Part No. X1005245-LSA3SA10A2

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

(1561 / 1575 / 1602) MHz + (600-960; 1710-2170; 2300-2690) MHz

Supports: 2G / 3G / 4G, Cellular, LTE, LTE-M, LTE MIMO, Beidou, Galileo, Glonass, GNSS, GPS



GNSS (active) & LTE MIMO External Antenna

(1561 / 1575 / 1602) MHz
(600-960; 1710-2170; 2300-2690) MHz

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.

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.

Environmental Compliance

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

Electrical Specifications

Typical characteristics in free-space

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	2.0:1 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)	600~960 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	3.0:1 max / 2.0:1 max	2.0:1 max	
Impedance	50 Ω		

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

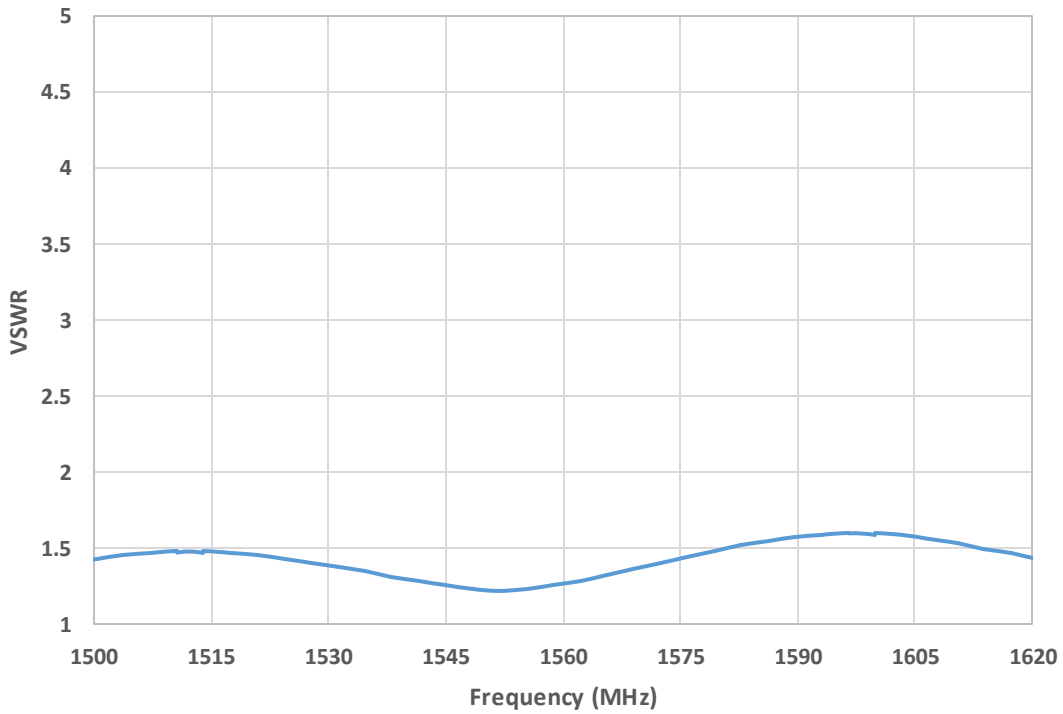
Mechanical Specifications

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:



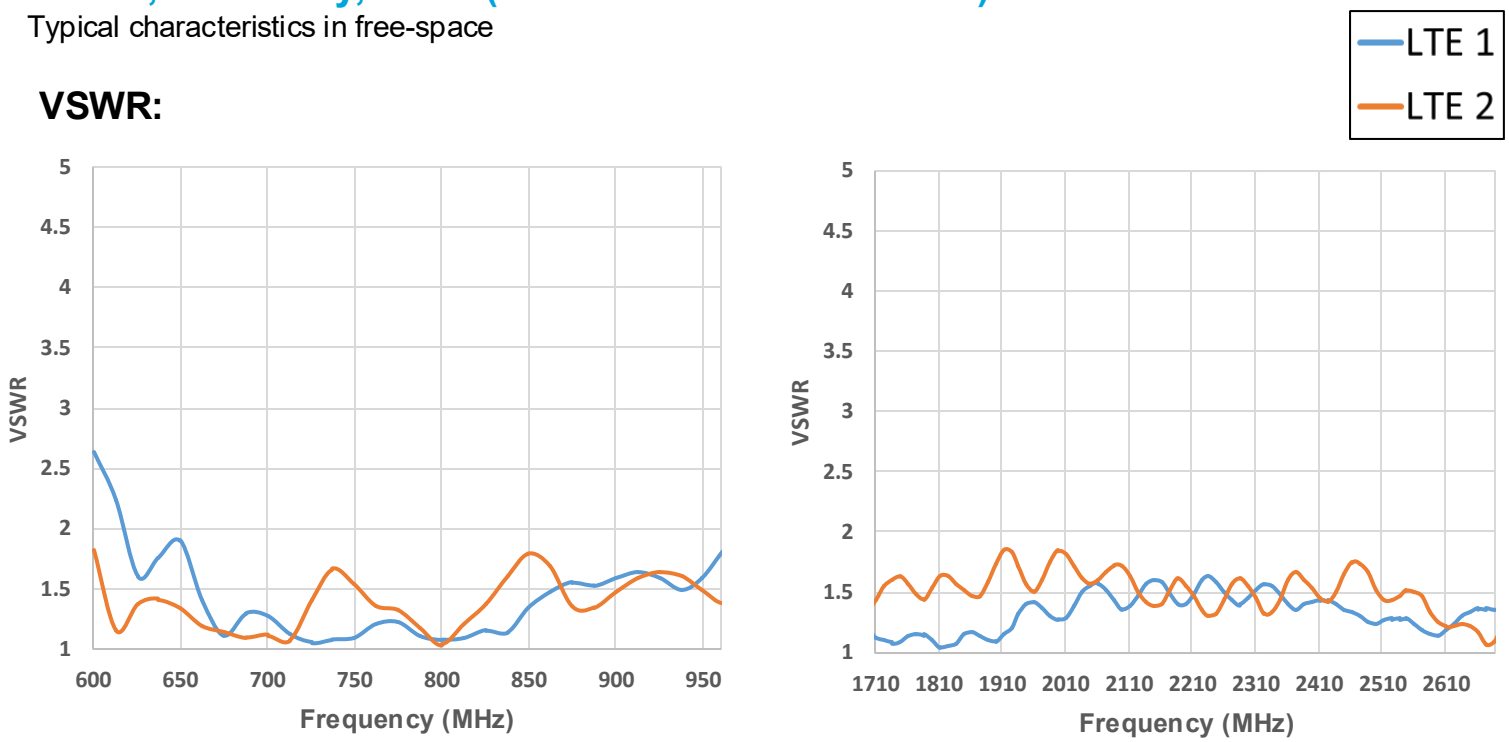
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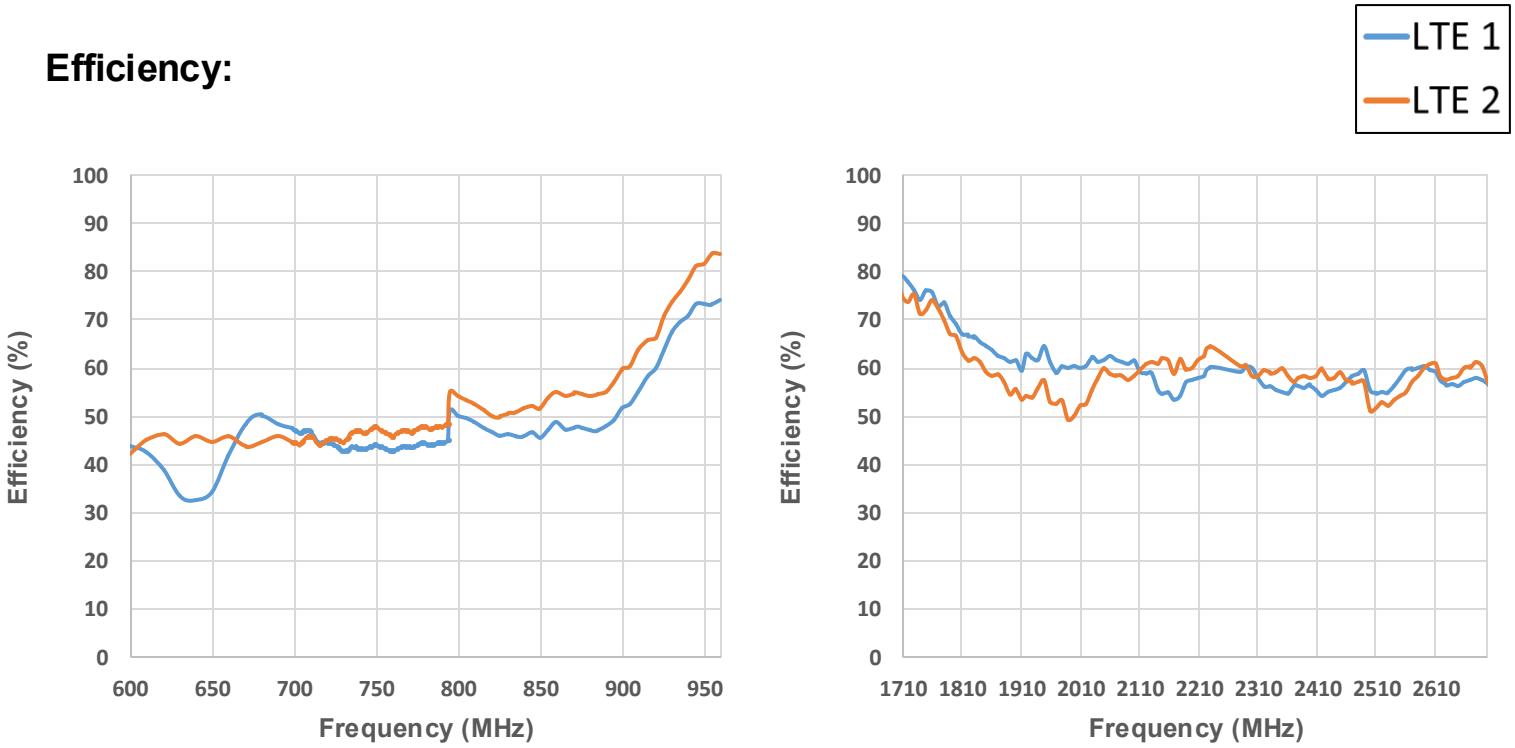
VSWR, Efficiency, Plots (LTE 1 & 2 - 600-2690 MHz)

Typical characteristics in free-space

VSWR:



Efficiency:



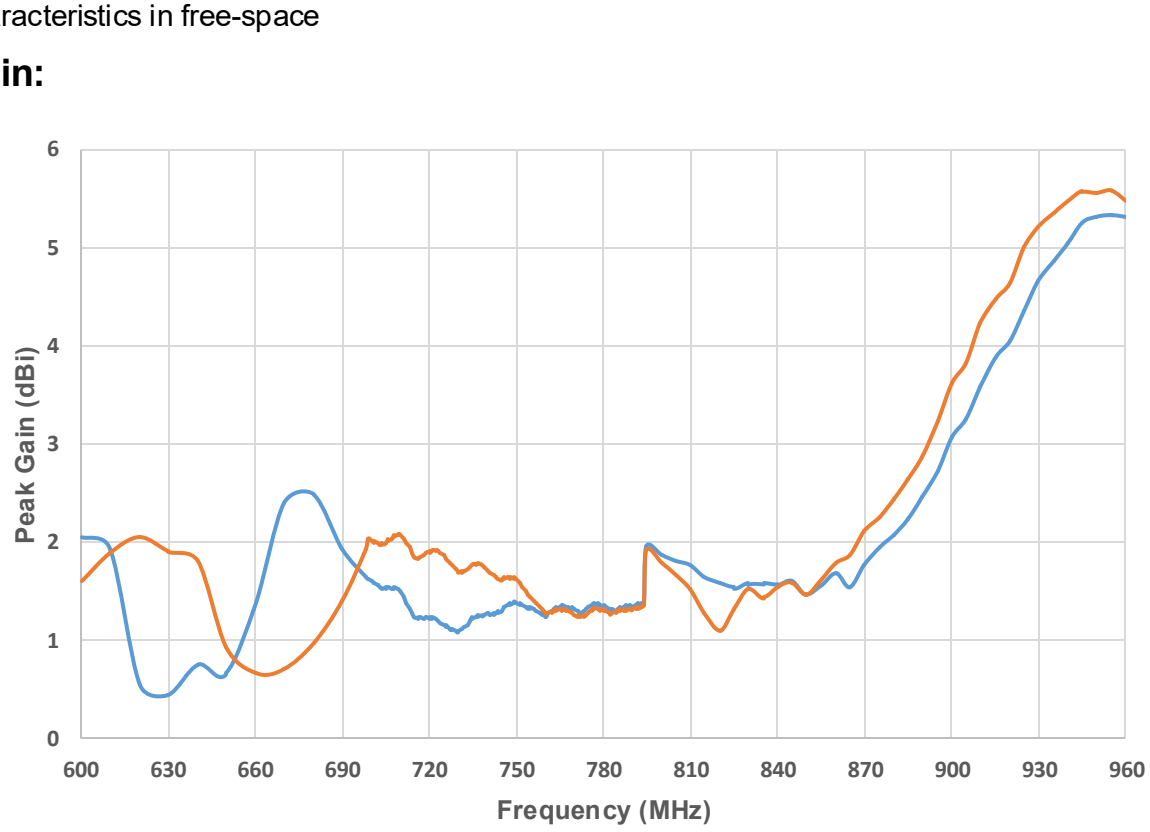
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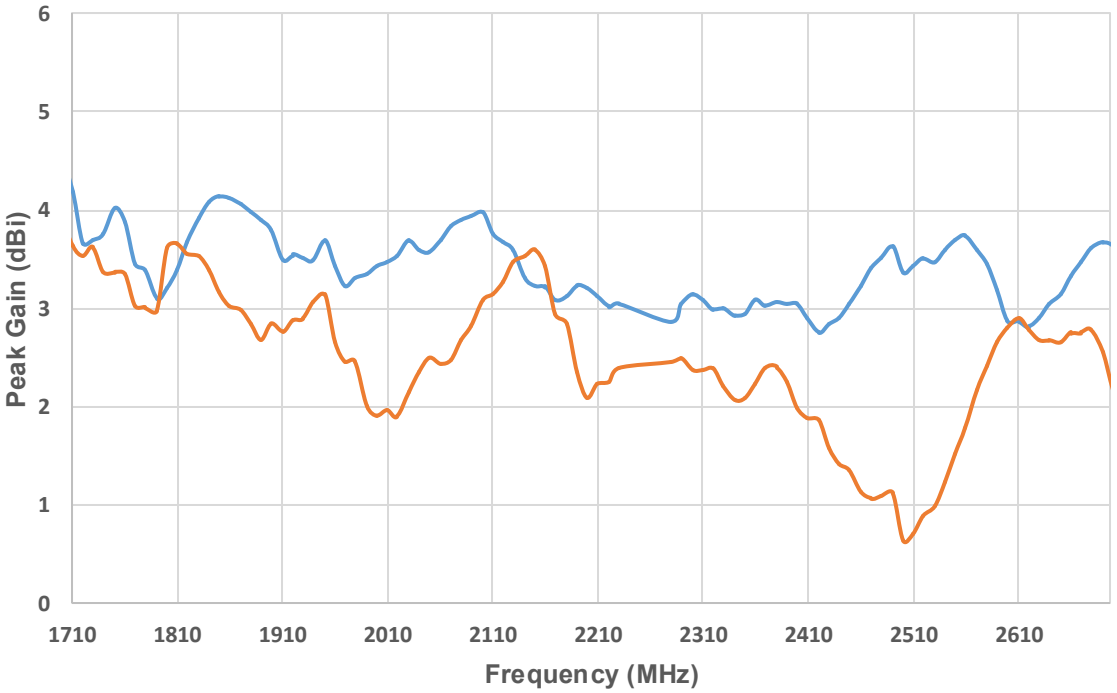
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Peak Gain Plot (LTE 1 & 2 600-2690 MHz)

Typical characteristics in free-space

Peak Gain:





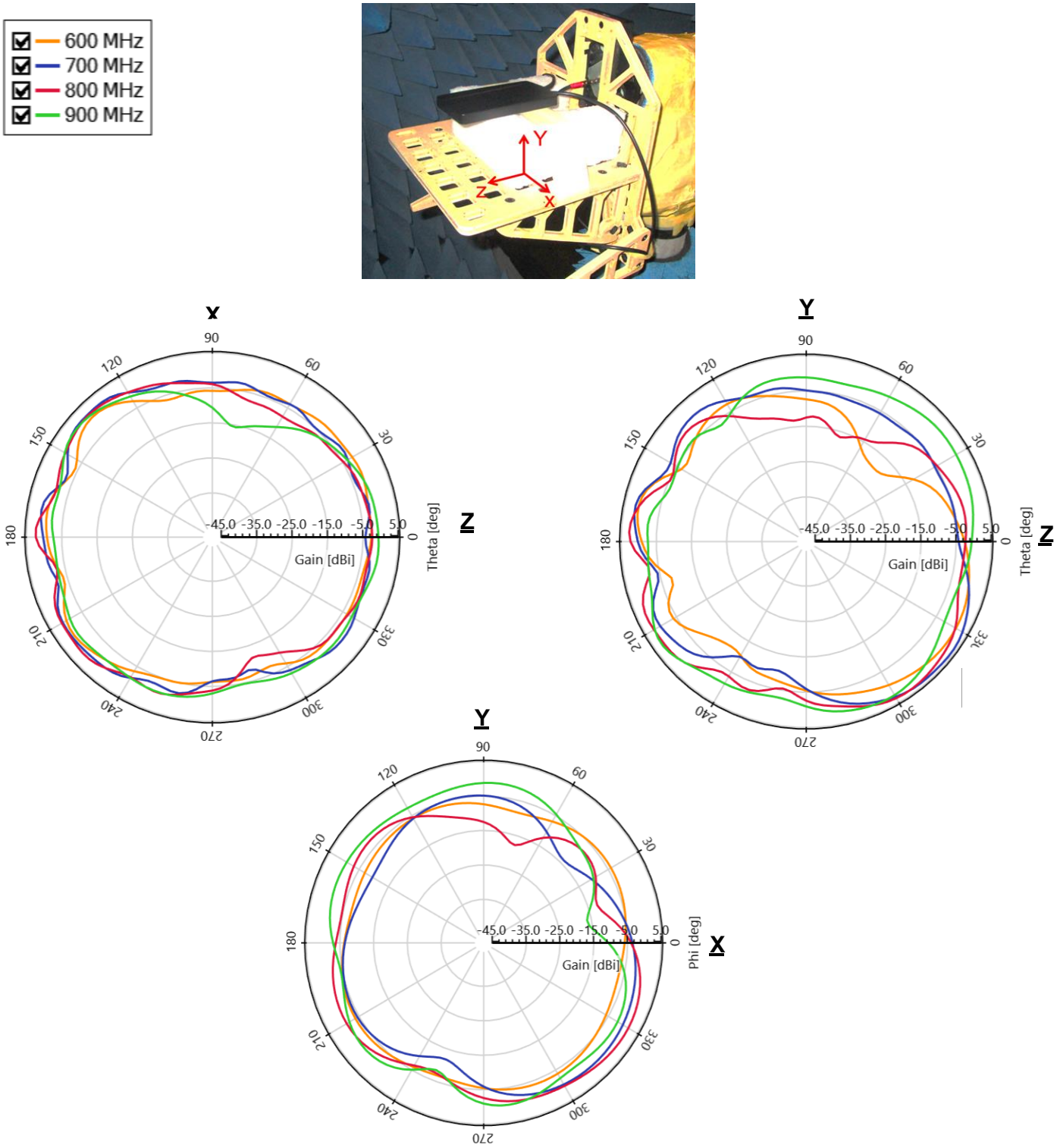
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2D Radiation Patterns (LTE-1 : 600-960 MHz)

Typical characteristics in free-space



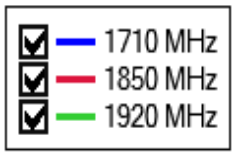
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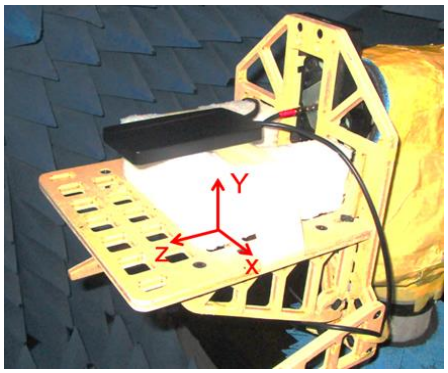
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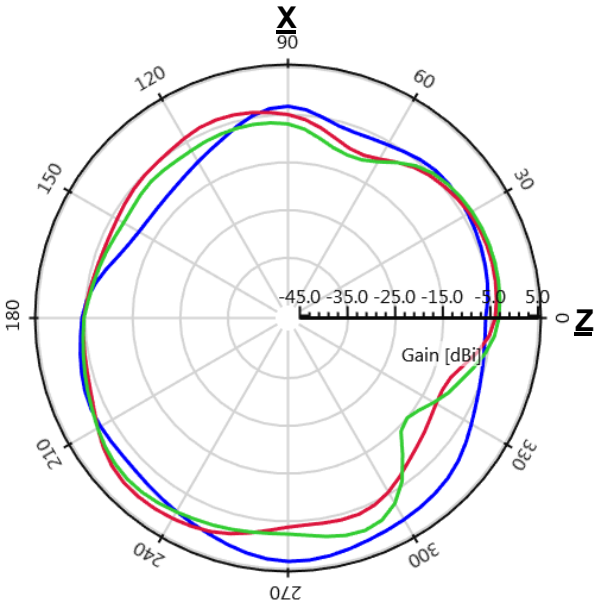
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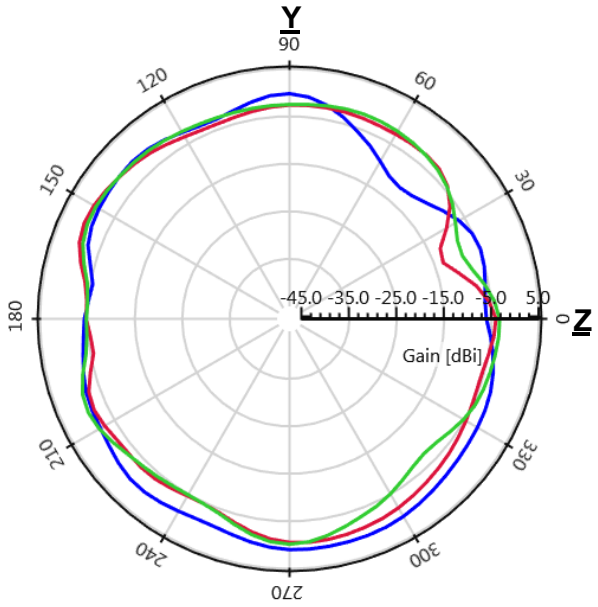
2D Radiation Patterns (LTE-1 : 1710-2170 MHz)

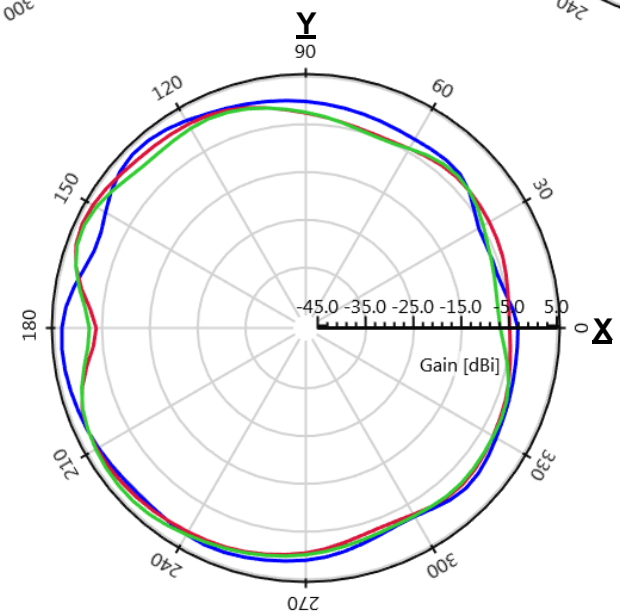
Typical characteristics in free-space











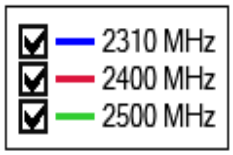
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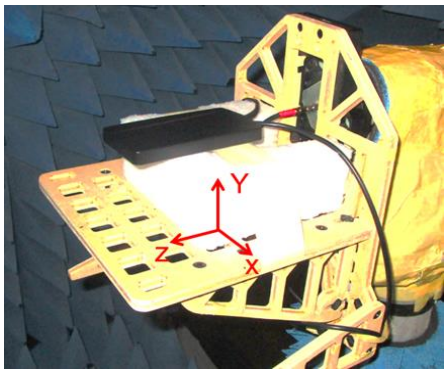
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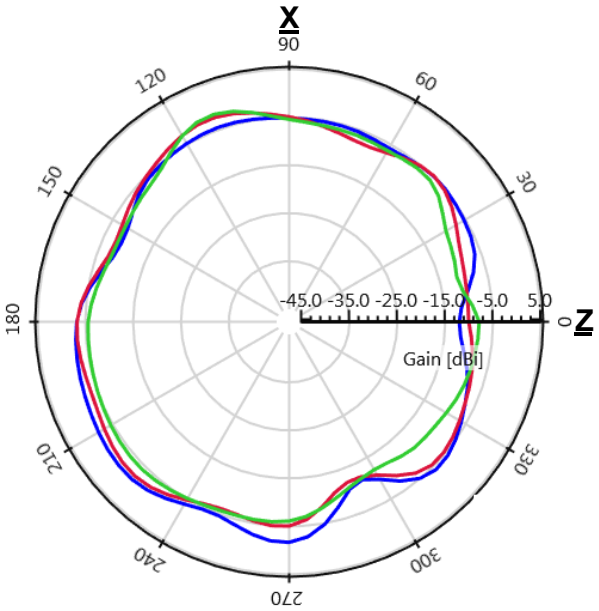
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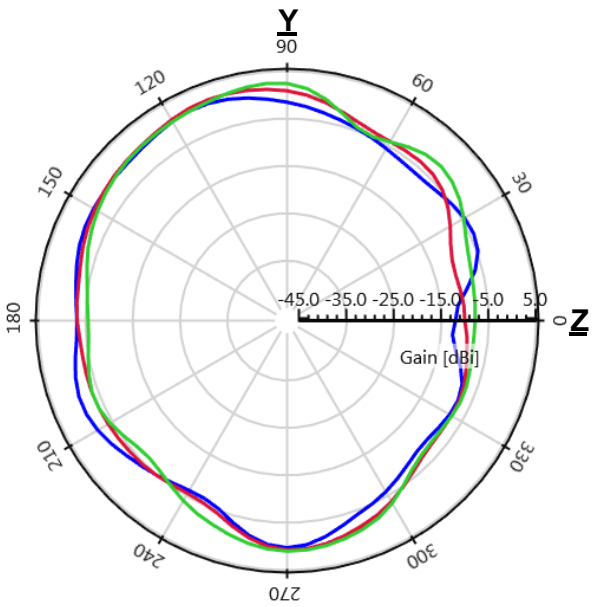
2D Radiation Patterns (LTE-1 : 2300-2690 MHz)

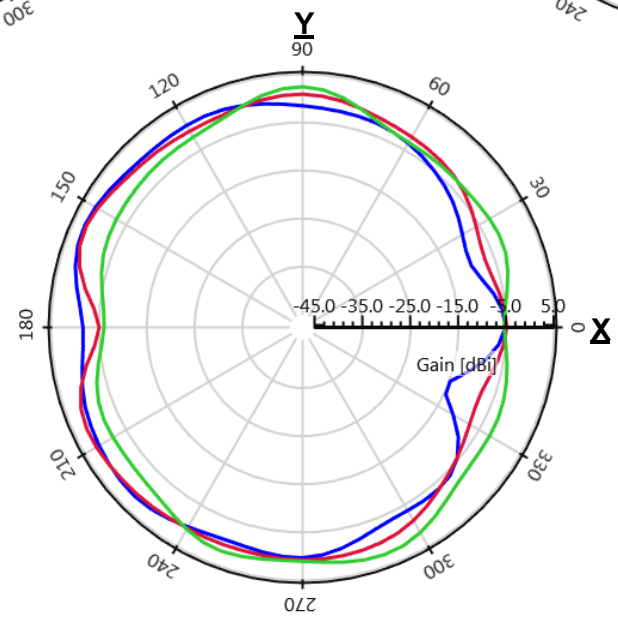
Typical characteristics in free-space











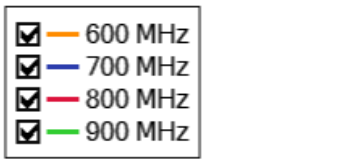
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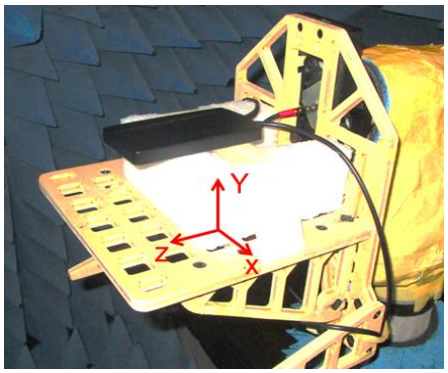
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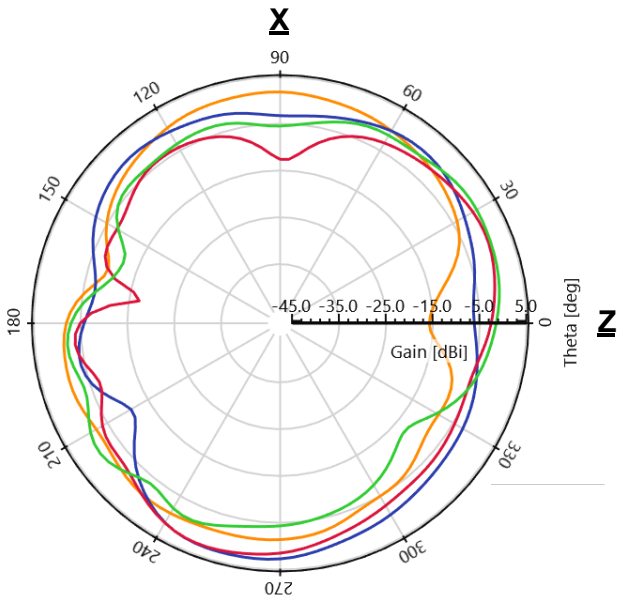
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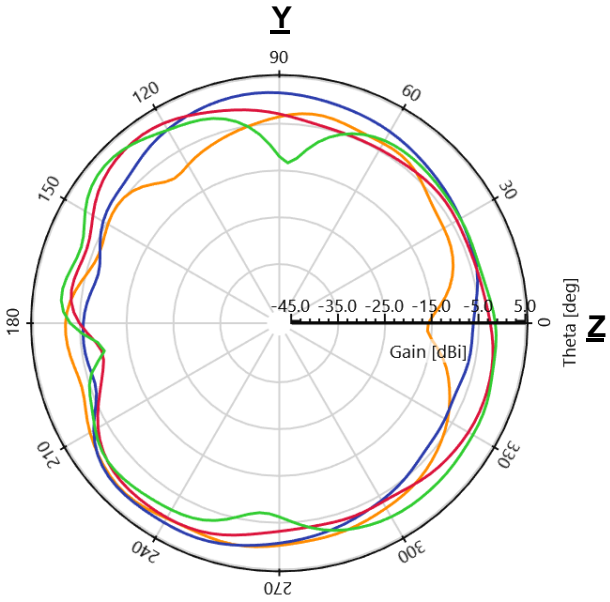
2D Radiation Patterns (LTE-2 : 600-960 MHz)

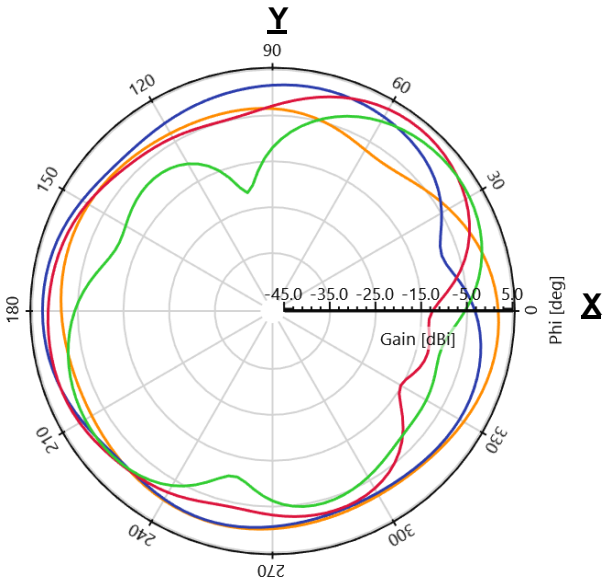
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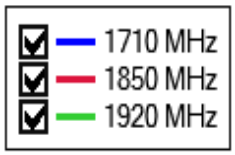
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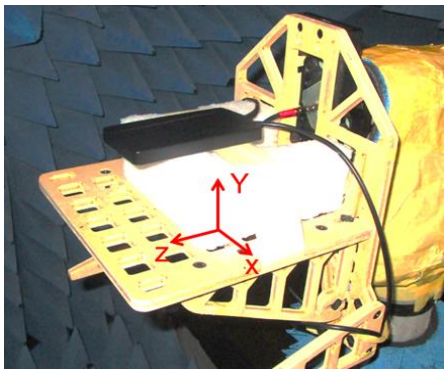
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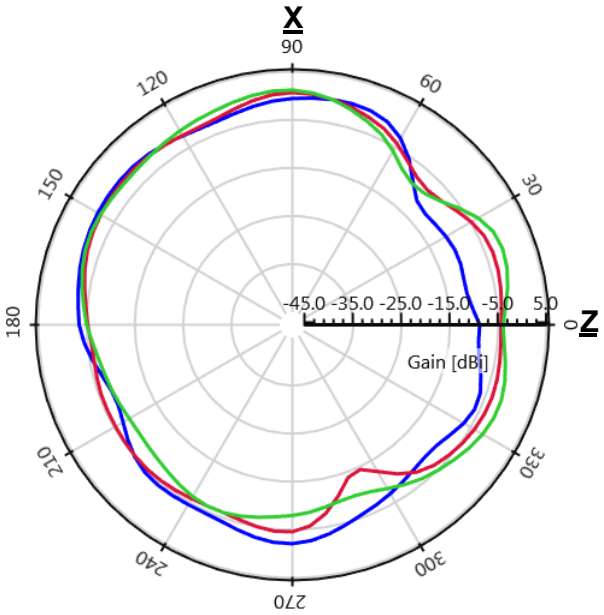
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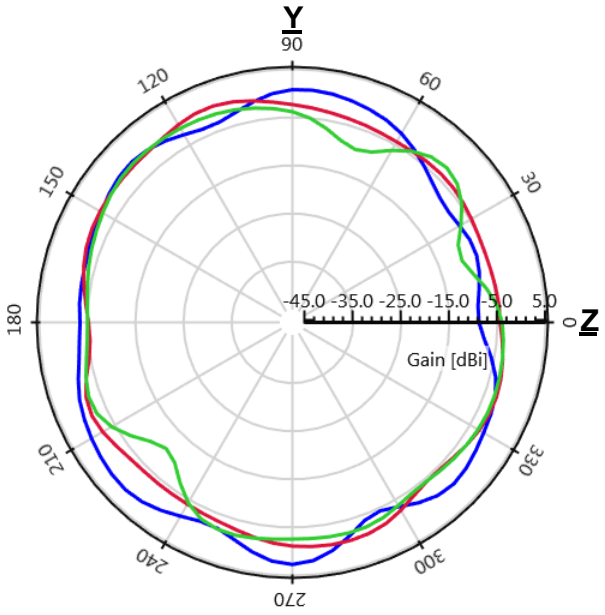
2D Radiation Patterns (LTE-2 : 1710-2170 MHz)

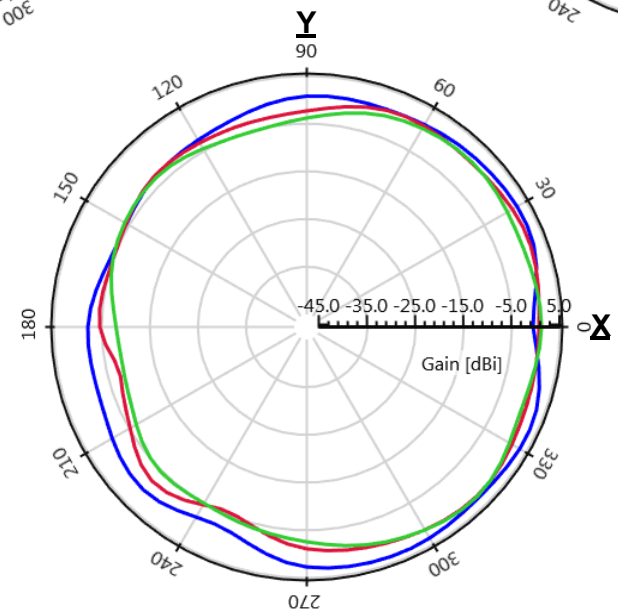
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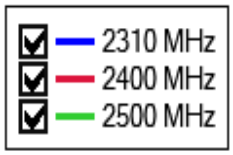
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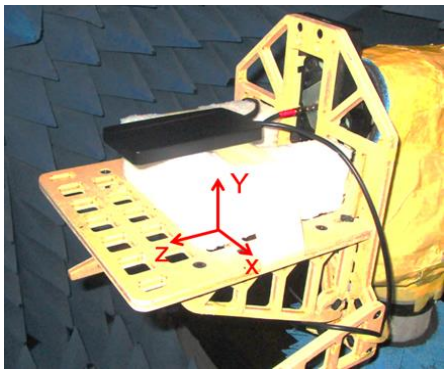
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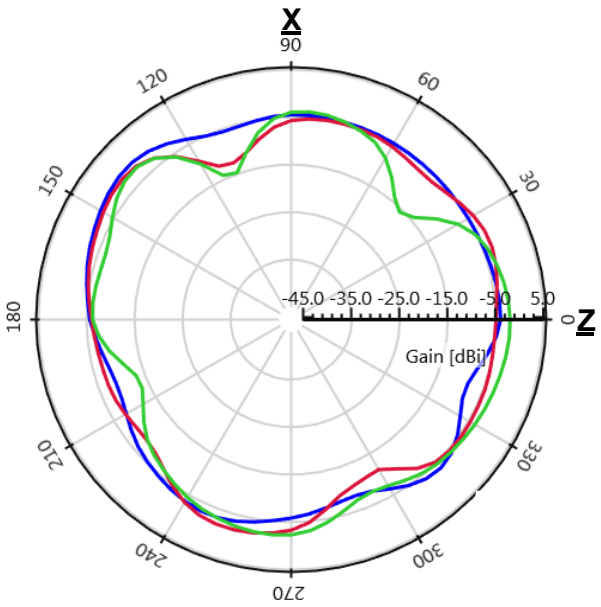
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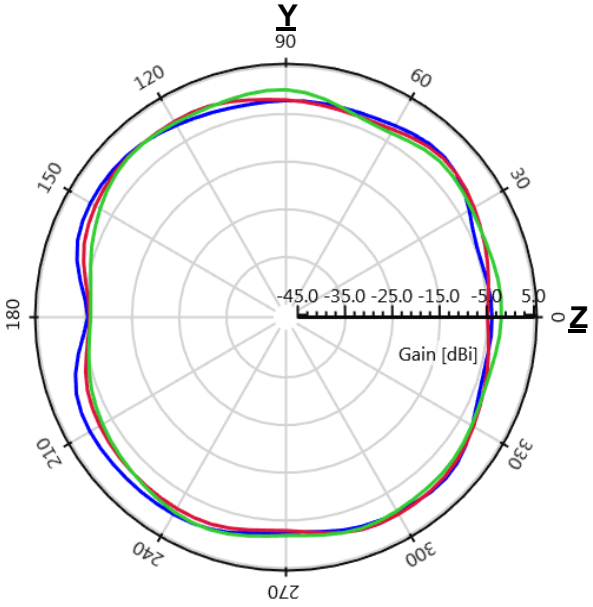
2D Radiation Patterns (LTE-2 : 2300-2690 MHz)

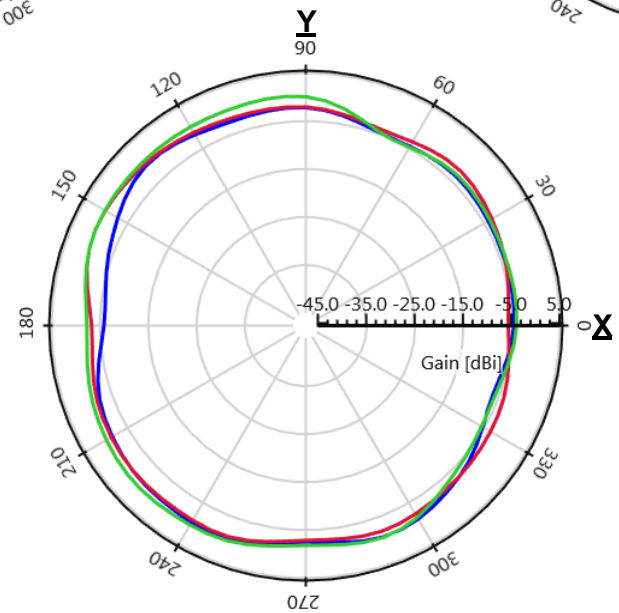
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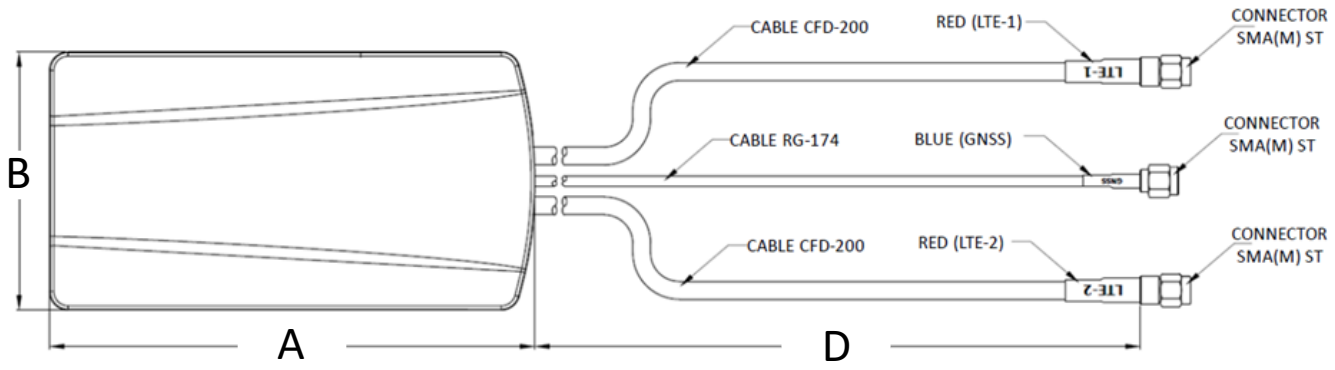
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Mechanical Dimensions

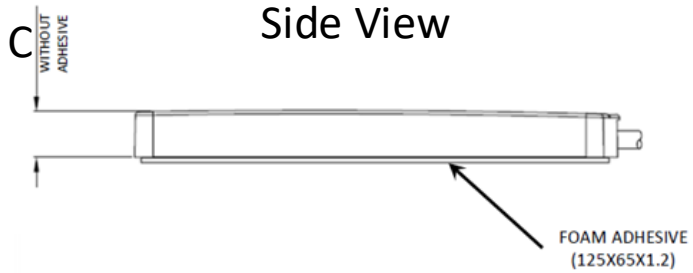
Typical antenna dimensions (mm)

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



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