

Part No. X1005245-LSA3SA10A2

GNSS (active) / LTE MIMO 3-in-1 External Antenna

(1561 / 1575 / 1602) MHz + (698-960; 1710-2170; 2300-2690) MHz

Supports: Tracking, Smart Home, Agriculture, Automotive Aftermarket, Healthcare, Digital Signage, Logistics, Industrial Devices



KYOCERA AVX's 3-in-1 GNSS (active) and LTE MIMO external antenna delivers on the key needs of device designers for higher functionality and performance.

Electrical Specifications

Typical characteristics in free-space

GNSS (active) & LTE MIMO External Antenna

(1561 / 1575 / 1602) MHz
(698-960; 1710-2170; 2300-2690) MHz

KEY BENEFITS

Reduced Costs and Time-to Market

Standard antennas eliminate design fees and cycle time associated with a custom solution, getting products to market faster.

High Performance

By optimizing antenna size, performance and emissions, customer and regulatory specifications are more easily met.

Reliability

Products are the latest RoHS & REACH version compliant.

APPLICATIONS

- Remote Monitoring
- Point of Sale
- IoT
- Gateway
- Telematics
- Tracking
- Healthcare
- M2M,
- Industrial devices
- Smart Grid
- Logistics
- Energy
- Retail

| Frequency (GNSS) | 1561 MHz | 1575 MHz | 1602 MHz |
|-----------------------------|--------------------|----------|----------|
| Gain at Zenith | 1.1 dBi | 2.1 dBi | 2.3 dBi |
| VSWR | 2.0:1 max | | |
| LNA Electrical Properties | | | |
| Frequency (GPS-GLONASS) | 1561 MHz | 1575 MHz | 1602 MHz |
| VSWR | 3.0:1 max | | |
| Impedance | 50 Ω | | |
| Antenna Gain (@3.3 V) | 28 dB / 25 dB min. | | |
| DC Power Input | 3~5 V | | |
| Noise Figure | 3.0 dB Typ. | | |
| Power Consumption (@ 3.3 v) | 9 mA Typ. | | |

| Frequency (LTE 1 & 2) | 698~960 MHz | 1710~2170 MHz | 2300~2690 MHz |
|-----------------------|---------------|---------------|---------------|
| Peak Gain | 3.9 / 4.5 dBi | 4.2 / 3.6 dBi | 3.7 / 2.2 dBi |
| Average Efficiency | 47 / 50 % | 64 / 60 % | 57 / 57 % |
| VSWR | 2.0:1 max | | |
| Impedance | 50 Ω | | |

GNSS (active) / LTE MIMO 3-in-1 External Antenna Specifications.
KYOCERA AVX produces a wide variety of standard and custom antennas to meet user needs.

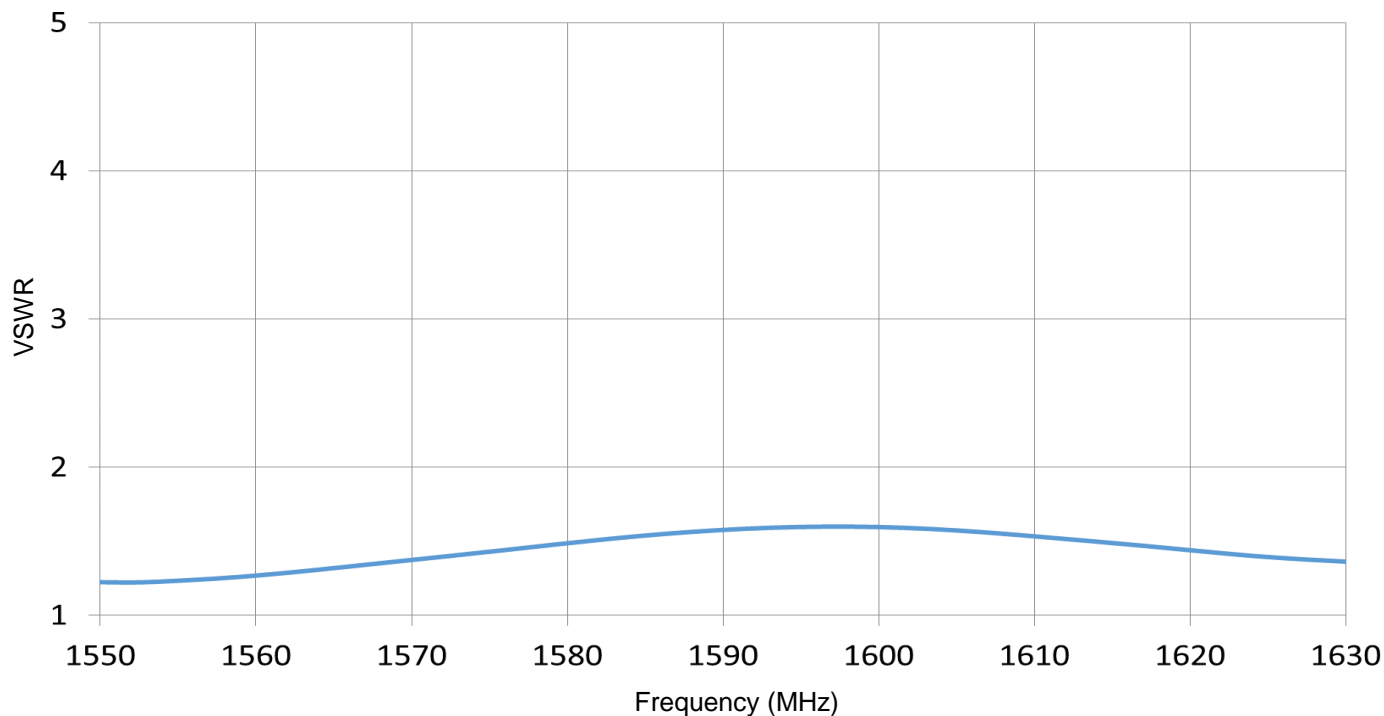
Mechanical Specifications

| Ordering Part # | X1005245-LSA3SA10A2 |
|----------------------------|--|
| Dimensions (mm) | 136.2 x 72.4 x 12.7 |
| Mounting Type | Foam Adhesive |
| Operating Temperature (°C) | -40 ~ +85 |
| Weight (grams) | 189 |
| Housing Material & Color | PC+ABS (Black) |
| Cable | Length: 1M Type: RG-174 GNSS CFD-200 LTE 1 & 2 |
| Connector | SMA(M) GNSS SMA(M) LTE 1 & 2 |
| Waterproof | IPX7 |

VSWR Plots (GNSS 1561 & 1575 & 1602 MHz)

Typical characteristics in free-space

VSWR:

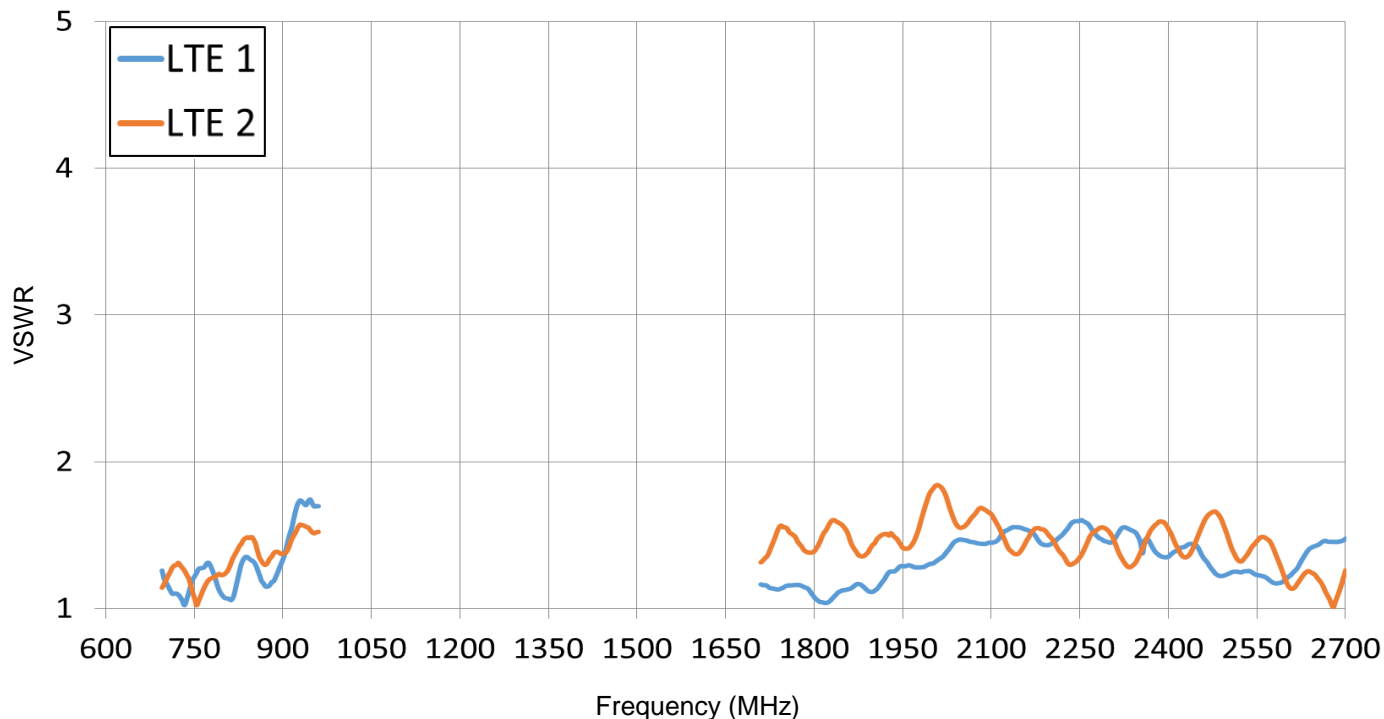


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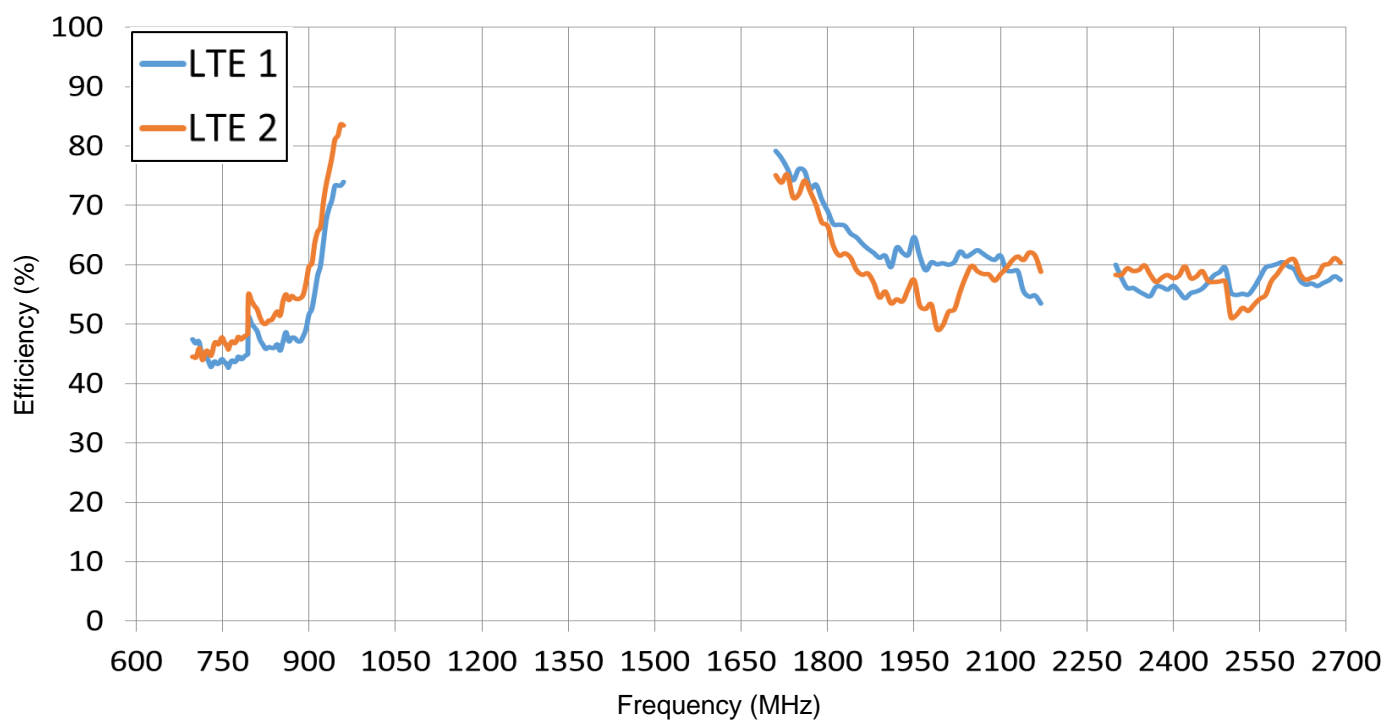
VSWR, Efficiency, Plots (LTE 1 & 2 698-2690 MHz)

Typical characteristics in free-space

VSWR:



Efficiency:

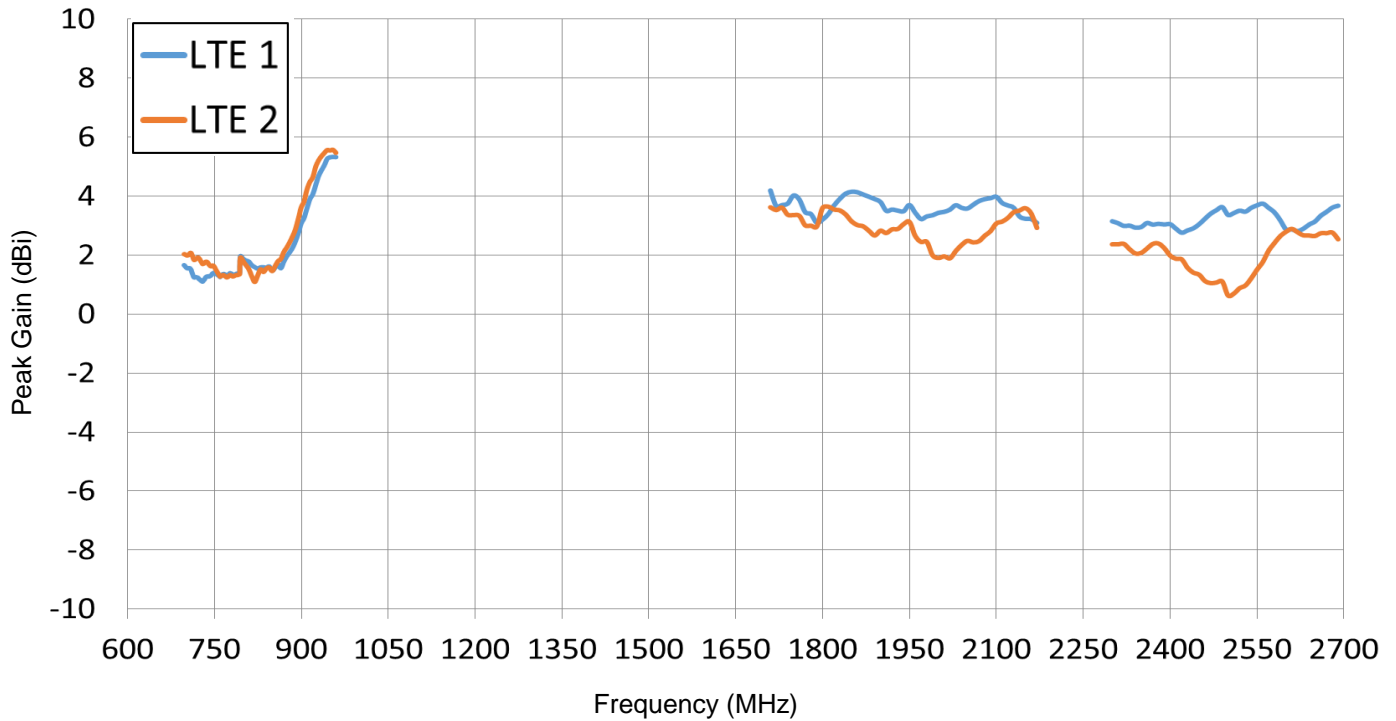


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Peak Gain Plot (LTE 1 & 2 698-2690 MHz)

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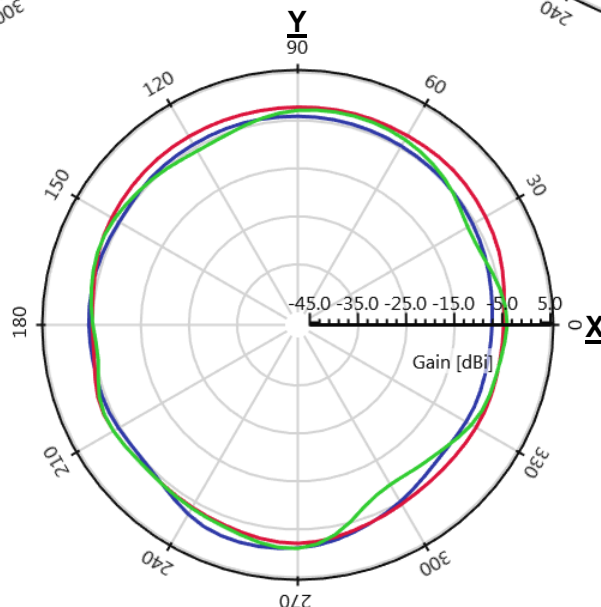
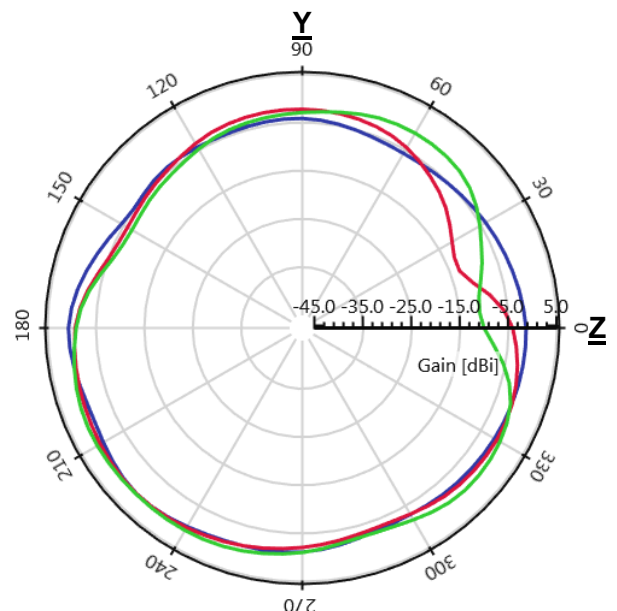
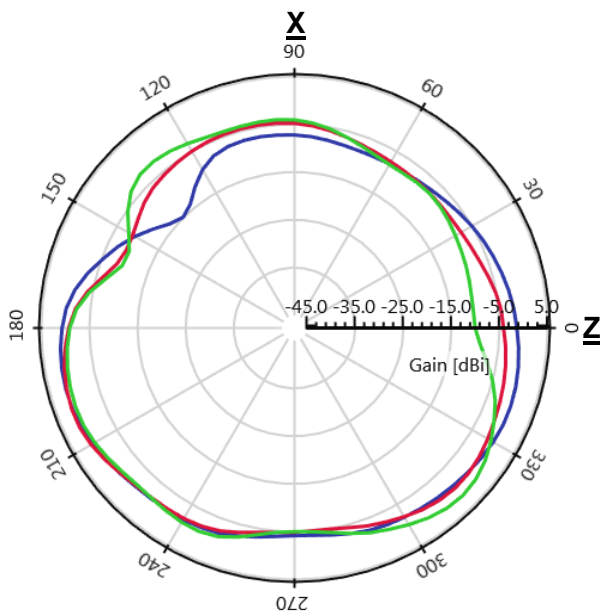
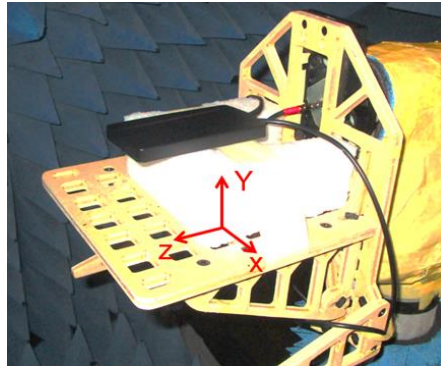
Peak Gain:



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2D Radiation Patterns (LTE-1 698-960 MHz)

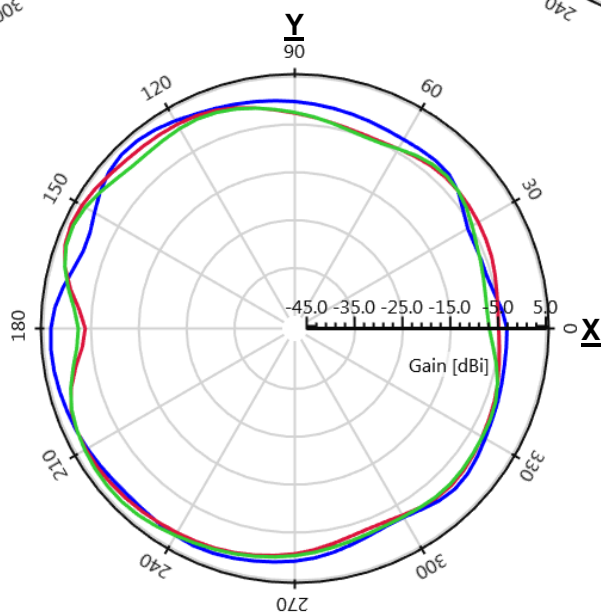
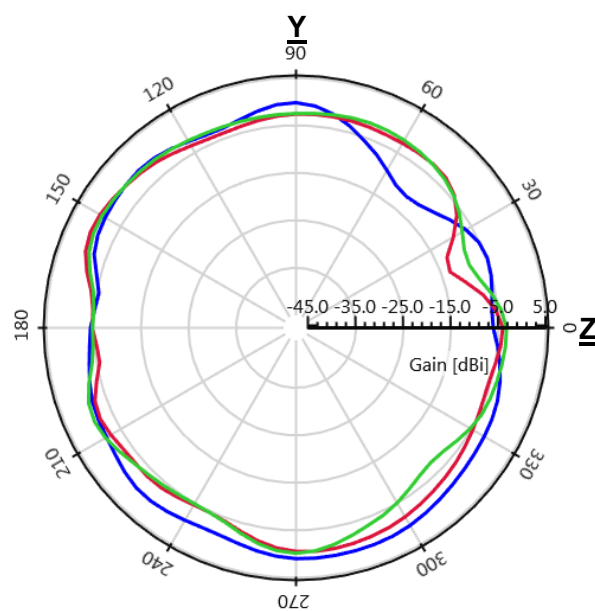
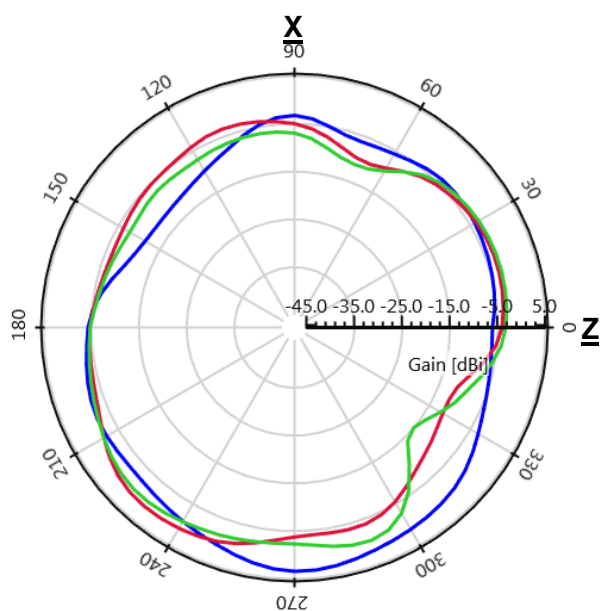
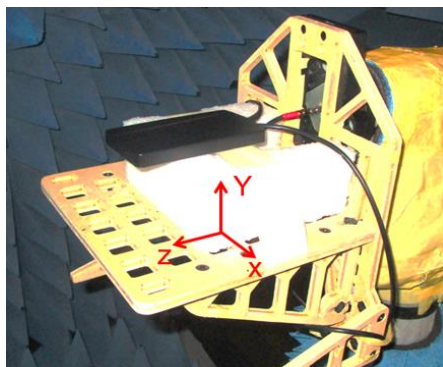
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2D Radiation Patterns (LTE-1 1710-2170 MHz)

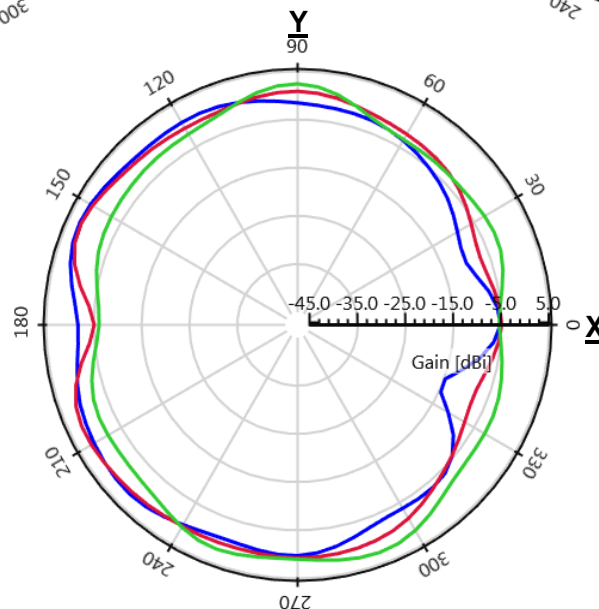
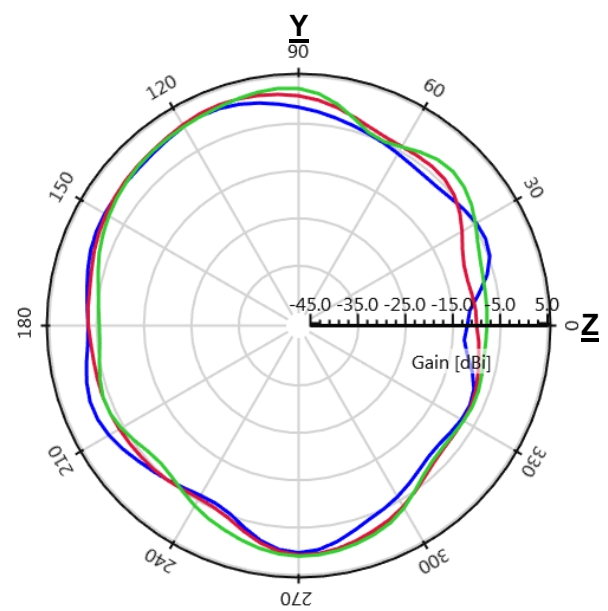
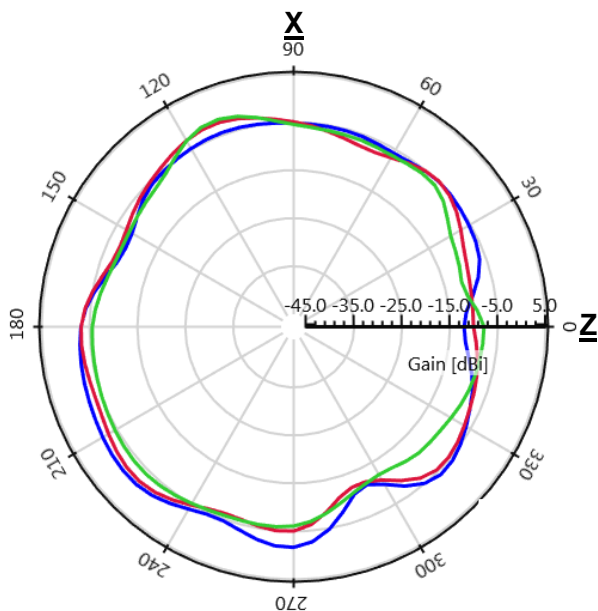
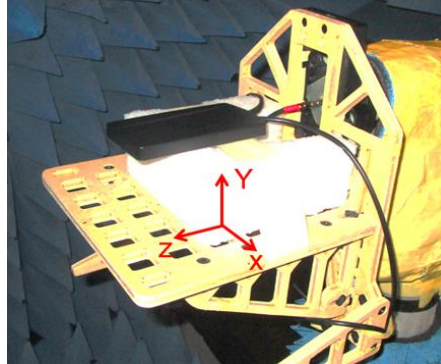
Typical characteristics in free-space



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2D Radiation Patterns (LTE-1 2300-2690 MHz)

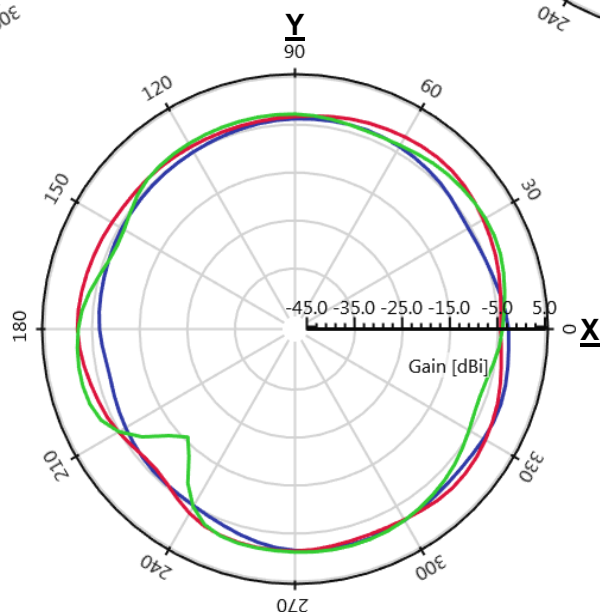
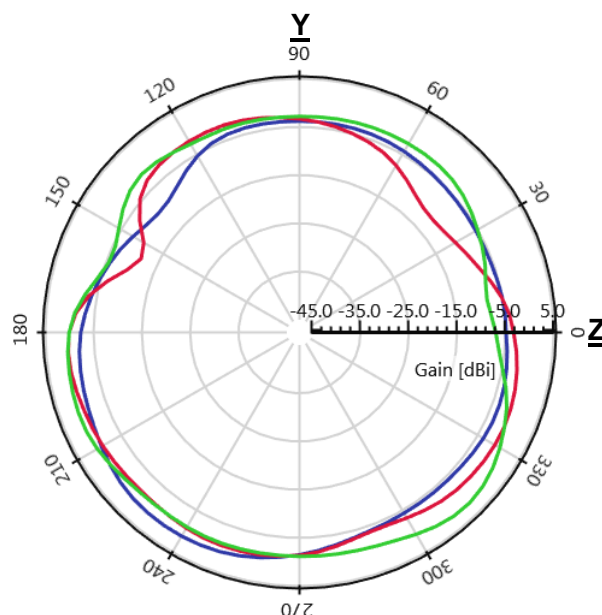
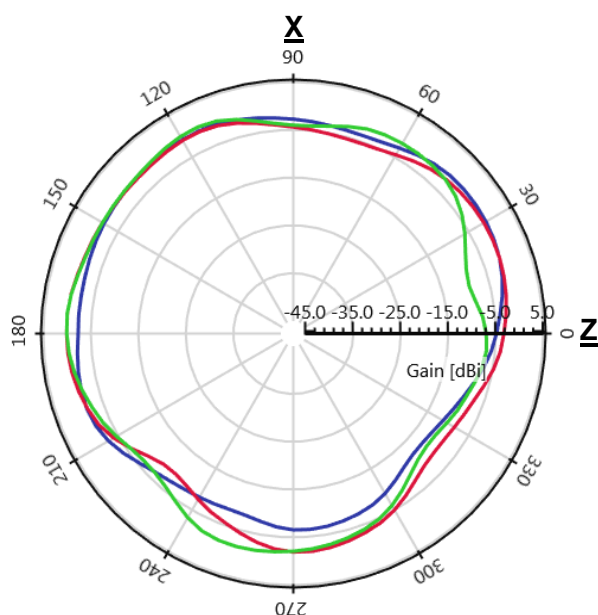
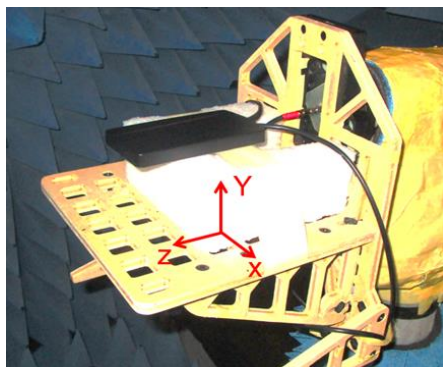
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2D Radiation Patterns (LTE-2 698-960 MHz)

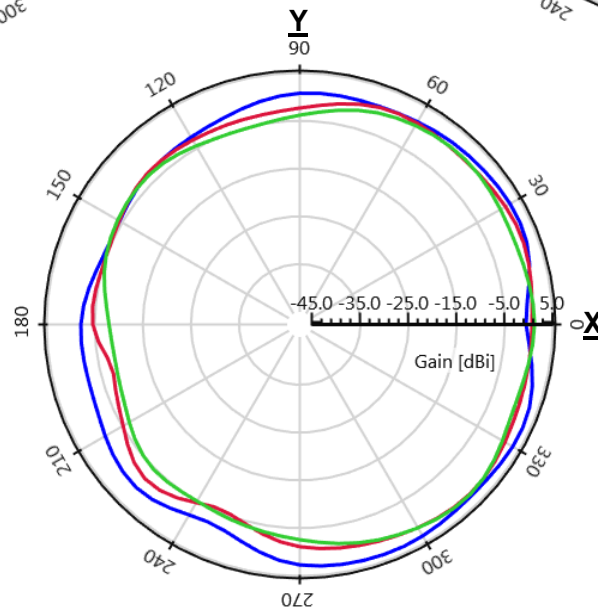
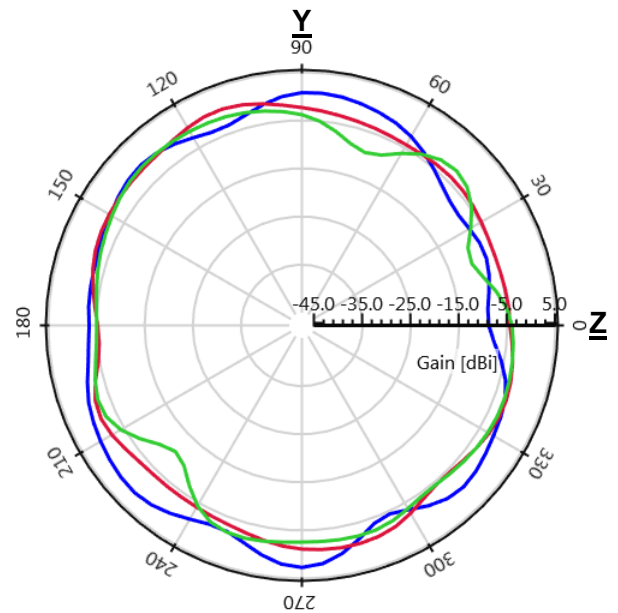
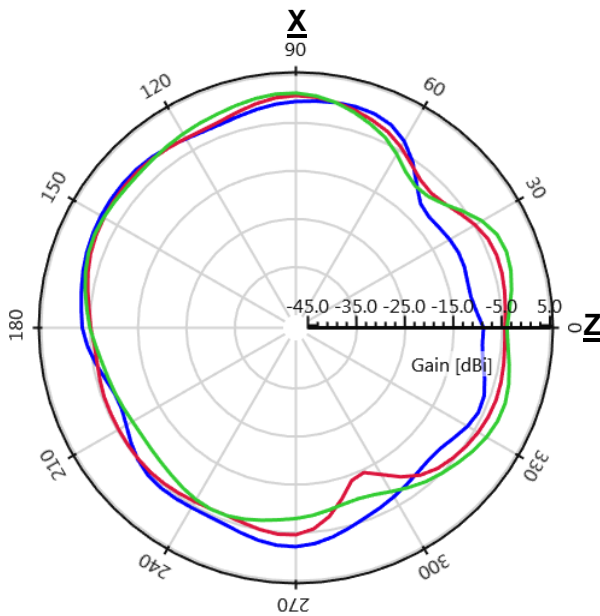
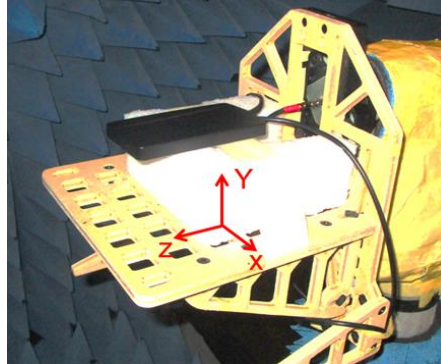
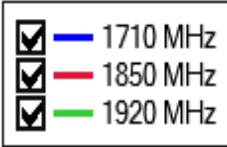
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2D Radiation Patterns (LTE-2 1710-2170 MHz)

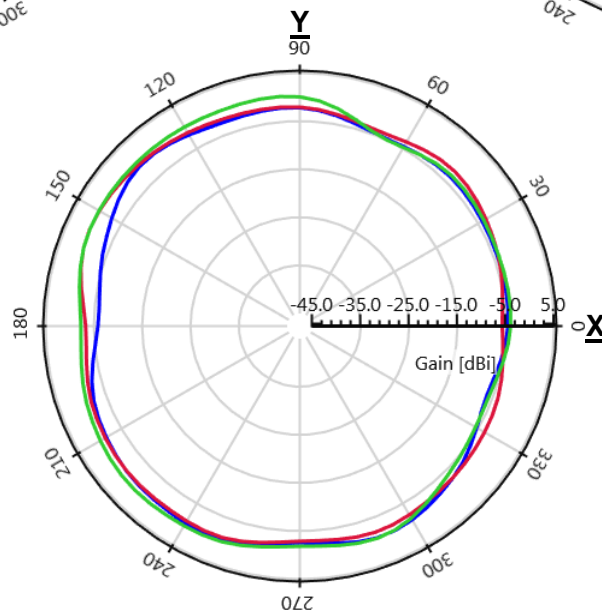
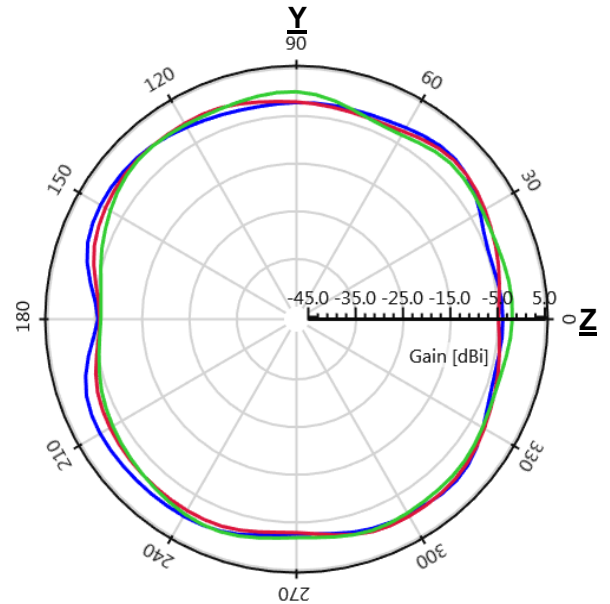
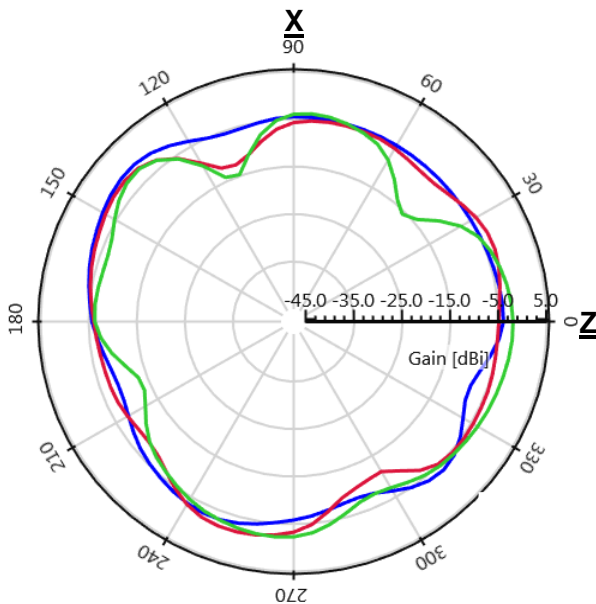
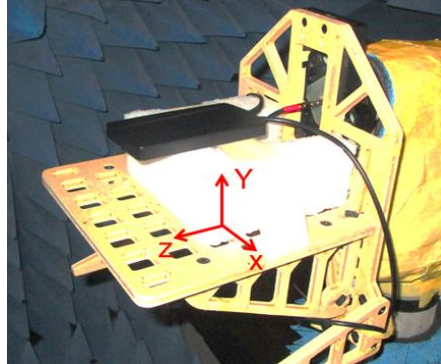
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2D Radiation Patterns (LTE-2 2300-2690 MHz)

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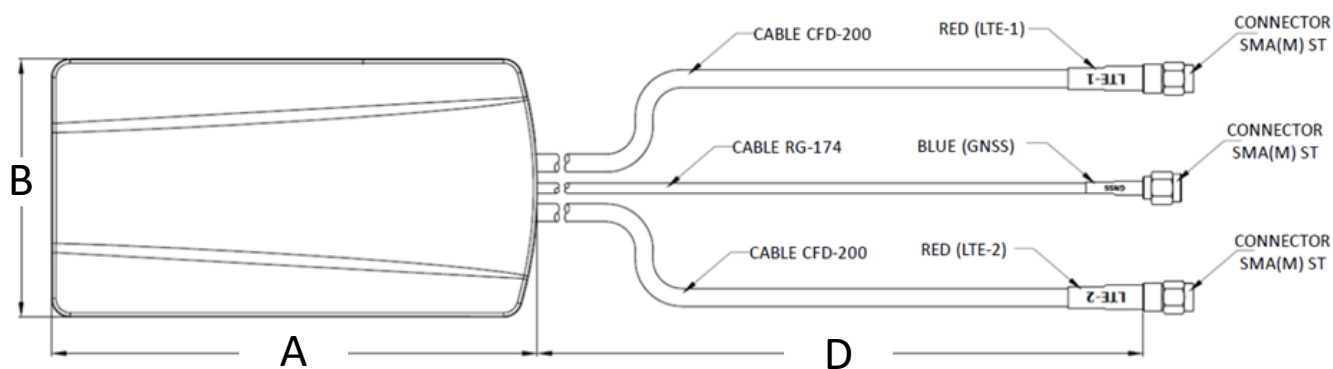
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Mechanical Dimensions

Typical antenna dimensions (mm)

| Part Number | A (mm) | B (mm) | C (mm) | D (mm) |
|---------------------|-------------|------------|------------|-------------|
| X1005245-LSA3SA10A2 | 136.2 ± 3.0 | 72.4 ± 1.5 | 12.7 ± 1.0 | 1000 ± 40.0 |

Top View



Side View

