



TAOGLAS®



Datasheet

Blade

Part No:
TD.66.6H31

Description:

5G/4G 600-6000MHz Connector Mount Antenna
With N-Type Male Connector

Features:

600-6000MHz Wideband 5G/4G Cellular Antenna
Fantastic Efficiency Across all Bands
Robust External Antenna for exterior mounting
IP67 Rated Waterproof, suitable for outdoor applications
Omnidirectional Gain Patterns for Optimum Coverage
Connector: N-Type Male
Dimensions: 228 * Ø22.8 mm
RoHS and REACH Compliant

| | |
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1. Introduction



The Taoglas TD.66 is a robust antenna designed to cover all global 5G/4G frequencies between 600MHz and 6GHz. The TD.66 uses a robust PC/ABS enclosure along with an IP67 rating, which is ideal for outdoor applications. The TD.66 is supplied with an N-Type male connector meaning can be directly installed on gateways and routers which come with N-Type connectors. The TD.66 performs excellently at 5G bands with efficiencies above 50% across the entire 5G/4G spectrum while also maintaining stable radiation patterns.

The Blade TD.66 has been evolved from the highly successful TD.95 and is part of the ever-growing portfolio of 5G antennas offered by Taoglas.

Typical Applications include:

- Gateways and Routers
- Cameras and Security
- Public Safety
- Point of Sales Terminals
- Smart Home Automation
- Robotics / Autonomous

The TD.66 comes with a N-Type Male connector as standard and this can be customized subject to MOQ and NRE, contact your regional Taoglas customer support team for more information.

2. Specifications

Electrical

| Band | Frequency (MHz) | Efficiency (%) | Average Gain (dB) | Peak Gain (dBi) | Impedance | Max Input Power | Polarization | Radiation Pattern |
|--|------------------|----------------|-------------------|-----------------|-----------|-----------------|--------------|-------------------|
| 5GNR/4G Band 71 | 617~698 | 78 | -1.04 | 1.8 | 50 Ω | 10W | Linear | Omni-Directional |
| 4G/3G Band 12,13,14,17,28,29 | 698~824 | 51 | -2.9 | 1.6 | | | | |
| 4G/3G/NB-IoT/Cat M Band 5,8,18,19,20,26,27 | 824~960 | 49 | -3.09 | 2.6 | | | | |
| 5GNR/4G Band 21,32,74,75,76 | 1427~1518 | 79 | -1.04 | 3.9 | | | | |
| 4G/3G Band 1,2,3,4,9,23,25,35,39,66 | 1710~2200 | 70 | -1.54 | 2.5 | | | | |
| 4G/3G Band 7,30,38,40,41 | 2300~2690 | 57 | -2.41 | 3.9 | | | | |
| 5GNR/4G Band 22,42,48,77,78,79 | 3300~5000 | 75 | -1.21 | 4.4 | | | | |
| LTE5200/ Wi-Fi 5800 | 5150~5925 | 66 | -1.79 | 5.4 | | | | |

*Tested in free space

Mechanical

| | |
|------------------|-------------|
| Dimensions | 229 x 23 mm |
| Weight | 70g |
| Plastic Material | PC/ABS |
| Connector | N-Type Male |

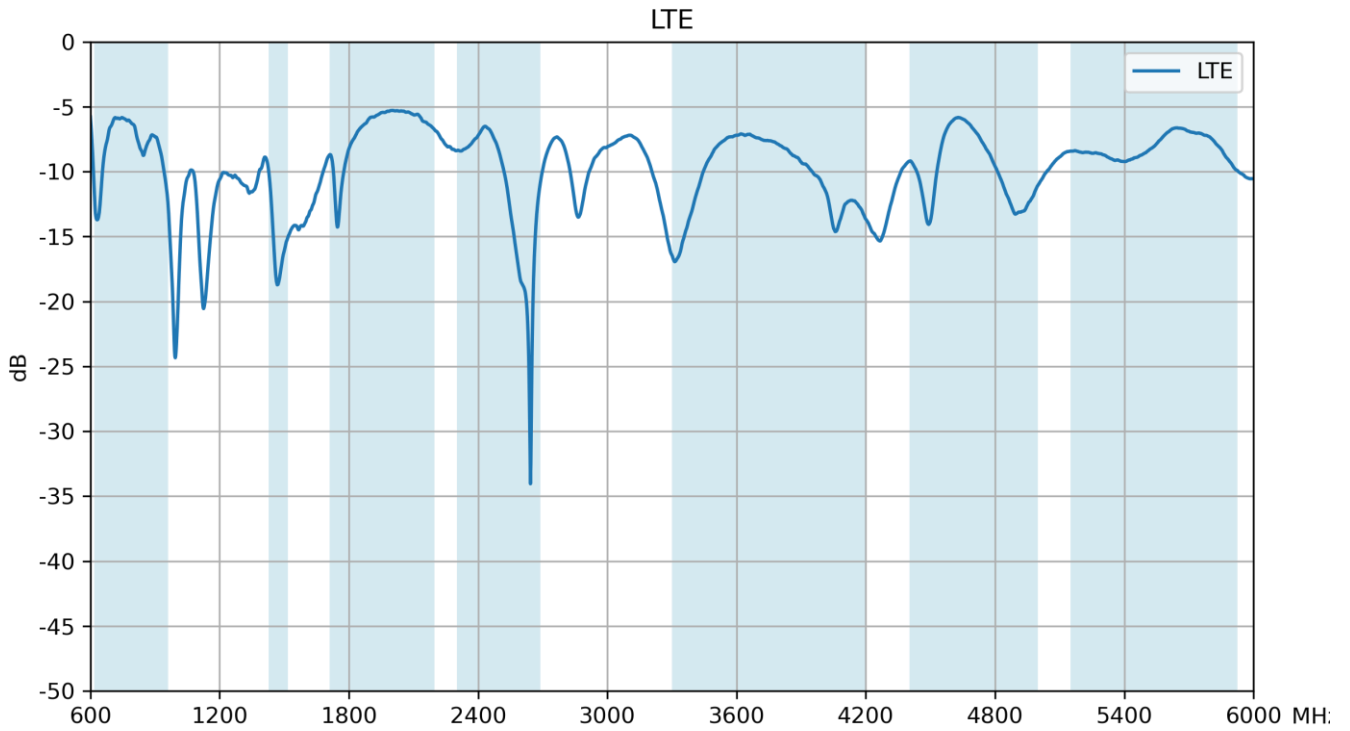
Environmental

| | |
|-------------------|---------------|
| Temperature Range | -40°C to 85°C |
|-------------------|---------------|

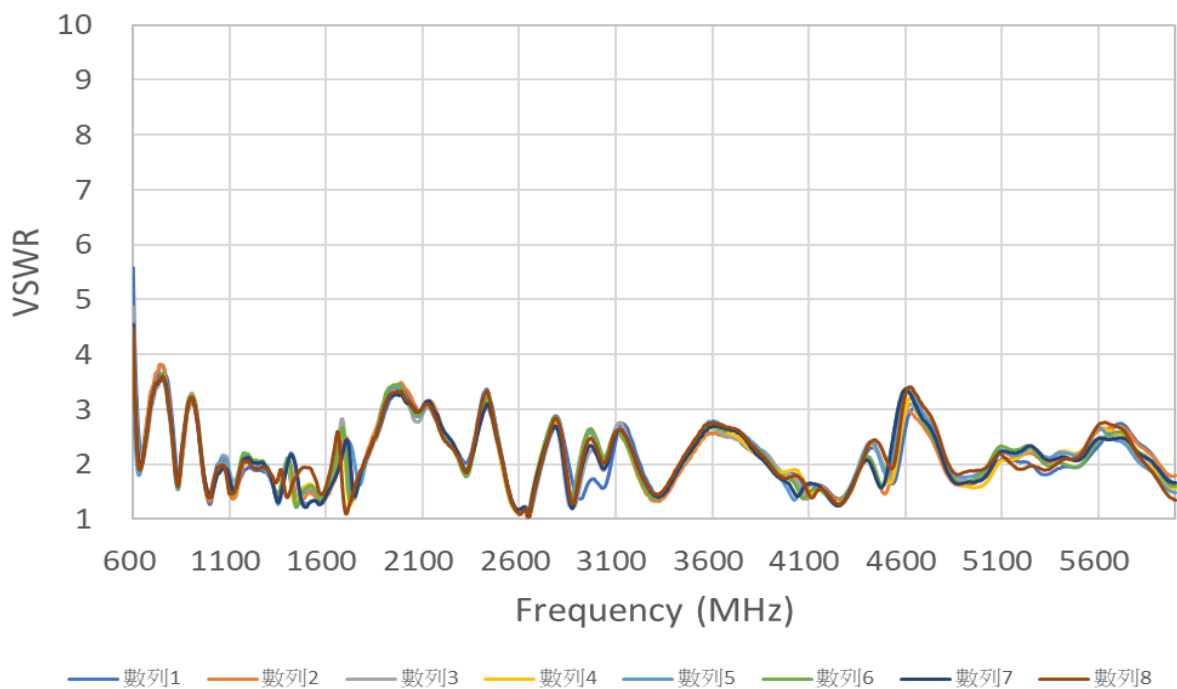
| 5G/4G Bands | | | |
|-------------|--|----------------------|---------|
| Band Number | 5G NR / FR1 / LTE / LTE-Advanced / WCDMA / HSPA / HSPA+ / TD-SCDMA | | |
| | Uplink | Downlink | Covered |
| 1 | UL: 1920 to 1980 | DL: 2110 to 2170 | ✓ |
| 2 | UL: 1850 to 1910 | DL: 1930 to 1990 | ✓ |
| 3 | UL: 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 | ✓ |
| 18 | UL: 815 to 830 | DL: 860 to 875 | ✓ |
| 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 | ✓ |
| 24 | UL: 1625.5 to 1660.5 | DL: 1525 to 1559 | ✓ |
| 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 | ✓ |
| 28 | UL: 703 to 748 | DL: 758 to 803 | ✓ |
| 29 | UL: - | DL: 717 to 728 | ✓ |
| 30 | UL: 2305 to 2315 | DL: 2350 to 2360 | ✓ |
| 31 | UL: 452.5 to 457.5 | DL: 462.5 to 467.5 | ✗ |
| 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 | ✓ |
| 77 | | 3300 to 4200 | ✓ |
| 78 | | 3300 to 3800 | ✓ |
| 79 | | 4400 to 5000 | ✓ |

3. Antenna Characteristics

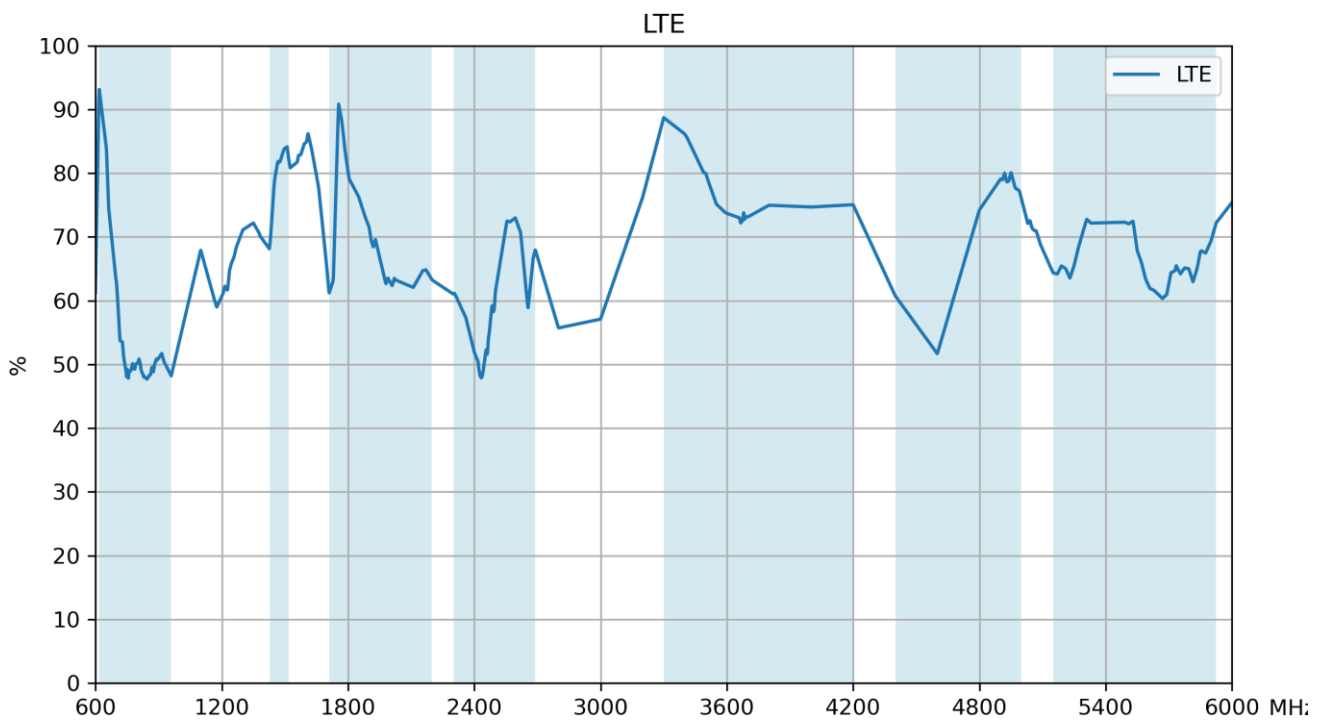
3.1 Return Loss



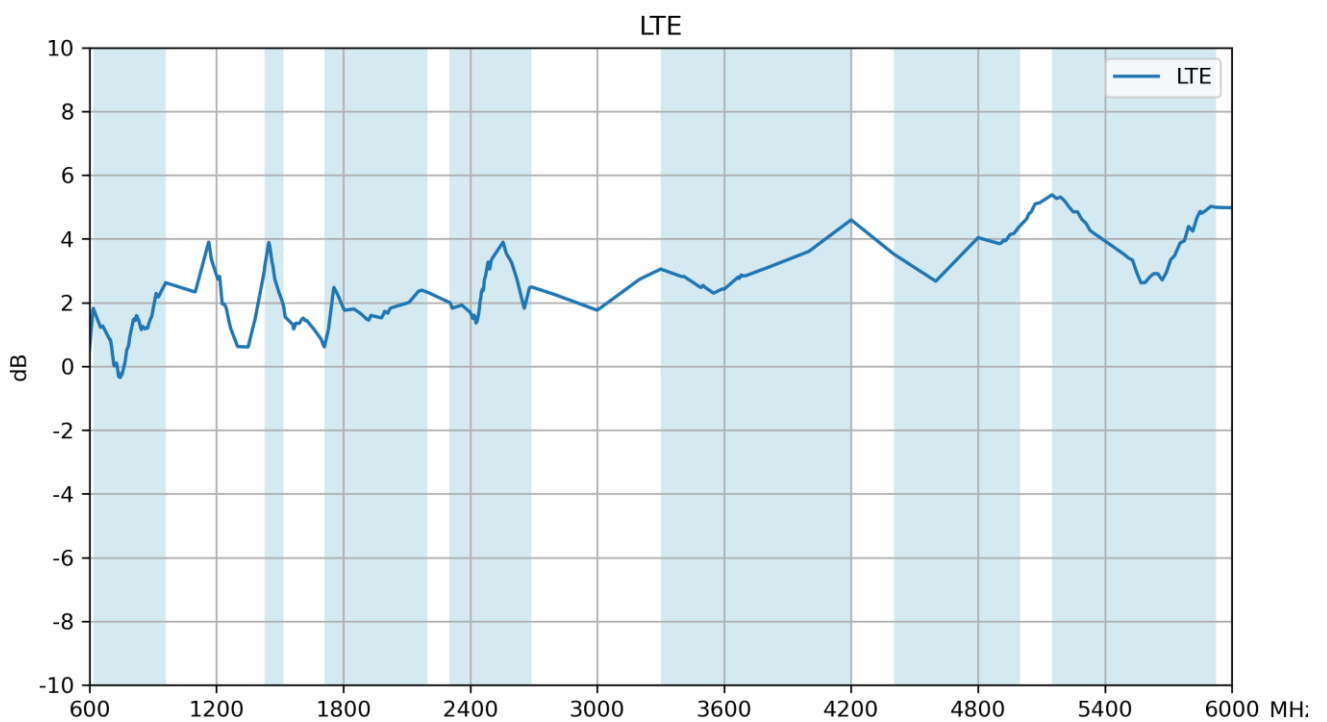
3.2 VSWR



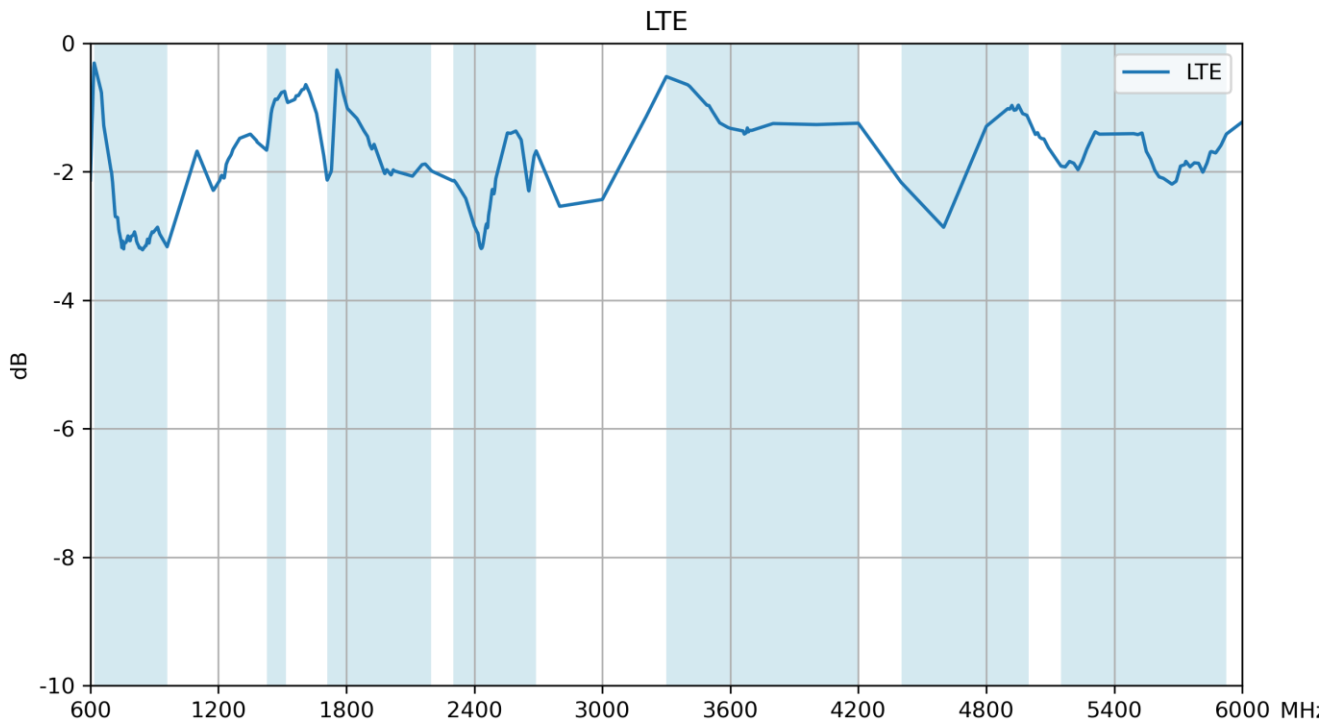
3.3 Efficiency



3.4 Peak Gain

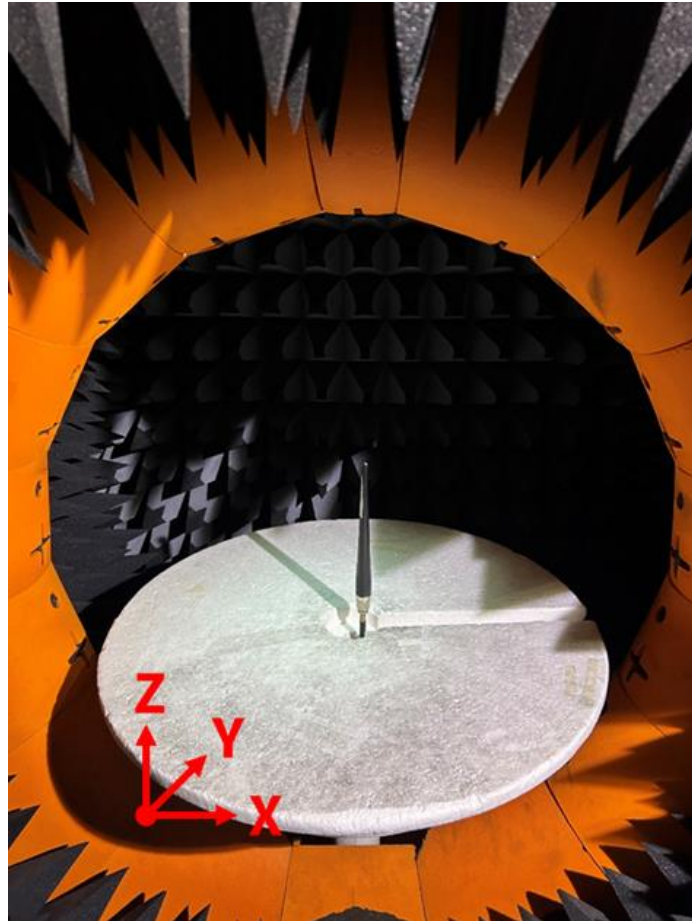


3.5 Average Gain



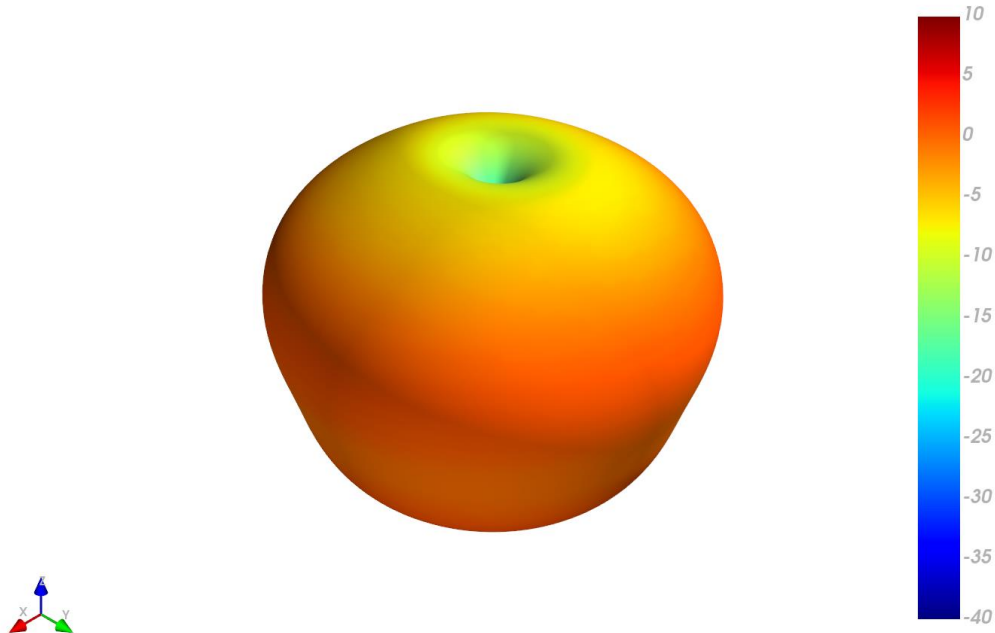
4. Radiation Patterns

4.1 Test Setup

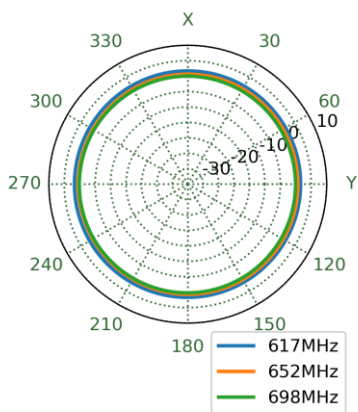


4.2 3D and 2D Radiation Patterns – Straight

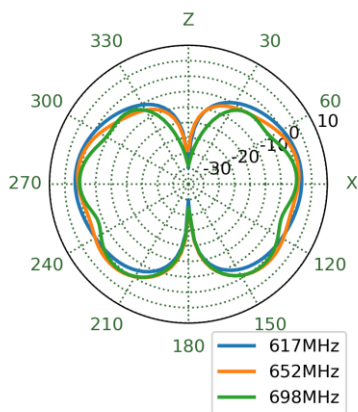
663MHz



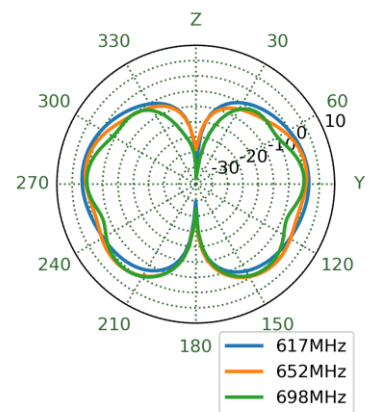
XY Plane



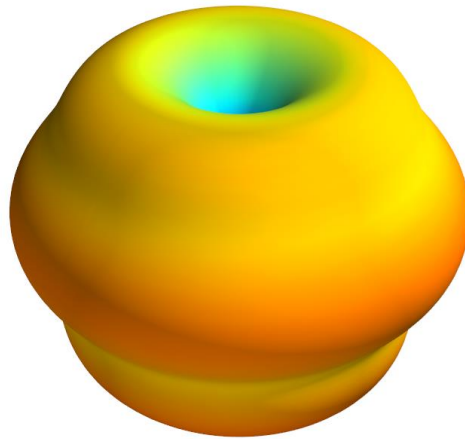
XZ Plane



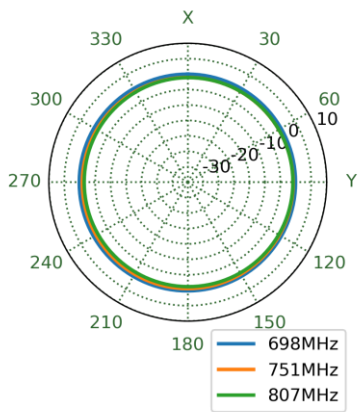
YZ Plane



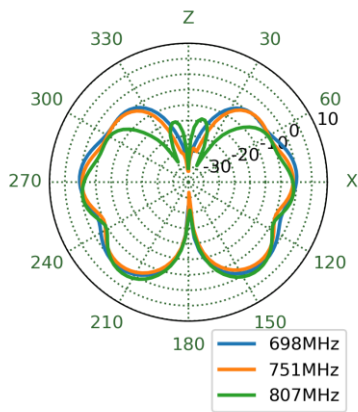
751MHz



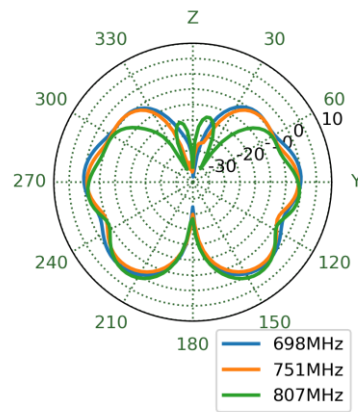
XY Plane



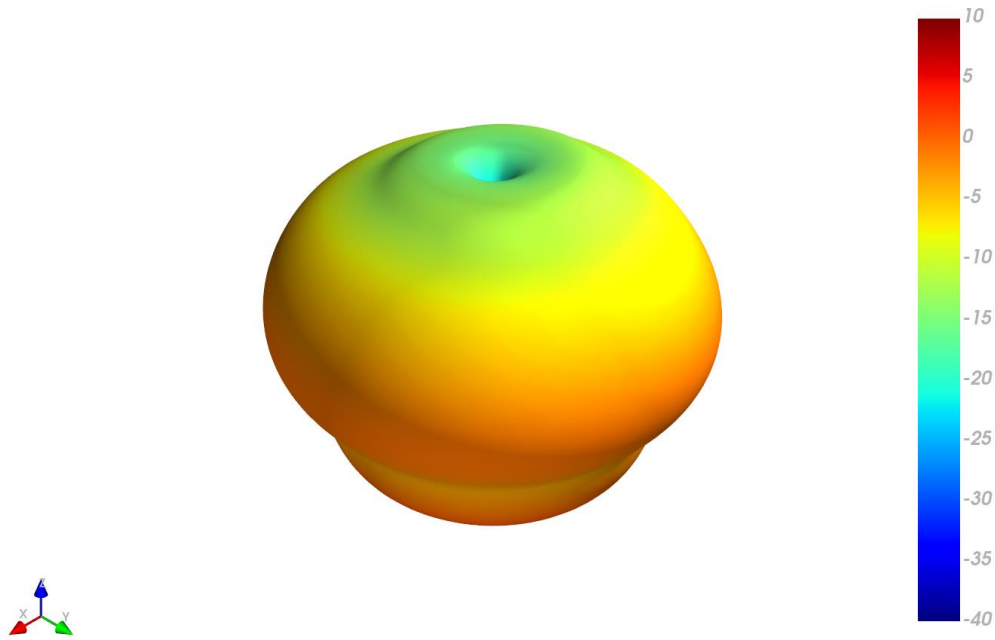
XZ Plane



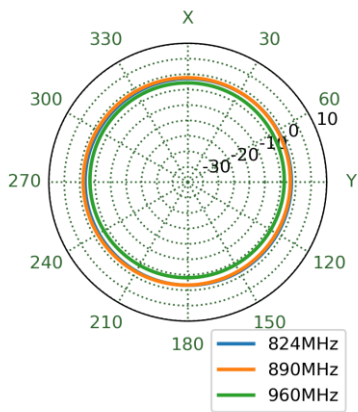
YZ Plane



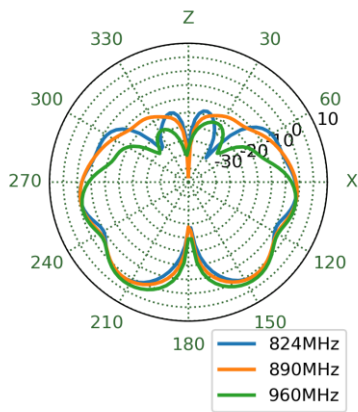
890MHz



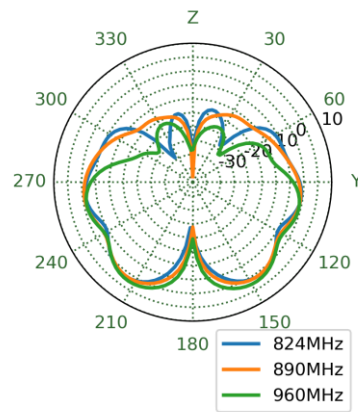
XY Plane



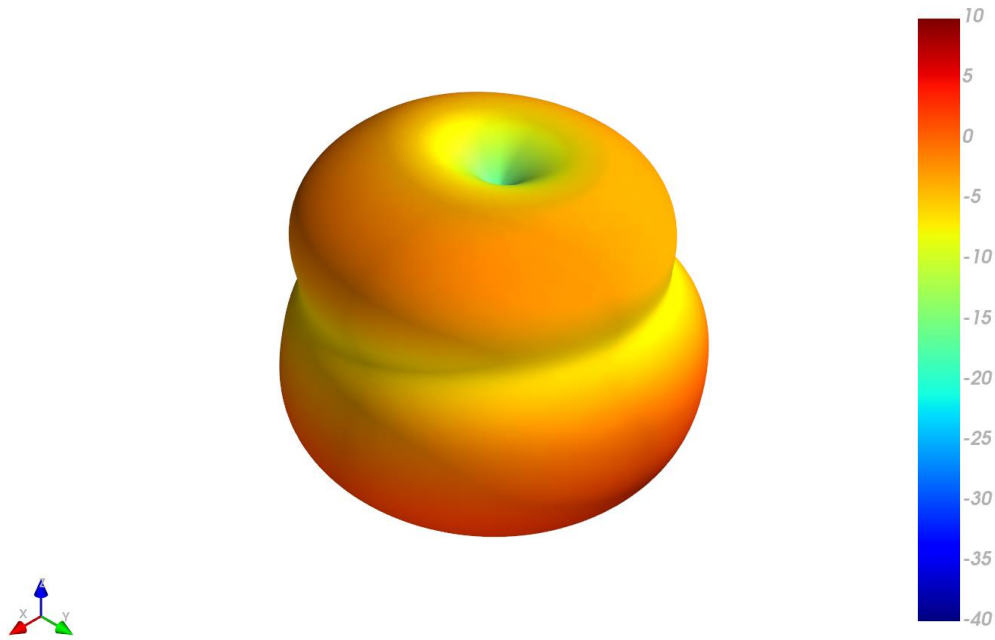
XZ Plane



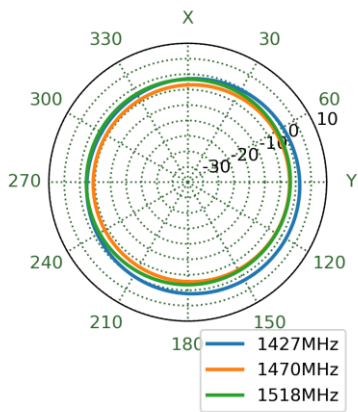
YZ Plane



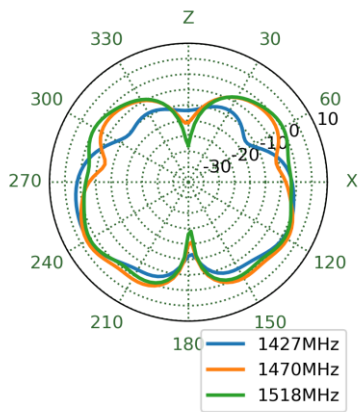
1470MHz



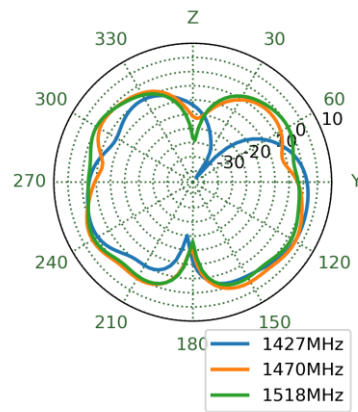
XY Plane



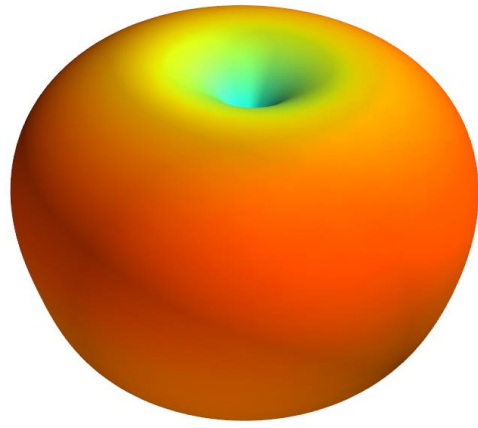
XZ Plane



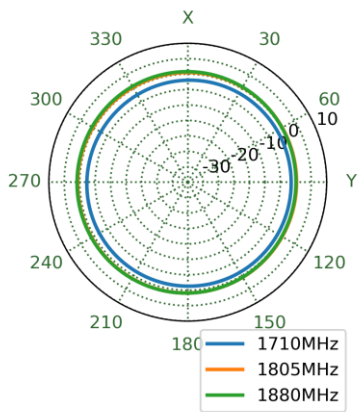
YZ Plane



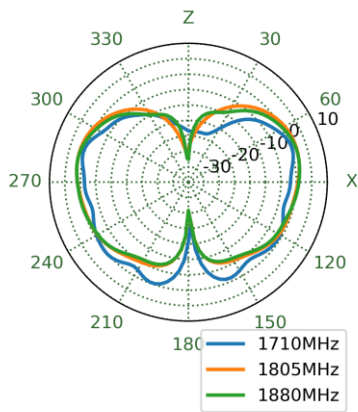
1805MHz



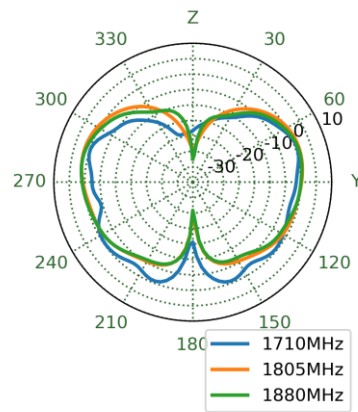
XY Plane



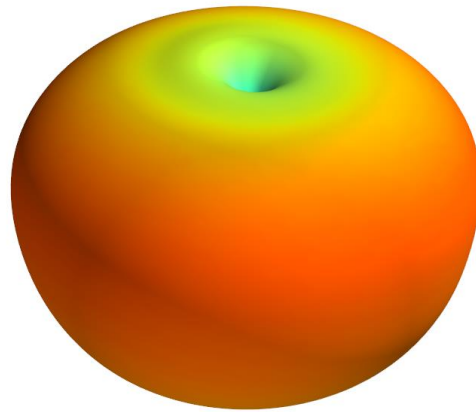
XZ Plane



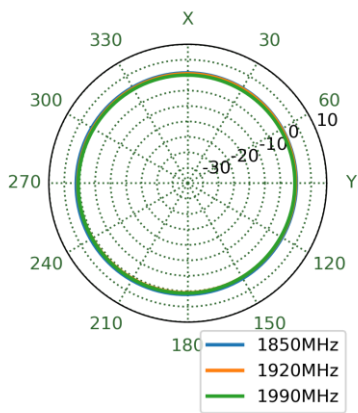
YZ Plane



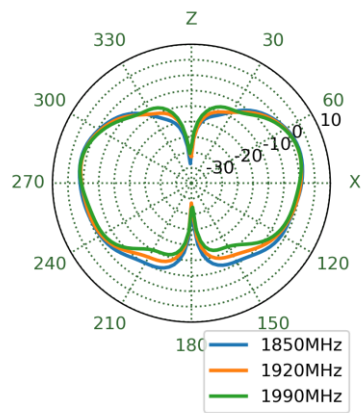
1920MHz



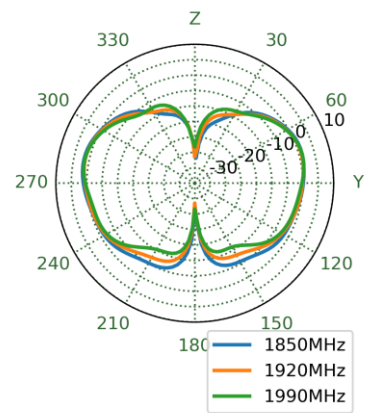
XY Plane



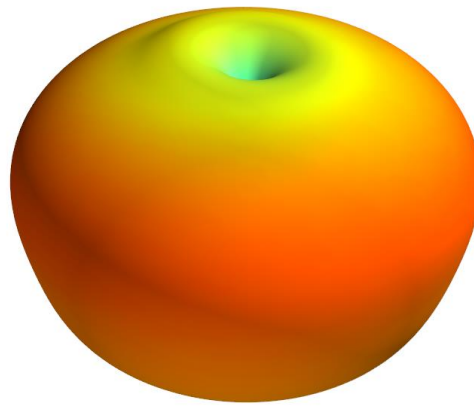
XZ Plane



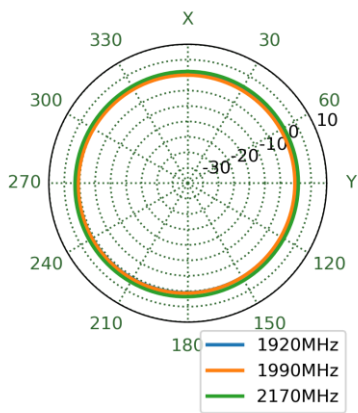
YZ Plane



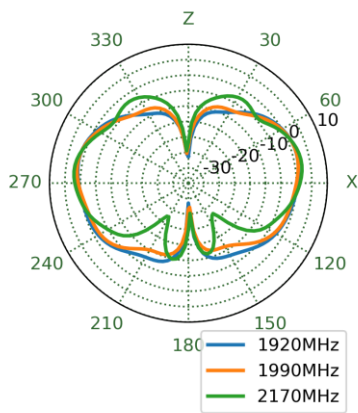
1990MHz



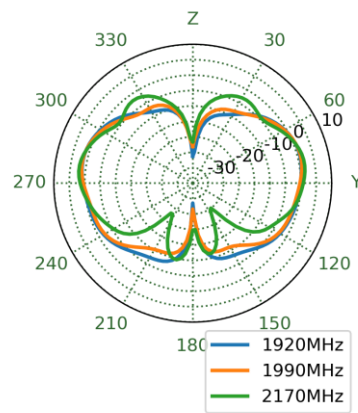
XY Plane



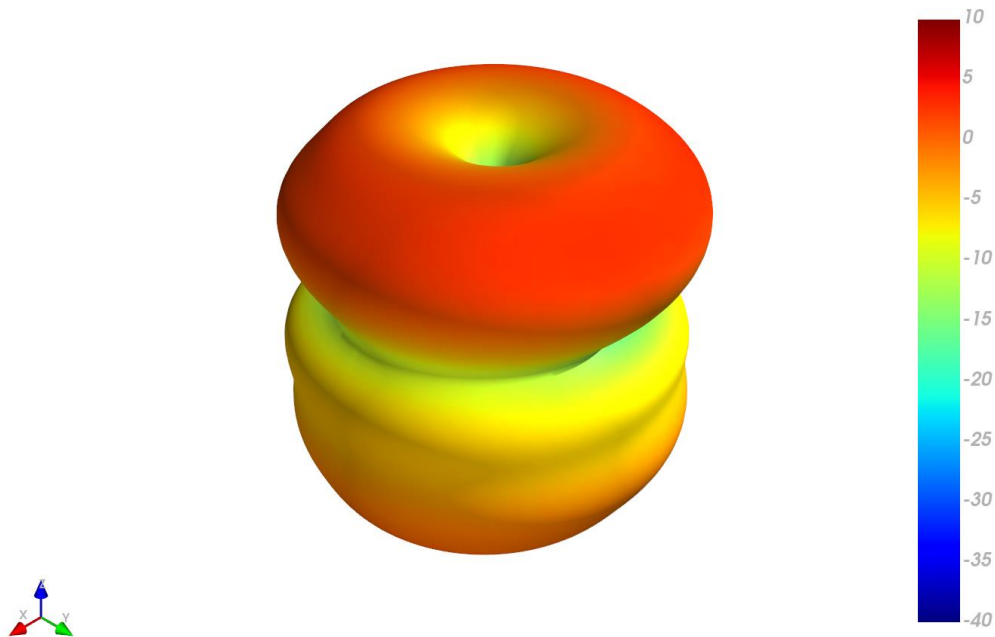
XZ Plane



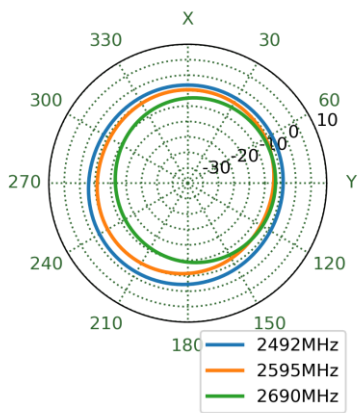
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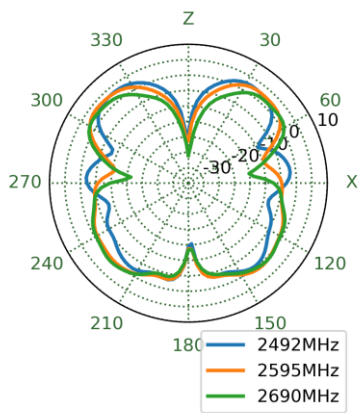
2595MHz



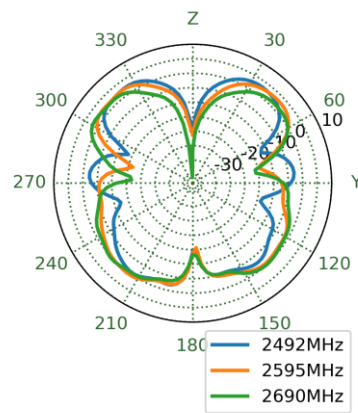
XY Plane



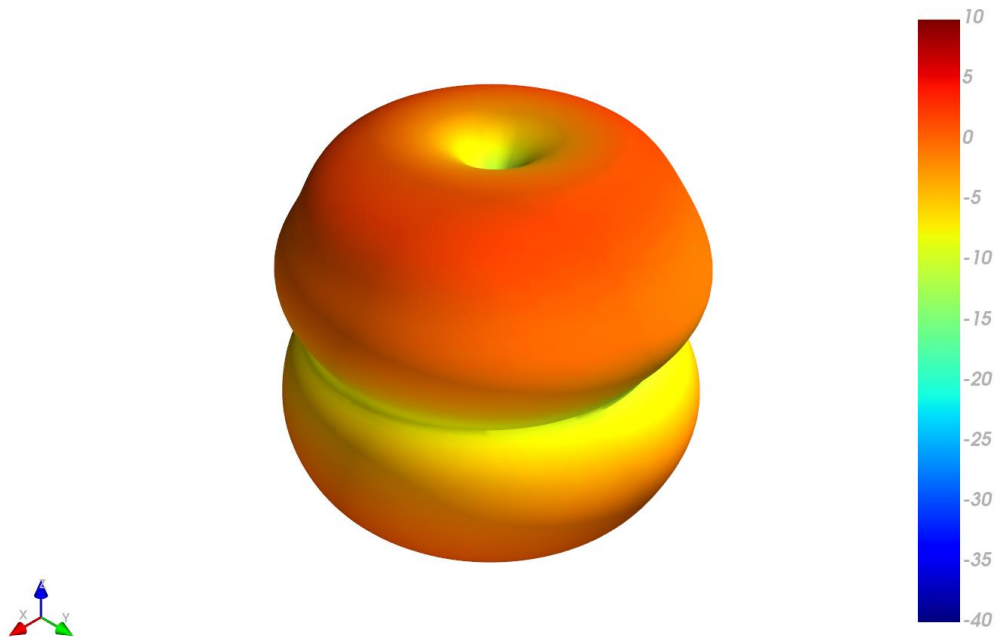
XZ Plane



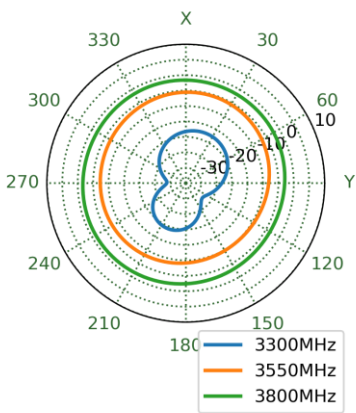
YZ Plane



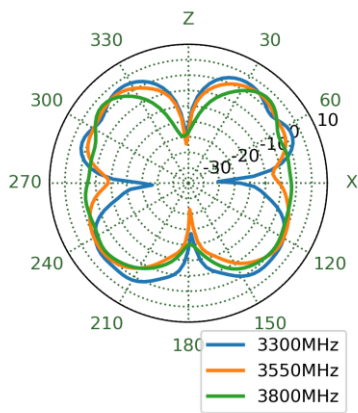
3550MHz



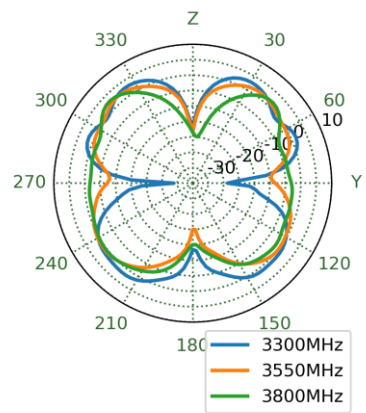
XY Plane



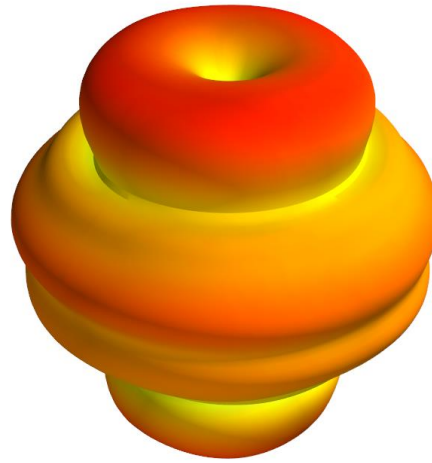
XZ Plane



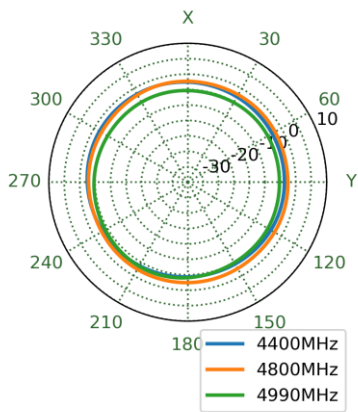
YZ Plane



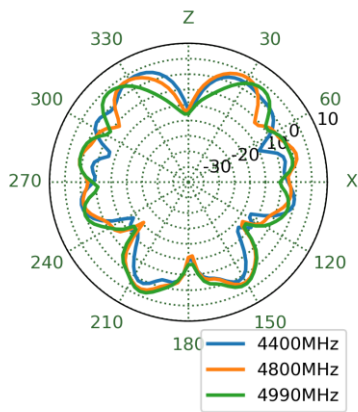
4800MHz



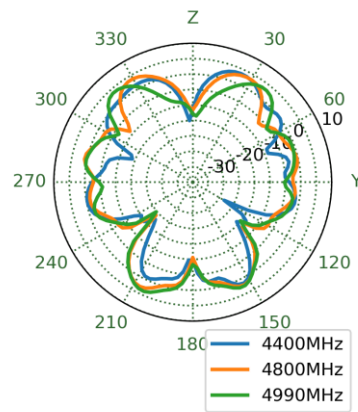
XY Plane



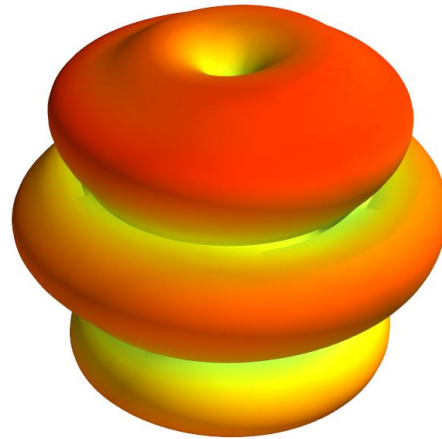
XZ Plane



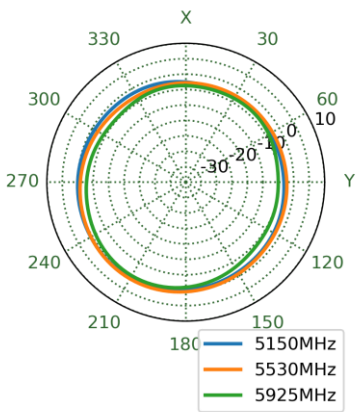
YZ Plane



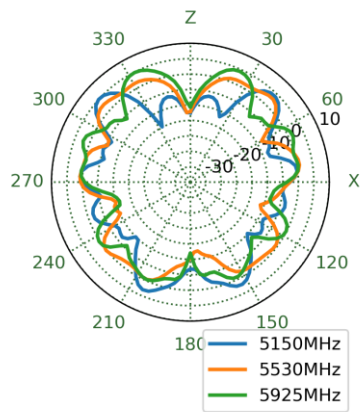
5530MHz



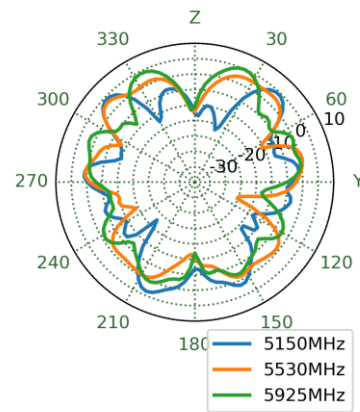
XY Plane



XZ Plane



YZ Plane



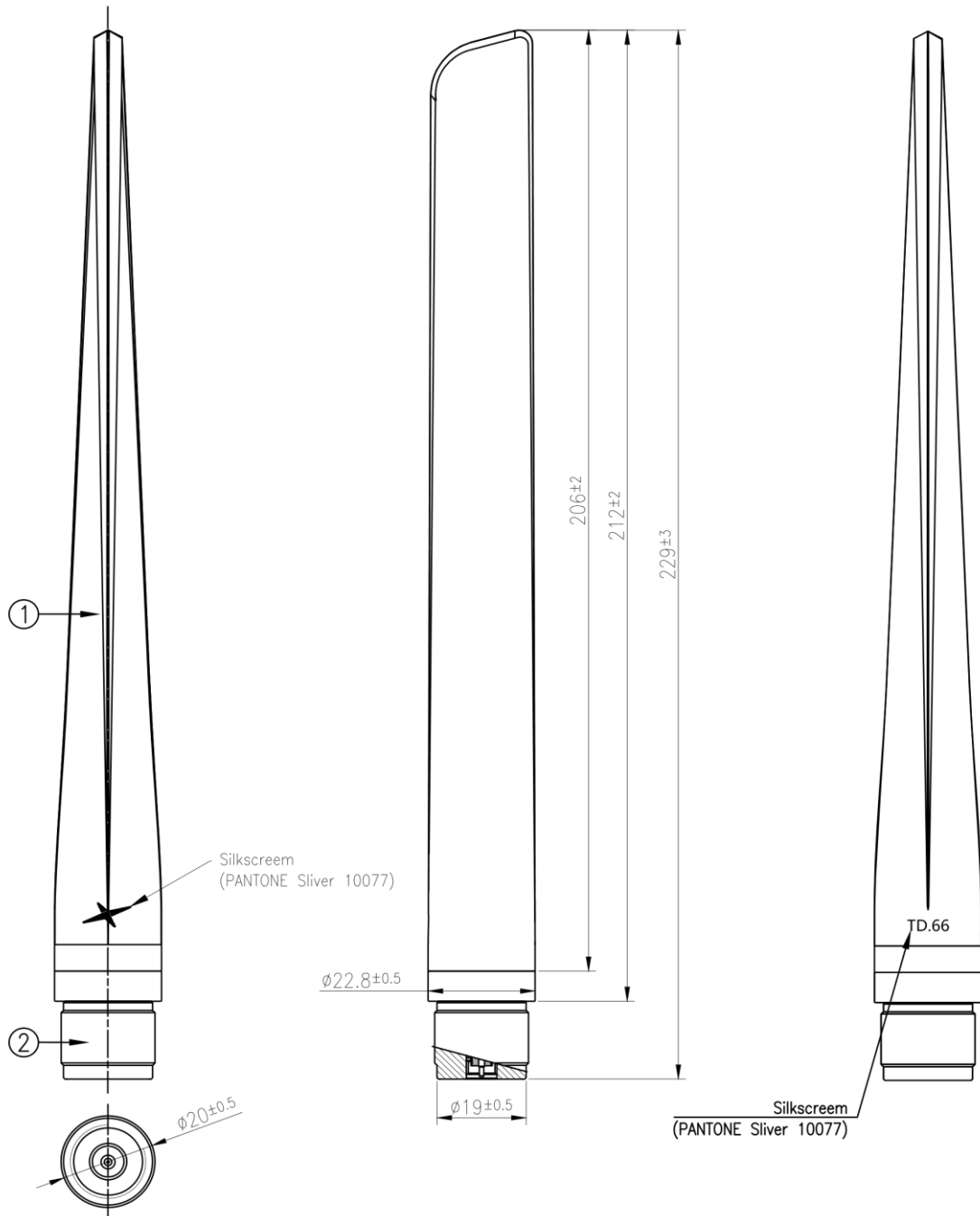
5. Mechanical Drawing (Units: mm)

ISO NO.: EDW-23-8-0680

STATE: Release

NOTES: 1. All material must be RoHS compliant.

| REV. | DESCRIPTION | ENG. | APPROVED | DATE |
|------|----------------|-------|----------|------------|
| 01 | Initial Design | Karry | Aaron | 2023/05/24 |

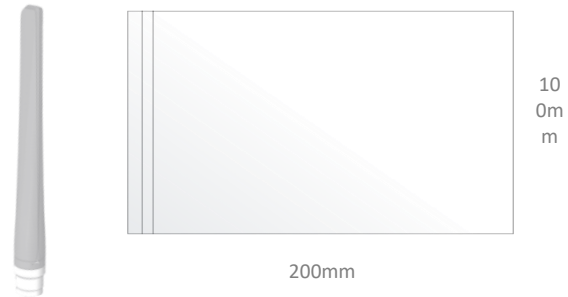


| | Name | Material | Finish | QTY |
|---|----------------------|---------------|-----------|-----|
| 1 | Housing | PC/ABS AC2000 | Black | 1 |
| 2 | N Type (M) Connector | Brass | Ni Plated | 1 |

| | |
|---|---|
| APPROVED BY: Aaron | <p>TW Design Centre This drawing and its inherent design concepts are property of Taoglas. Not to be copied or given to third parties without the written consent of Taoglas.</p> |
| CHECK BY: Aaron | |
| DRAWN BY: Karry | |
| DATE: 2023/05/24 | |
| UNLESS OTHERWISE SPECIFIED TOLERANCES ON: | <p>TITLE : Blade Wideband 600-6000MHz 5G/4G Connector Mount Antenna - N-Type Male</p> <p>PART NO. : TD.66.AH31</p> |
| THIRD ANGLE PROJECTION | <p>UNIT: mm SCALE: 1:1.25 PAGES: 1/1 REV. D01</p> |

8. Packaging

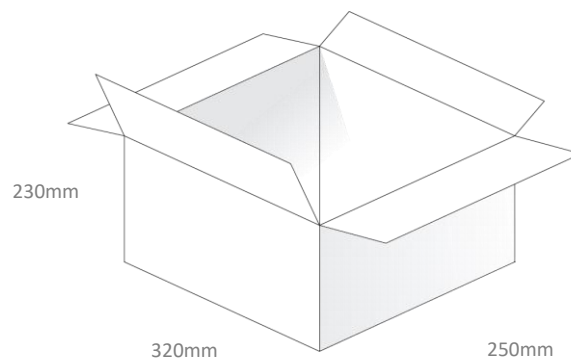
1pc TD.66.6H31 per PE Bag
 Bag Dimension: 200*100mm
 Weight: 70g



20pcs TD.66.6H31 per Large PE Bag
 Bag Dimensions: 180*265mm
 Weight: 1.4Kg



200pcs TD.66.6H31 per Carton
 Dimensions: 320*250*230mm
 Weight: 14Kg



Changelog for the datasheet

SPE-23-8-234 – TG.66.A113

| | |
|---|-------------|
| Revision: A (Original First Release) | |
| Date: | 2021-07-07 |
| Notes: | |
| Author: | Jack Conroy |

Previous Revisions

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



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