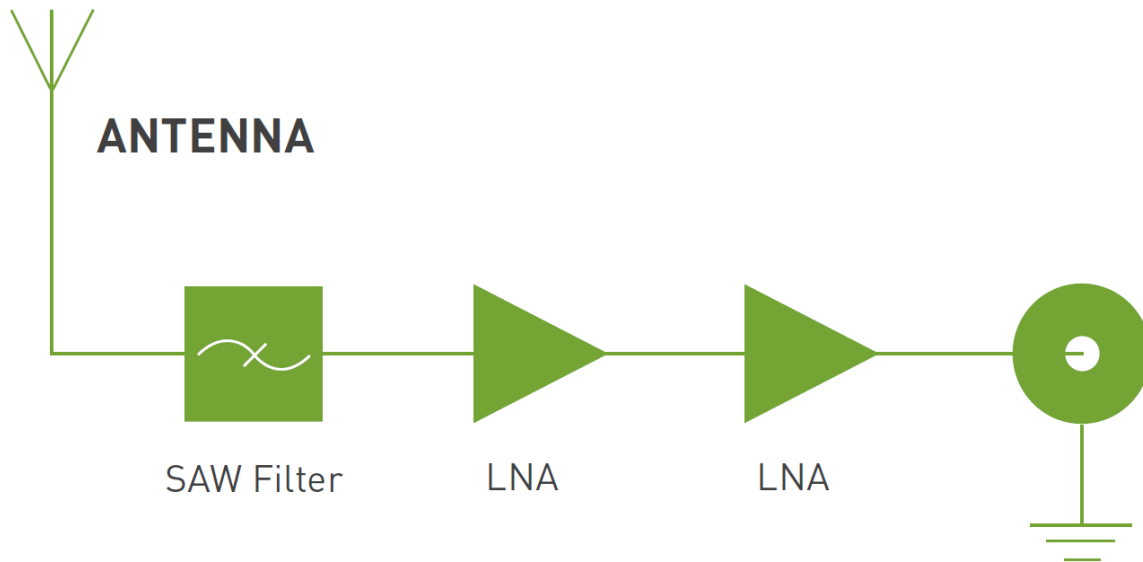
| Mechanical | |
|--------------------|--|
| Height | 57.47mm |
| Planner Dimension | Ø160mm |
| Casing | PC |
| Cable | 0.3m RG-174 with 4.7m TGC-200 for 5G/4G – Fully Customizable 0.3m RG-174 with 4.7m TGC-200 for Wi-Fi – Fully Customizable 0.3m RG174 with 4.7m TGC-200 for GNSS – Fully Customizable |
| Connector | 5G/4G_SMA-Plug – Fully Customizable Wi-Fi_RP-SMA-Plug – Fully Customizable GNSS_SMA-Plug – Fully Customizable |
| Thread | 18.23mm |
| Thread Diameter | M22 |
| Waterproof | IP67 |
| Sealant | Rubber Stopper and O-Ring |
| Weight | 2.7Kg |
| Environmental | |
| Ingress Protection | IP67 |
| Temperature Range | -40°C to 85°C |
| Humidity | Non-condensing 65°C 95% RH |
| Cable Pull | RG-174 4 Kg |

| 5G/4G Bands | | | |
|-------------|--|-------------------------------|---------|
| Band Number | 5G NR / FR1 / LTE / LTE-Advanced / WCDMA / HSPA / HSPA+ / TD-SCDMA | | |
| | Uplink | Downlink | Covered |
| 1 | UL: 1920 to 1980 | DL: 2110 to 2170 | ✓ |
| 2 | UL: 1850 to 1910 | DL: 1930 to 1990 | ✓ |
| 3 | UL: 1710 to 1785 | DL: 1805 to 1880 | ✓ |
| 4 | UL: 1710 to 1755 | DL: 2110 to 2155 | ✓ |
| 5 | UL: 824 to 849 | DL: 869 to 894 | ✓ |
| 7 | UL: 2500 to 2570 | DL: 2620 to 2690 | ✓ |
| 8 | UL: 880 to 915 | DL: 925 to 960 | ✓ |
| 9 | UL: 1749.9 to 1784.9 | DL: 1844.9 to 1879.9 | ✓ |
| 11 | UL: 1427.9 to 1447.9 | DL: 1475.9 to 1495.9 | ✓ |
| 12 | UL: 699 to 716 | DL: 729 to 746 | ✓ |
| 13 | UL: 777 to 787 | DL: 746 to 756 | ✓ |
| 14 | UL: 788 to 798 | DL: 758 to 768 | ✓ |
| 17 | UL: 704 to 716 | DL: 734 to 746 (LTE only) | ✓ |
| 18 | UL: 815 to 830 | DL: 860 to 875 (LTE only) | ✓ |
| 19 | UL: 830 to 845 | DL: 875 to 890 | ✓ |
| 20 | UL: 832 to 862 | DL: 791 to 821 | ✓ |
| 21 | UL: 1447.9 to 1462.9 | DL: 1495.9 to 1510.9 | ✓ |
| 22 | UL: 3410 to 3490 | DL: 3510 to 3590 | ✓ |
| 23 | UL: 2000 to 2020 | DL: 2180 to 2200 (LTE only) | ✓ |
| 24 | UL: 1625.5 to 1660.5 | DL: 1525 to 1559 (LTE only) | ✓ |
| 25 | UL: 1850 to 1915 | DL: 1930 to 1995 | ✓ |
| 26 | UL: 814 to 849 | DL: 859 to 894 | ✓ |
| 27 | UL: 807 to 824 | DL: 852 to 869 (LTE only) | ✓ |
| 28 | UL: 703 to 748 | DL: 758 to 803 (LTE only) | ✓ |
| 29 | UL: - | DL: 717 to 728 (LTE only) | ✓ |
| 30 | UL: 2305 to 2315 | DL: 2350 to 2360 (LTE only) | ✓ |
| 31 | UL: 452.5 to 457.5 | DL: 462.5 to 467.5 (LTE only) | ✗ |
| 32 | UL: - | DL: 1452 - 1496 | ✓ |
| 35 | | 1850 to 1910 | ✓ |
| 38 | | 2570 to 2620 | ✓ |
| 39 | | 1880 to 1920 | ✓ |
| 40 | | 2300 to 2400 | ✓ |
| 41 | | 2496 to 2690 | ✓ |
| 42 | | 3400 to 3600 | ✓ |
| 43 | | 3600 to 3800 | ✓ |
| 48 | | 3550 to 3700 | ✓ |
| 66 | UL: 1710-1780 | DL: 2110-2200 | ✓ |
| 71 | | 617 to 698 | ✓ |
| 74/75/76 | | 1427 to 1518 | ✓ |
| 78 | | 3300 to 3800 | ✓ |
| 79 | | 4400 to 5000 | ✓ |

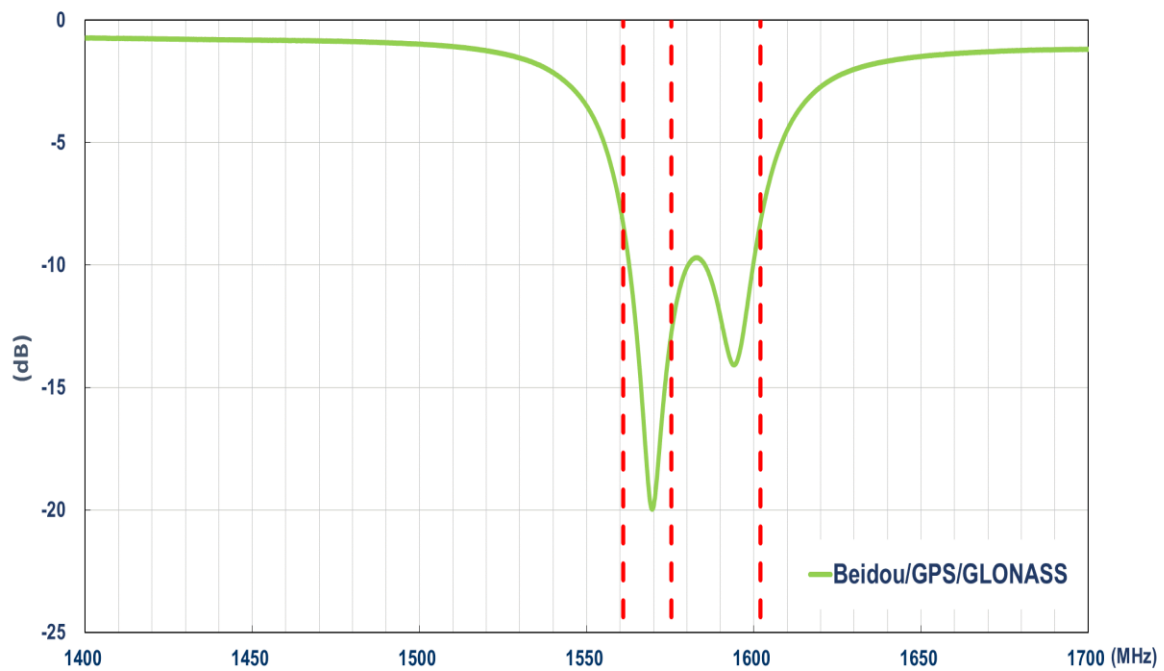
* Covered Bands represent greater than 20% efficiency

3. Active Antenna Characteristics

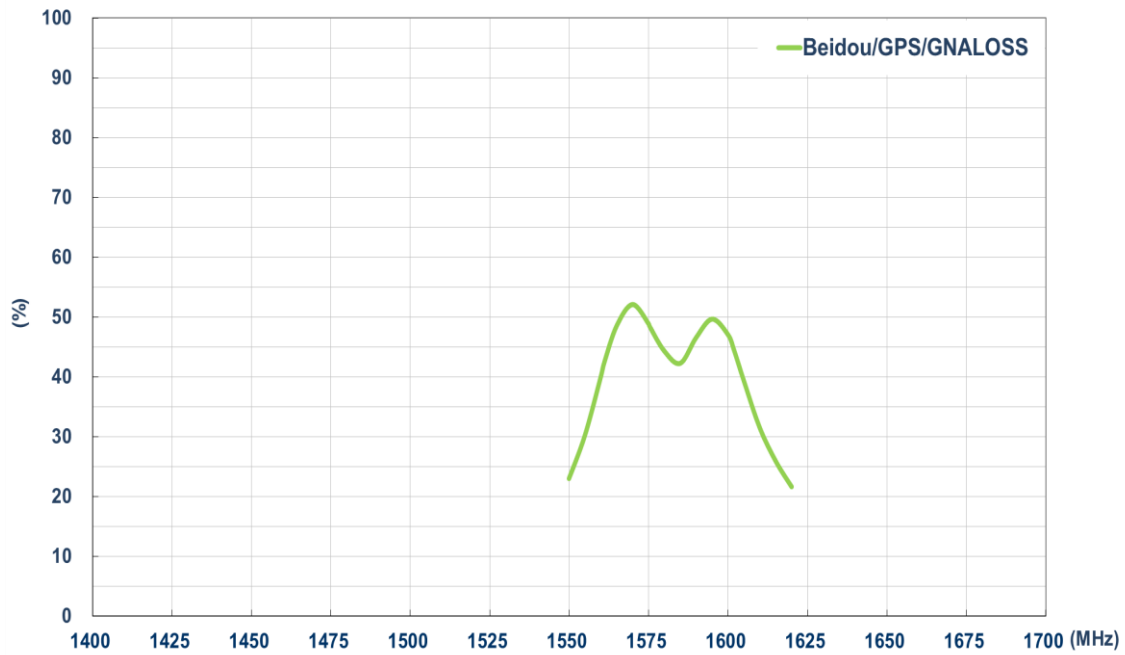
3.1 Block Diagram (Active antenna)



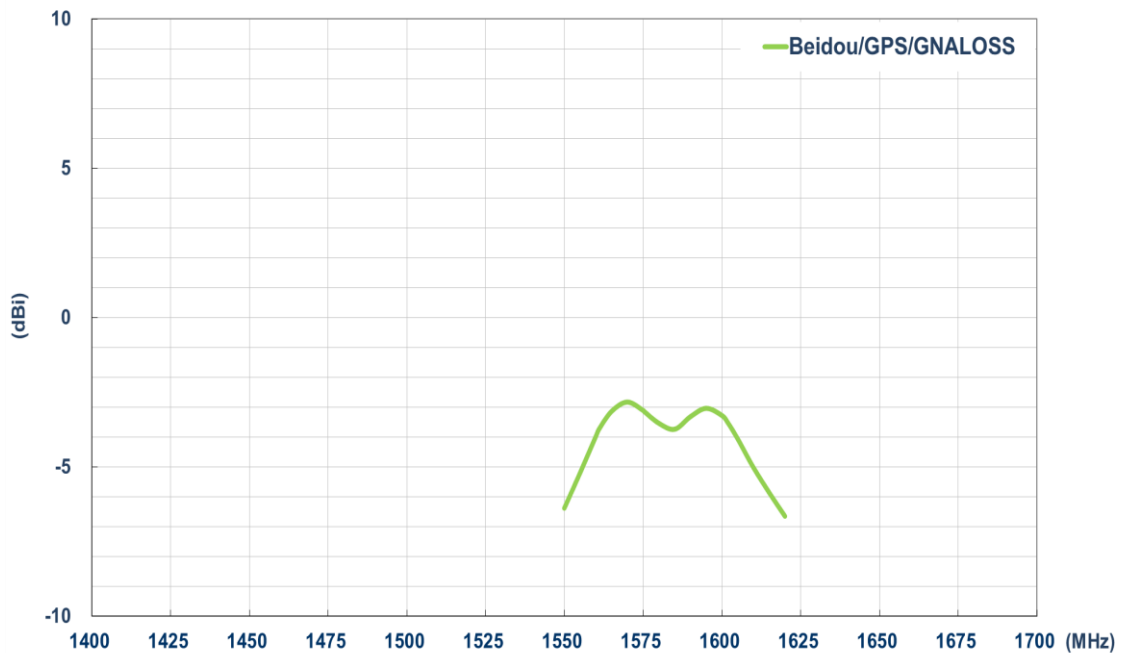
3.2 Passive Antenna Return Loss



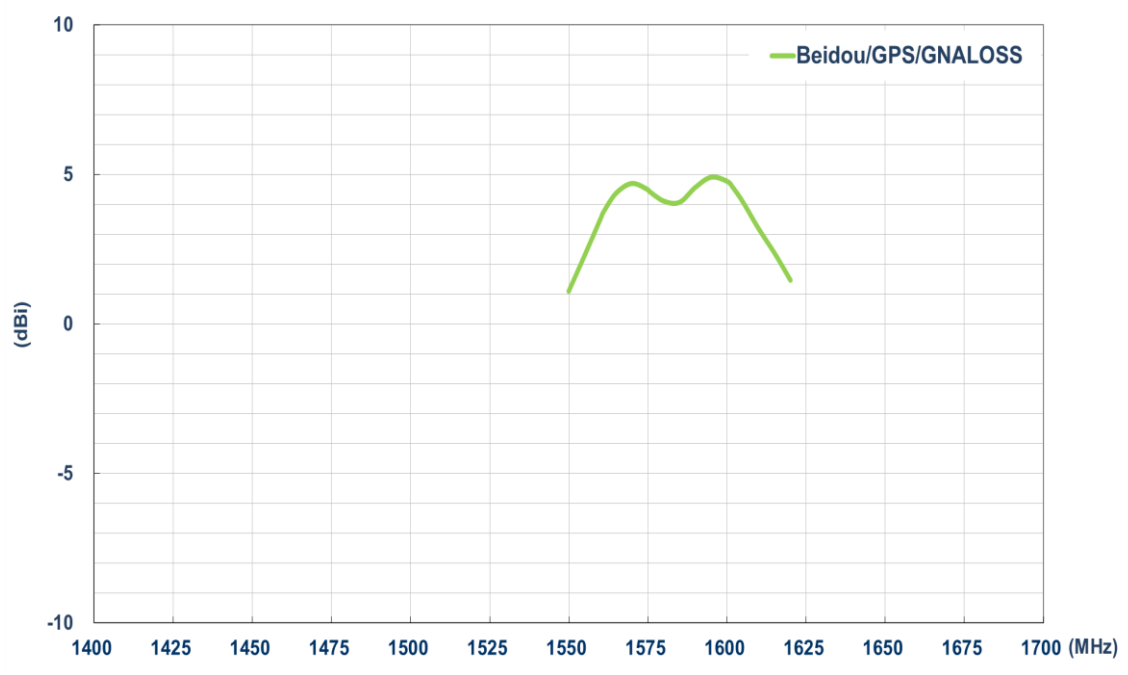
3.3 Passive Antenna Efficiency



3.4 Passive Antenna Average Gain

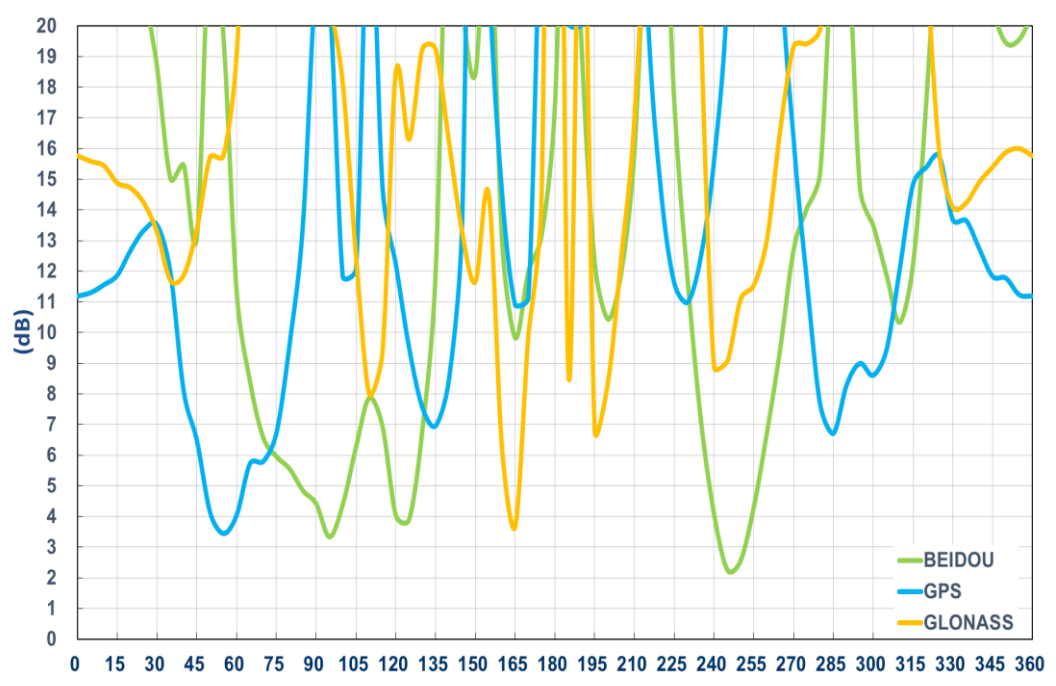


3.5 Passive Antenna Peak Gain

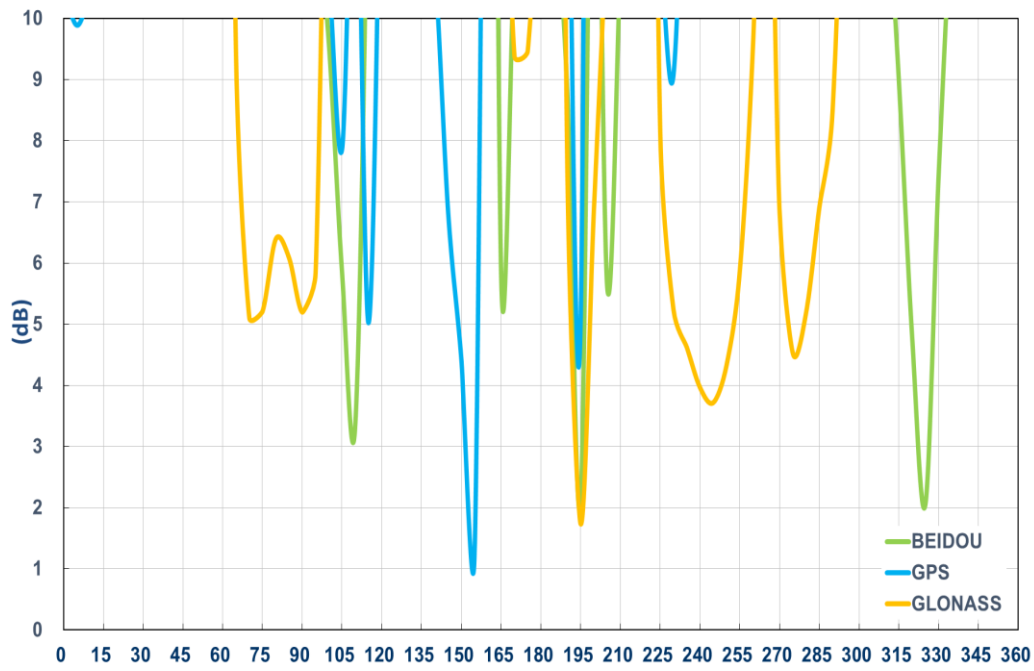


3.6 Passive Antenna Axial Ratio (Zenith is at 0°)

XZ-plane

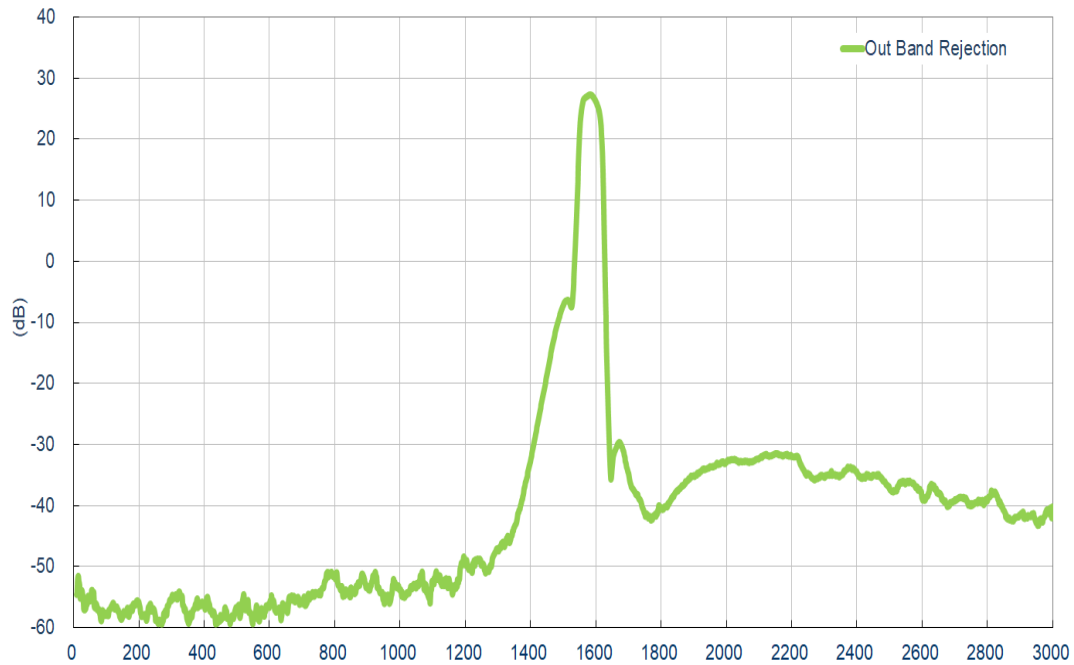


YZ-plane

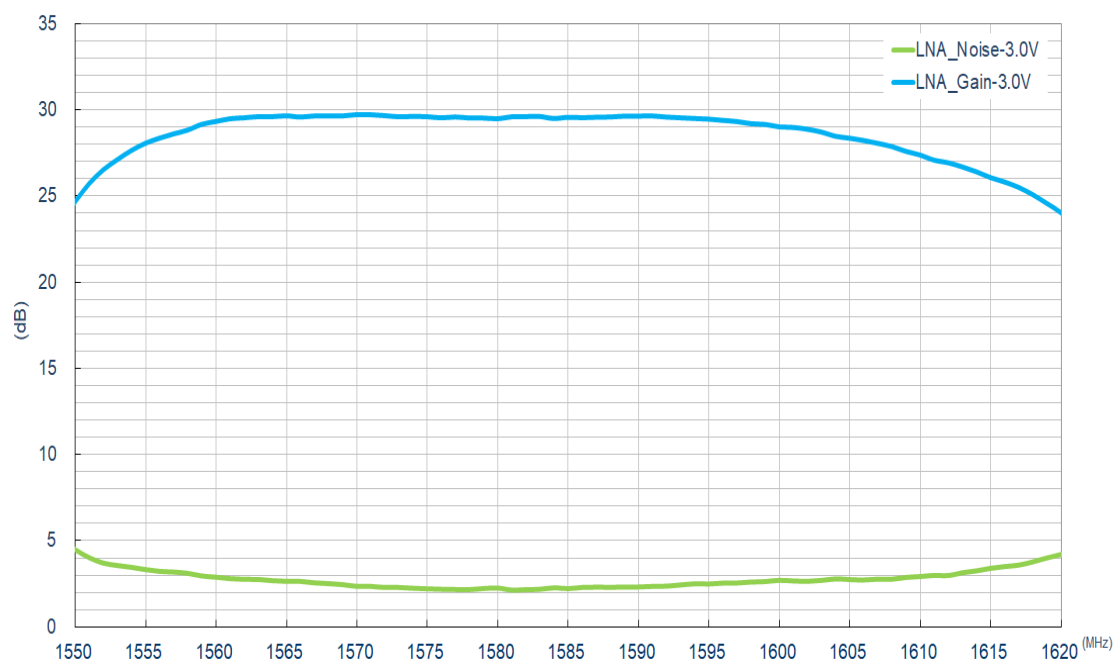


3.7 Active measurements

LNA Gain @ 3.0V

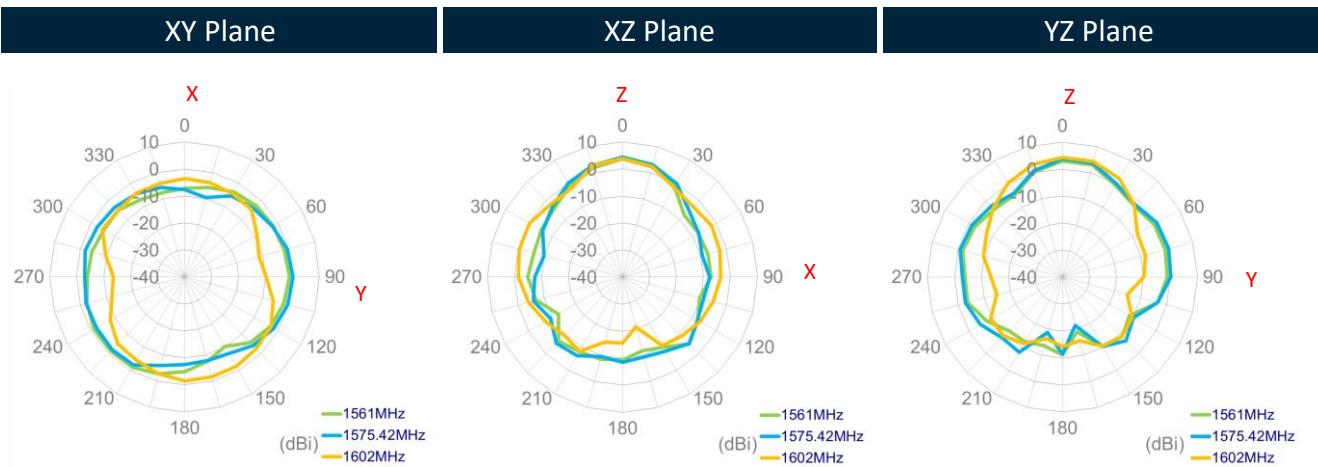
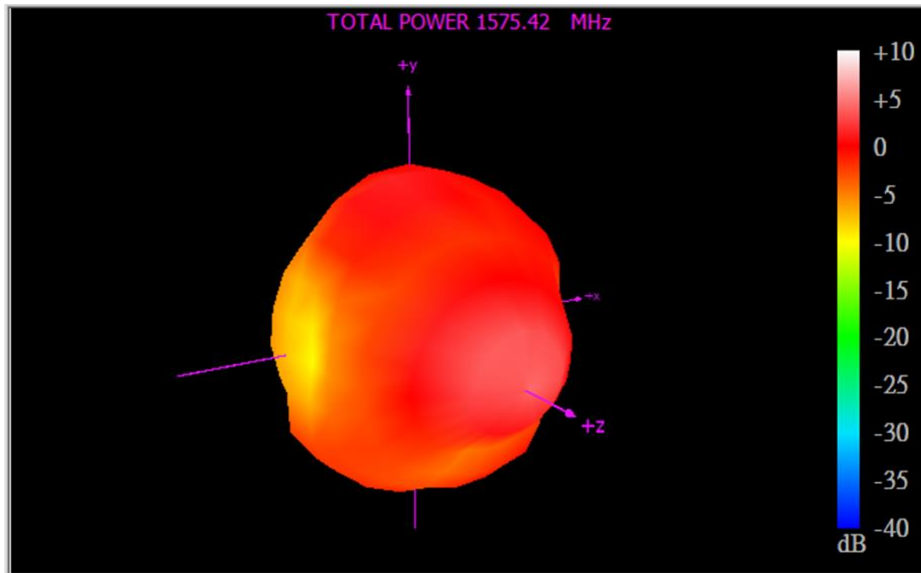


Noise Figure @ 3.0V



3.8 Passive Antenna Radiation Patterns

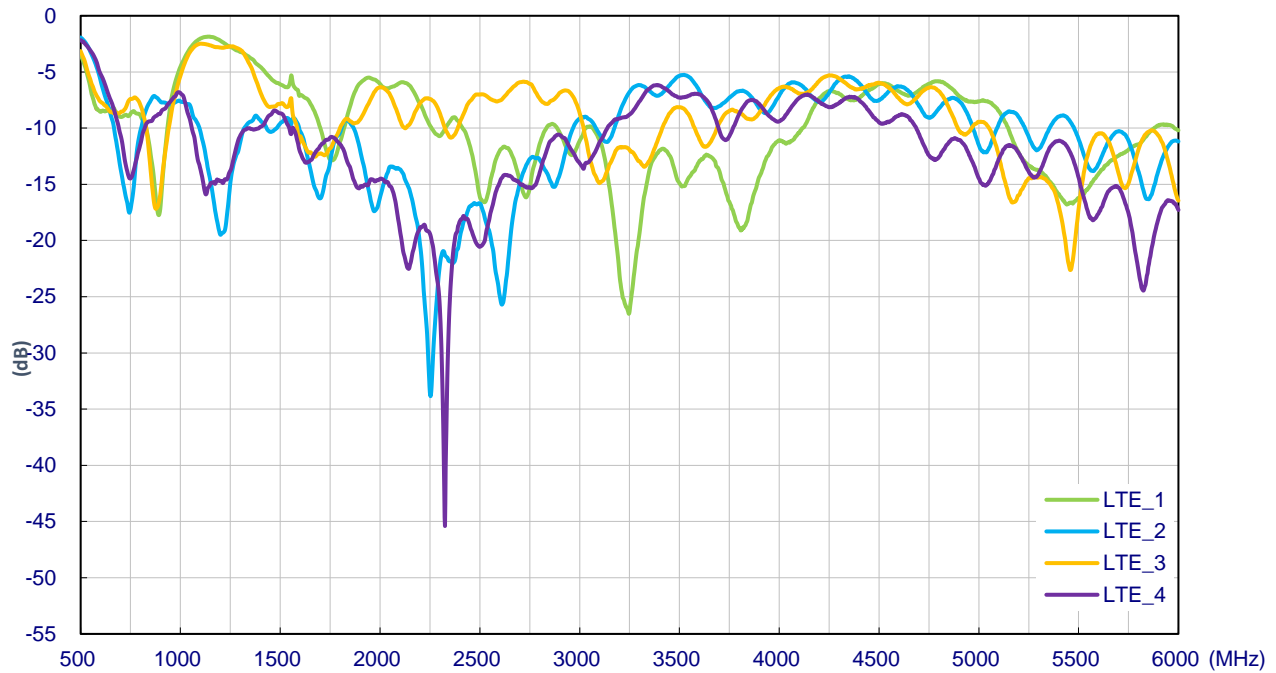
1575.42MHz



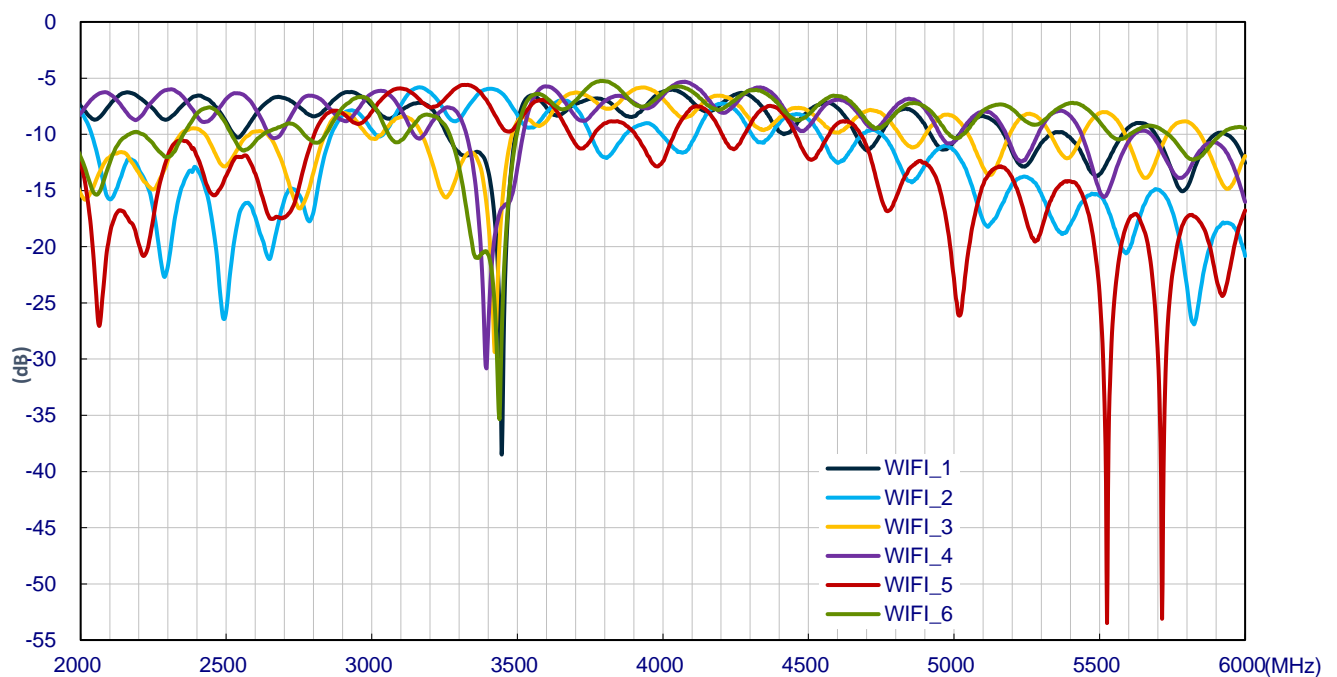
4. Antenna Characteristics

4.1 Return Loss

5G/4G MIMO

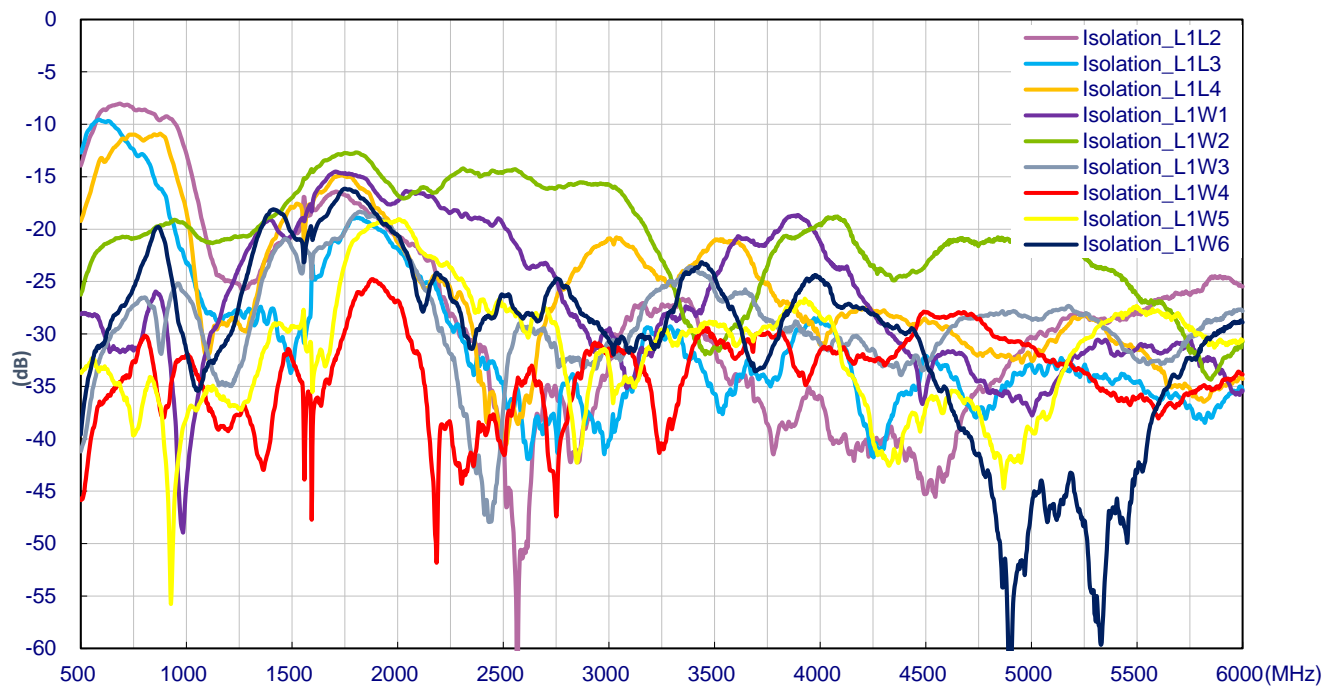


Wi-Fi MIMO

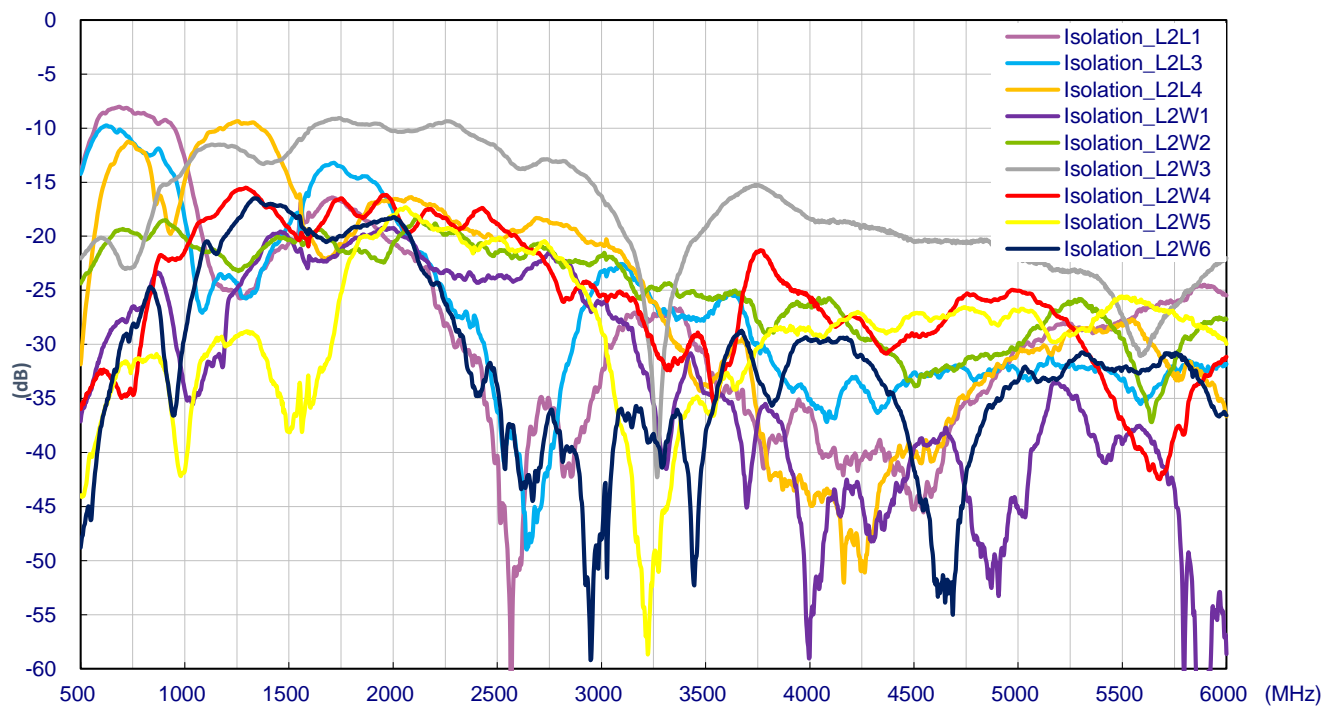


4.2 Isolation

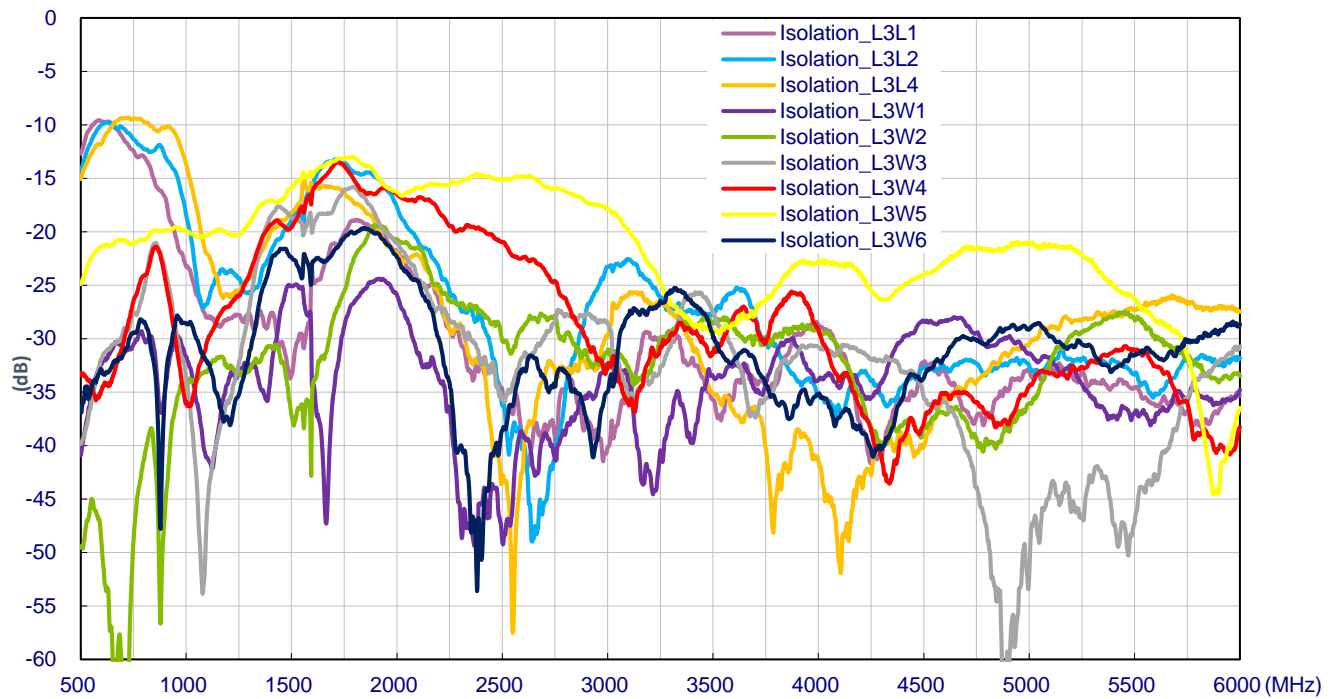
5G/4G 1



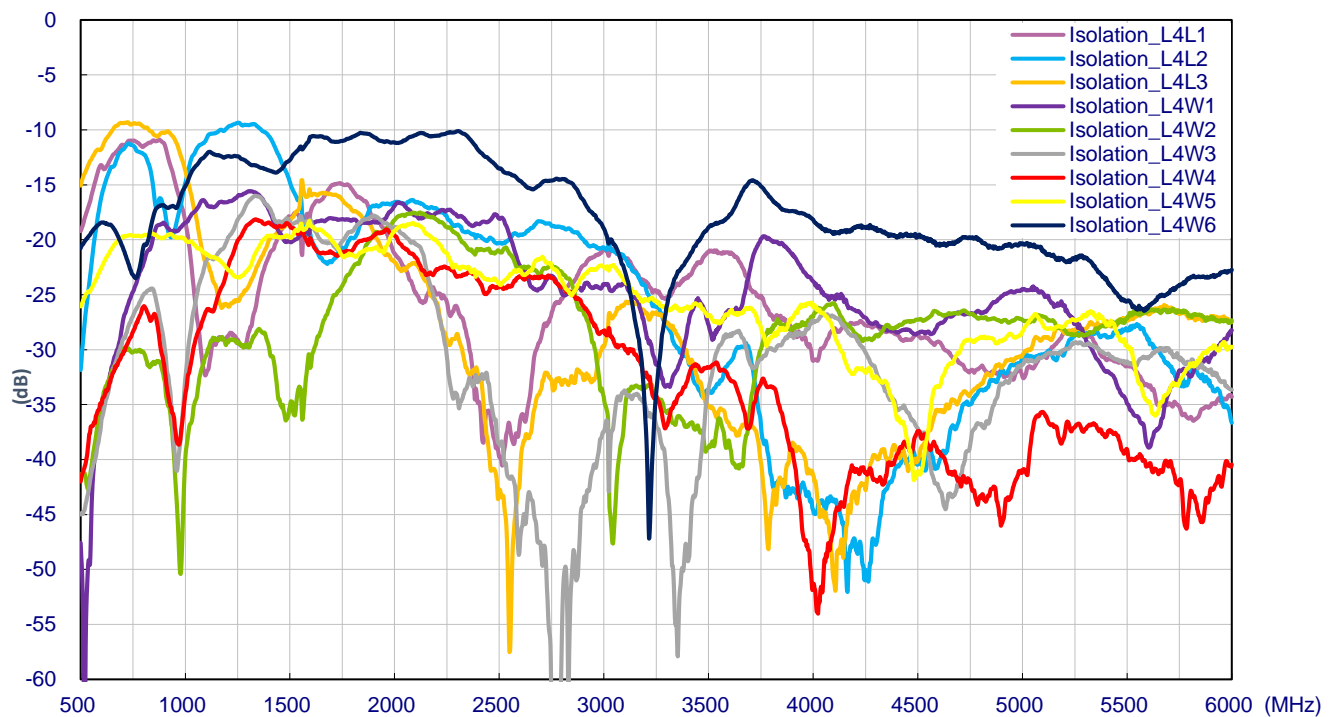
5G/4G 2



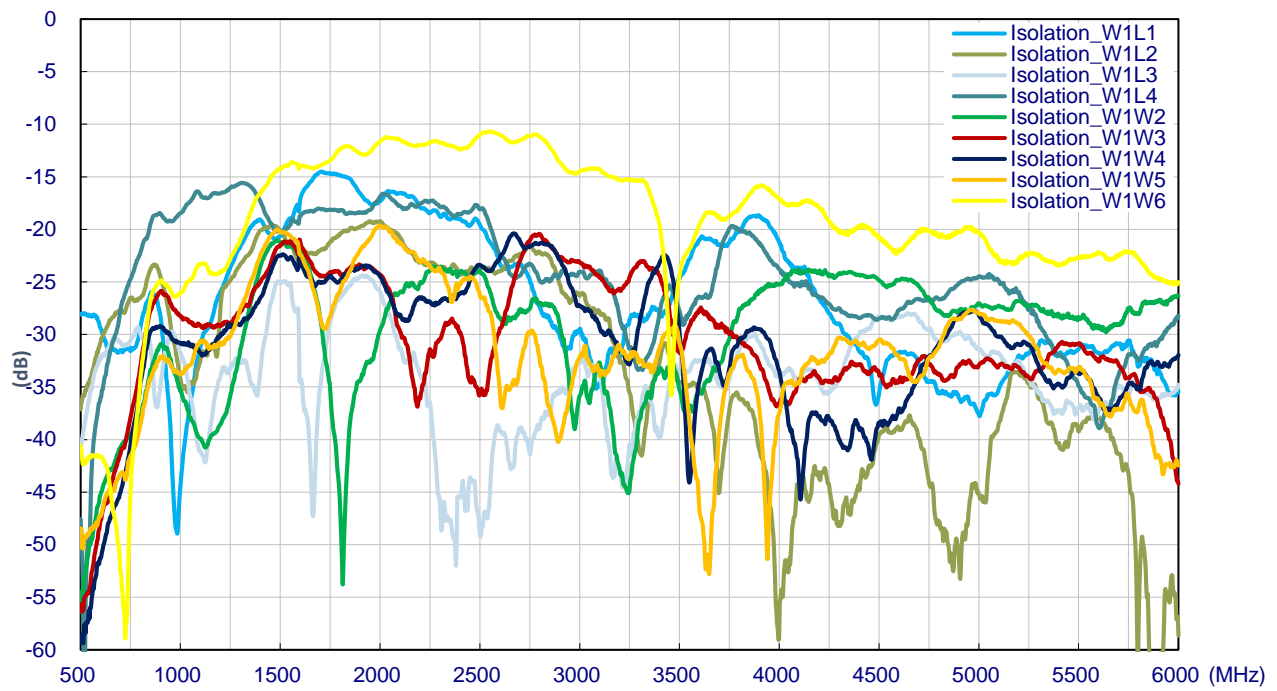
5G/4G 3



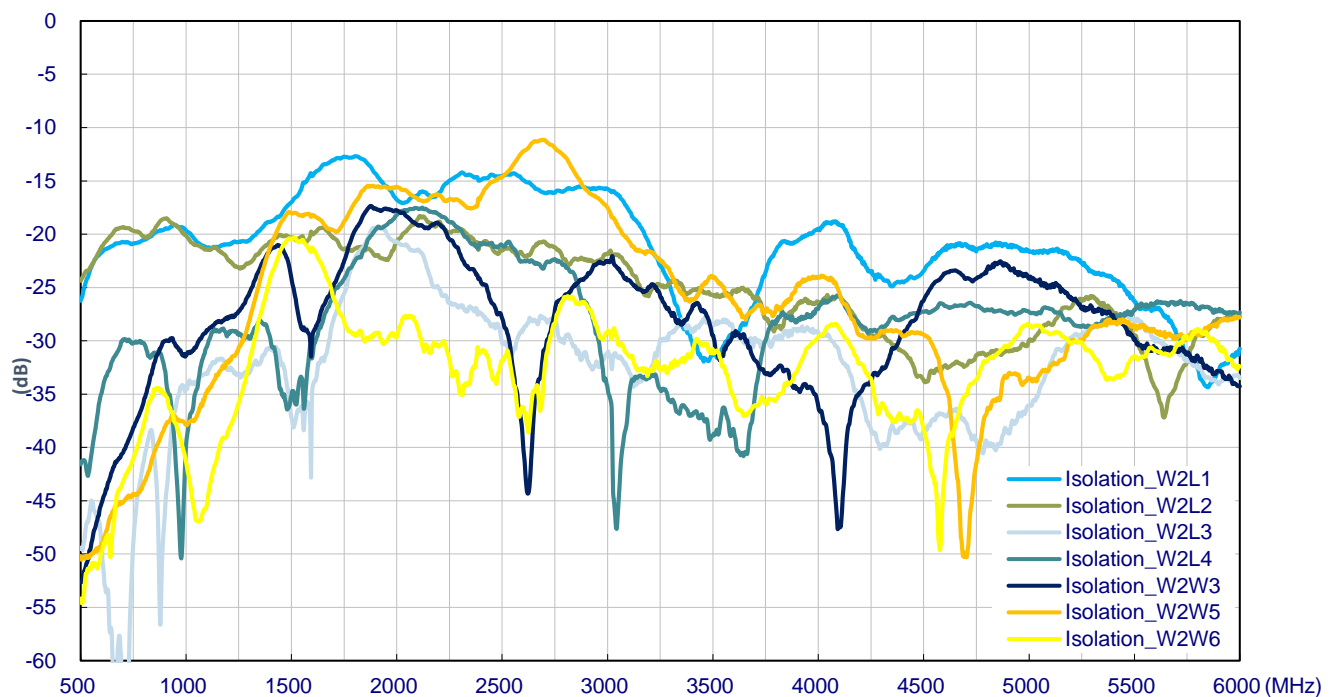
5G/4G 4



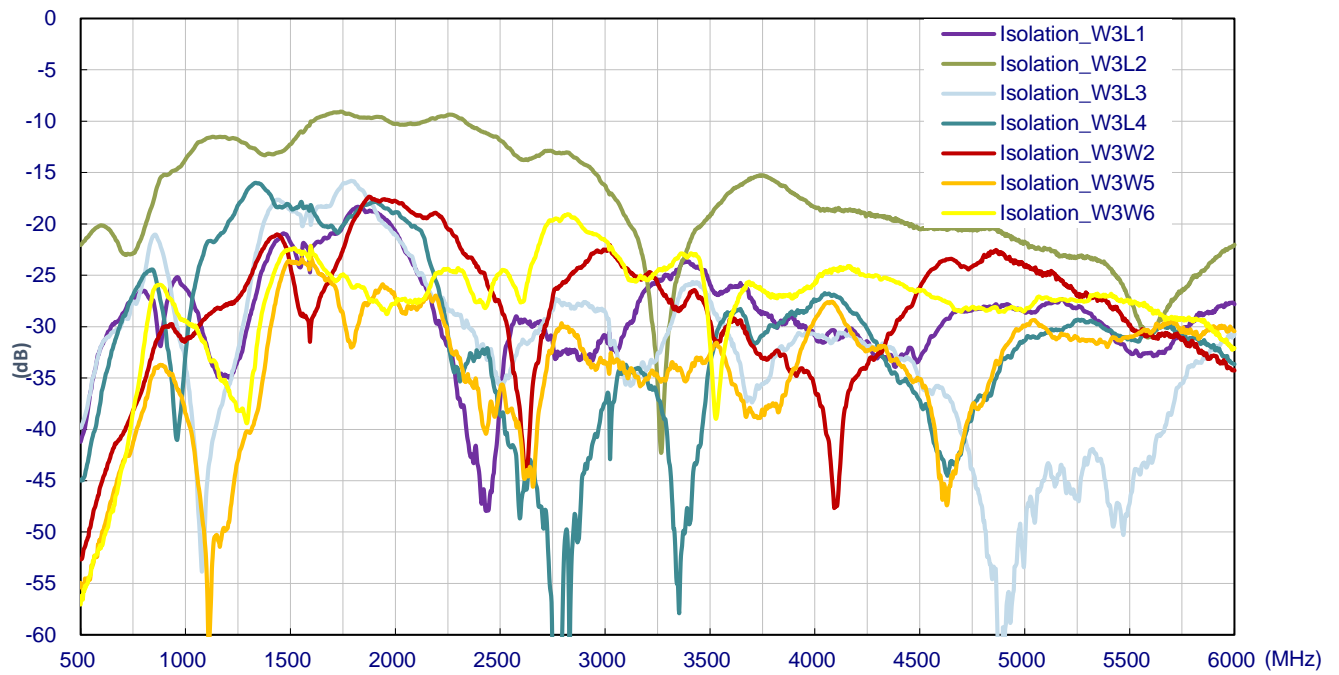
Wi-Fi 1



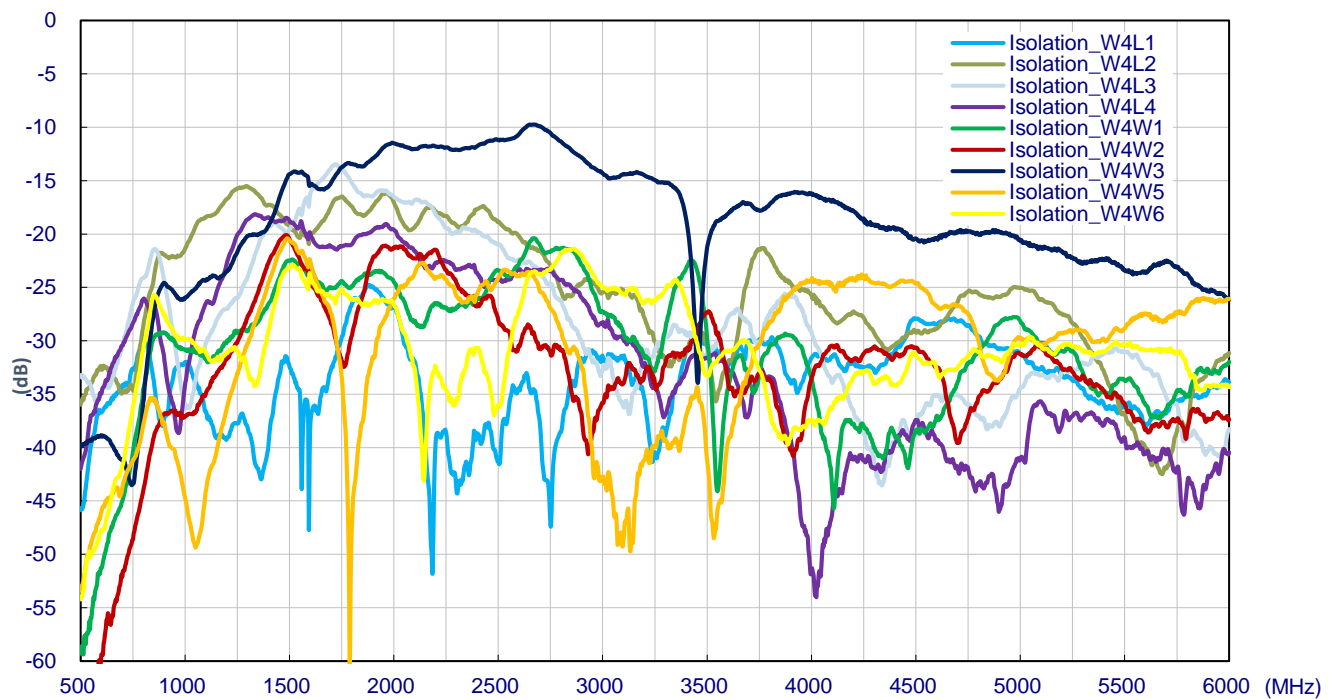
Wi-Fi 2



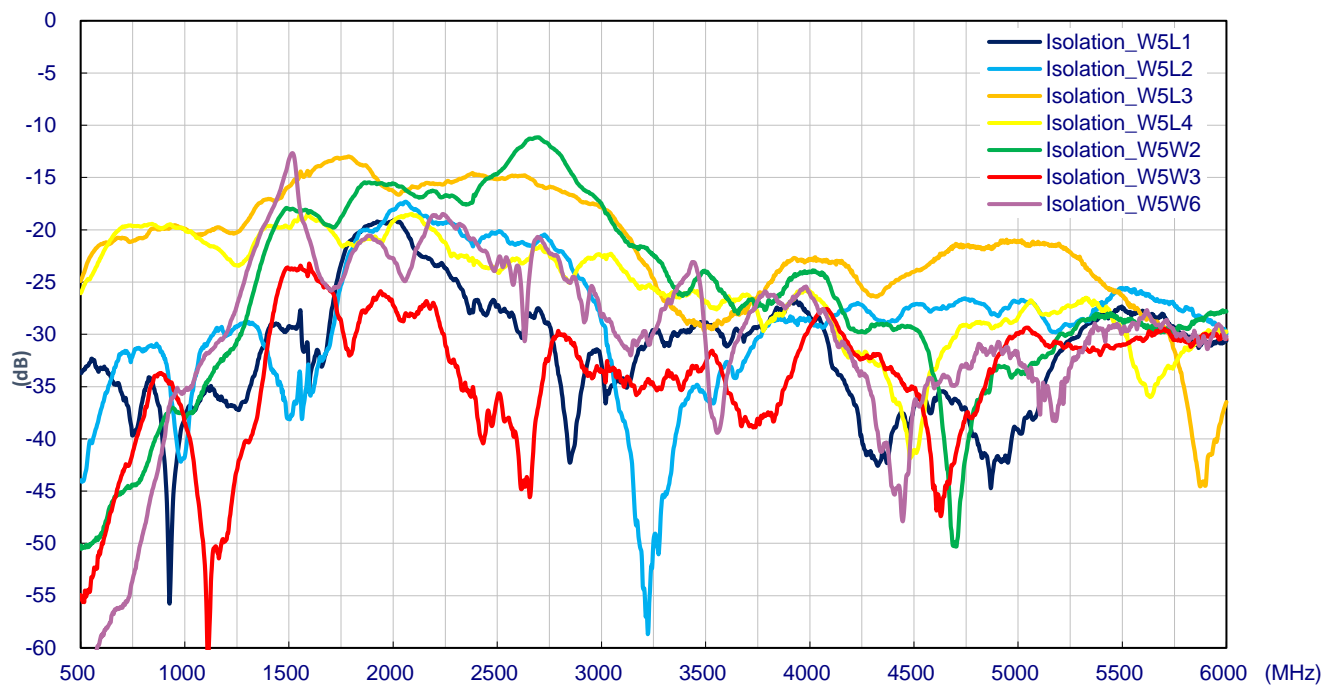
Wi-Fi 3



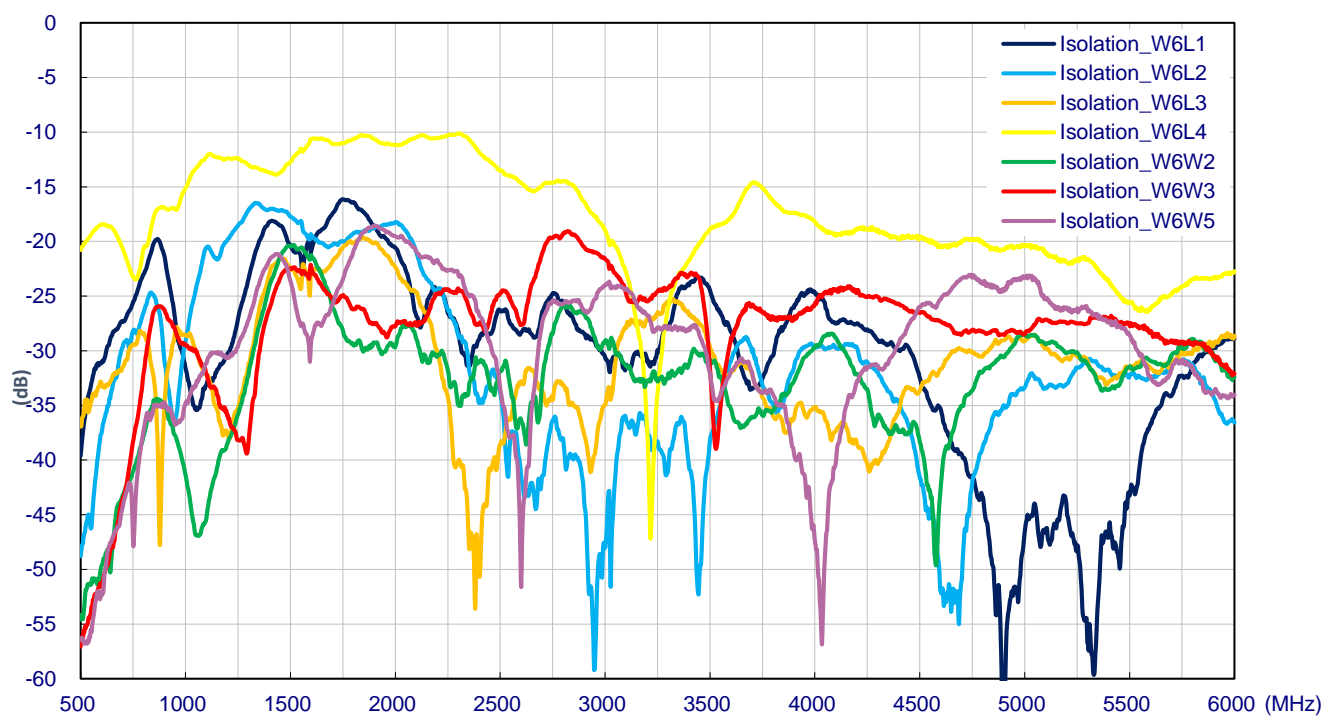
Wi-Fi 4



Wi-Fi 5

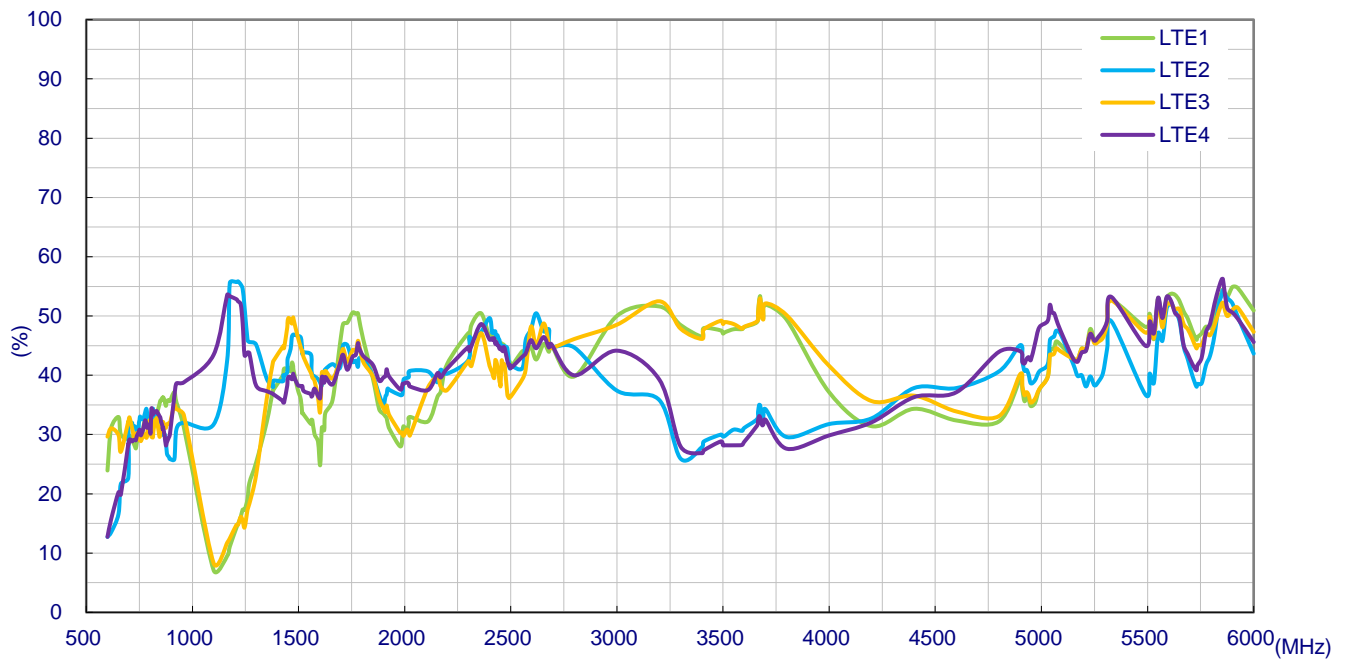


Wi-Fi 6

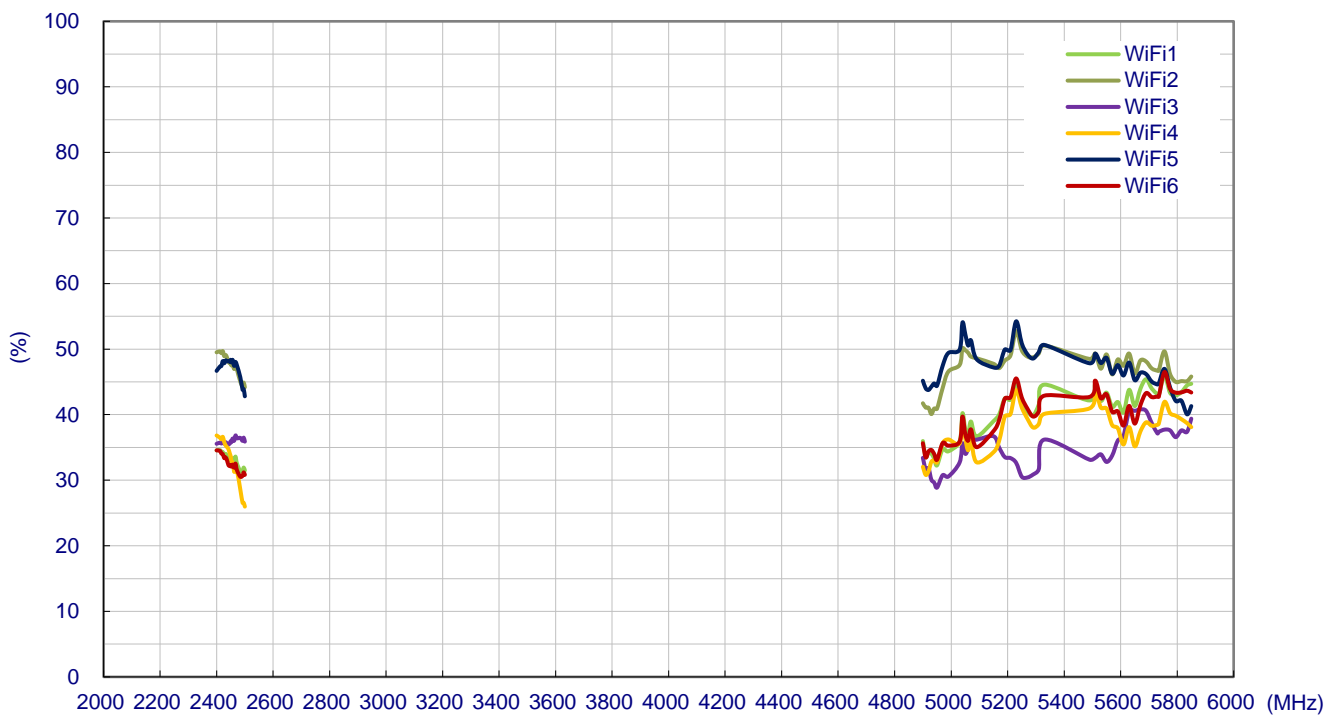


4.3 Efficiency

5G/4G MIMO

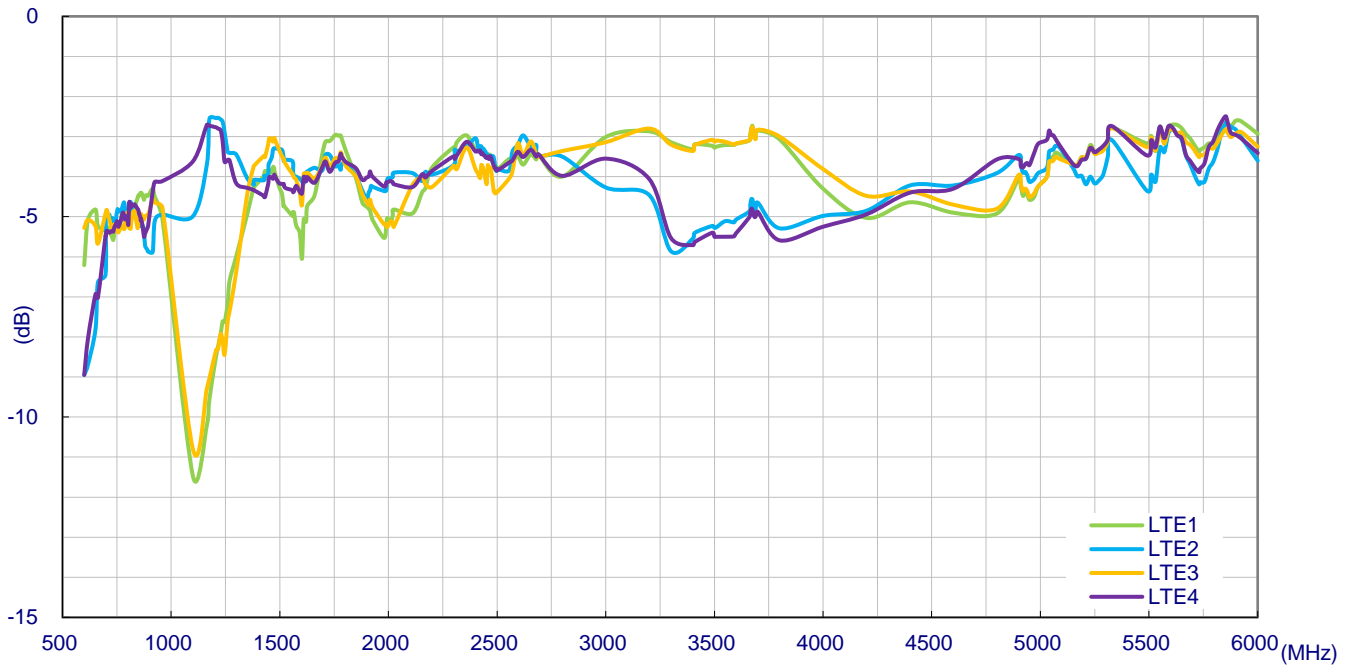


Wi-Fi MIMO

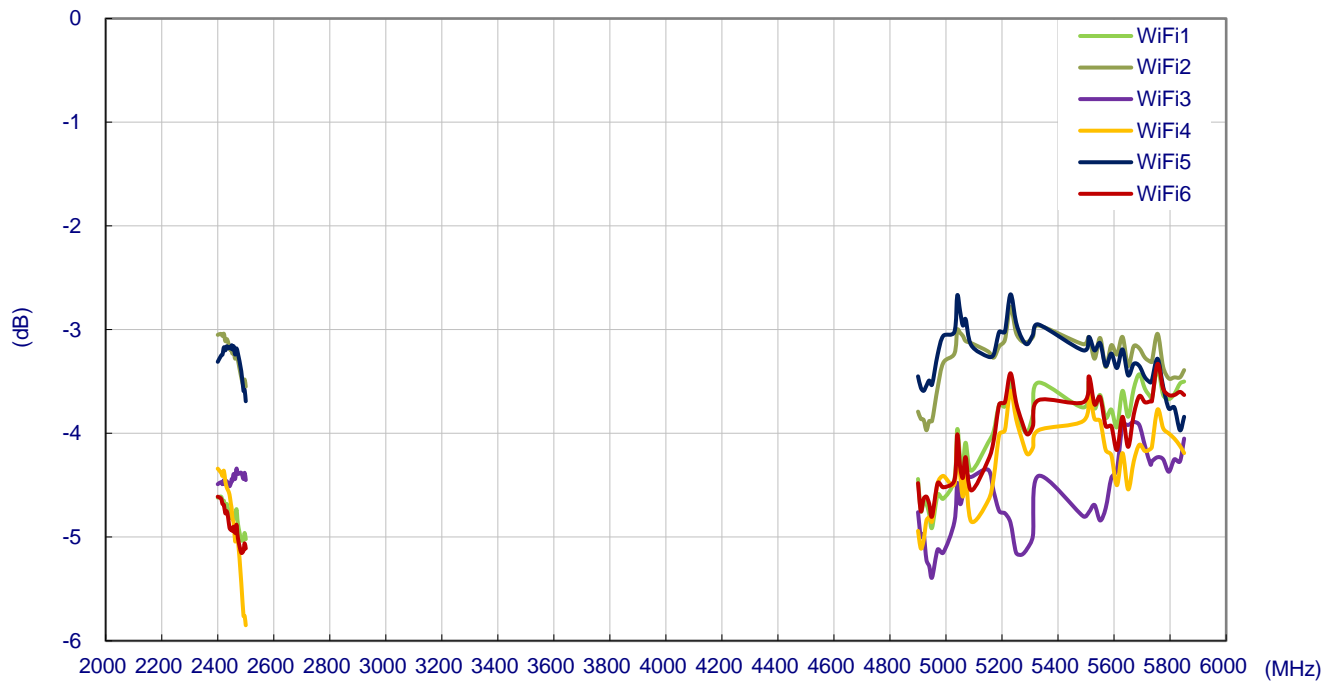


4.4 Average Gain

5G/4G MIMO

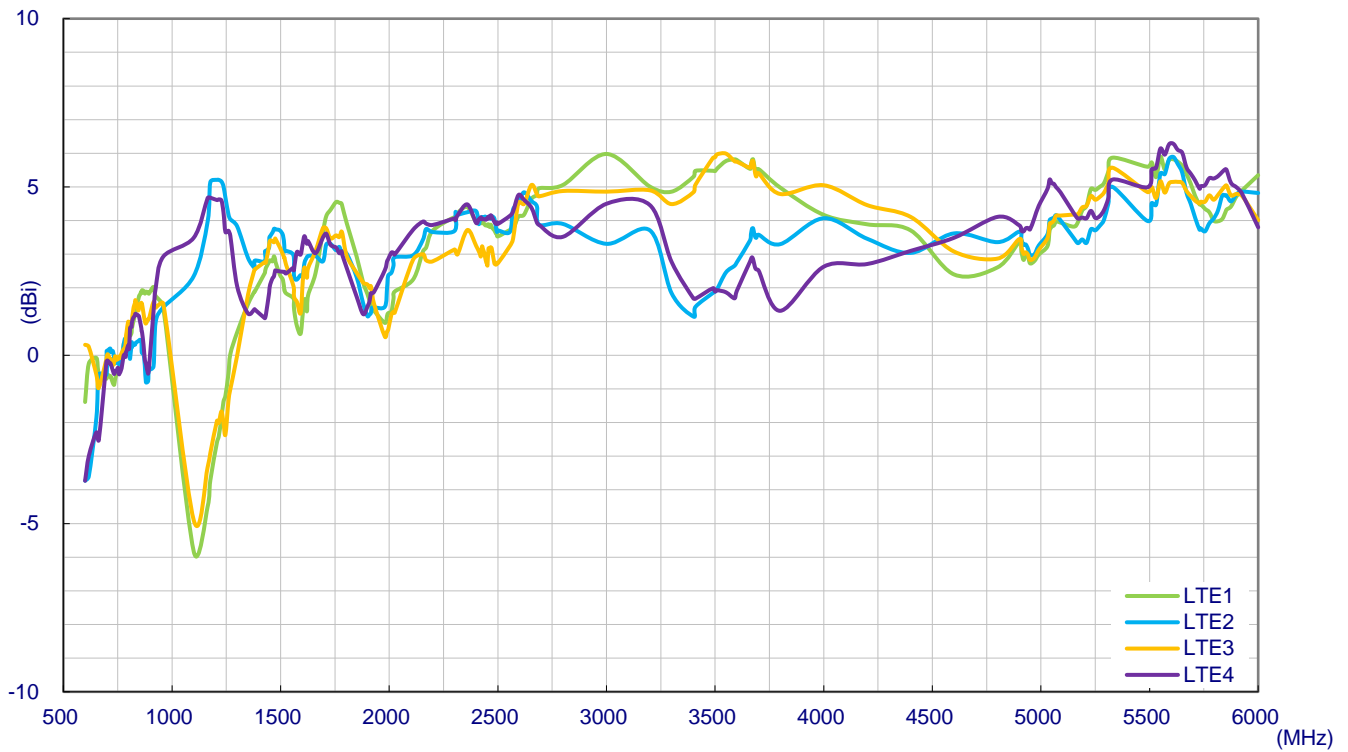


Wi-Fi MIMO

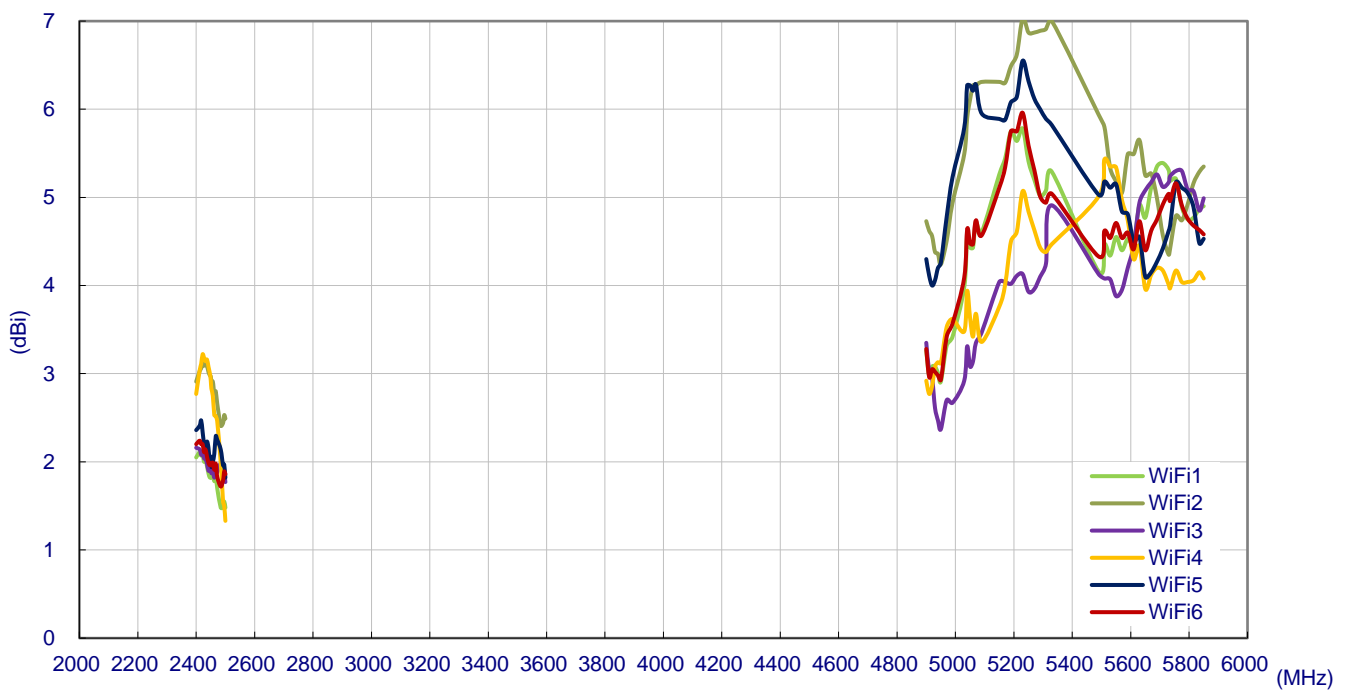


4.5 Peak Gain

5G/4G MIMO

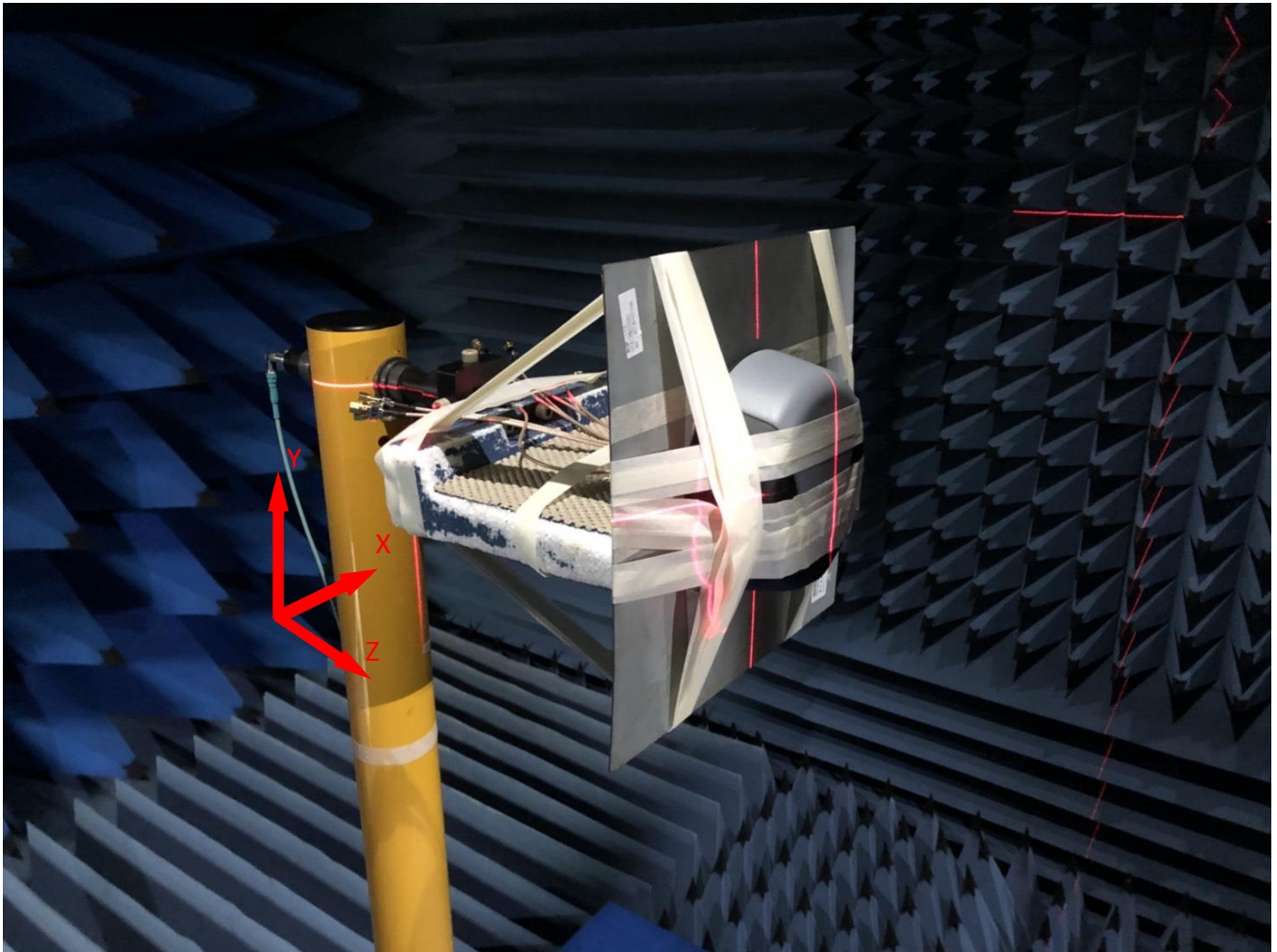


Wi-Fi MIMO



5. Radiation Patterns

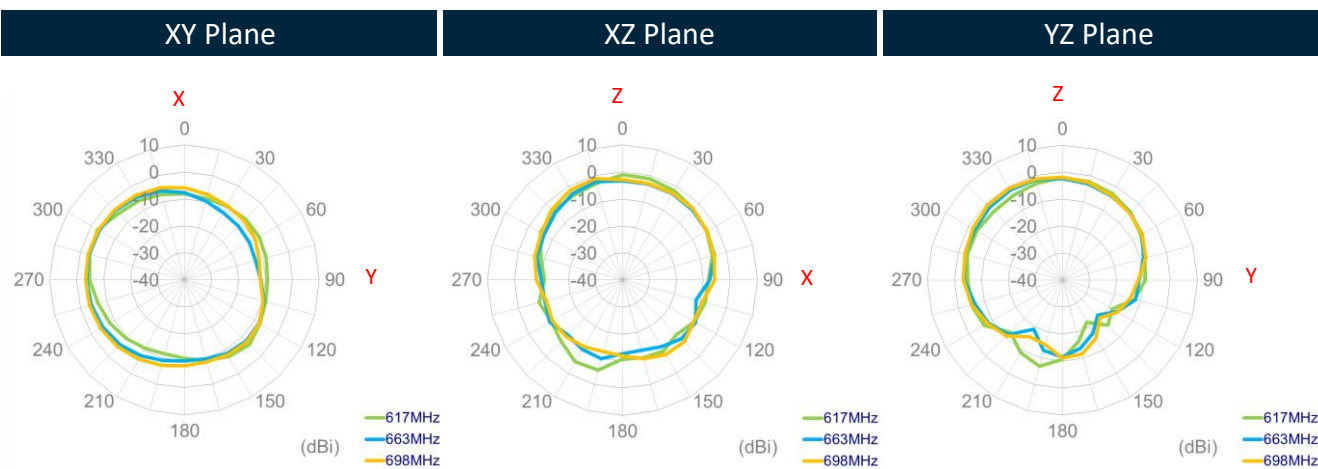
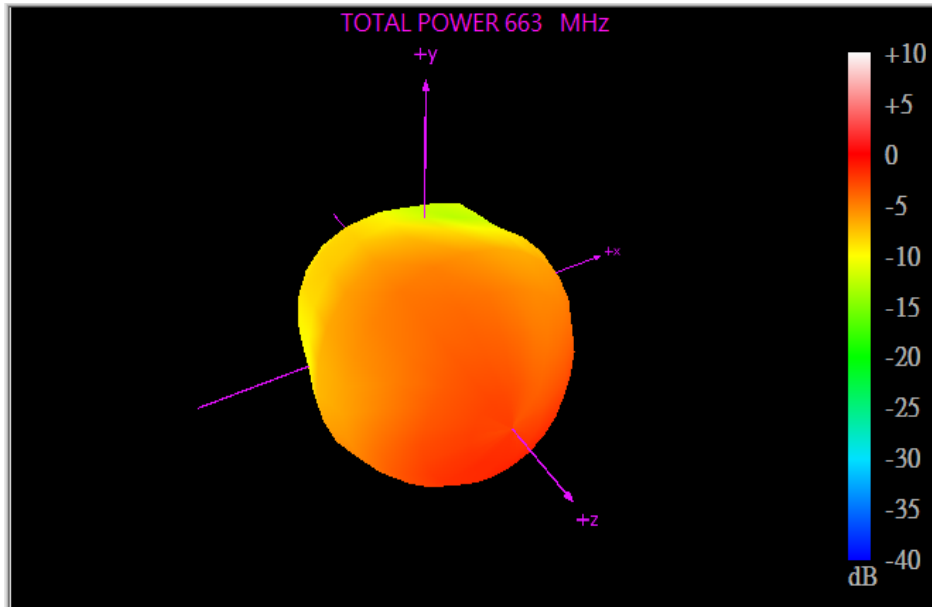
5.1 Test Setup



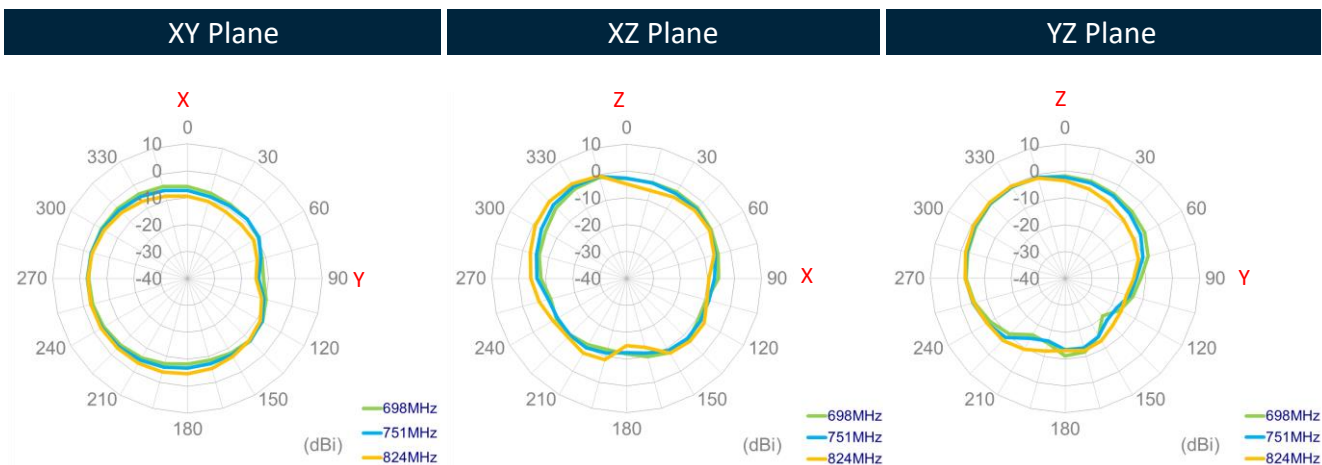
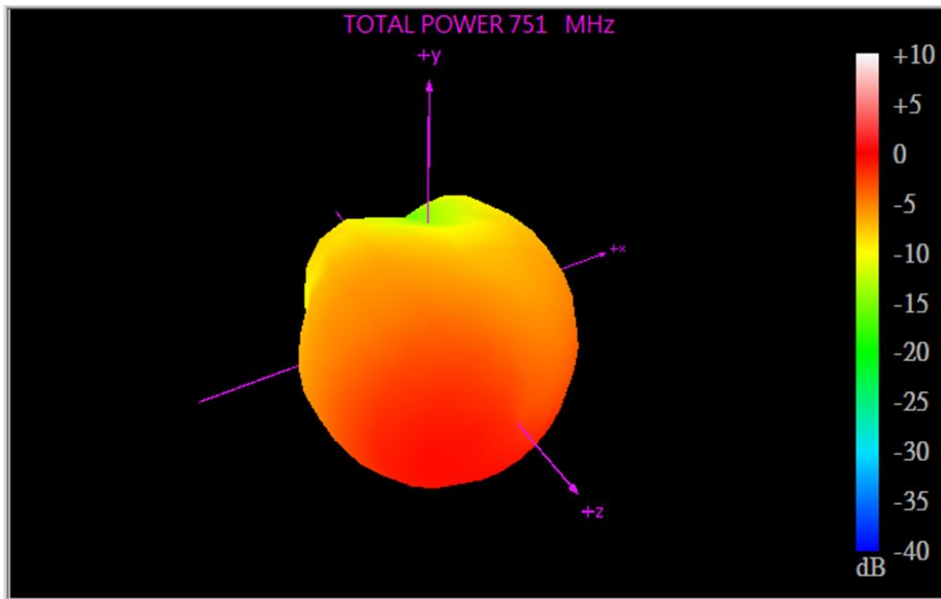
On 30x30cm Ground Plane

5.2 5G/4G MIMO 1 Radiation Pattern

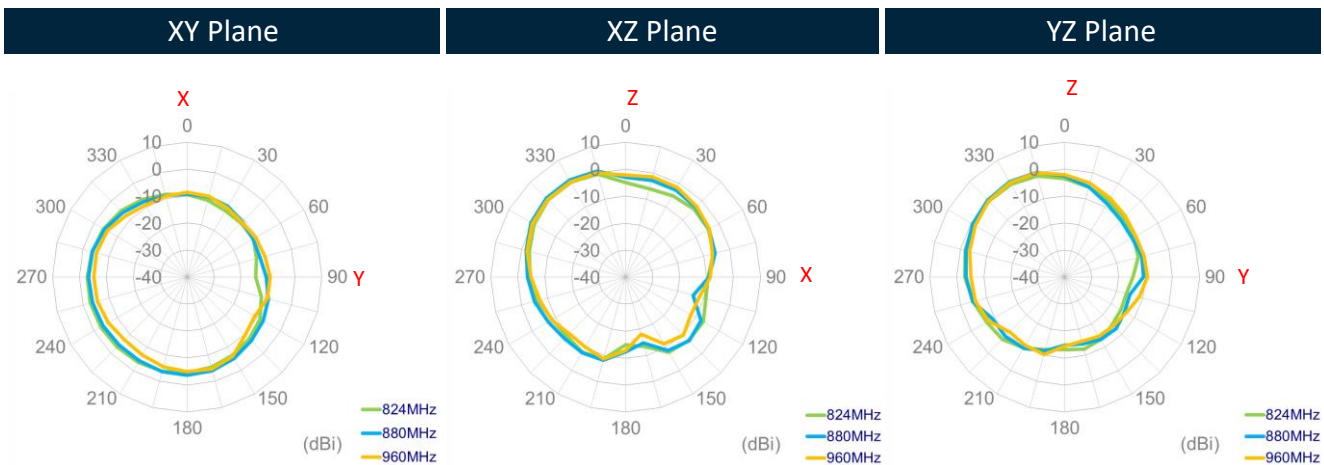
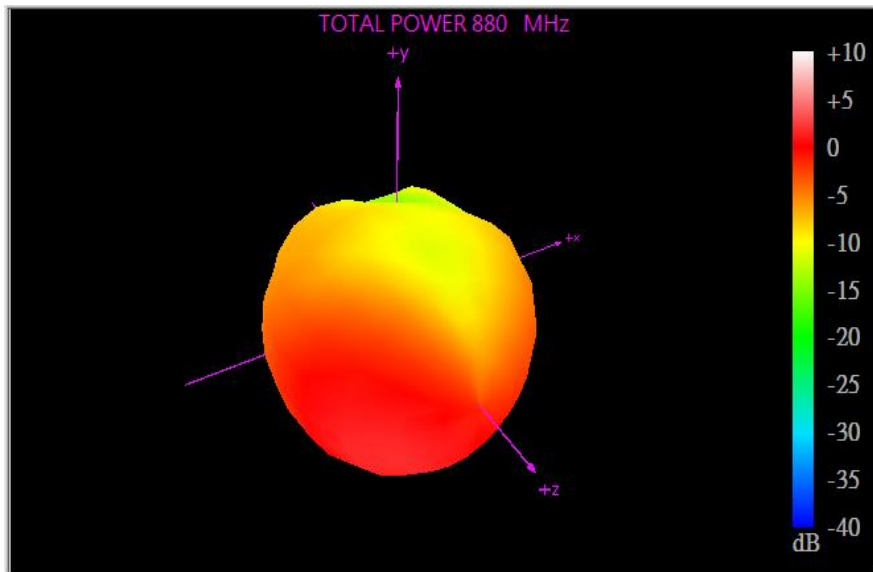
663MHz



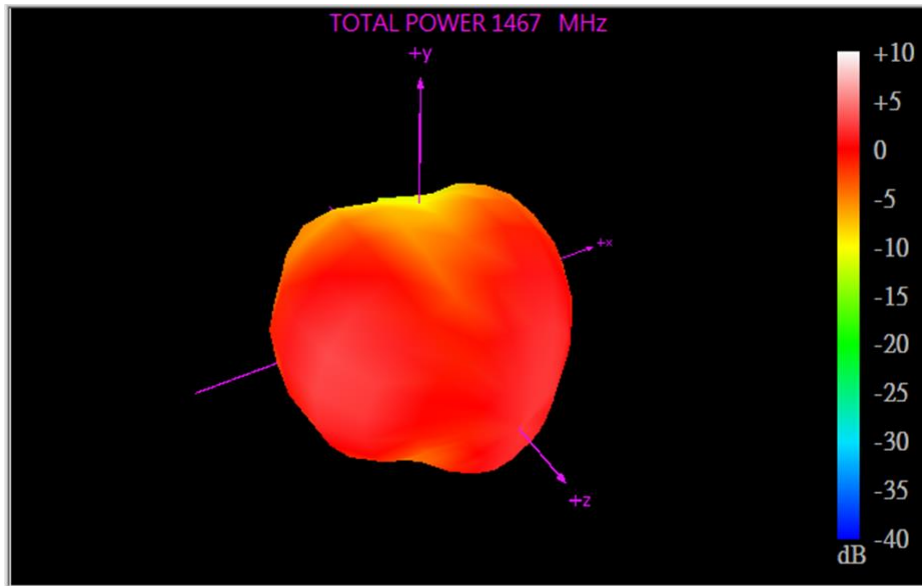
751MHz



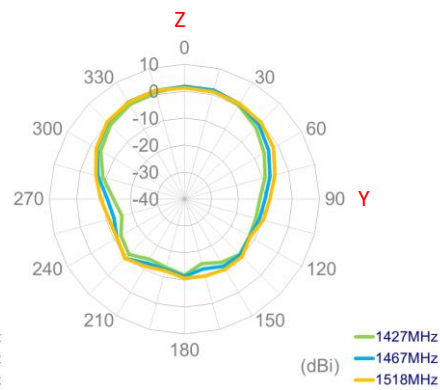
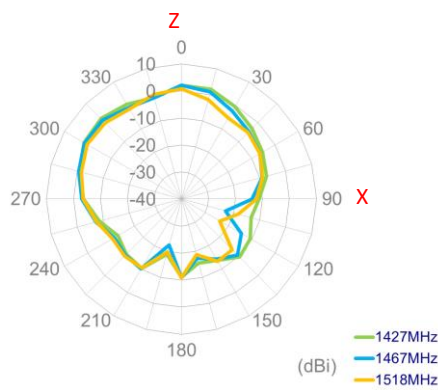
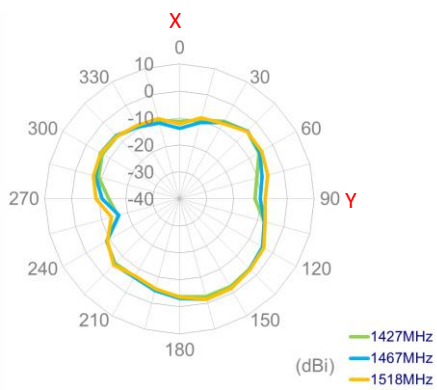
880MHz



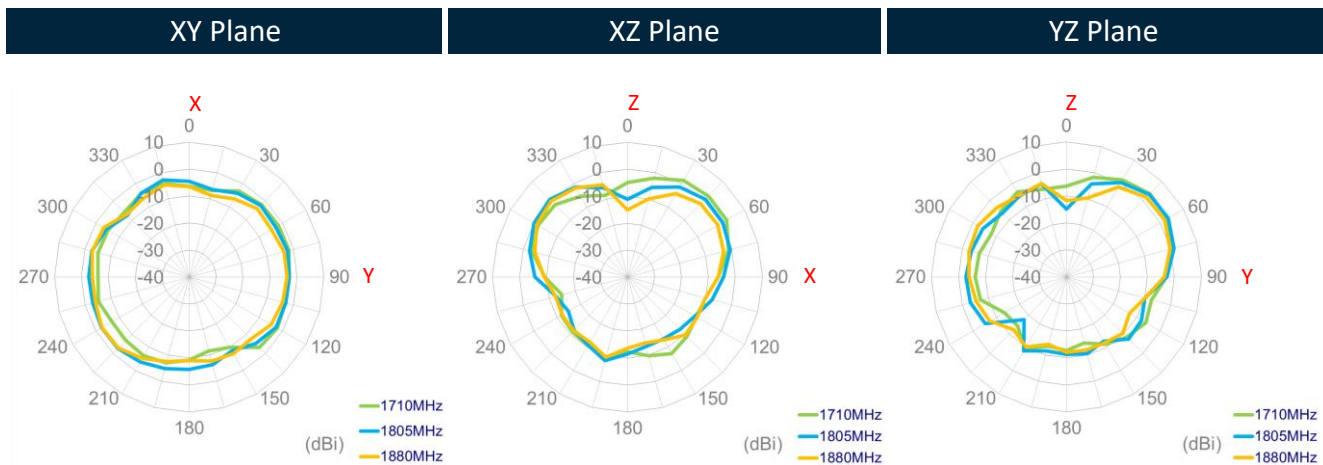
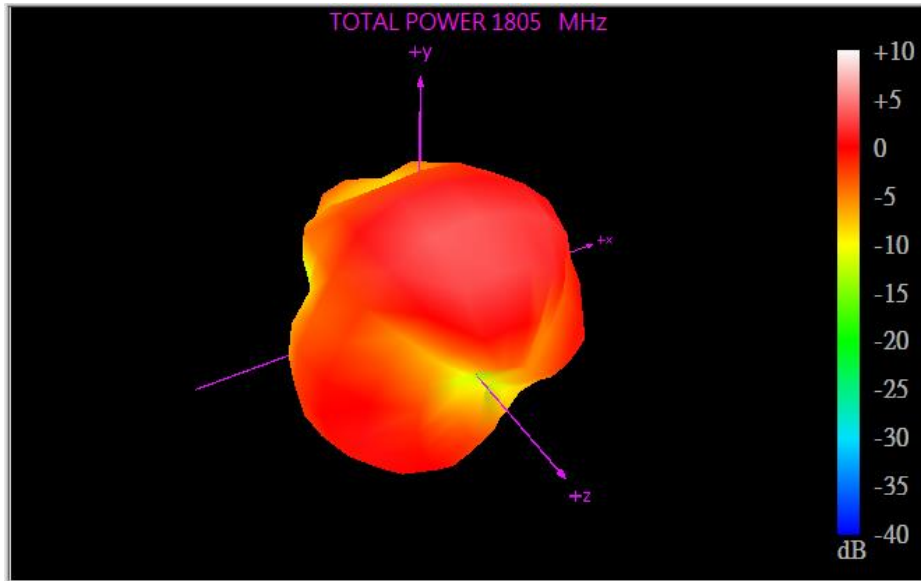
1467MHz



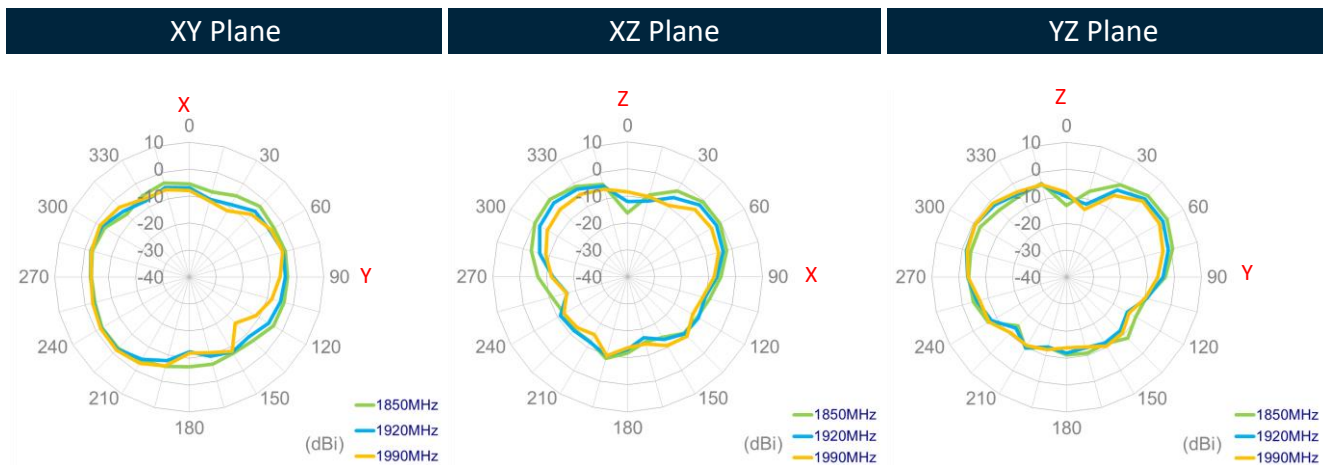
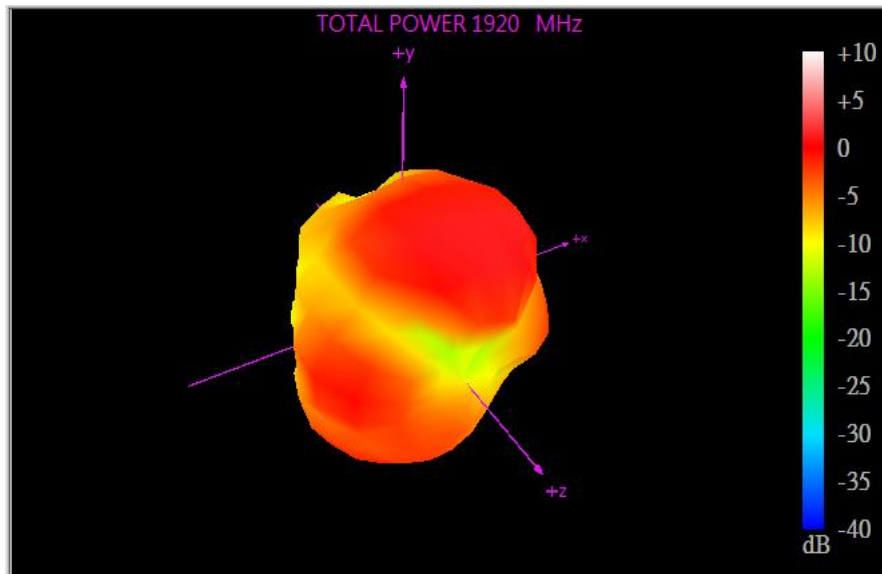
XY Plane XZ Plane YZ Plane



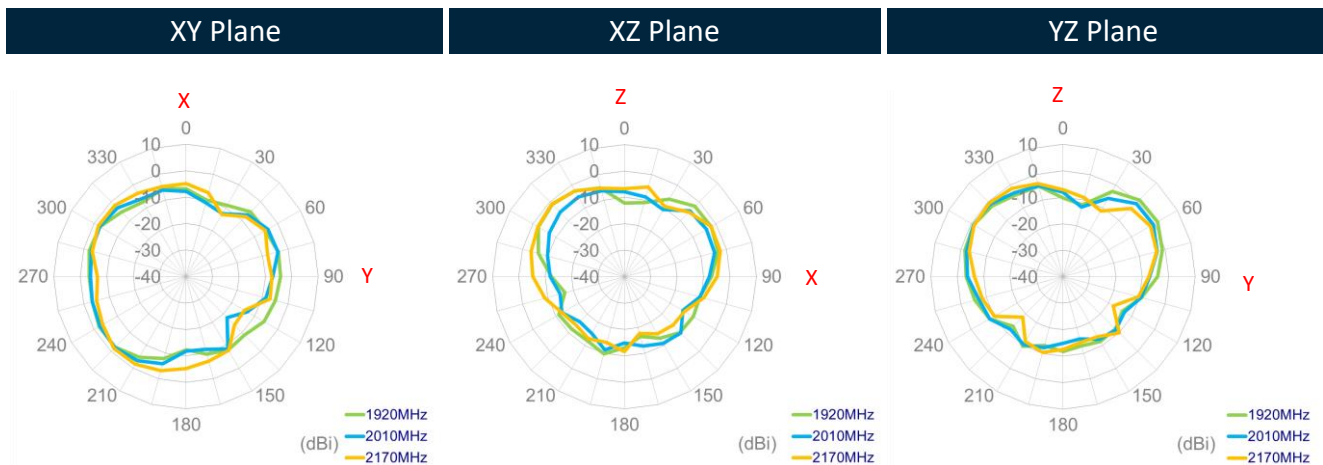
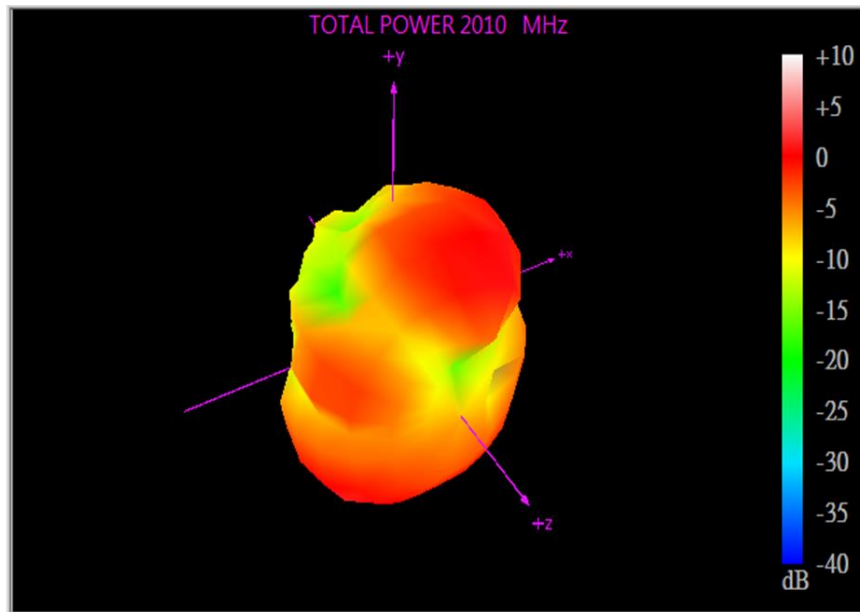
1805MHz



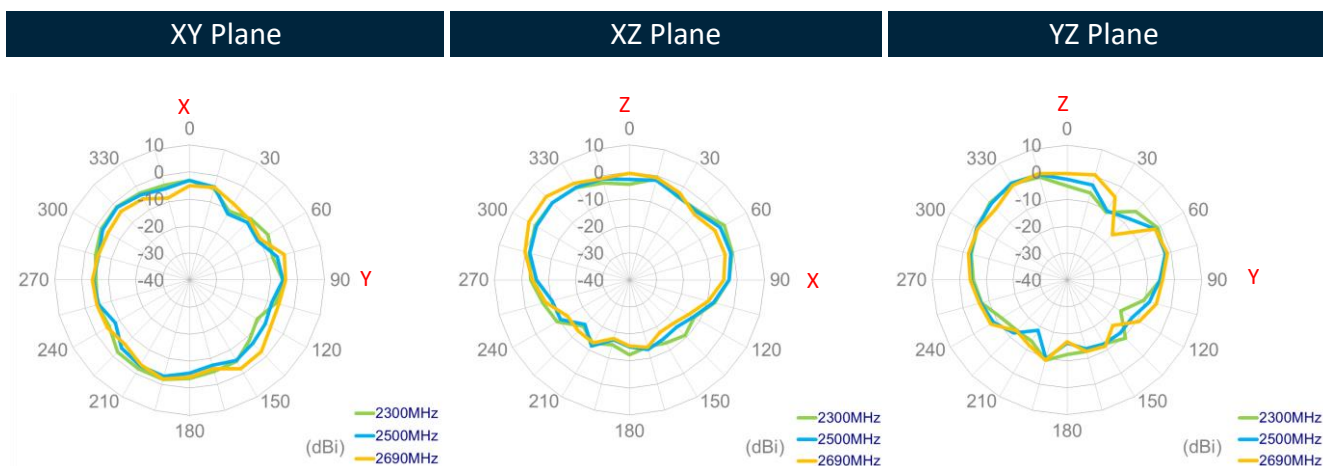
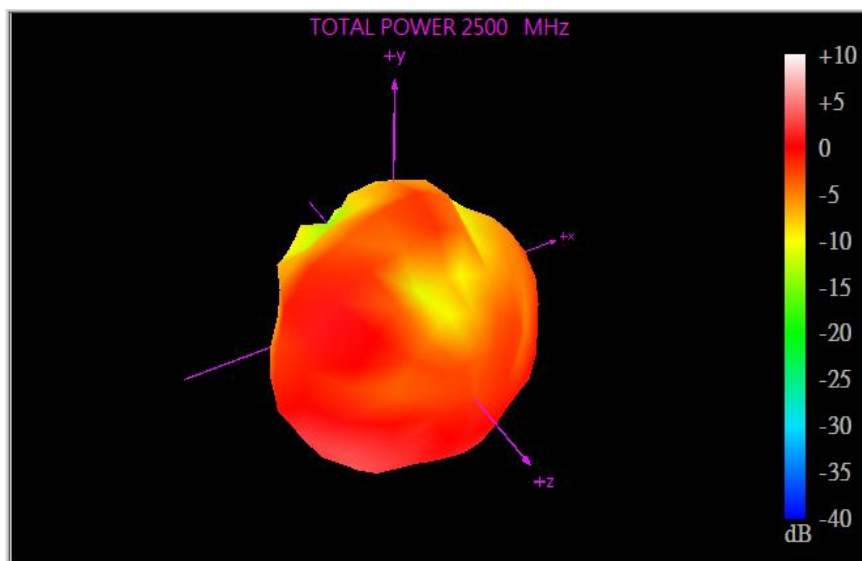
1920MHz



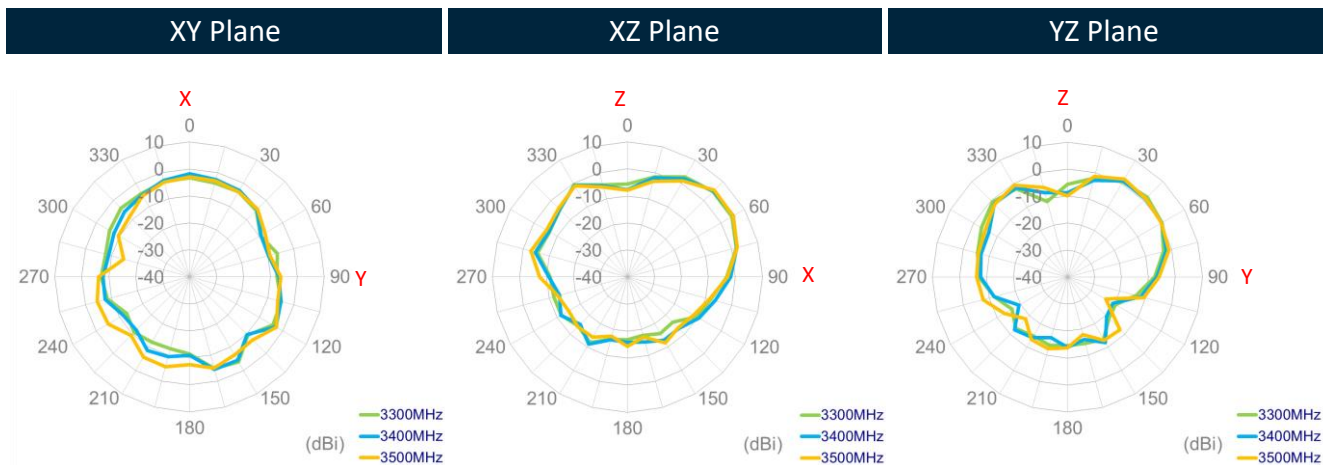
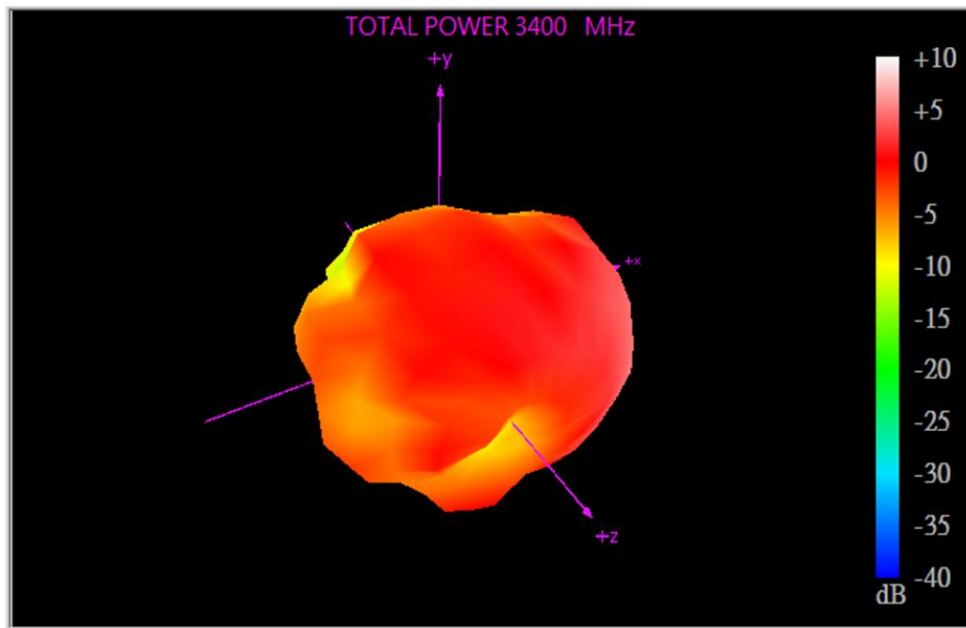
2010MHz



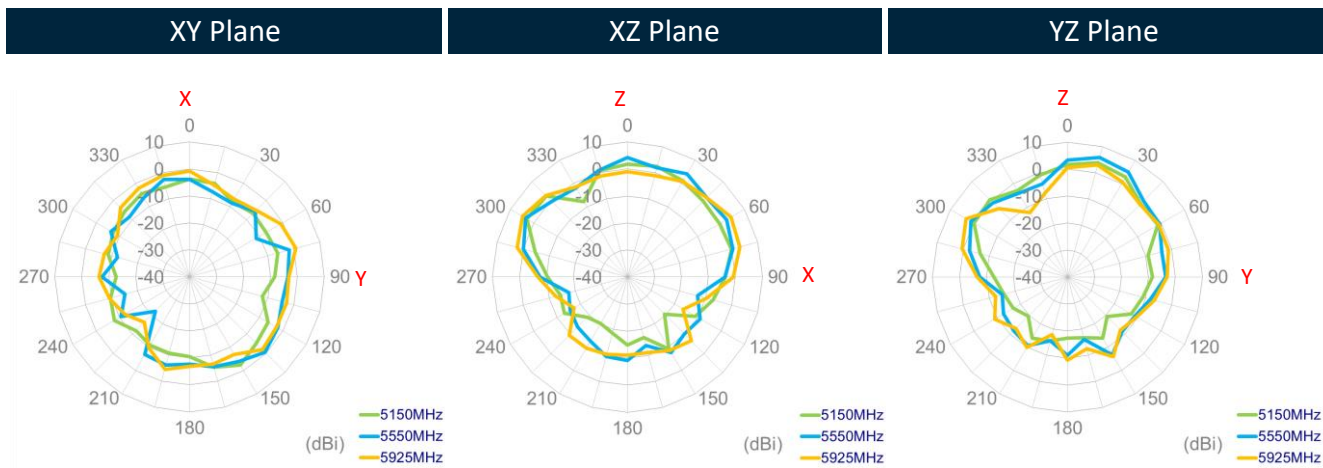
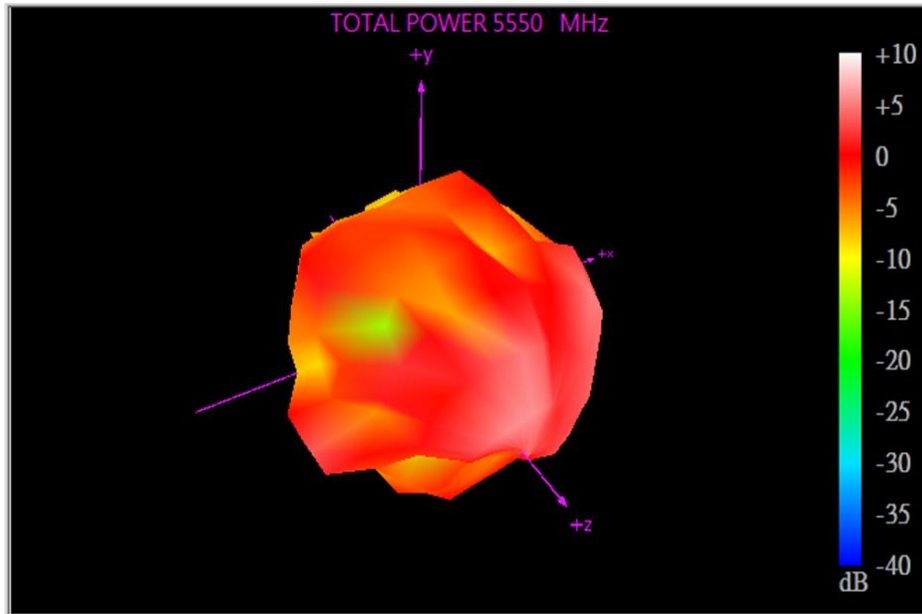
2500MHz



3300MHz

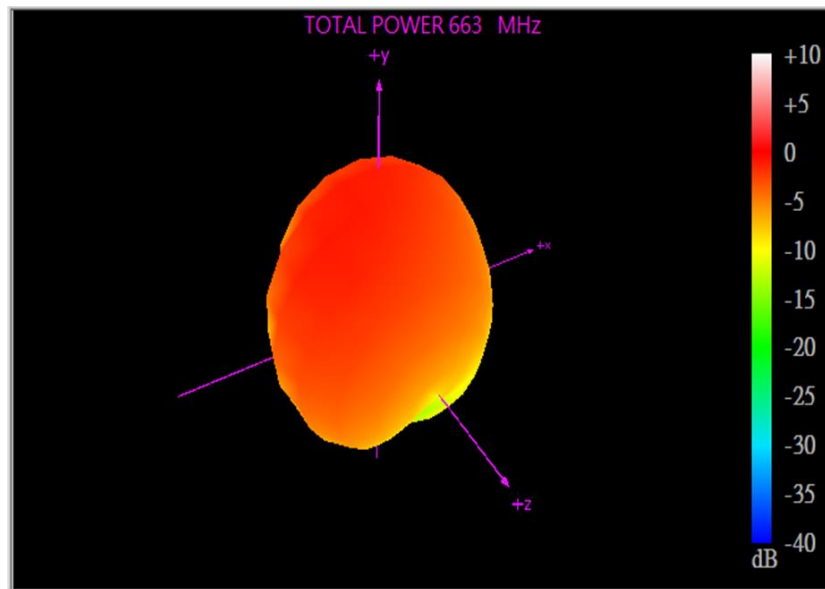


5550MHz

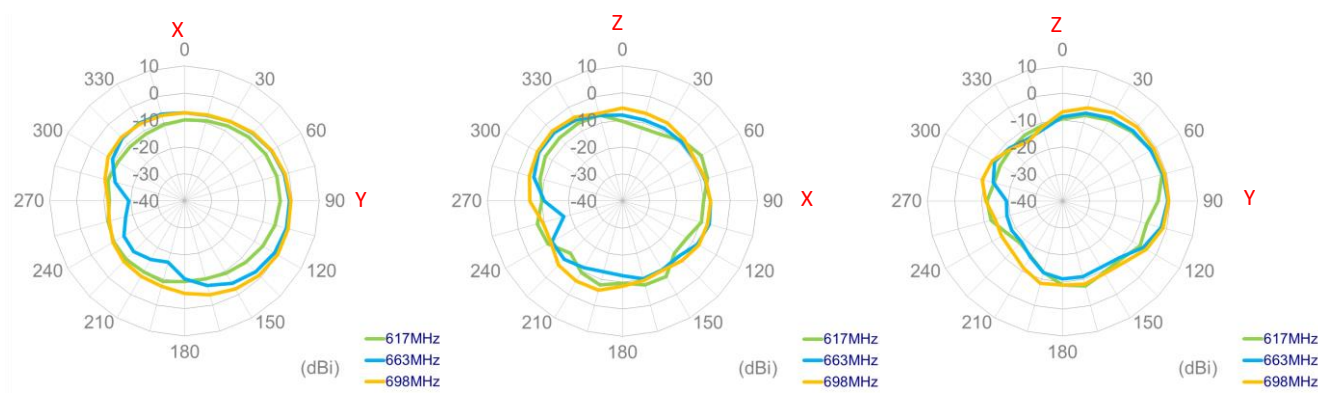


5.3 5G/4G MIMO 2 Radiation Pattern

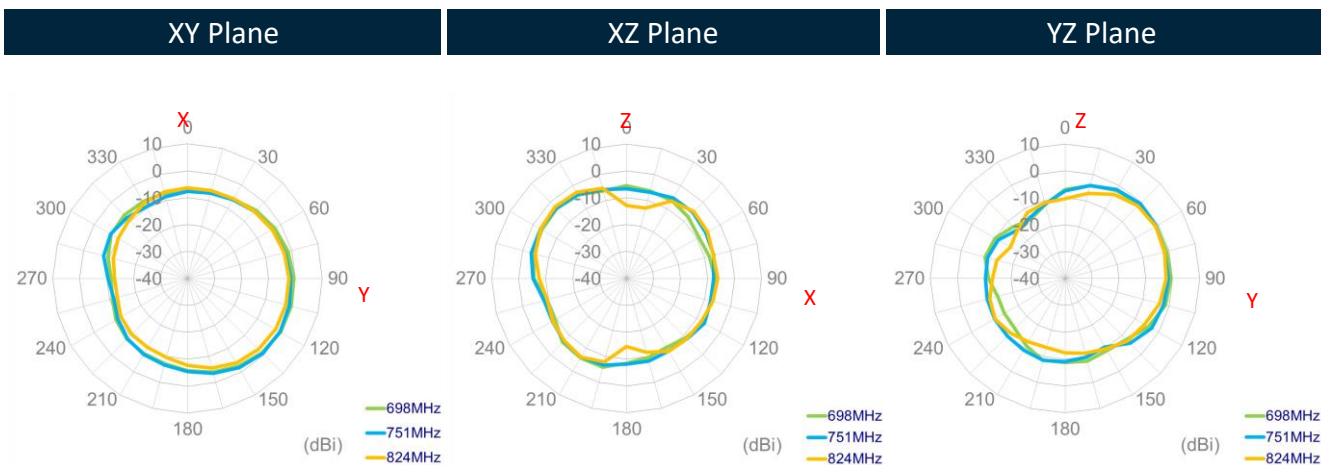
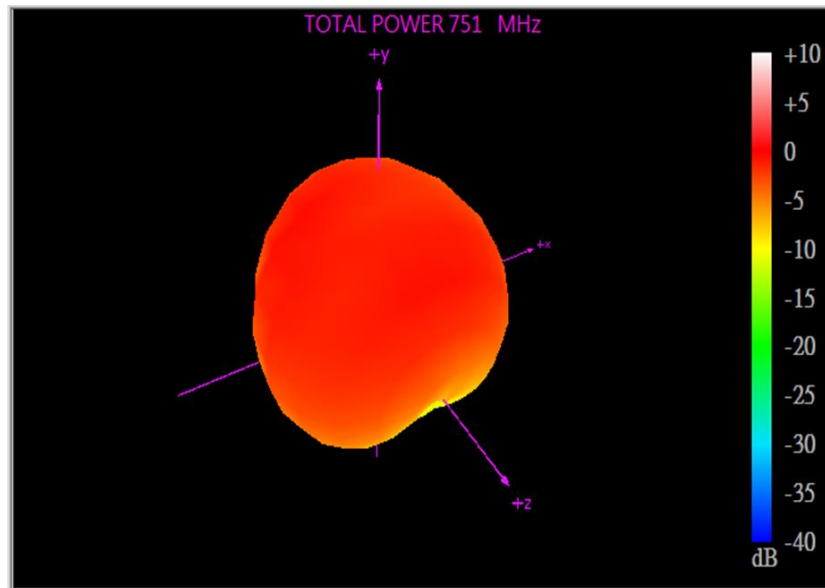
663MHz



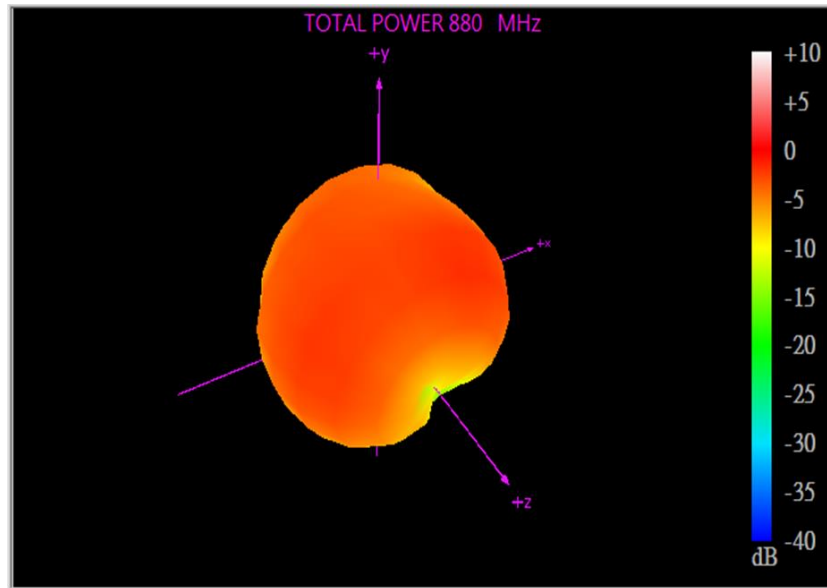
XY Plane XZ Plane YZ Plane



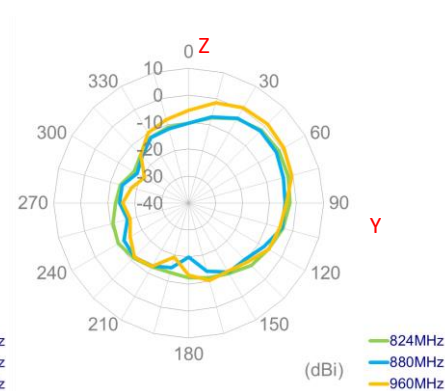
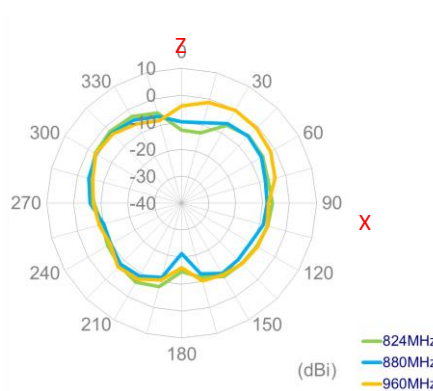
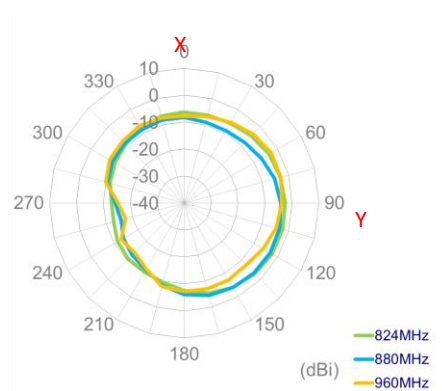
751MHz



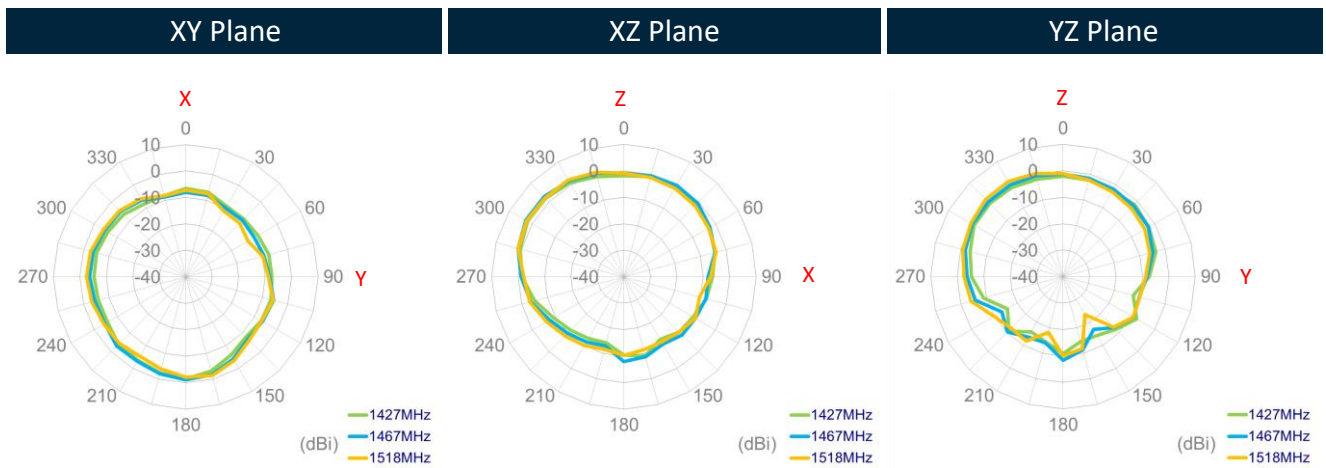
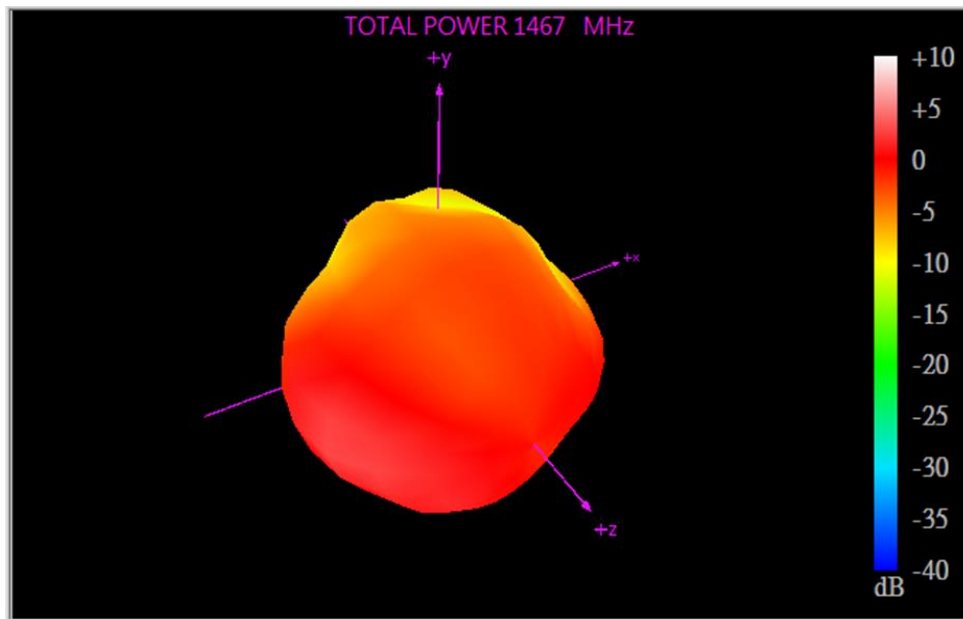
880MHz



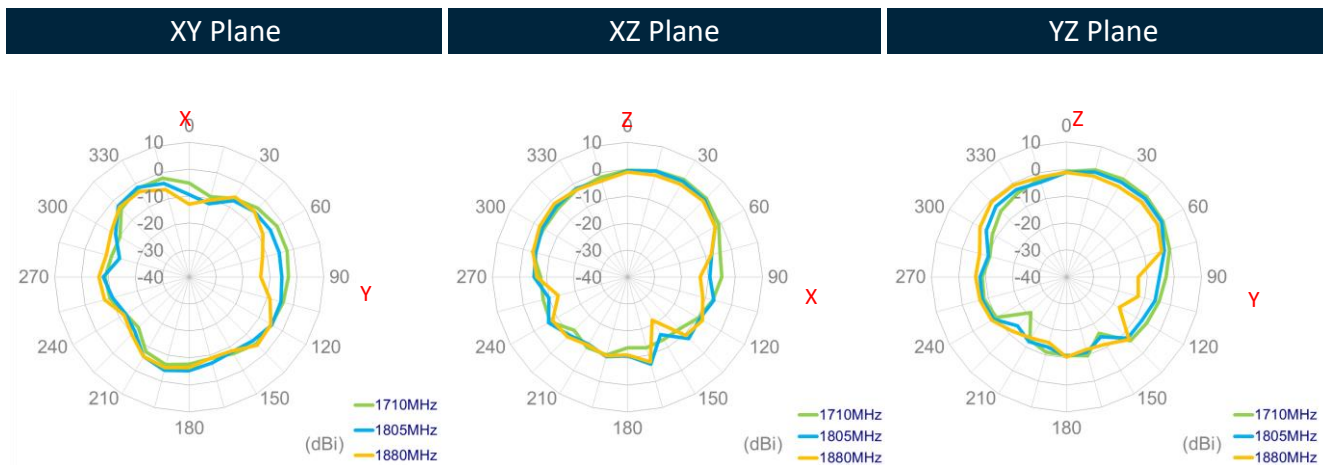
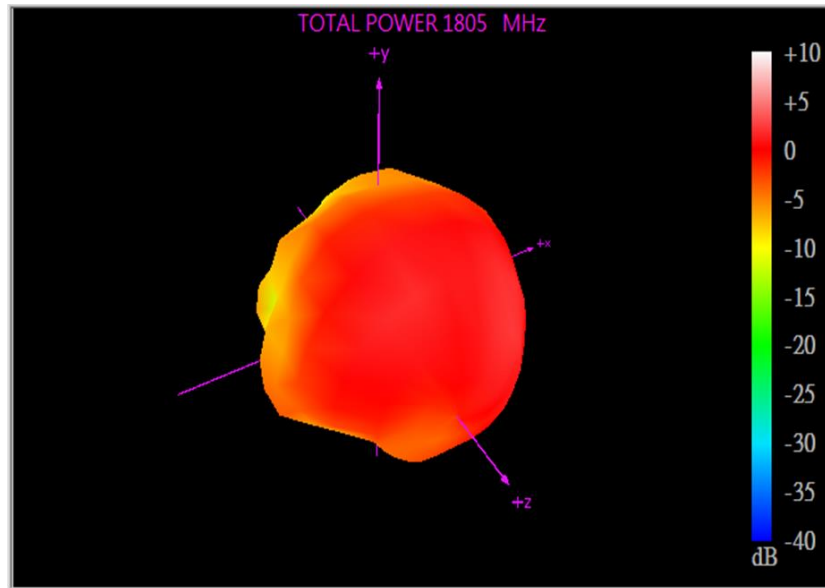
XY Plane XZ Plane YZ Plane



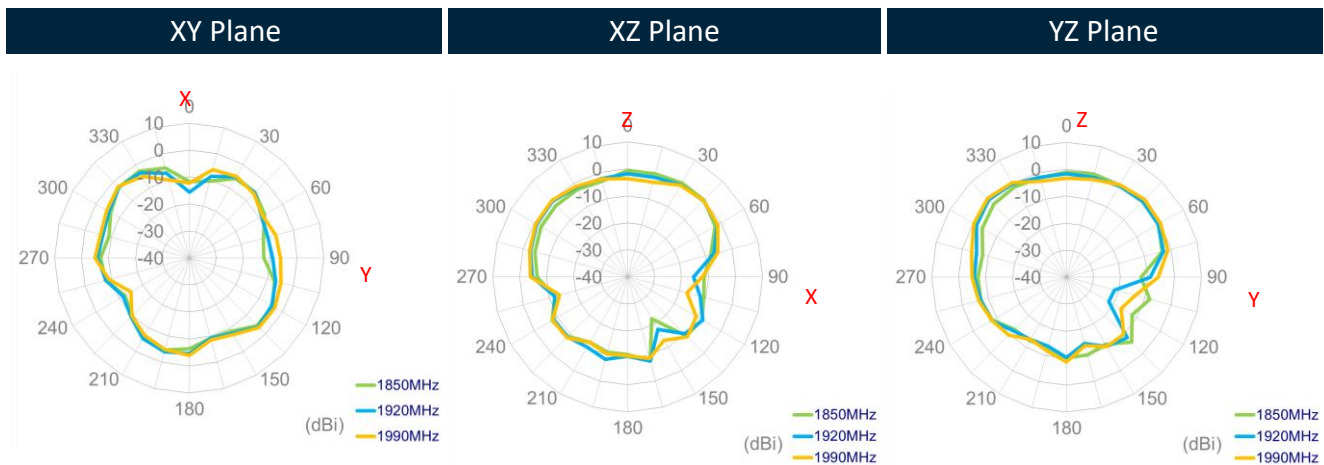
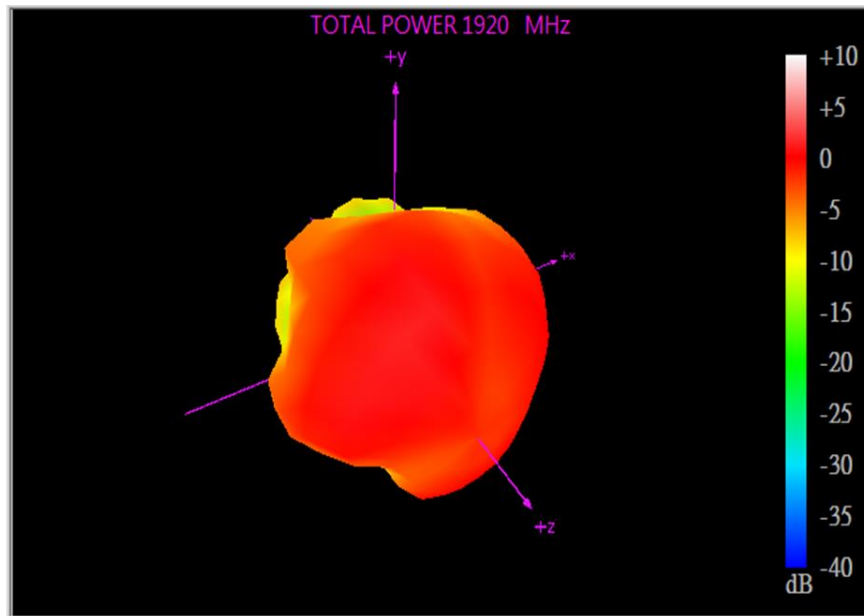
1467MHz



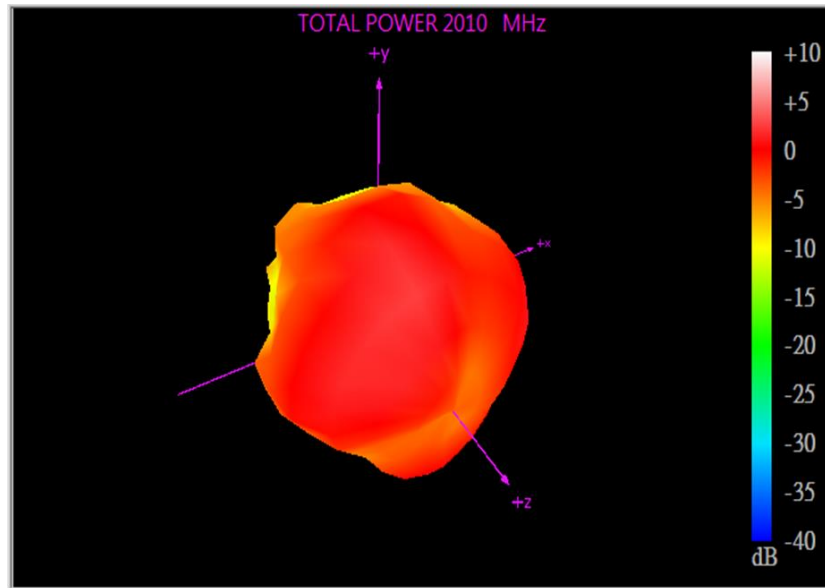
1805MHz



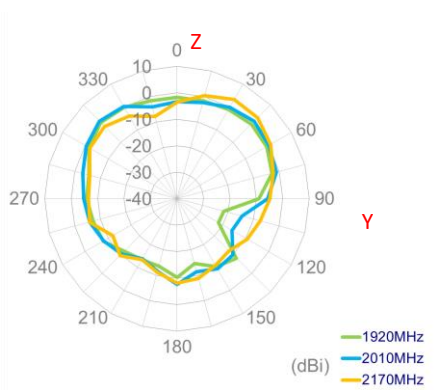
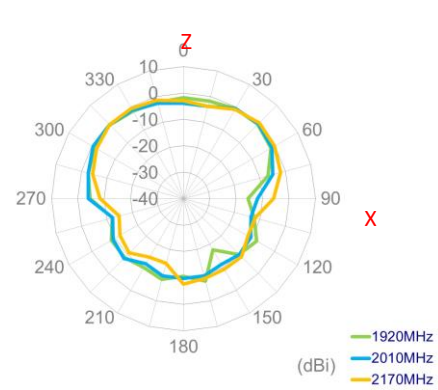
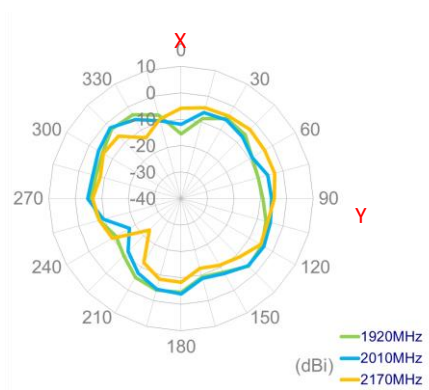
1920MHz



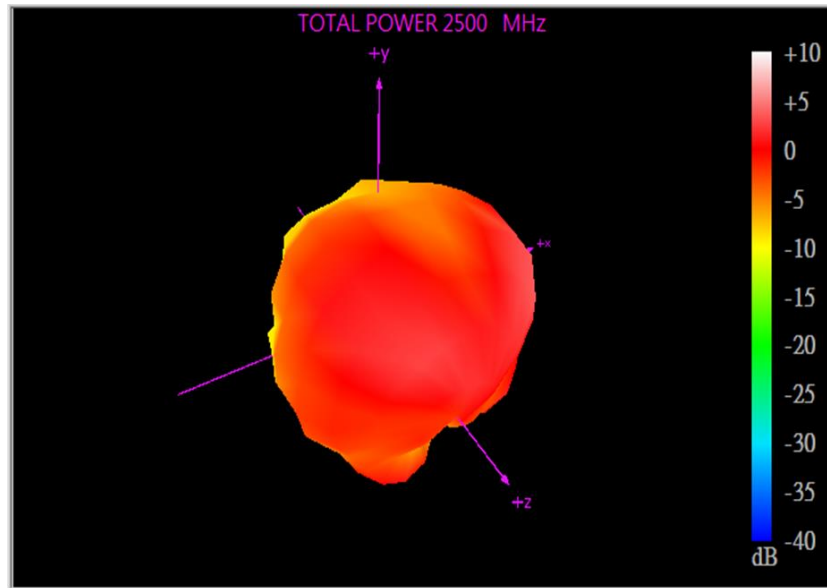
2010MHz



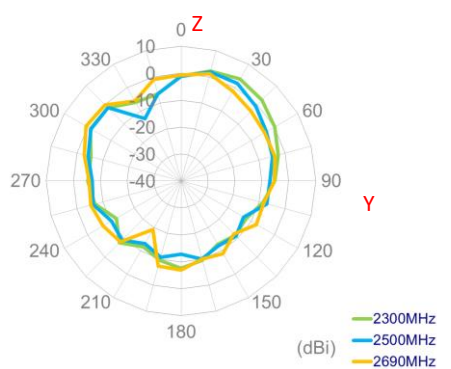
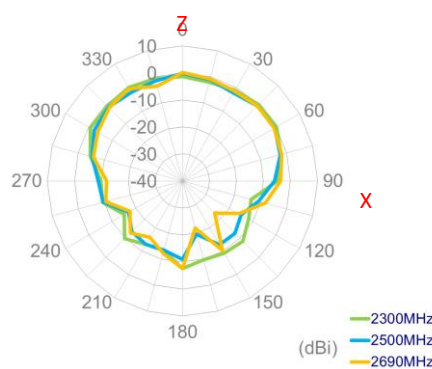
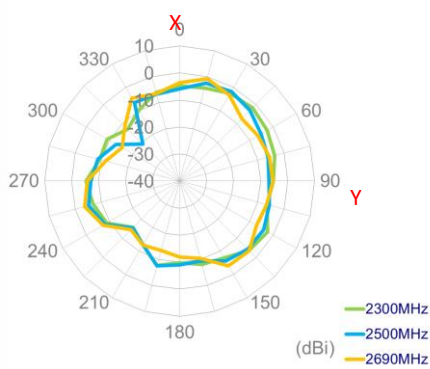
XY Plane XZ Plane YZ Plane



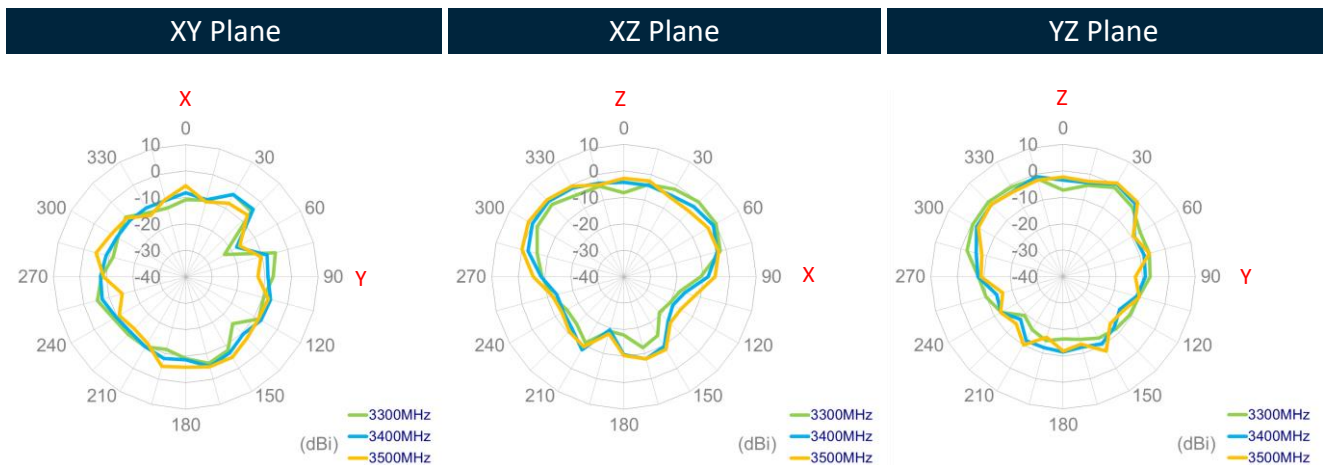
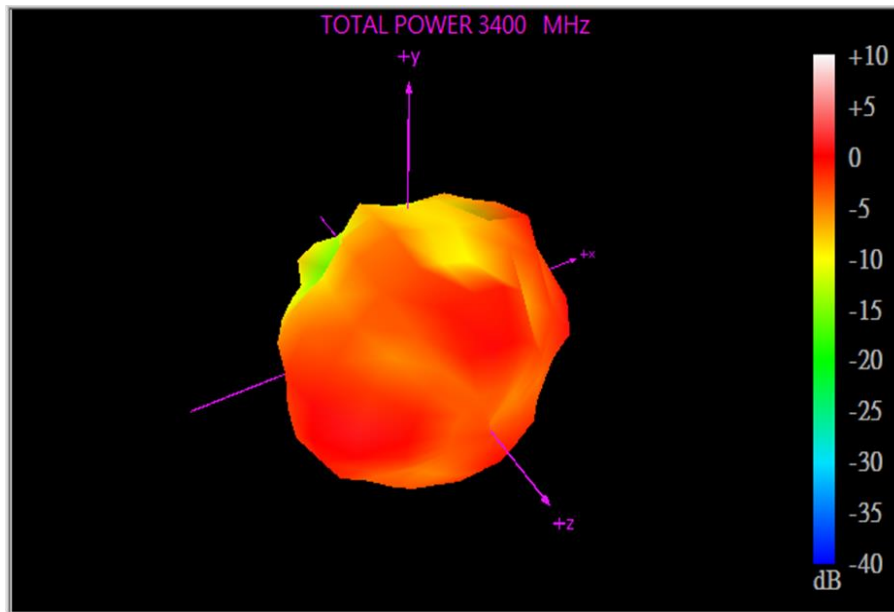
2500MHz



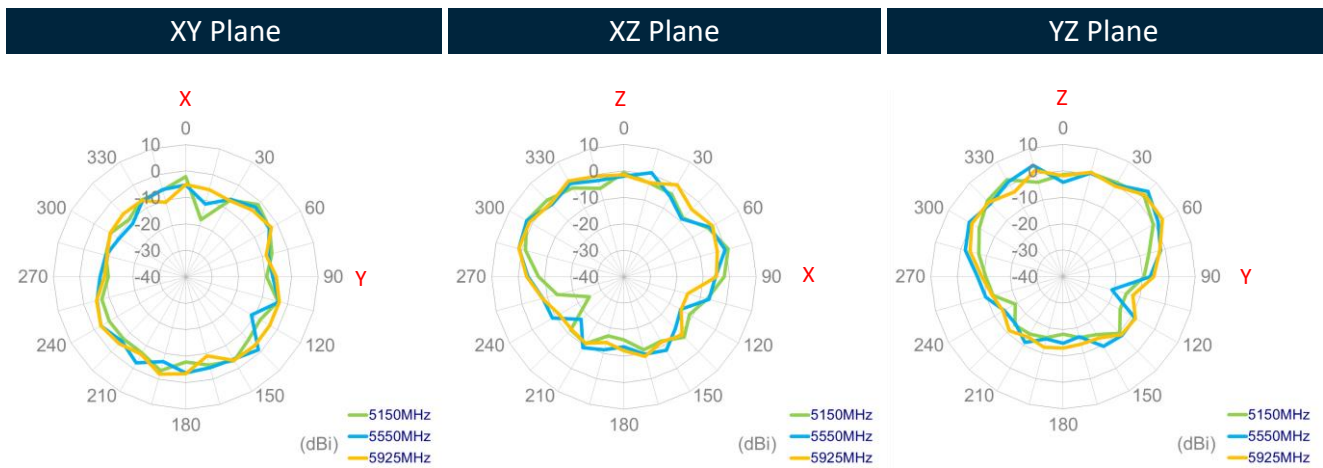
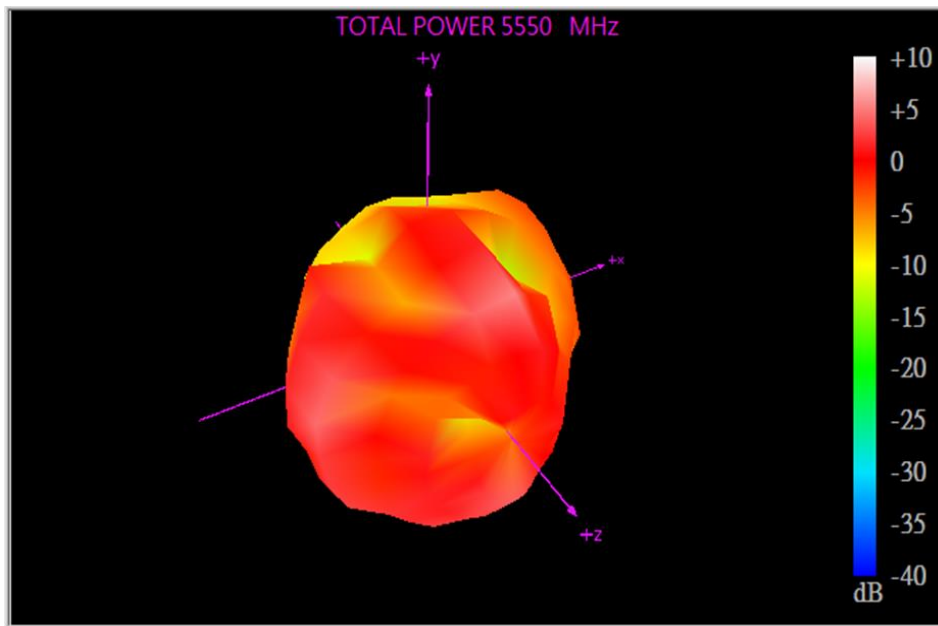
| | | |
|----------|----------|----------|
| XY Plane | XZ Plane | YZ Plane |
|----------|----------|----------|



3400MHz

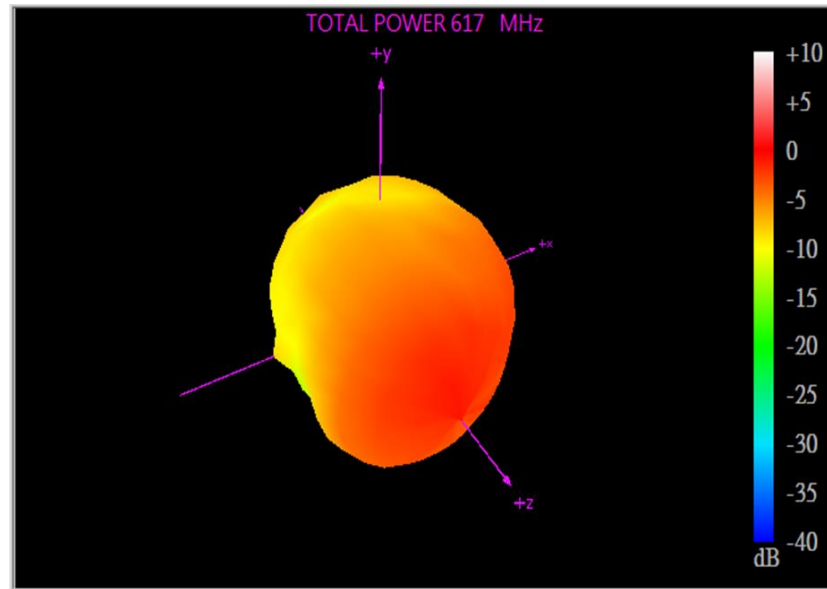


5550MHz

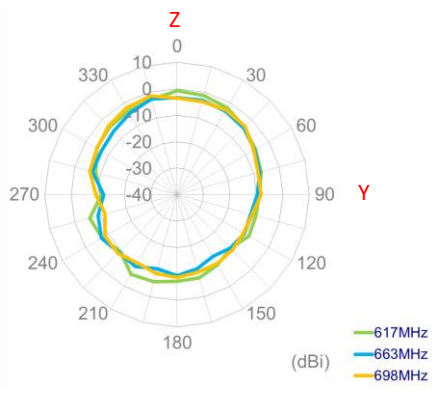
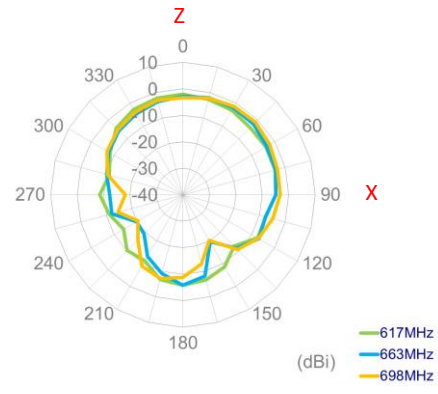
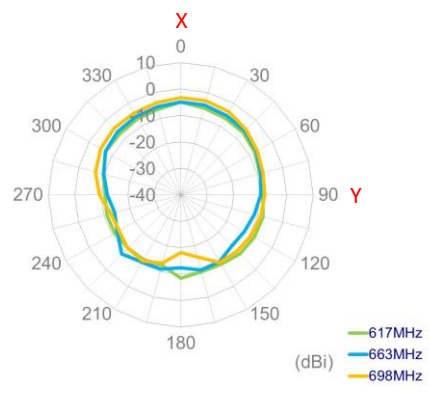


5.4 5G/4G MIMO 3 Radiation Pattern

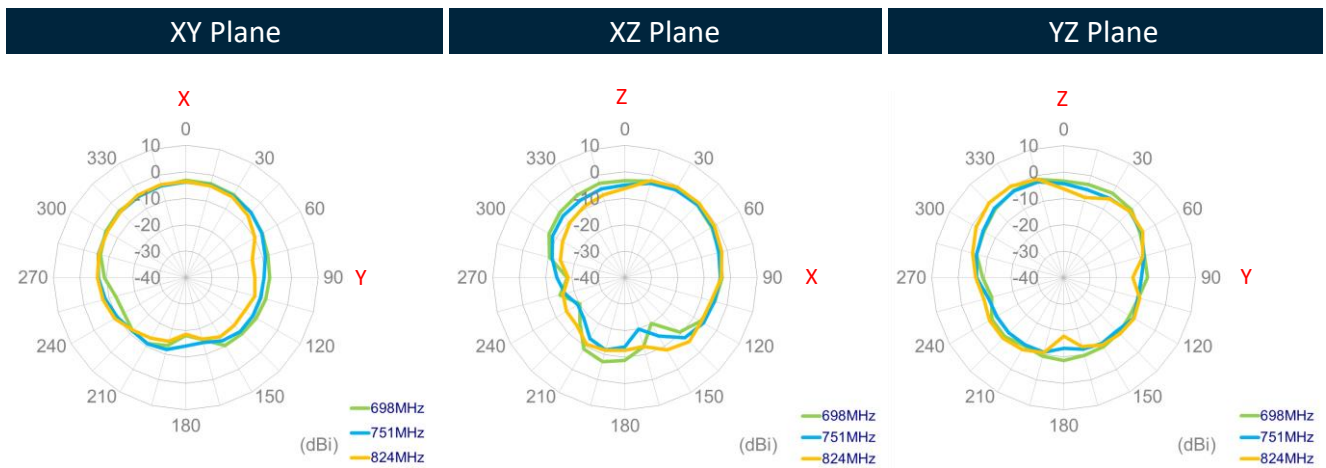
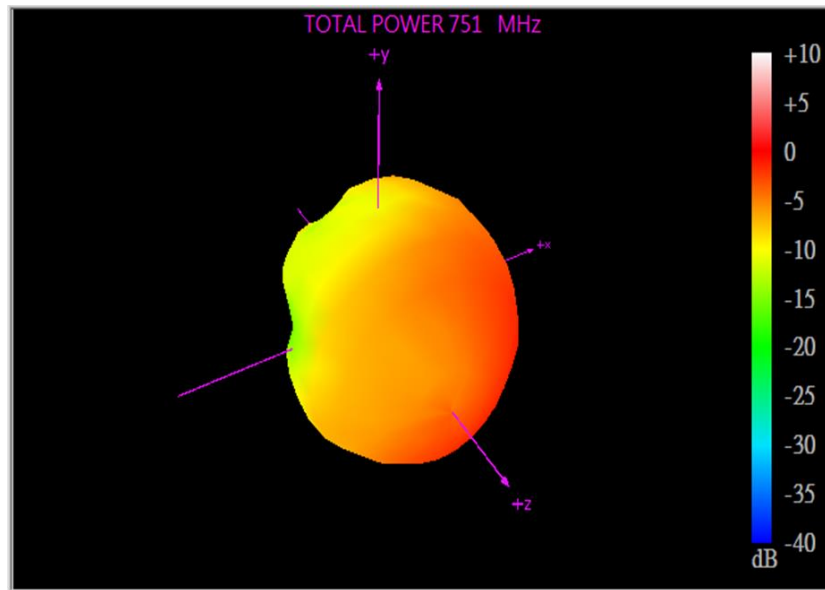
663MHz



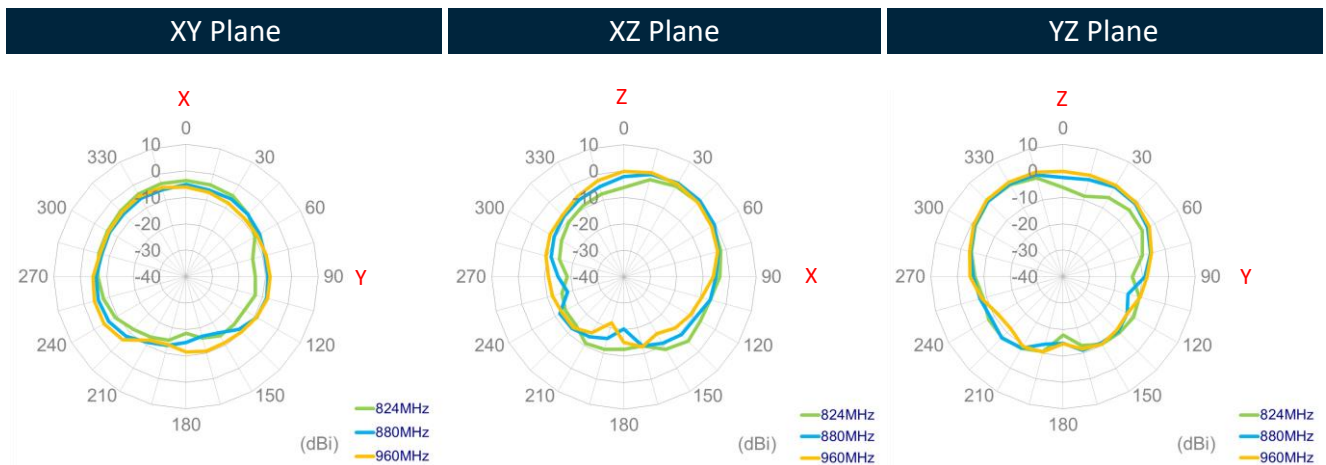
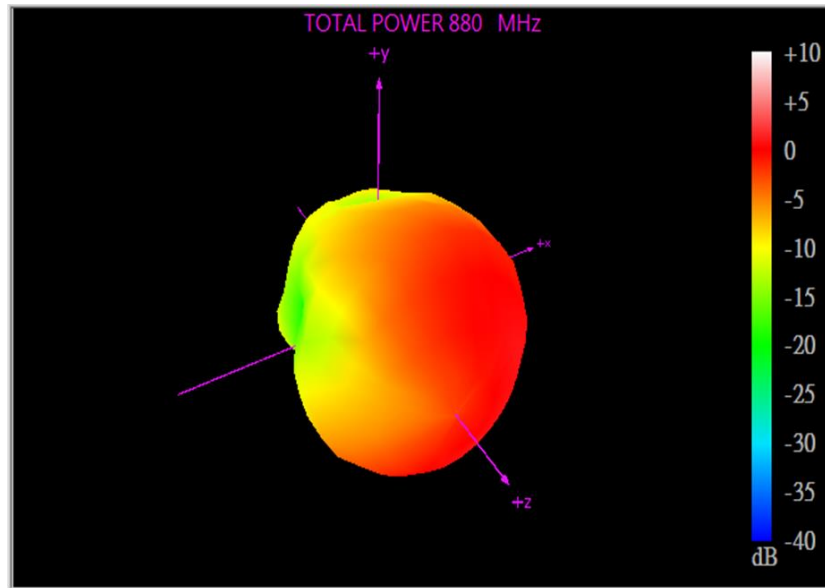
XY Plane XZ Plane YZ Plane



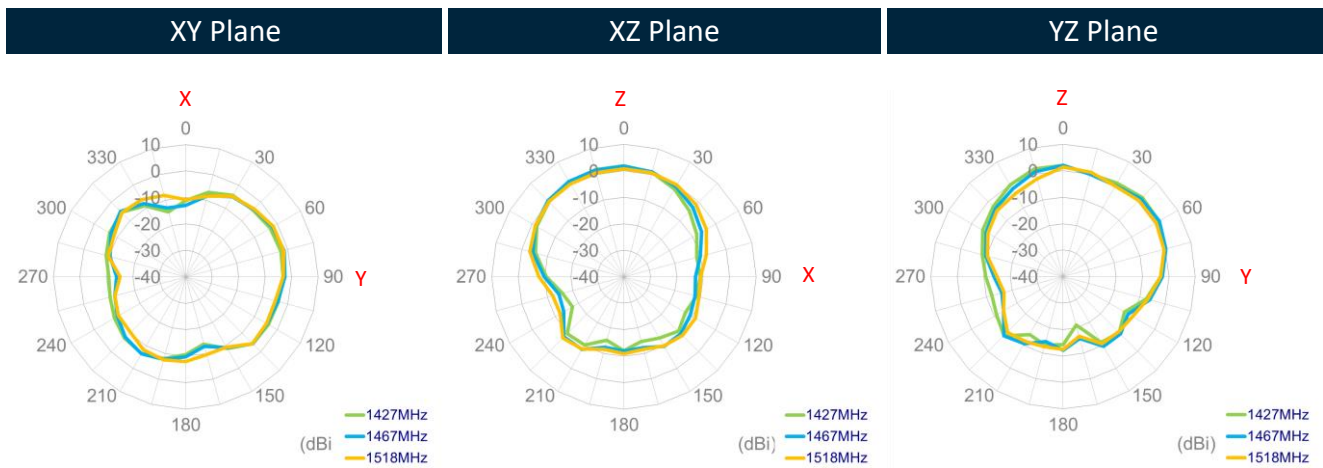
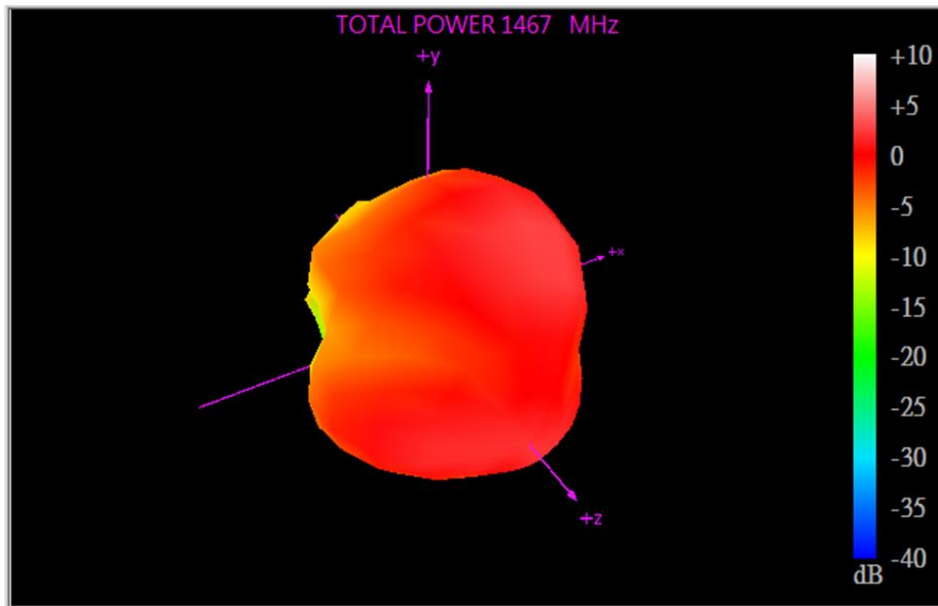
751MHz



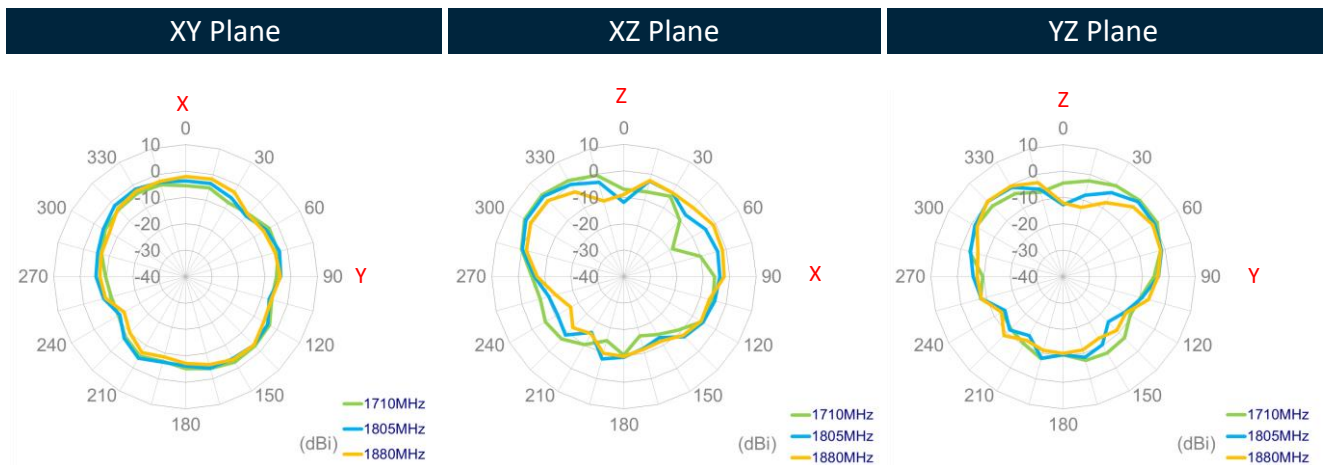
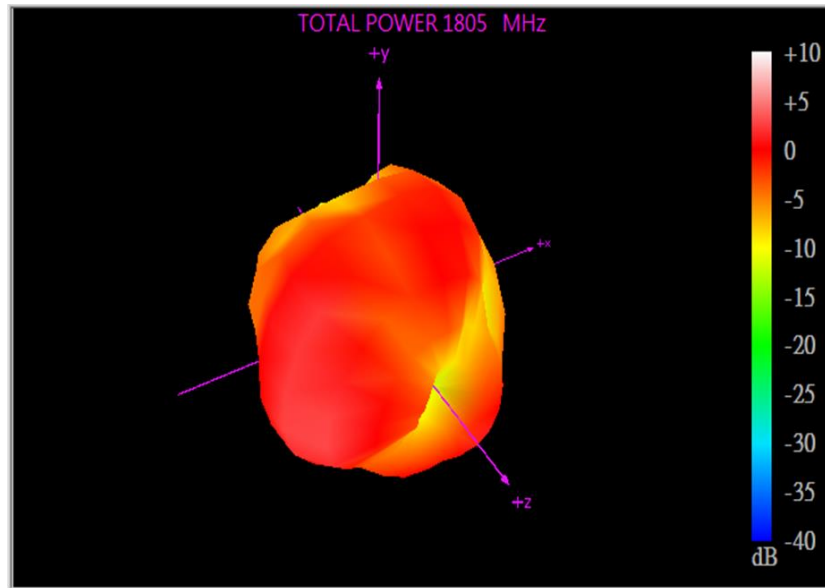
880MHz



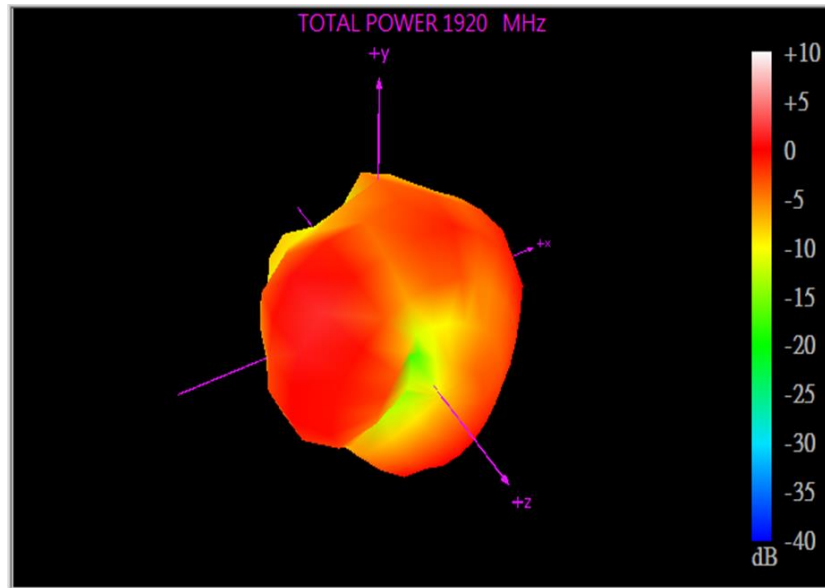
1467MHz



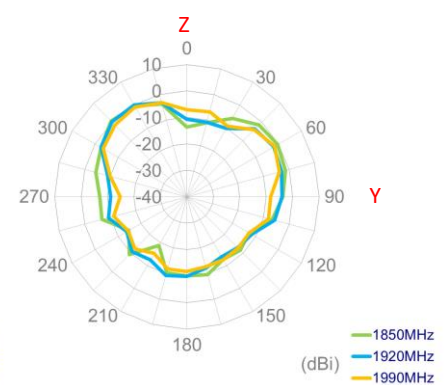
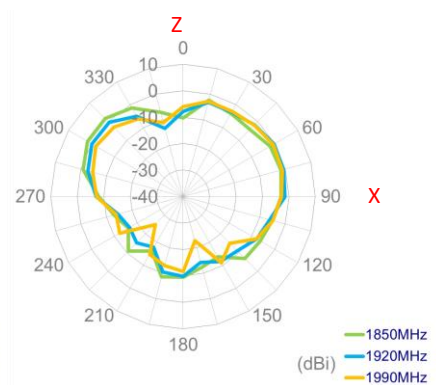
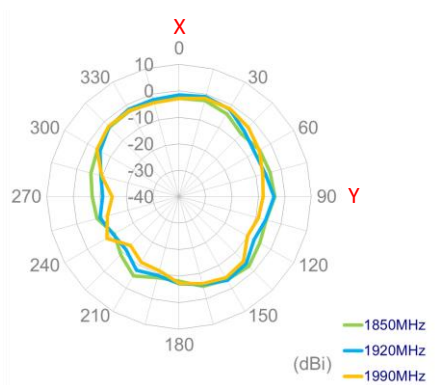
1805MHz



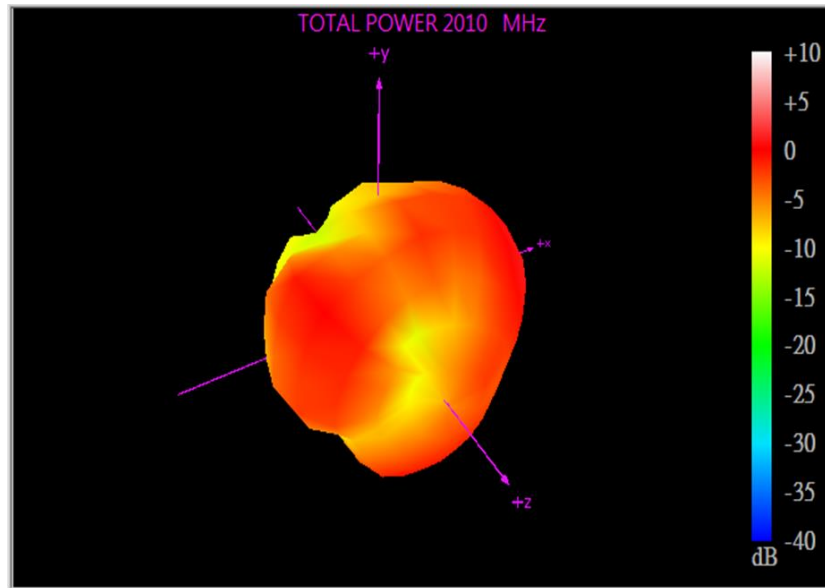
1920MHz



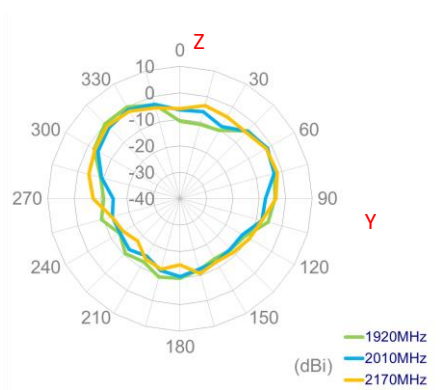
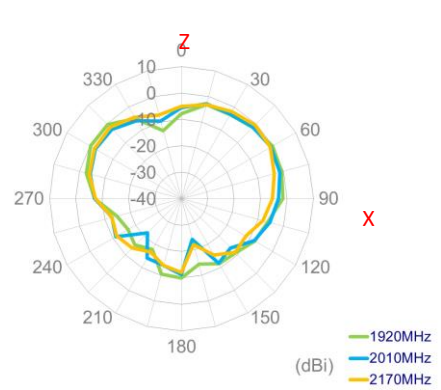
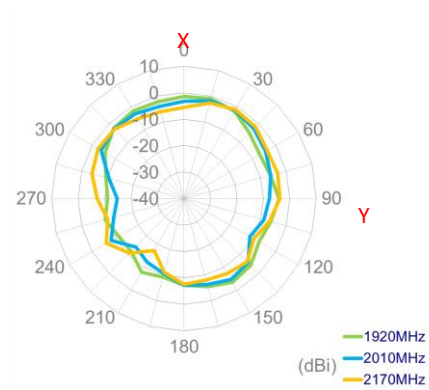
XY Plane XZ Plane YZ Plane



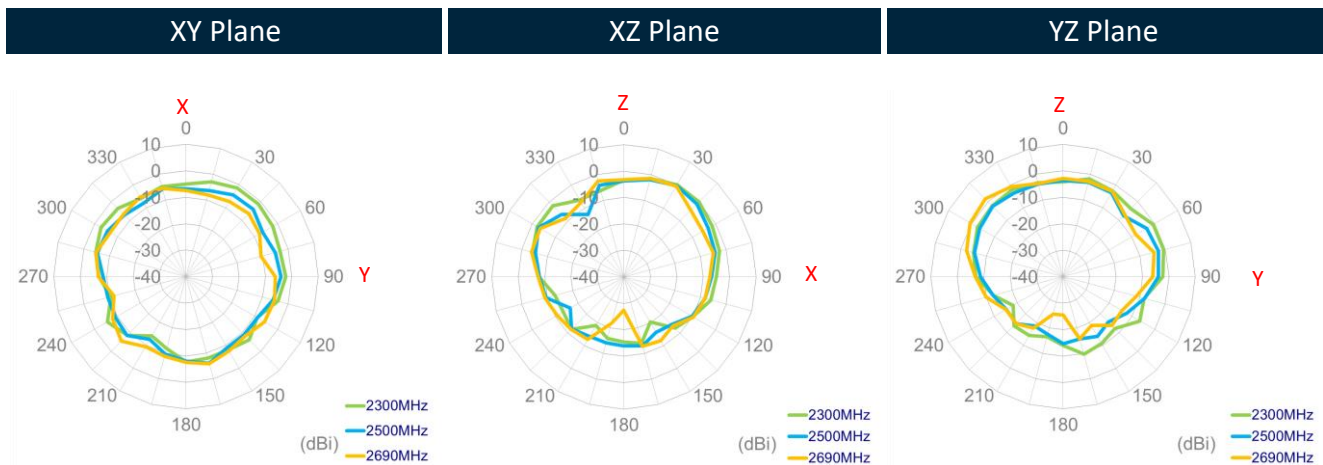
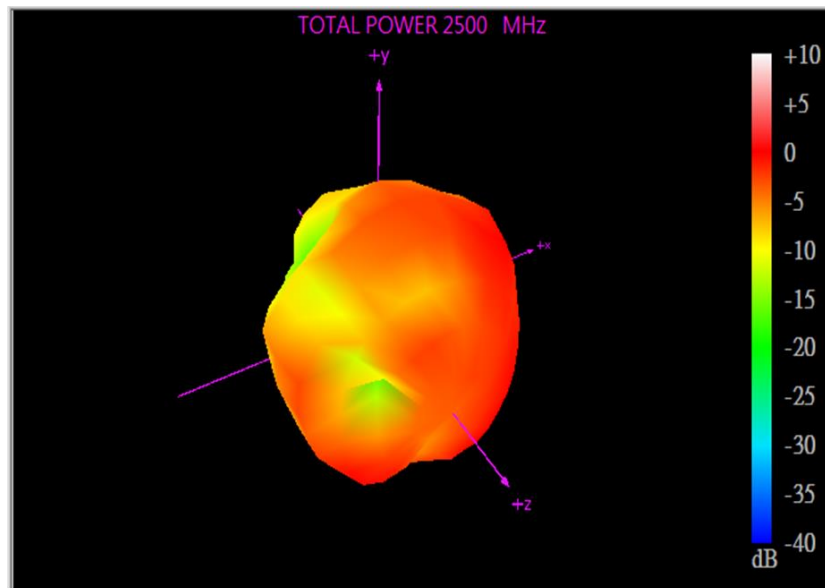
2010MHz



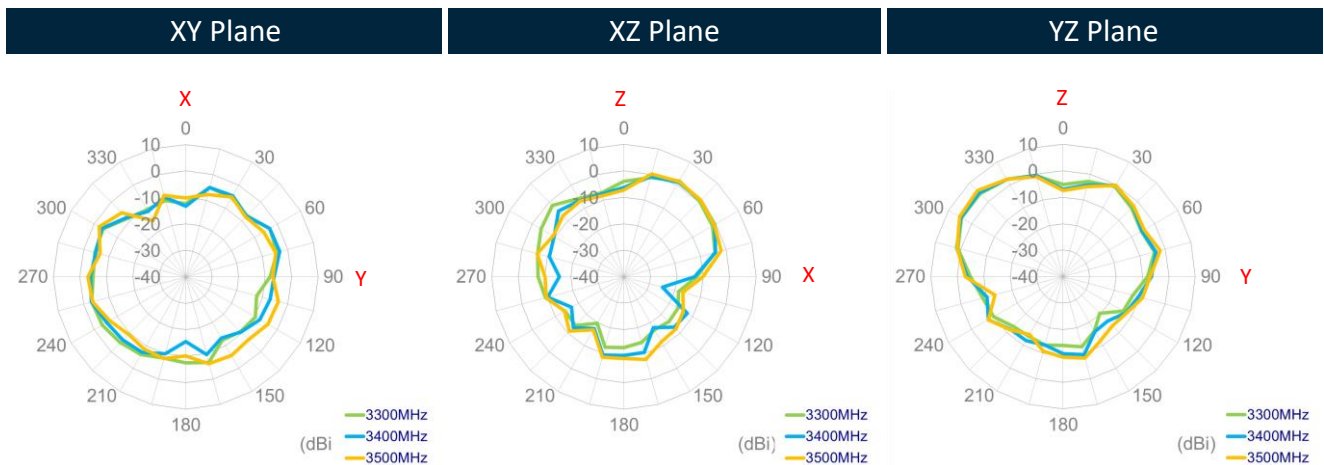
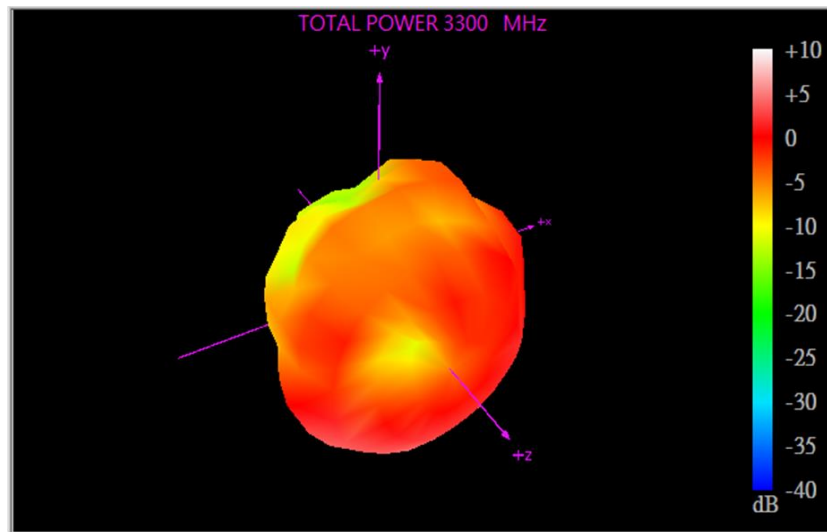
| XY Plane | XZ Plane | YZ Plane |
|----------|----------|----------|
|----------|----------|----------|



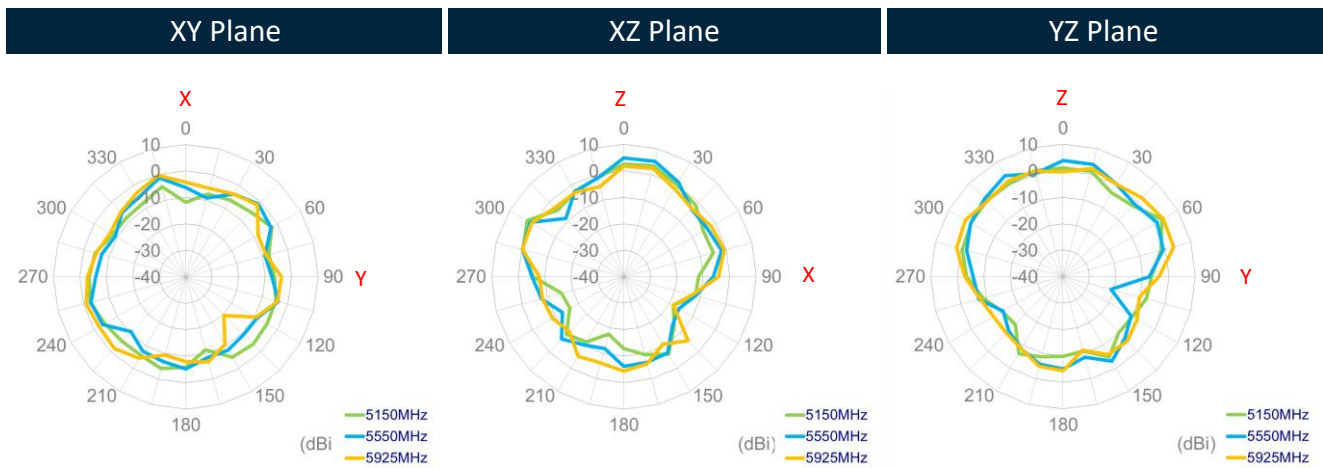
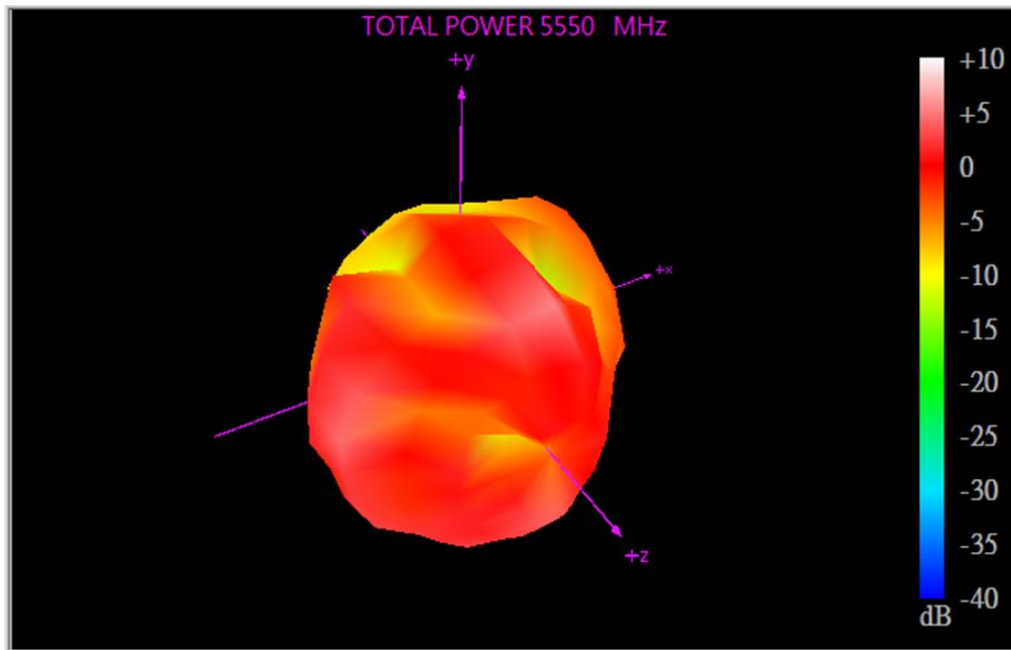
2500MHz



3300MHz

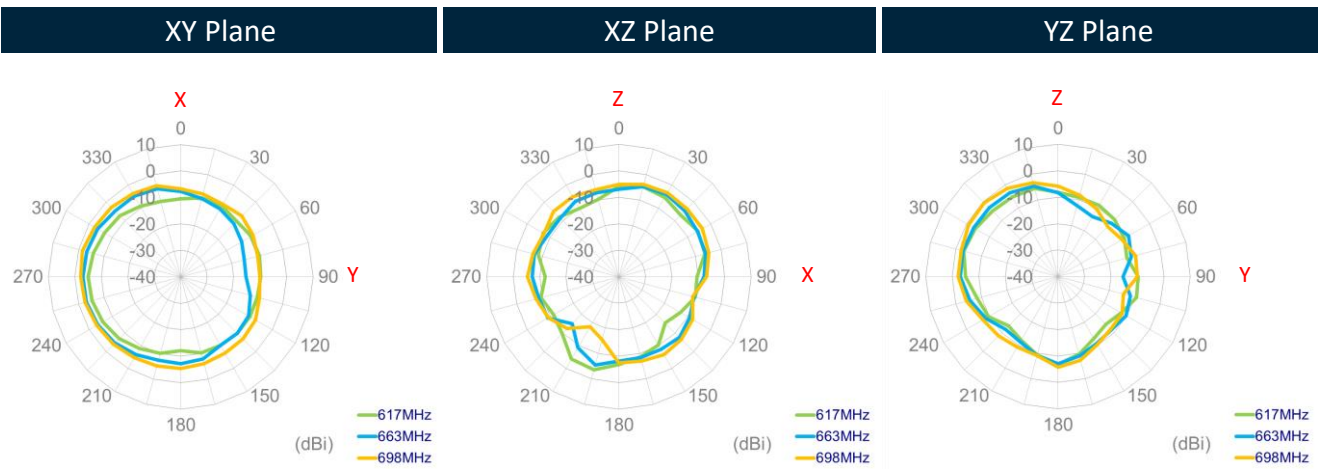
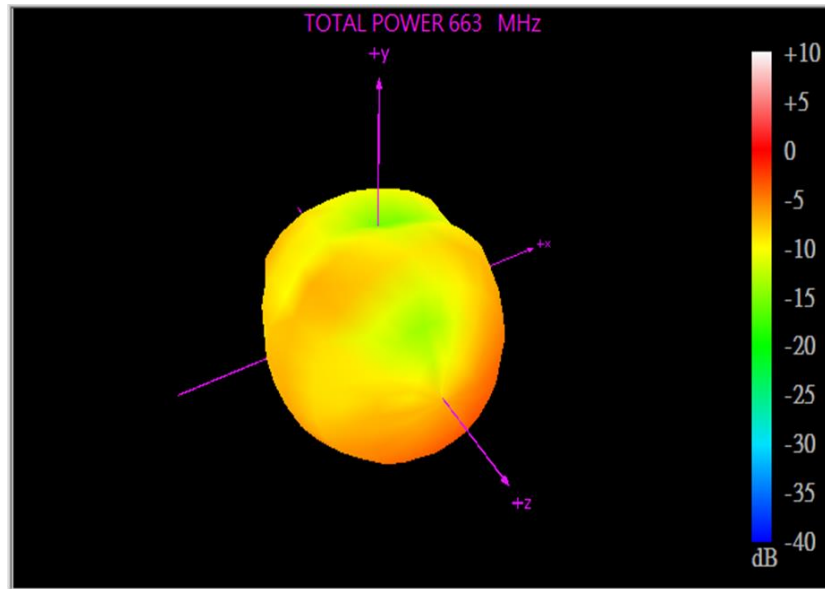


5550MHz

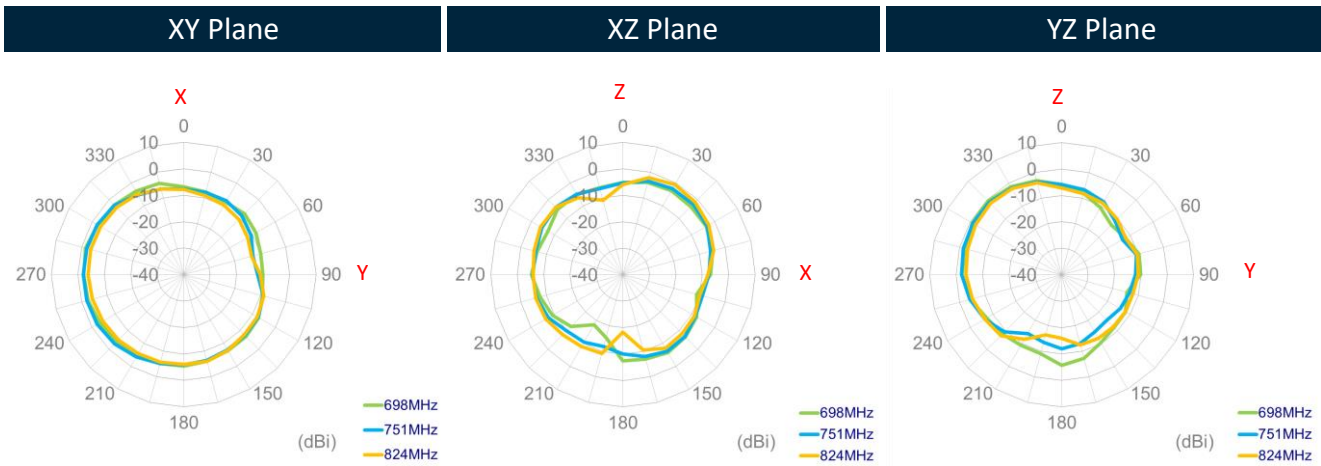
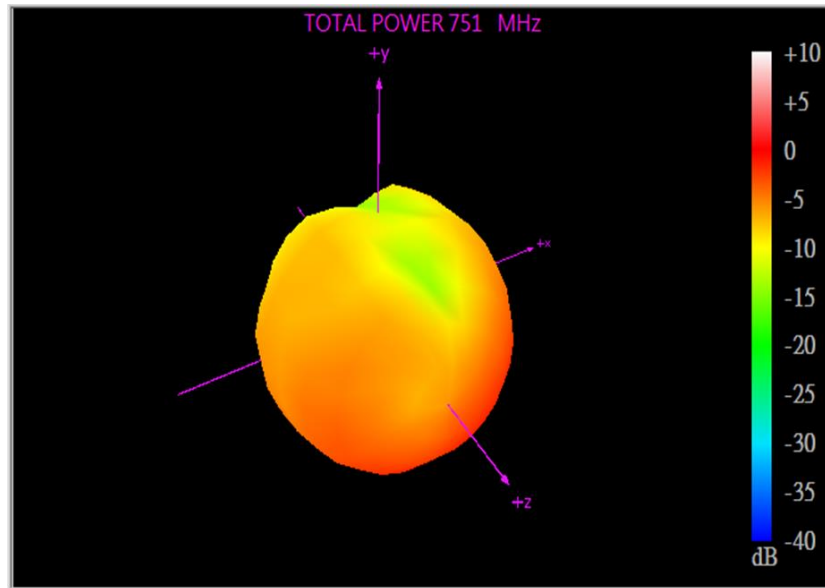


5.5 5G/4G MIMO 4 Radiation Pattern

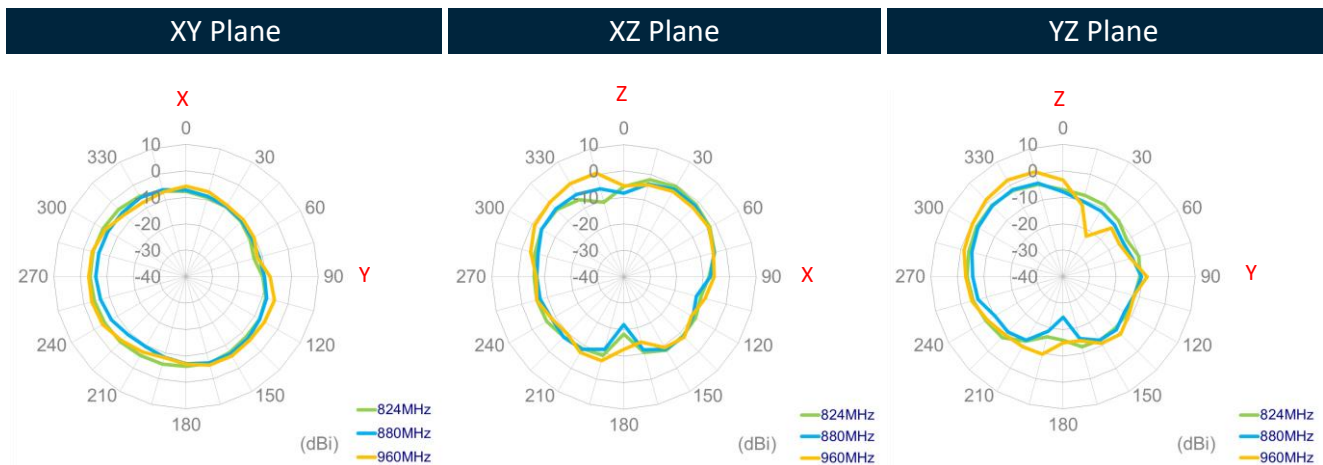
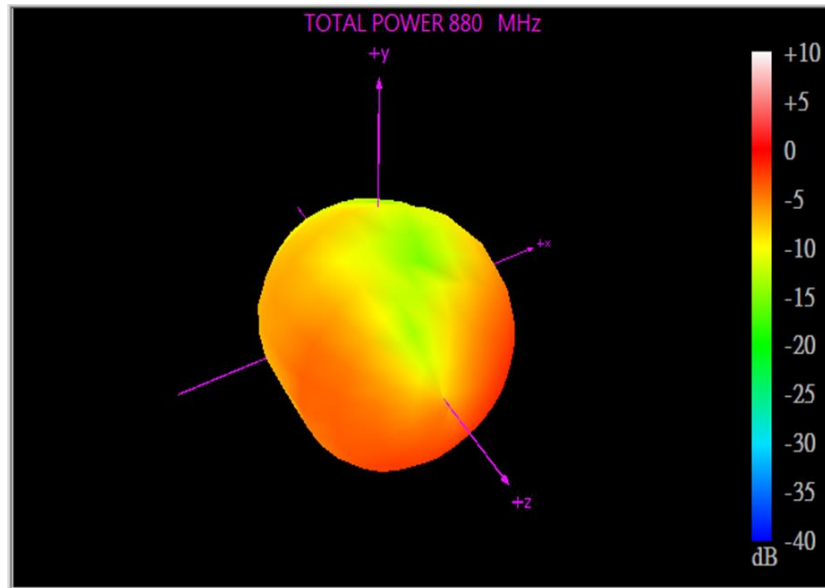
663MHz



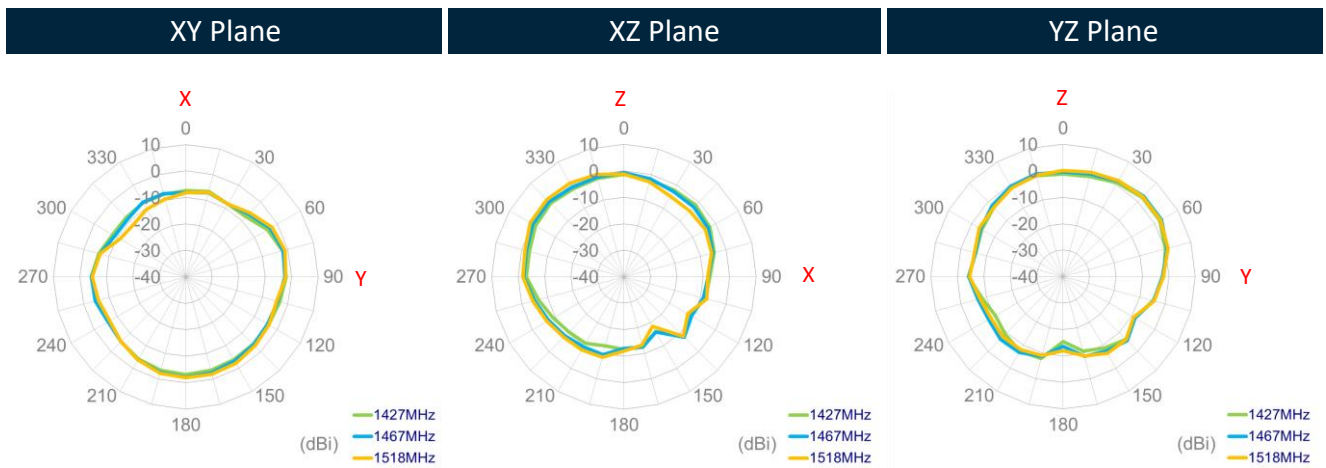
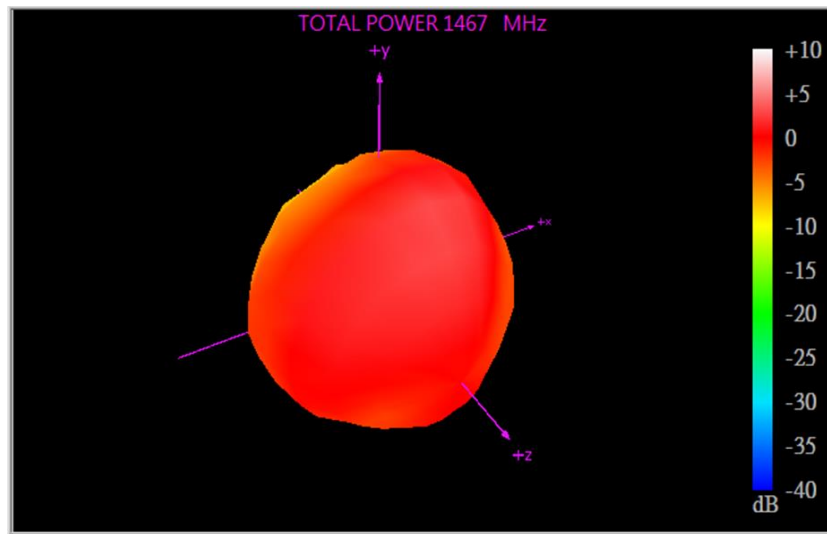
751MHz



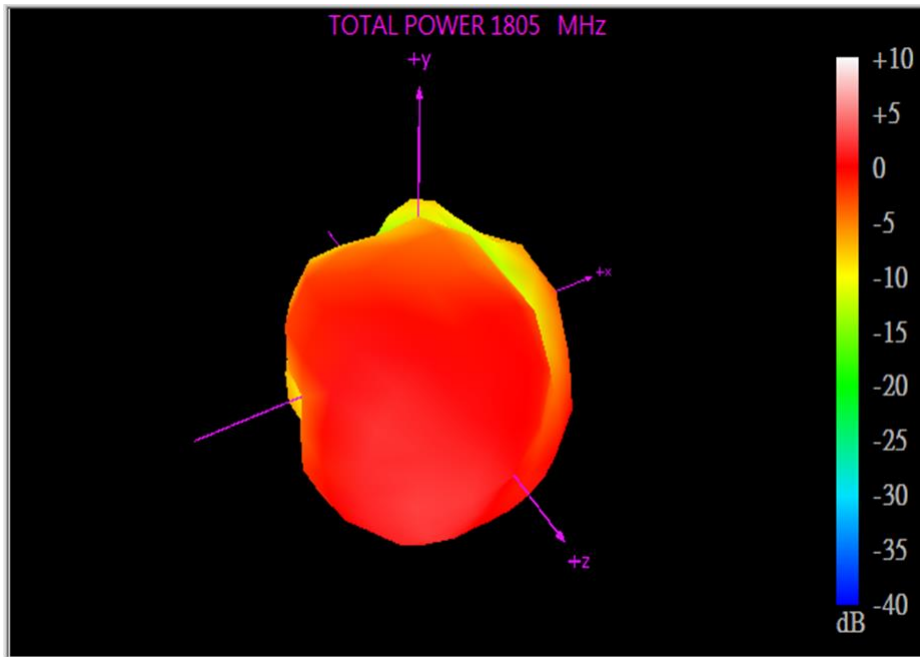
880MHz



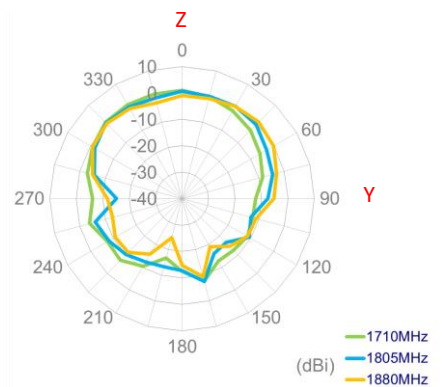
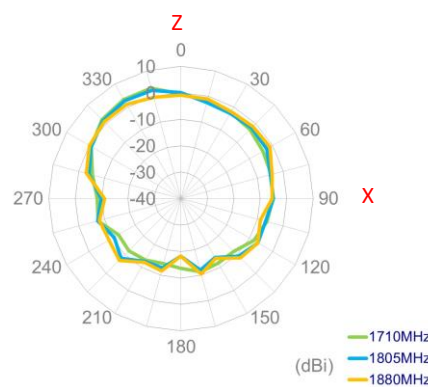
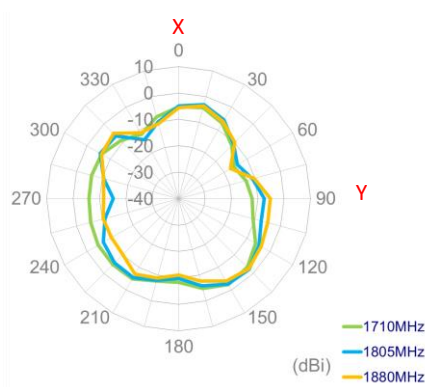
1467MHz



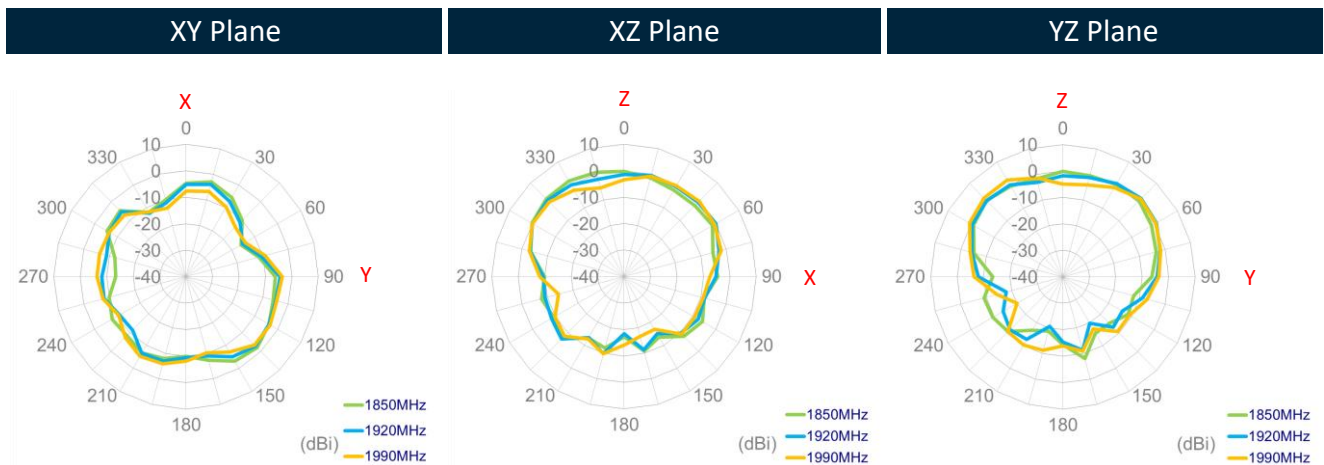
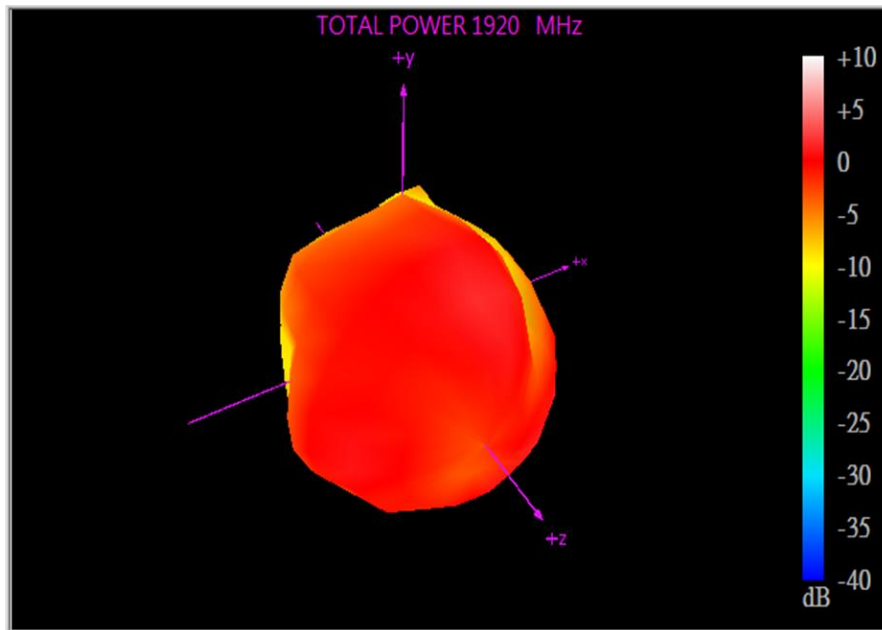
1805MHz



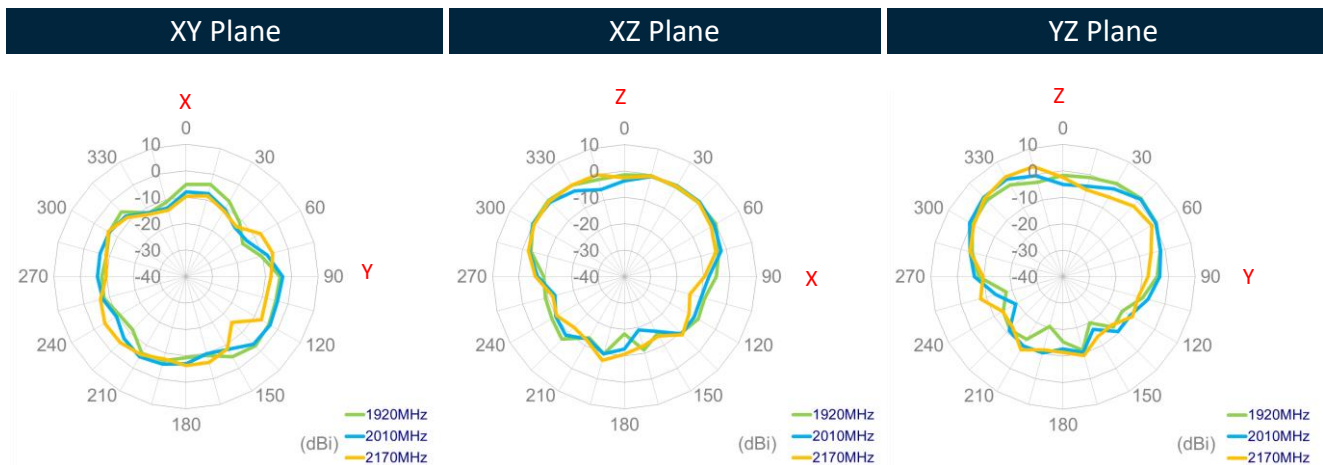
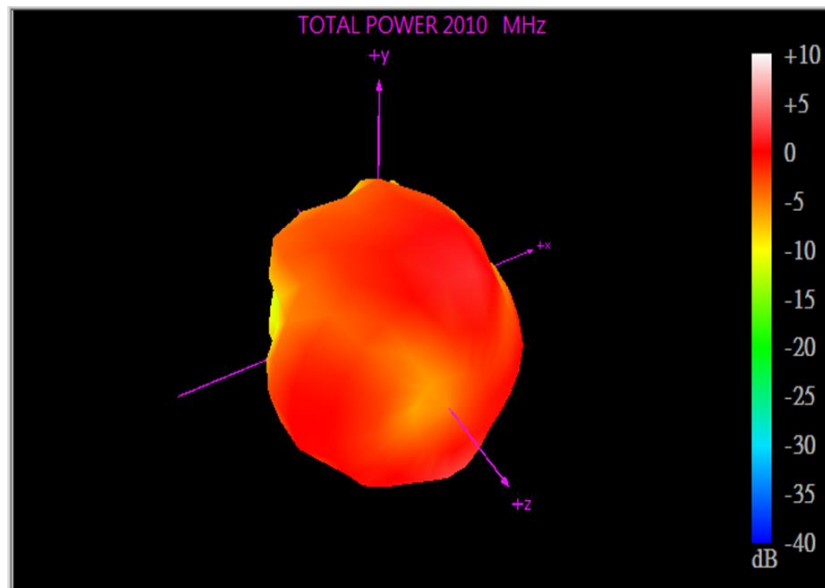
XY Plane XZ Plane YZ Plane



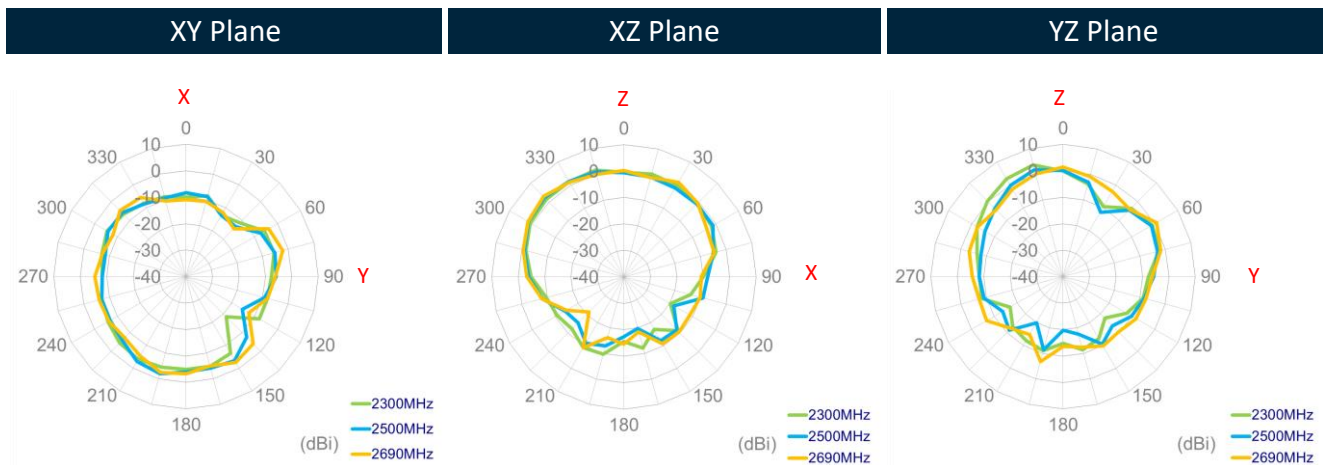
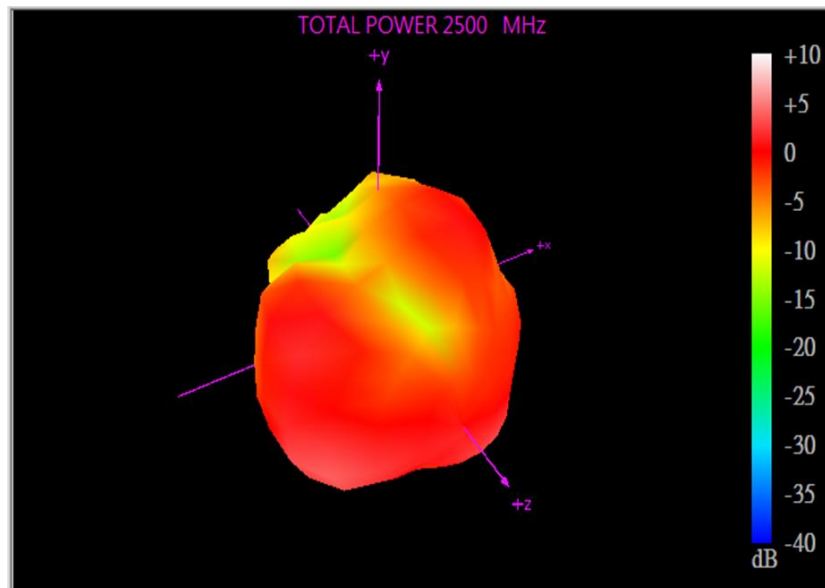
1920MHz



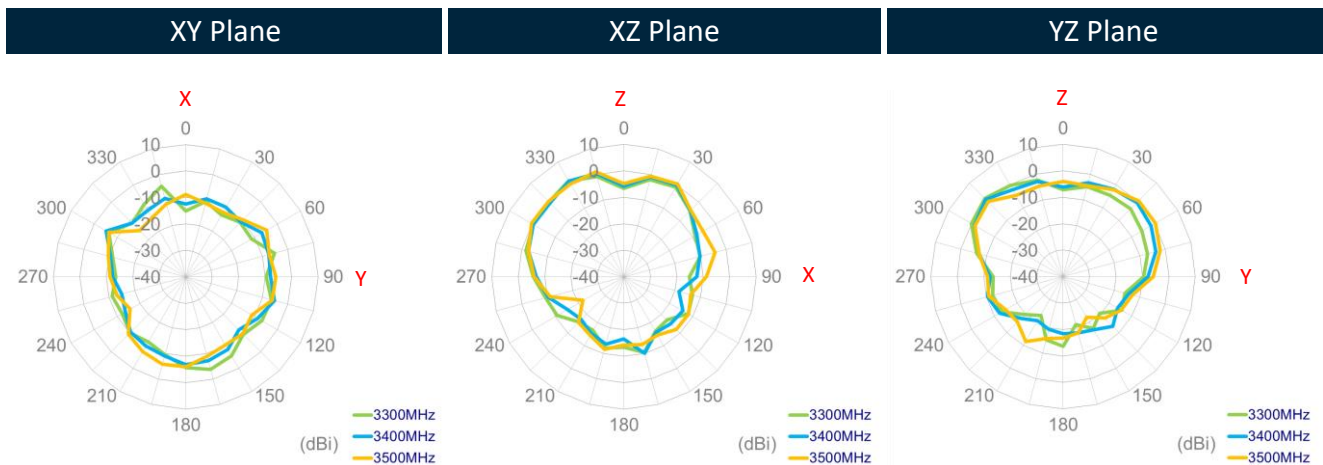
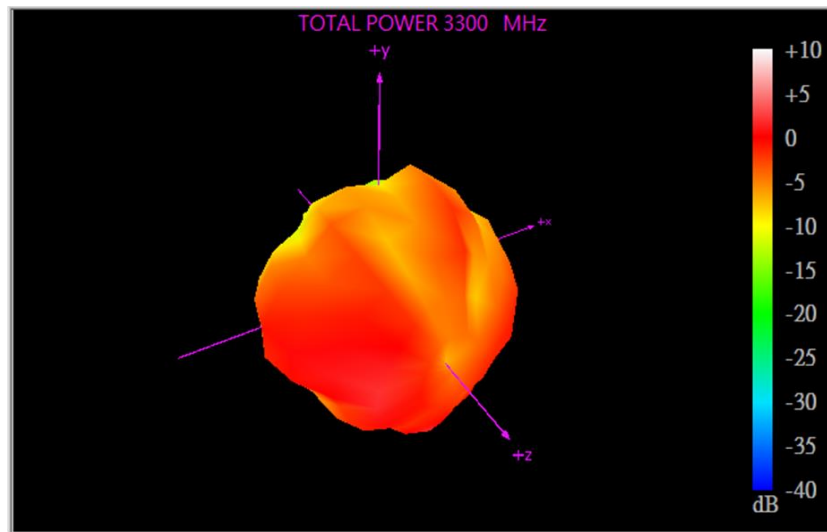
2010MHz



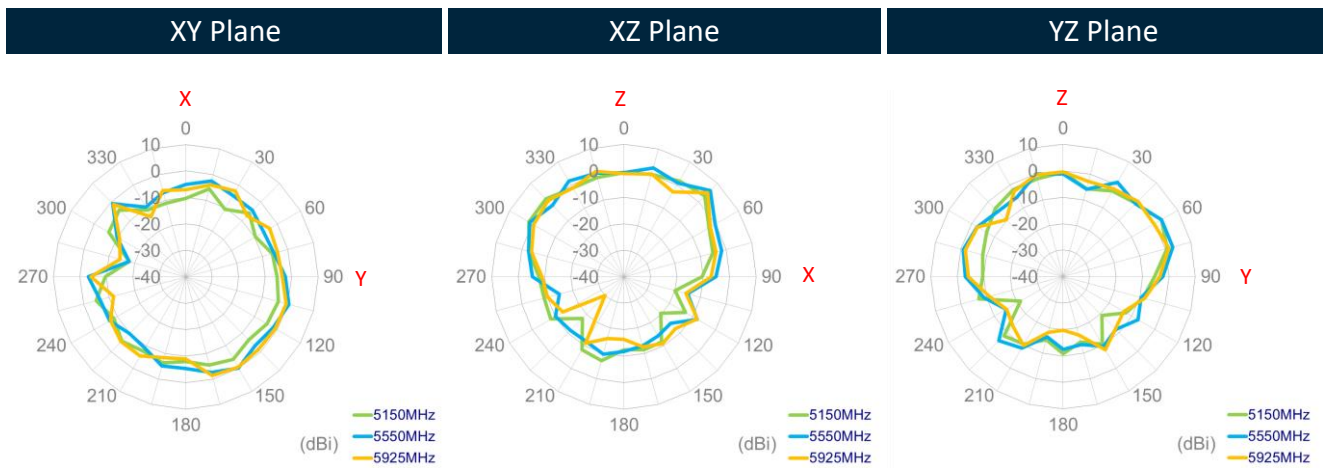
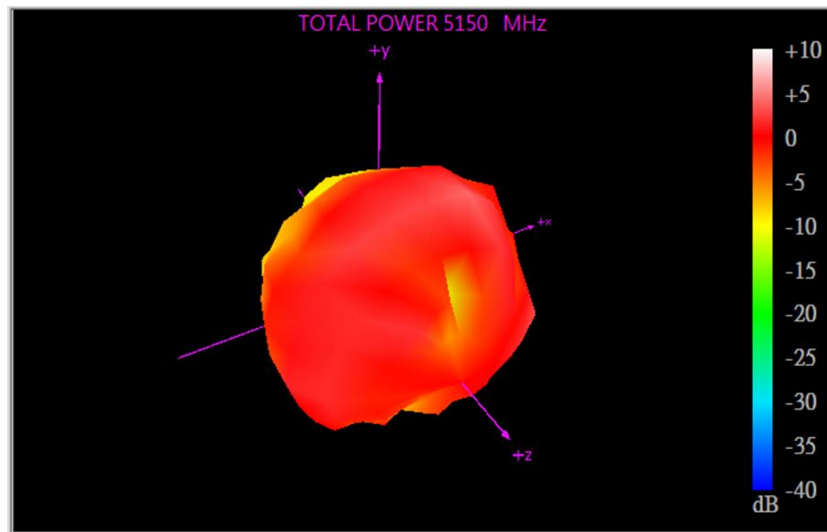
2500MHz



3300MHz

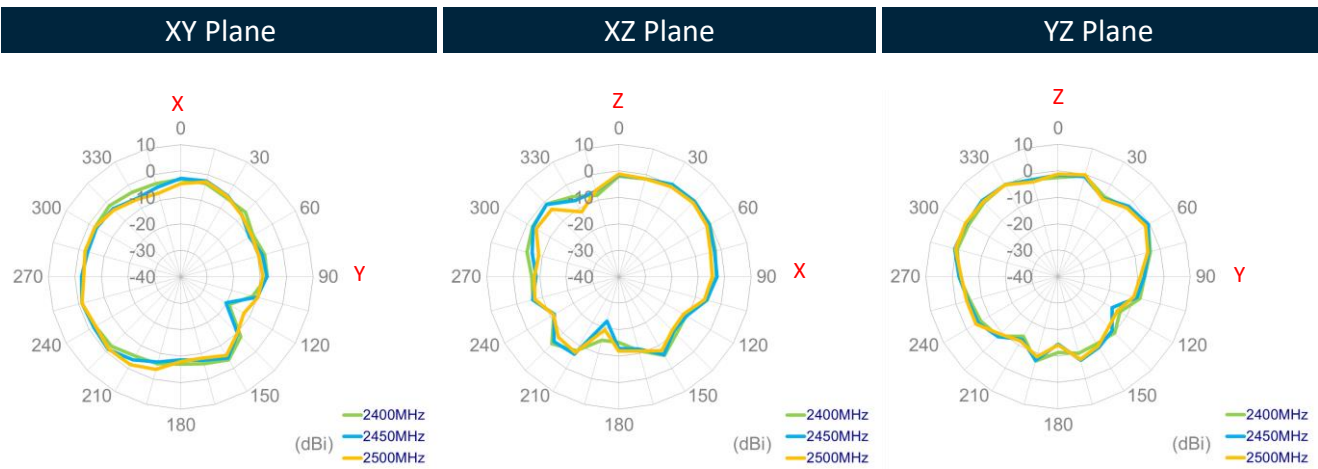
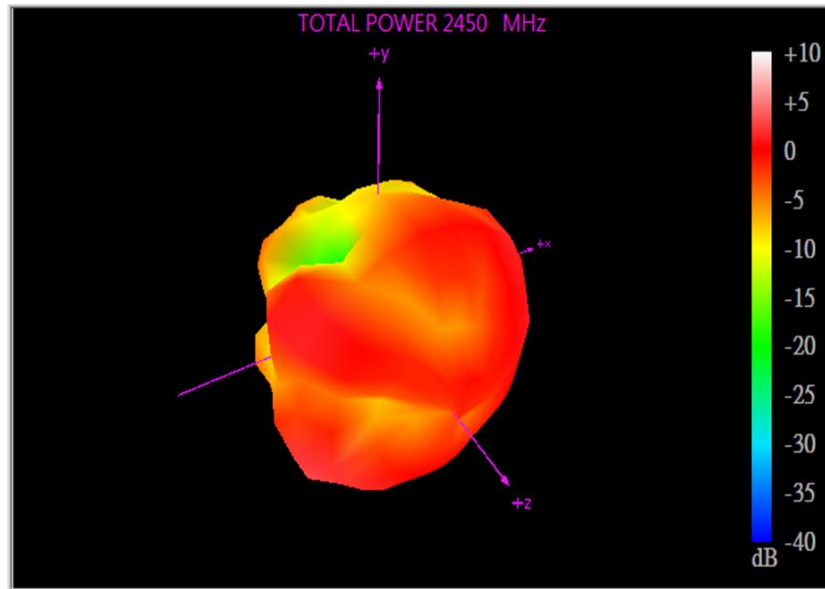


5150MHz

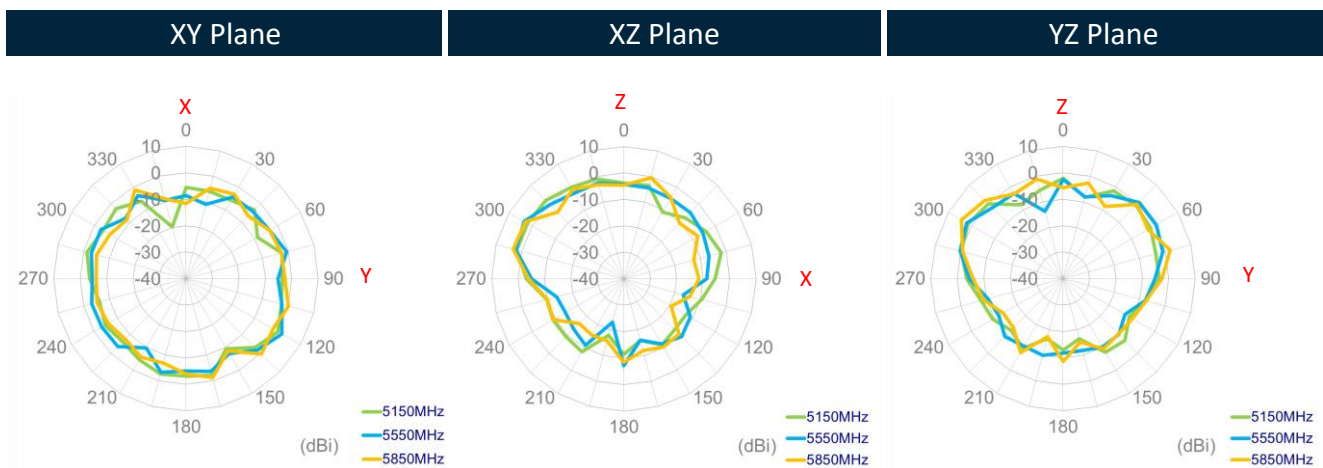
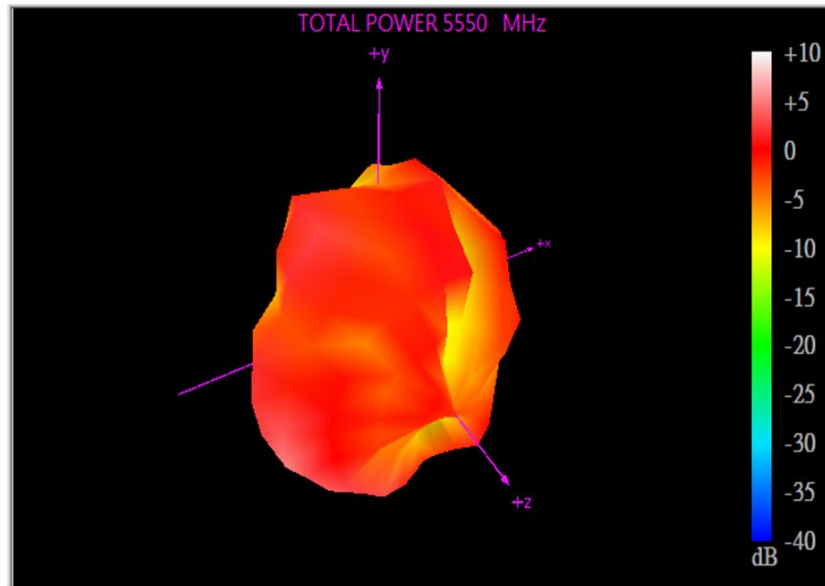


5.6 Wi-Fi MIMO 1 Radiation Pattern

2450MHz

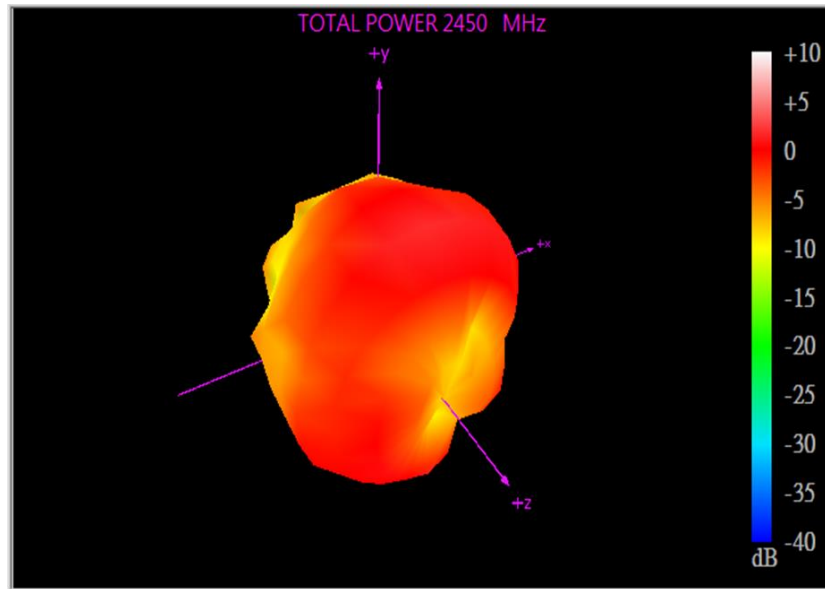


5550MHz



5.7 Wi-Fi MIMO 2 Radiation Pattern

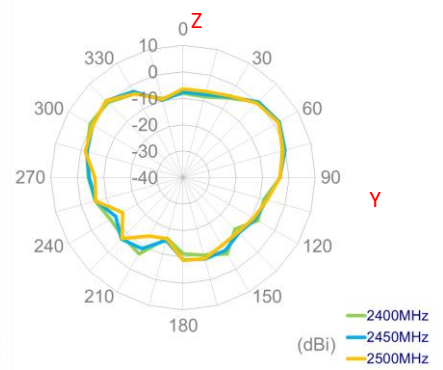
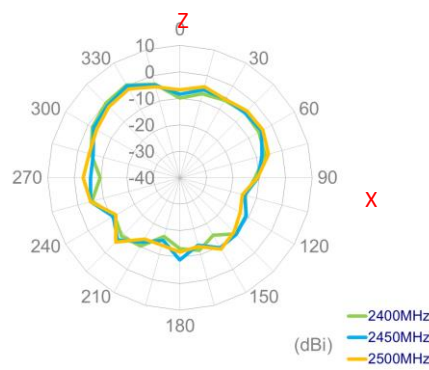
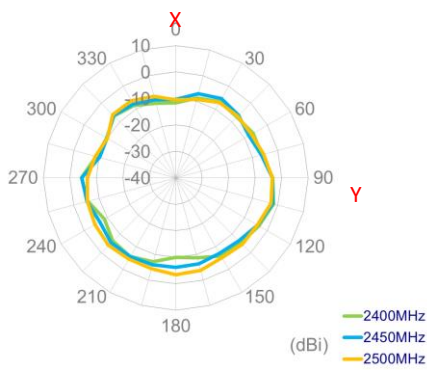
2450MHz



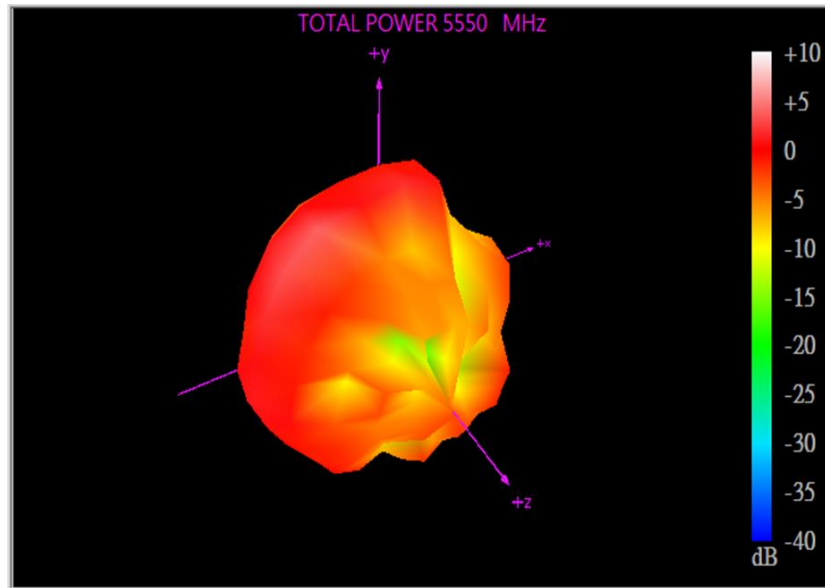
XY Plane

XZ Plane

YZ Plane



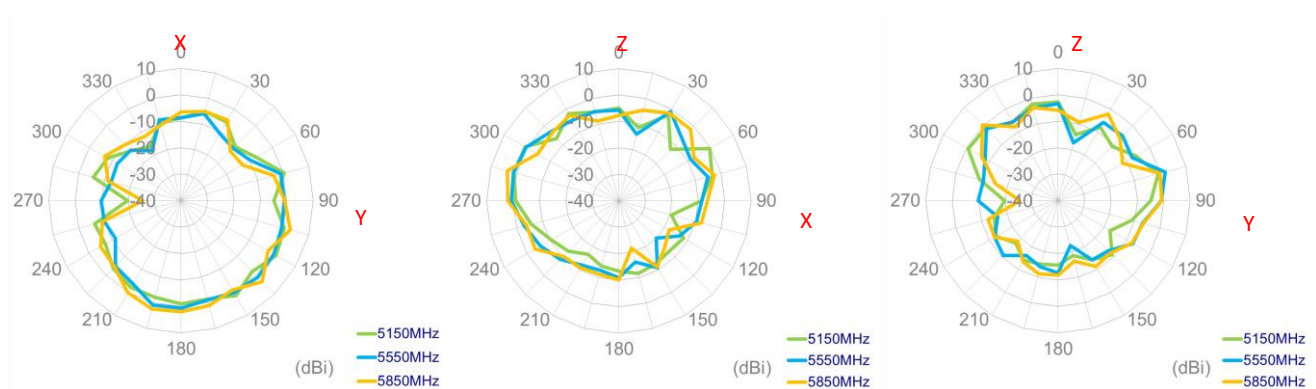
5550MHz



XY Plane

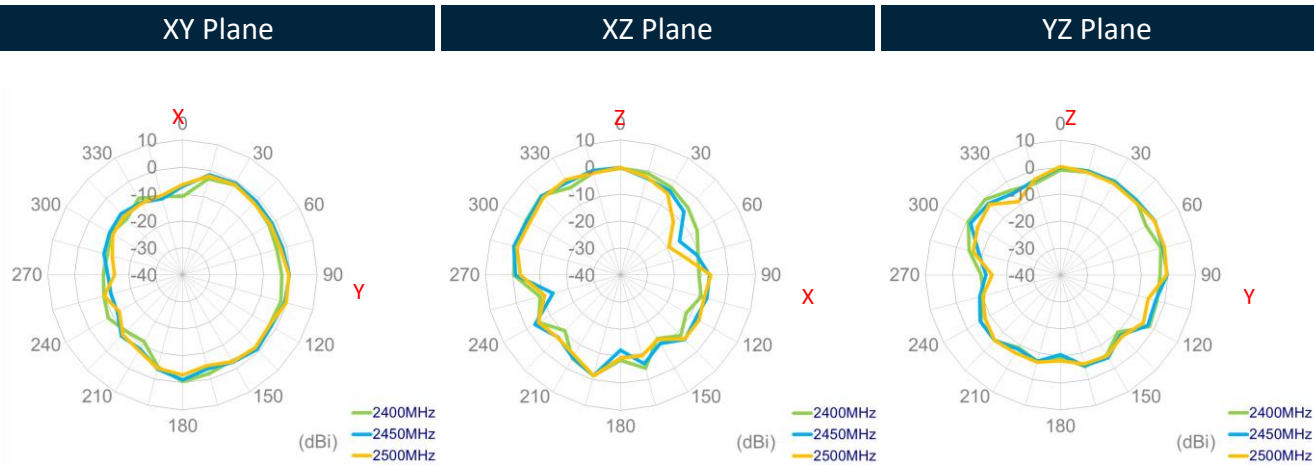
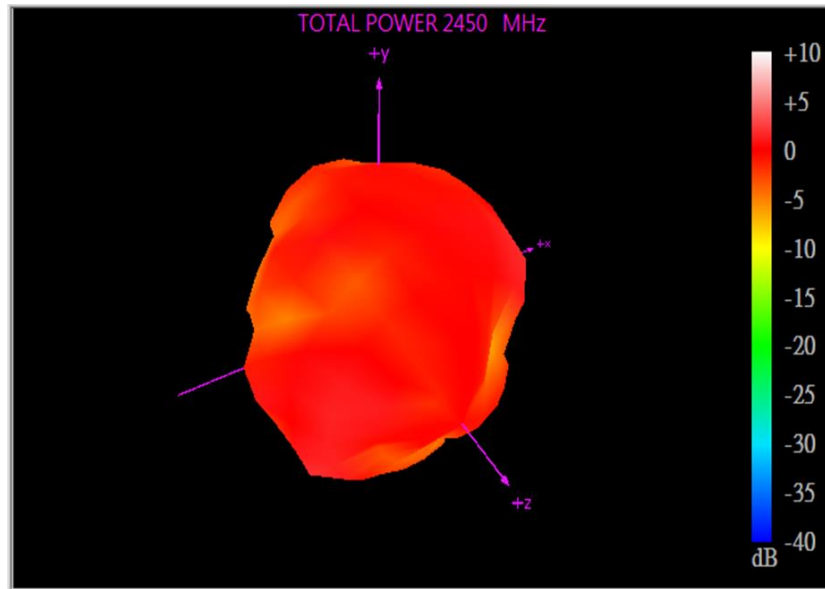
XZ Plane

YZ Plane

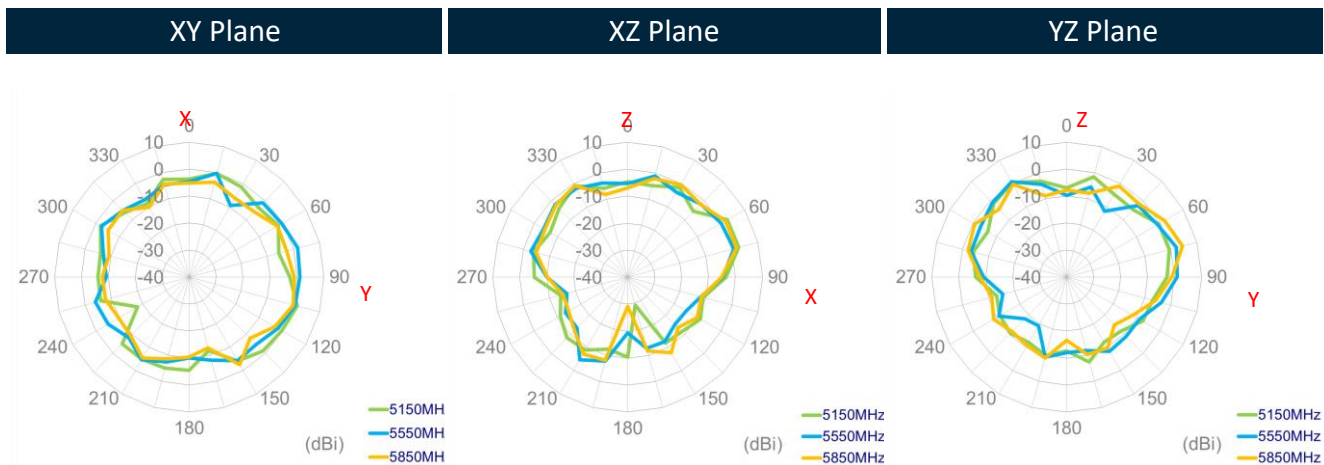
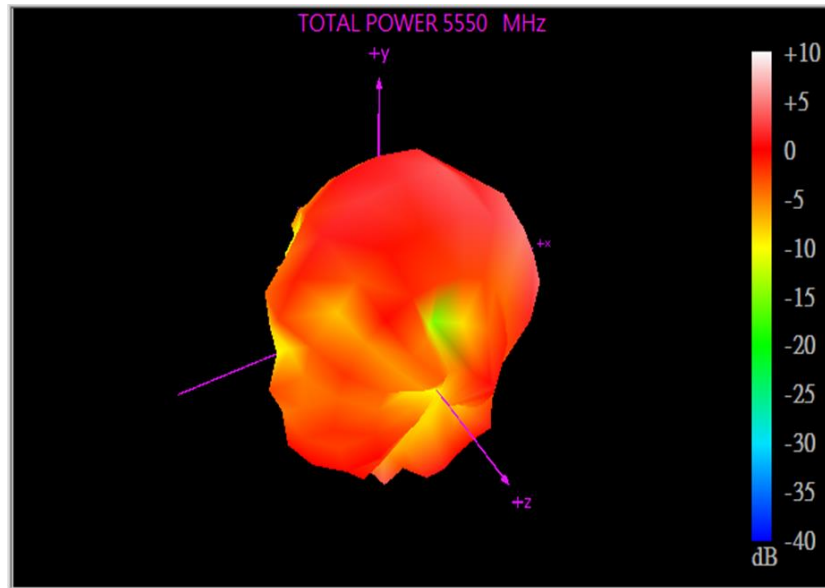


5.8 Wi-Fi MIMO 3 Radiation Pattern

2450MHz

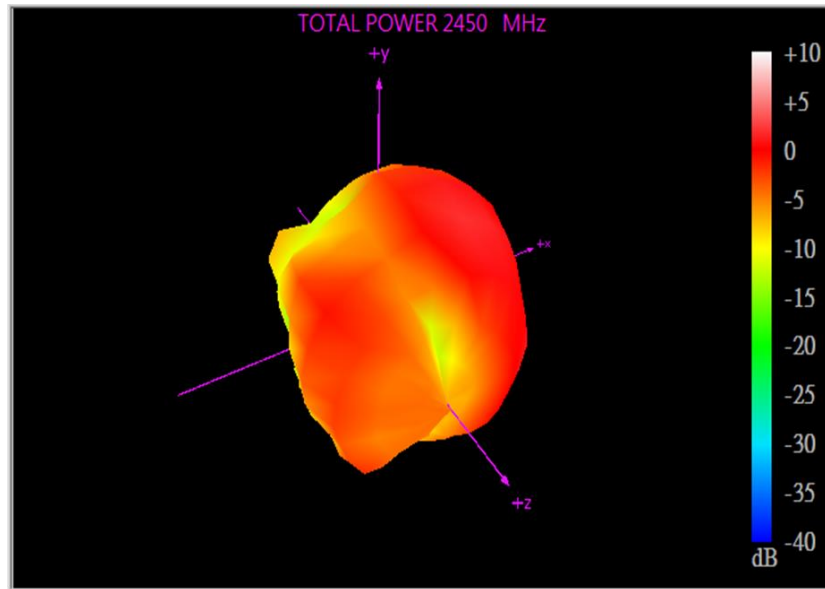


5550MHz

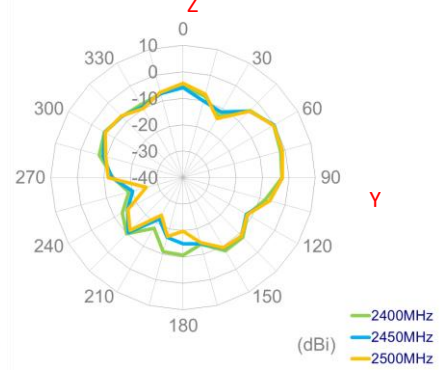
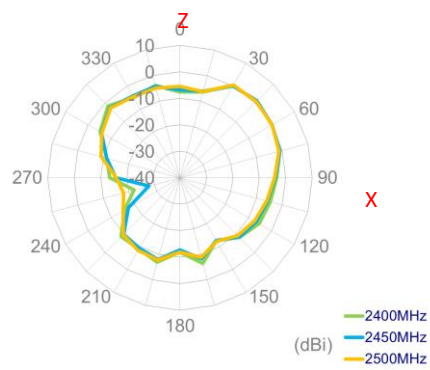
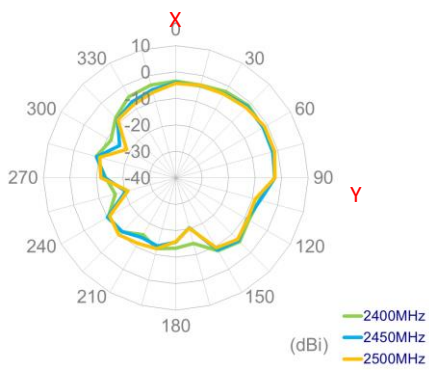


5.9 Wi-Fi MIMO 4 Radiation Pattern

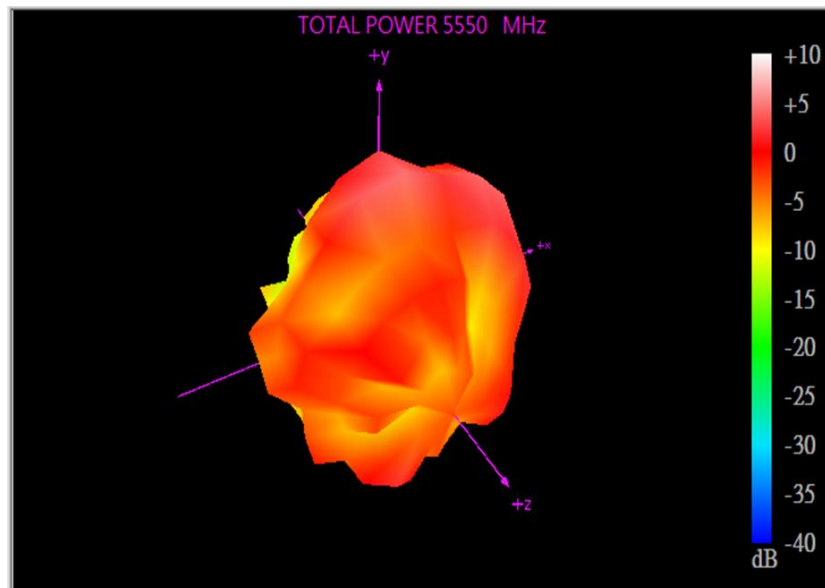
2450MHz



XY Plane XZ Plane YZ Plane



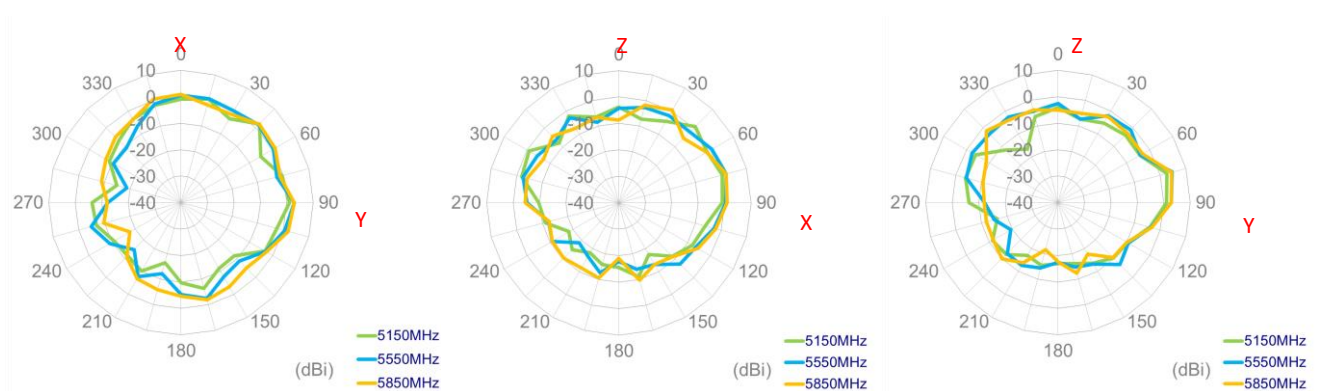
5550MHz



XY Plane

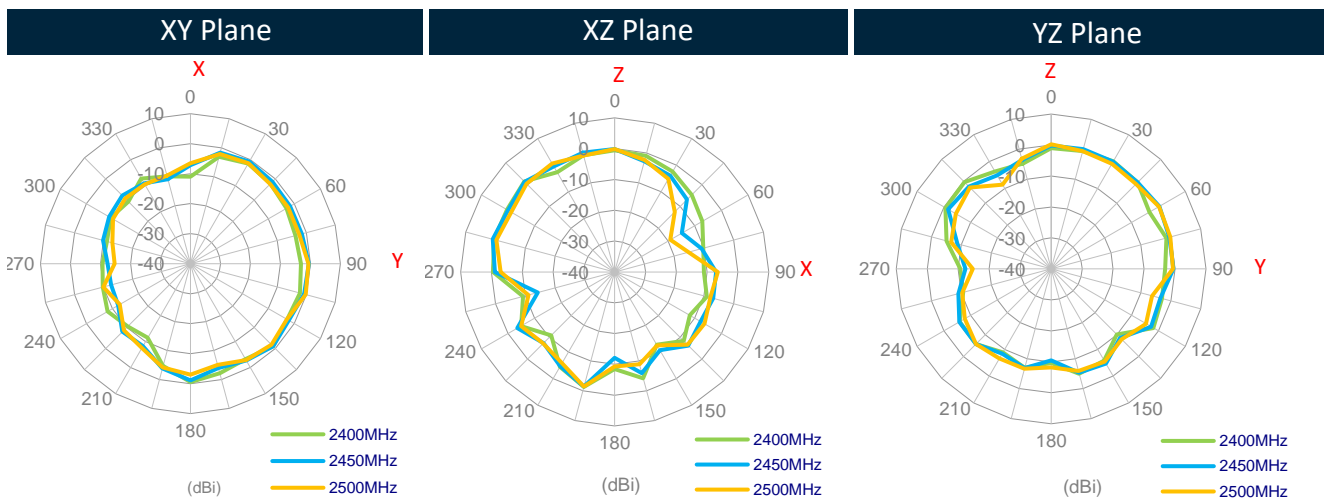
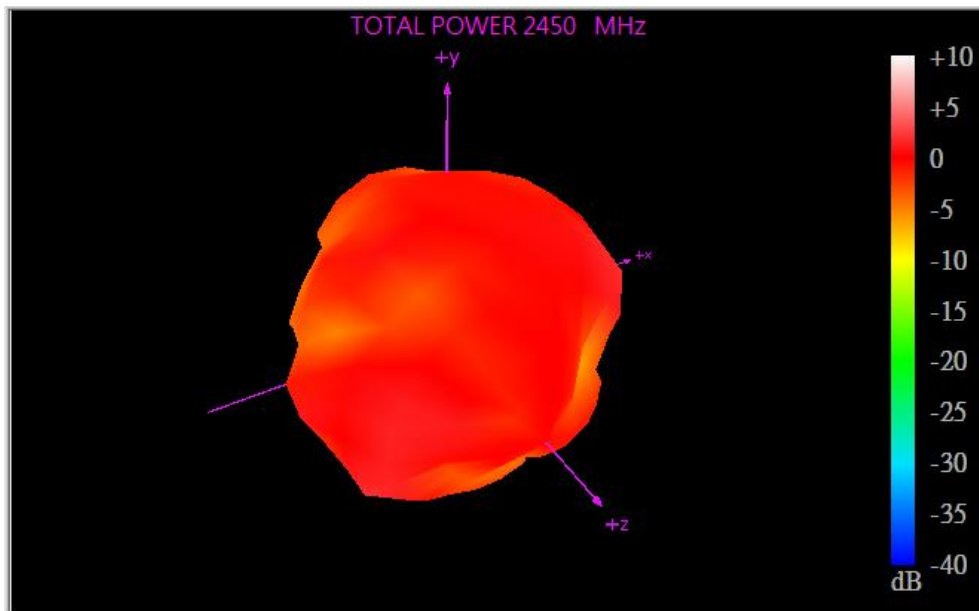
XZ Plane

YZ Plane

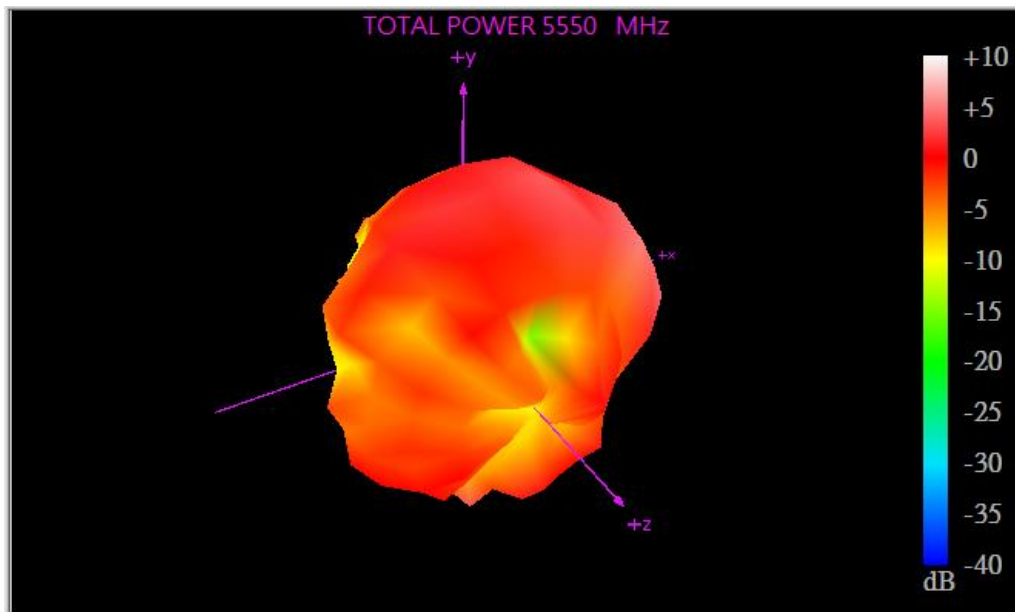


5.10 Wi-Fi MIMO 5 Radiation Pattern

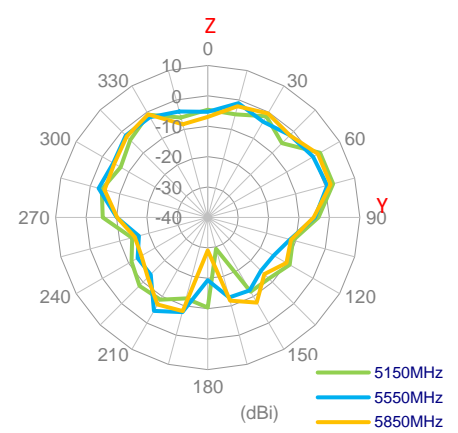
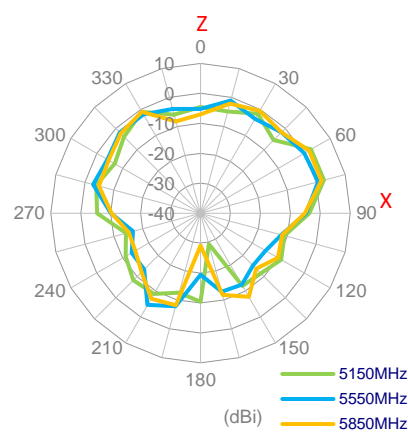
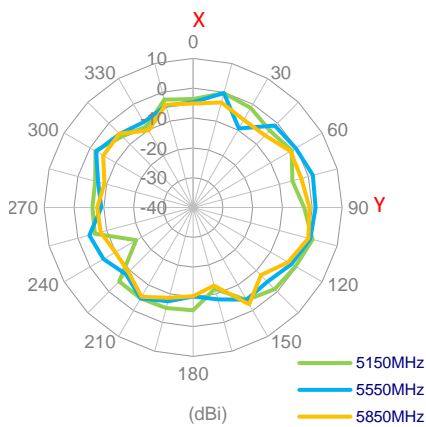
2450MHz



5550MHz

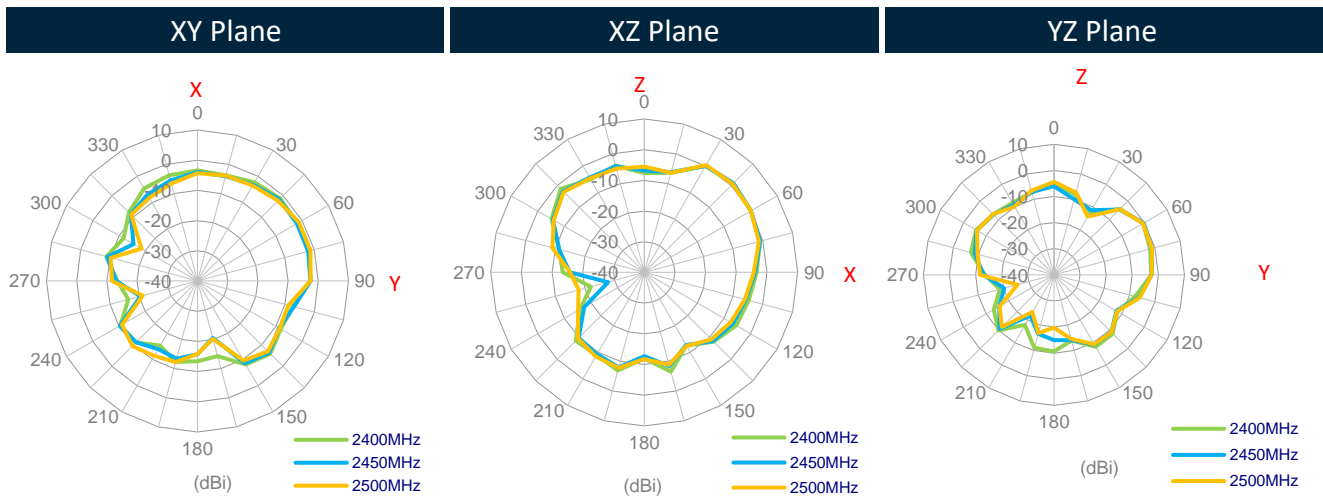
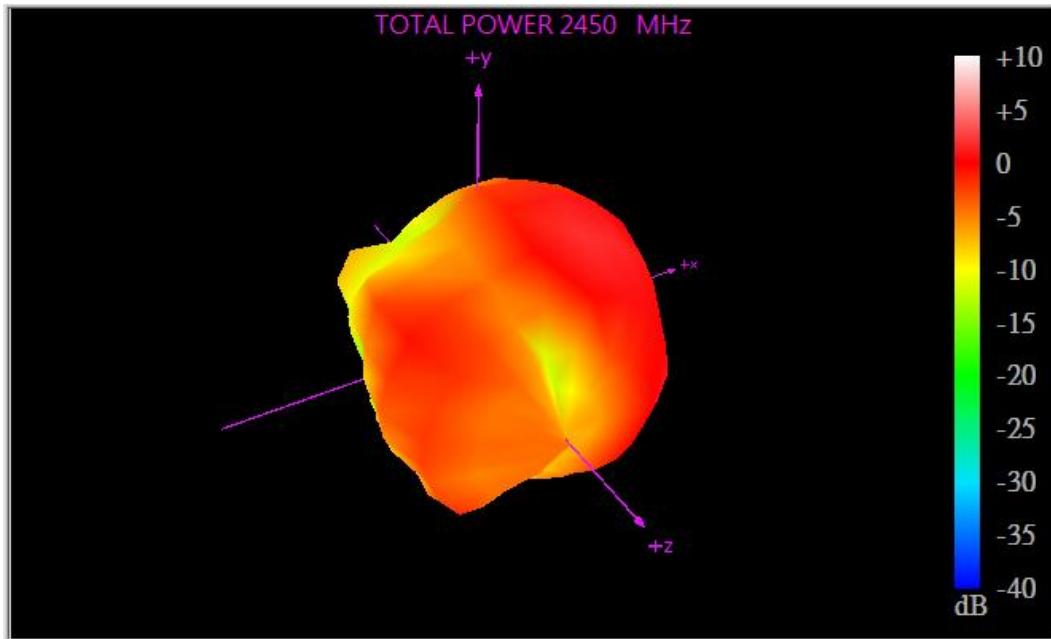


XY Plane XZ Plane YZ Plane

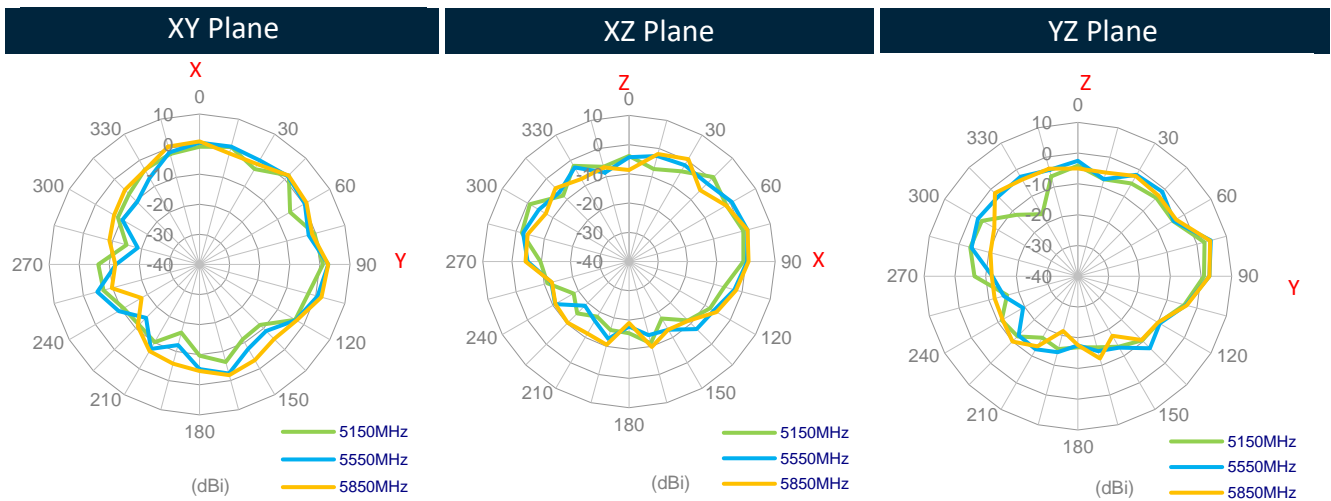
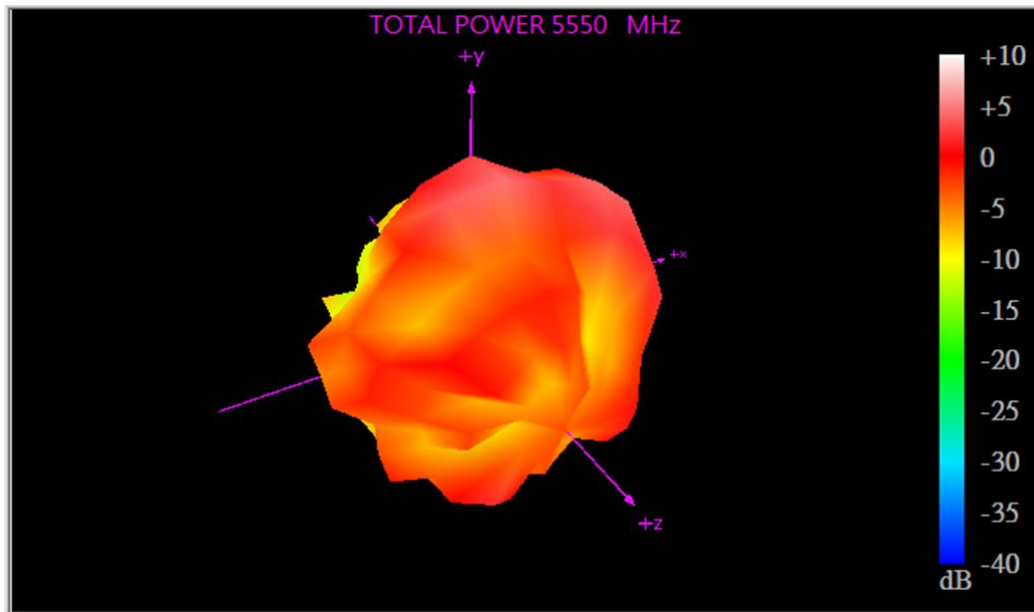


5.11 Wi-Fi MIMO 6 Radiation Pattern

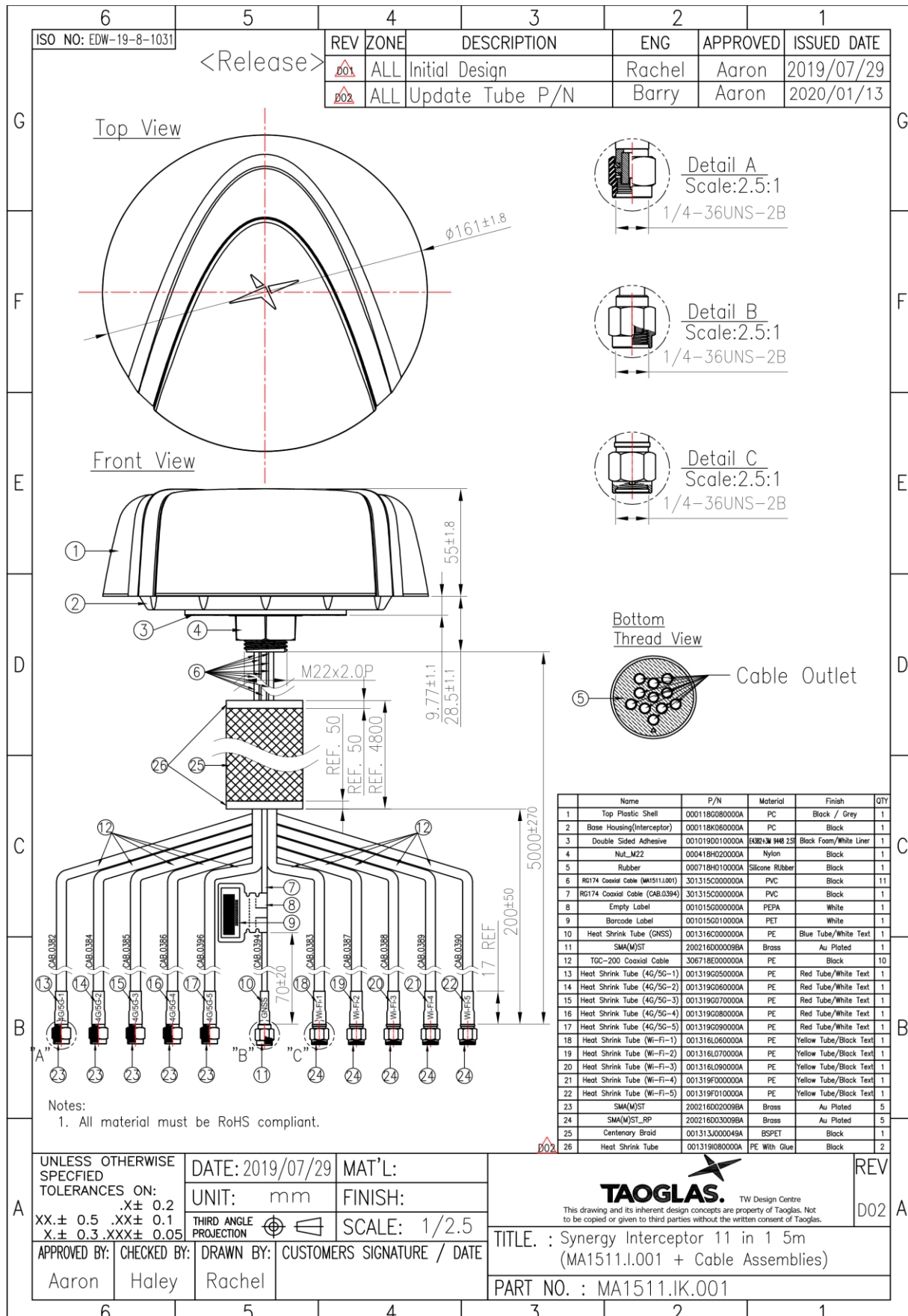
2450MHz



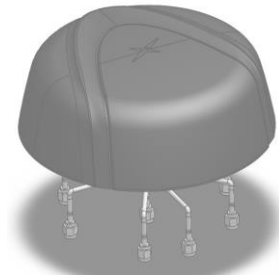
5550MHz



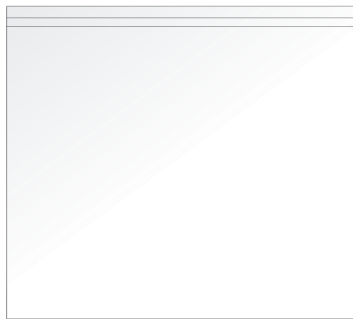
6. Mechanical Drawing (Units: mm)



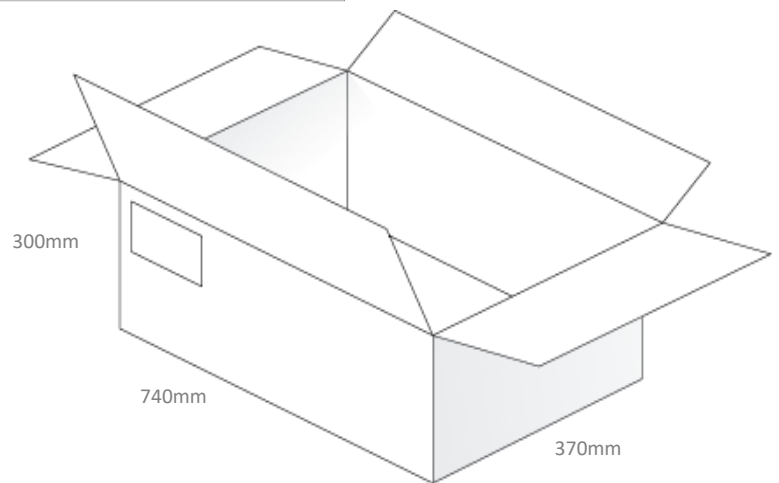
7. Packaging



1pc MA1511.IK.001 per PE Bag
Weight: 2.9Kg



4pcs MA1511.IK.001 per Carton
Carton Dimensions: 740*370*300mm
Weight: 12.7Kg



Changelog for the datasheet

SPE-20-8-009 - MA1511.IK.001

Revision: A (Original First Release)

| | |
|---------|-----------------|
| Date: | 2020-01-27 |
| Notes: | Initial Release |
| Author: | Jack Conroy |

Previous Revisions

| | |
|--|--|
| | |
| | |
| | |
| | |
| | |



TAOGLAS®

www.taoglas.com

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Antennas](#) category:

Click to view products by [Taoglas](#) manufacturer:

Other Similar products are found below :

[GAN30084EU](#) [930-033-R](#) [GW17.07.0250E](#) [1513563-1](#) [EXE902SM](#) [APAMPG-117](#) [MAF94383](#) [W3908B0100](#) [W6102B0100](#) [YE572113-](#)
[30RSMM](#) [108-00014-50](#) [66089-2406](#) [A09-F8NF-M](#) [A09-F5NF-M](#) [RGFRA1903041A1T](#) [W3593B0100](#) [W3921B0100](#) [SIMNA-868](#) [SIMNA-](#)
[915](#) [SIMNA-433](#) [W1044](#) [W1049B090](#) [A75-001](#) [WTL2449CQ1-FRSMM](#) [CPL9C](#) [EXB148BN](#) [0600-00060](#) [TRA9020S3PBN-001](#) [GD5W-](#)
[28P-NF](#) [MA9-7N](#) [GD53-25](#) [GD5W-21P-NF](#) [EXB144SM](#) [C37](#) [MAF94051](#) [P1744](#) [MA9-5N](#) [EXD420PL](#) [B1322NR](#) [QWFTB120](#)
[MAF94271](#) [MAF94300](#) [GPSMB301](#) [FG4403](#) [AO-AGSM-OM54](#) [5200232](#) [MIKROE-2349](#) [WCM.01.0111](#) [MIKROE-2393](#) [MIKROE-2352](#)