ADA-10-WXYZ

ADA-10-WXYZ Screw Mount Combination Antenna

Feature:

- GNSS/ LTE/ 5G WiFi Combination Antenna
- Versatile Combination with **up to 6 Cables**
- GPS/GLONASS/Beidou/Galileo/QZSS Supporting
- Full Band GNSS, LTE / 5G NR MIMO and Dual Band WiFi MIMO + DSRC/Tetra/ISM (optional)
- IP67 Fully Waterproof and ESD Protection
- Black or White Housing
- **E-mark & ECE-R118-03 certified**

Application:

- Vehicle Tracking & Telematics
- Machine to Machine Comunication & IOT
- First Responder & Emergency Services
- Asset and remote Monitoring
- Public Transport

RoHS/Reach

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E-mail: m2m@adactus.se http://www.adactus.se/

Specifications: Includes 5m cables

Category	GNSS	
Frequency	1561MHz / 1575.42MHz / 1602MHz	
Gain	35dB	
V.S.W.R	<2	
Noise Figure	1.5 typical	
Impedance	50 Ω	
Cable/Connector	H-100, 5 meters, FAKRA Code C	
Polarization	RHCP	
Power supply	DC 3.0 ~ 5.5V	
Power Consumption	14 mA	
Power Handling Capacity	N/A	
Operation Temperature	-40°C ~ +80°C	
Category	**MIMO LTE / 5G NR**	
	LTE 1 / 5G NR	
Frequency	698-960MHz	1710-3800MHz
Return Loss	< -5dB	< -5dB
Efficiency	31.31%	35.72%
Peak Gain	2.07dBi	2.72dBi
Average Gain	-5.04dBi	-4.47dBi
	LTE 2 / 5G NR	
Frequency	698-960MHz	1710-3800MHz
Return Loss	< -5dB	< -5dB
Efficiency	31.00%	33.39%
Peak Gain	4.66dBi	2.00dBi
Average Gain	**Cable/Connector**	LMR-19meters, FAKRA Code D
Polarization		Linear

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Category	MIMO WiFi	
	WiFi 1	
Frequency	2400-2500MHz	5150-5850MHz
Return Loss	< -10dB	< -10dB
Efficiency	34.17%	21.17%
Peak Gain	1.95dBi	0.92dBi
Average Gain	-4.66dBi	-6.74dBi
	WiFi 2	
Frequency	2400-2500MHz	5150-5850MHz
Return Loss	< -10dB	< -10dB
Efficiency	10.93%	8.25%
Peak Gain	-2.43dBi	-1.98dBi
Average Gain	-9.61dBi	-10.84dBi
Cable/Connector	LMR-195, 5 meters, FAKRA Code I	
Polarization	Linear	
Dimension	φ108.9mm, H:48.5mm	
Operation Temperature	-40°C ~ +80°C	
Storage Temperature	-40°C ~ +100°C	

∗ This specification is subject to change without prior notice

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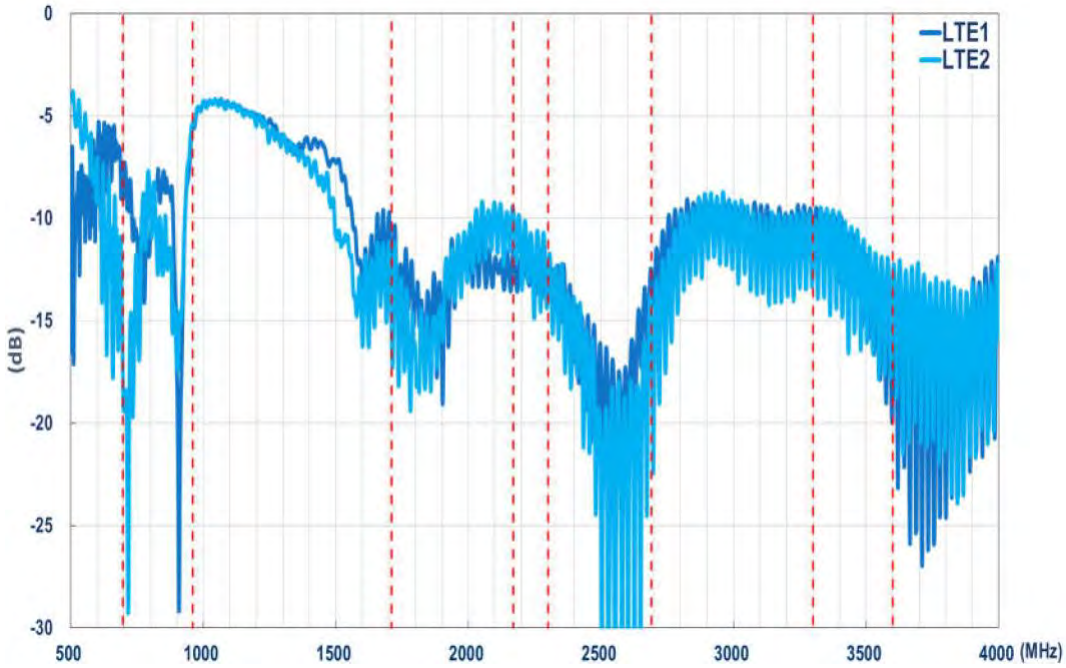
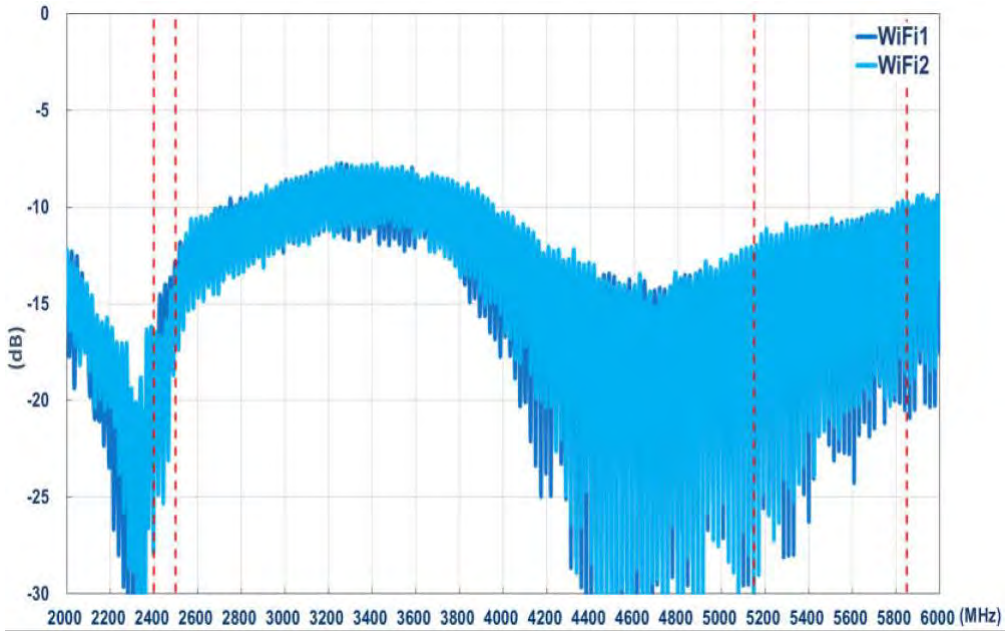
I. Analysis Antenna Performance:

S-parameters:





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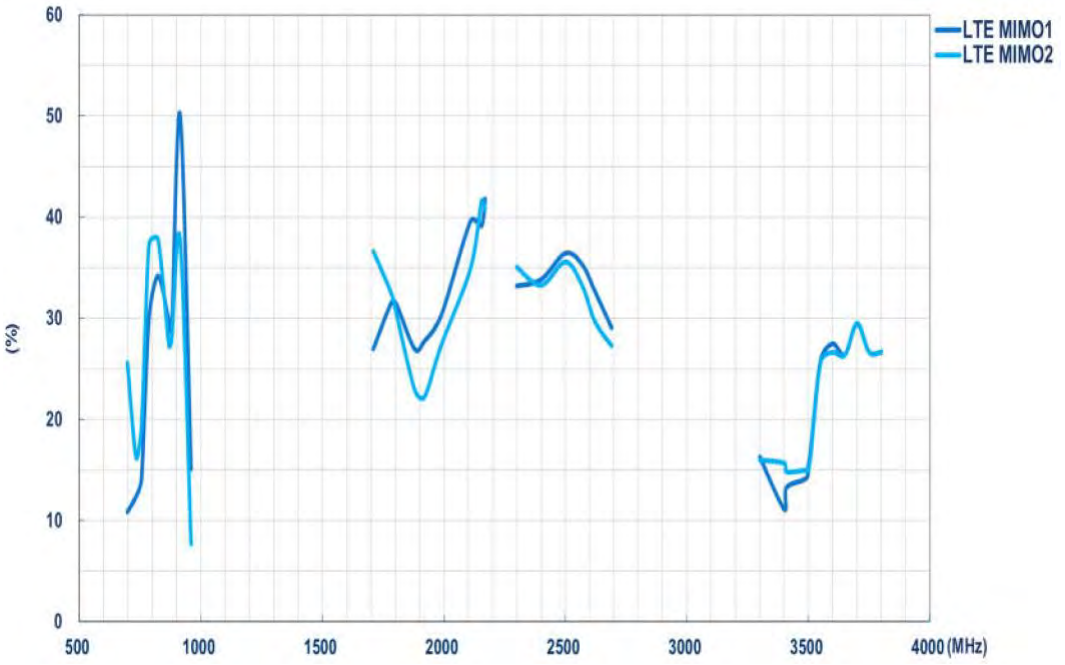
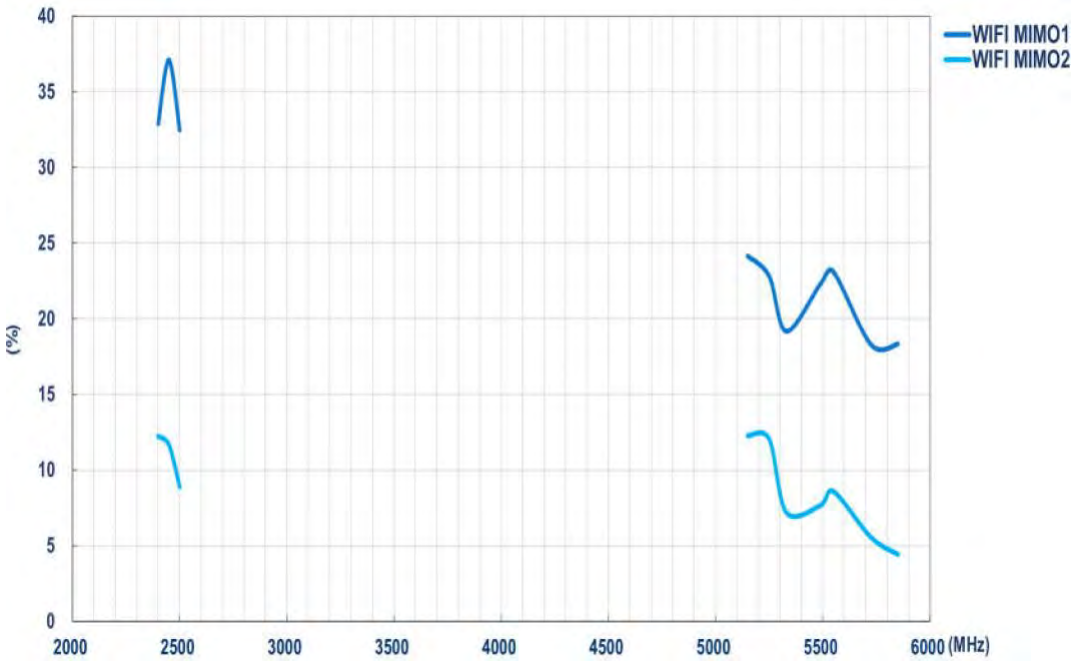
Efficiency:





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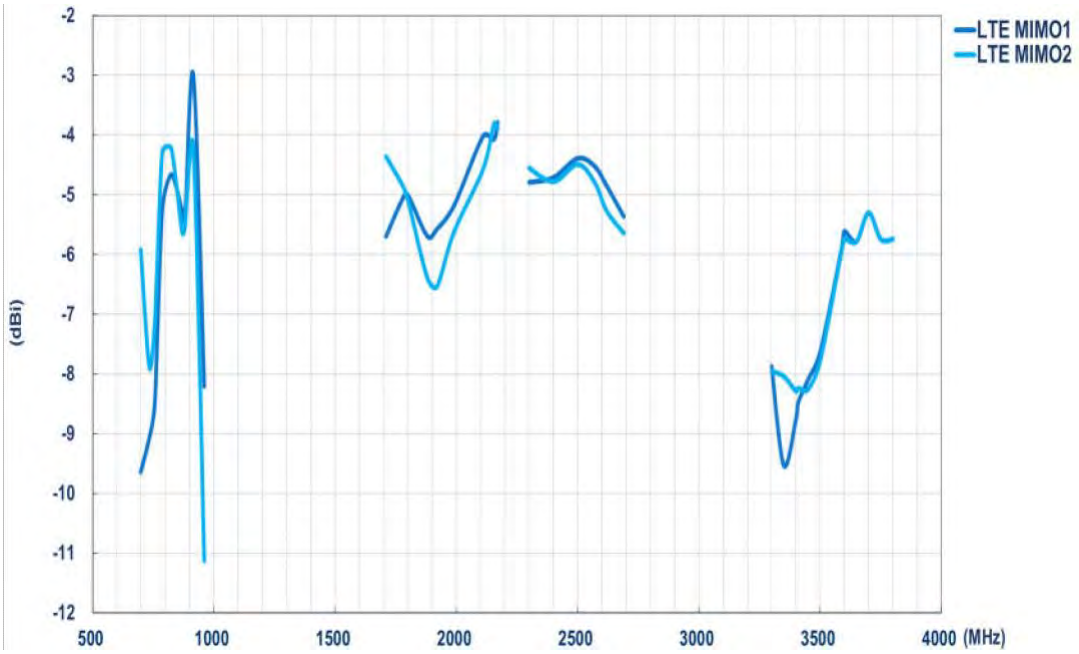
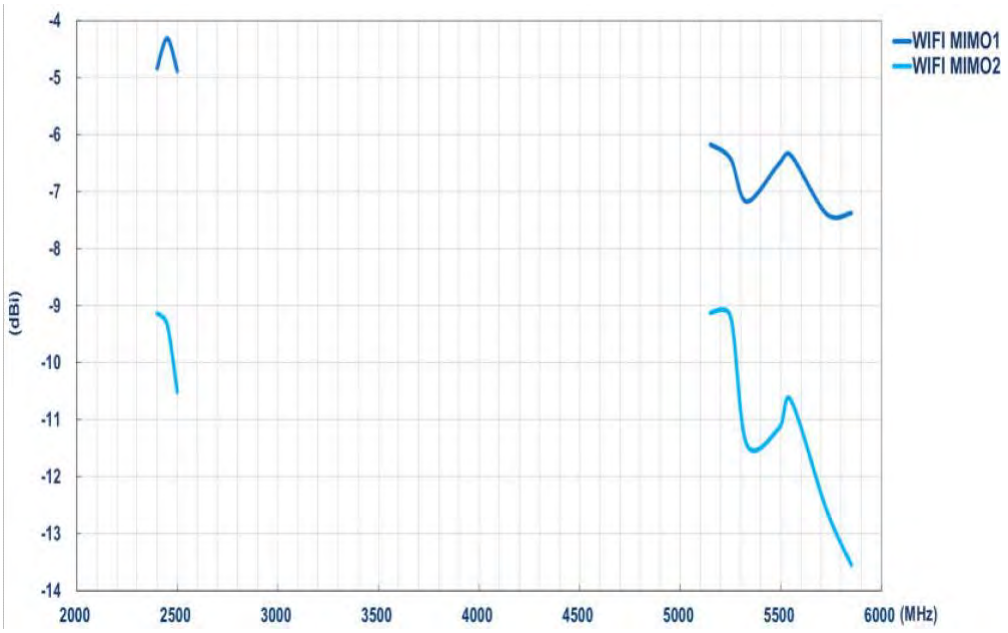
Average Gain:





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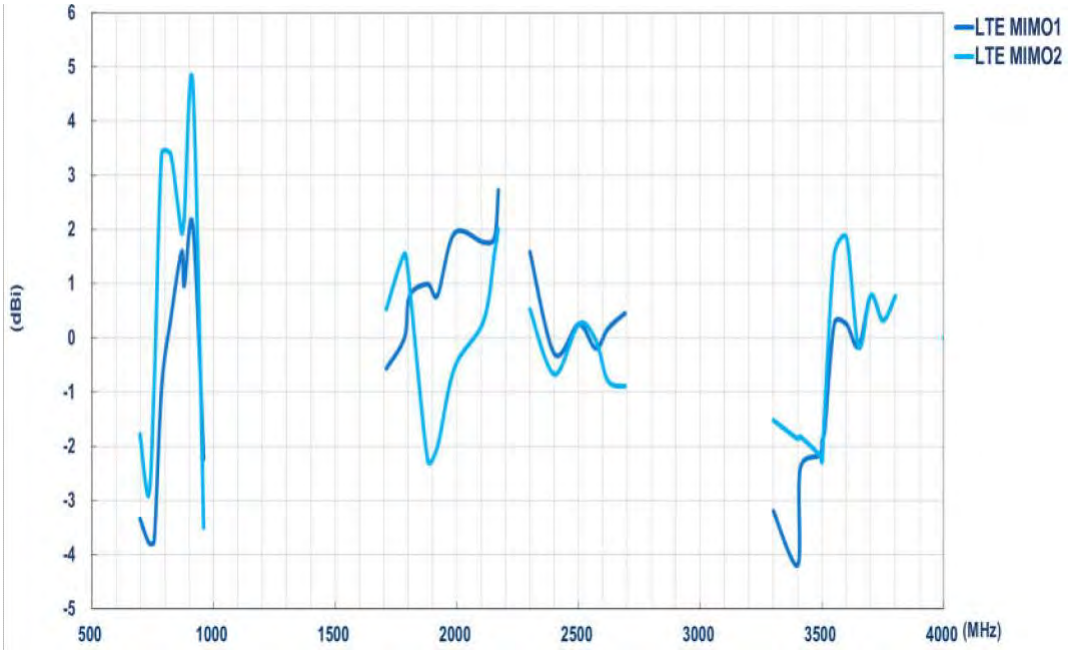
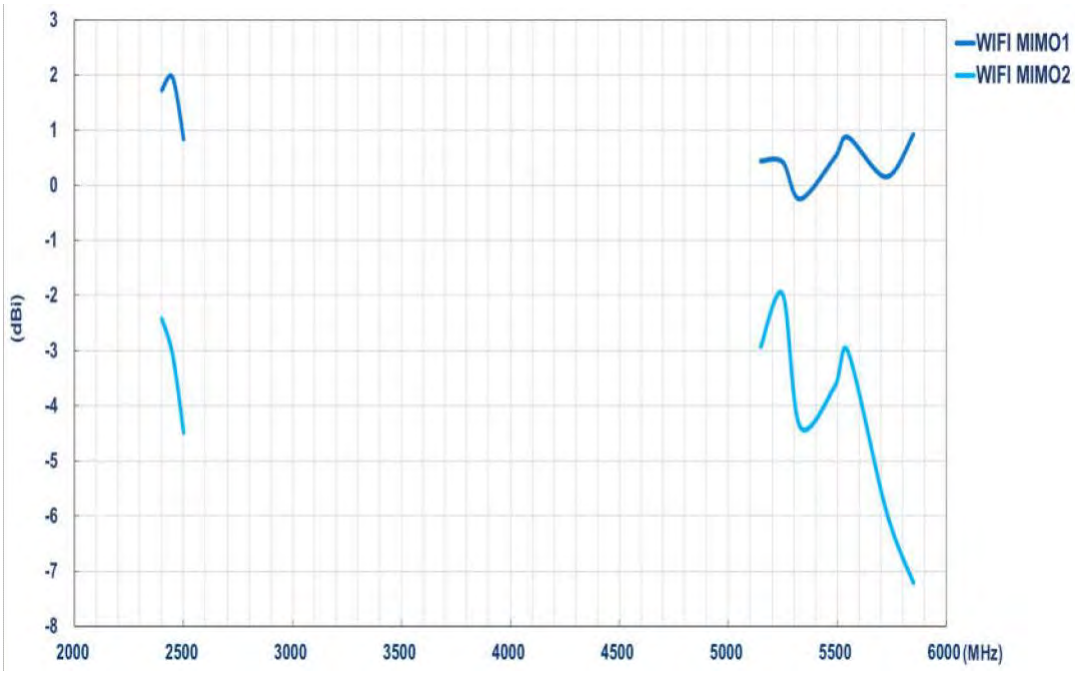
Peak Gain





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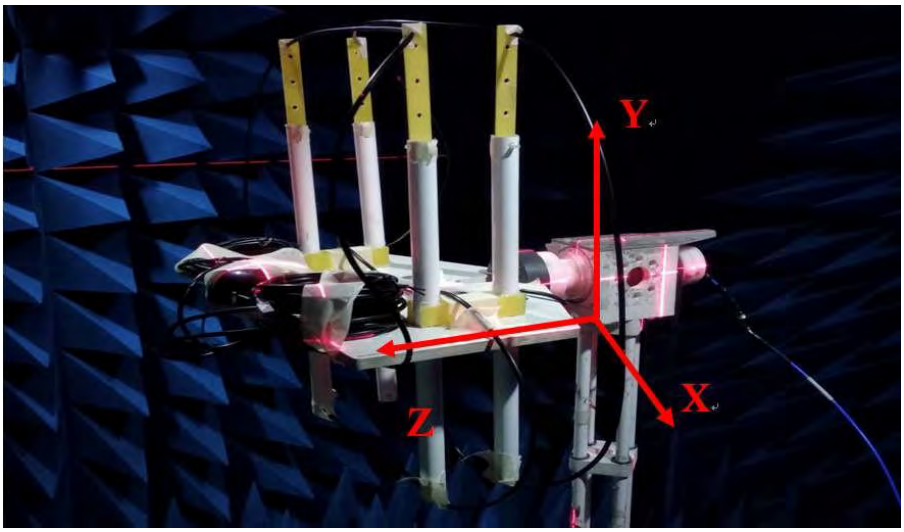
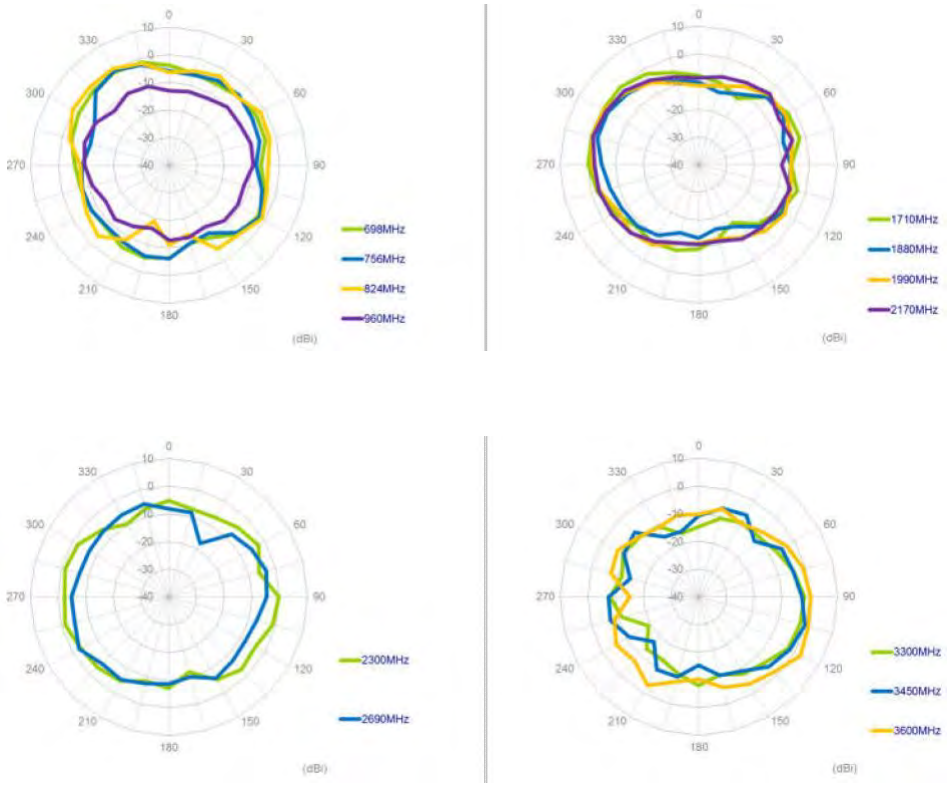
II. Antenna Radiation Pattern Measurement:



Antenna Radiation Patterns

X-Y plane

LTE-MIMO1



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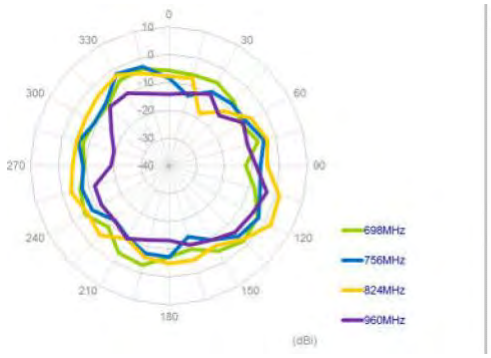
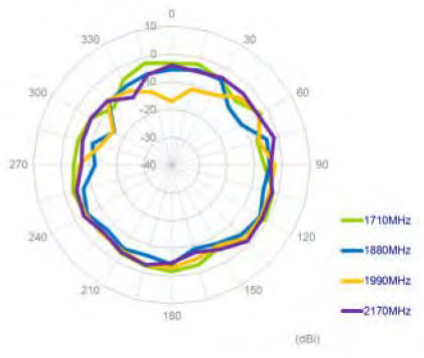
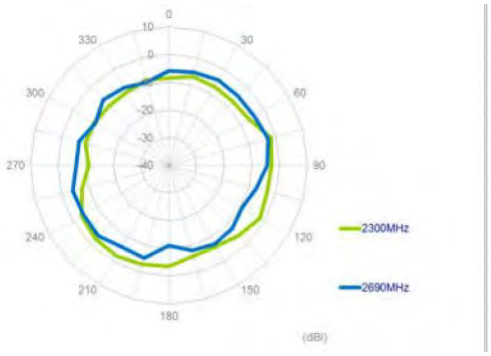
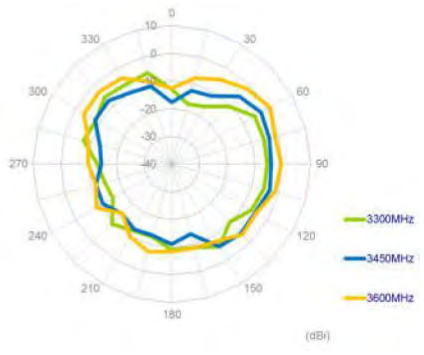
X-Y plane

LTE-MIMO2



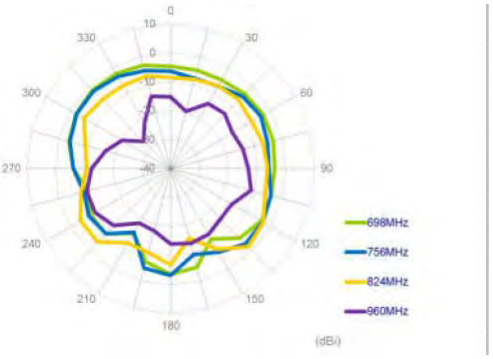


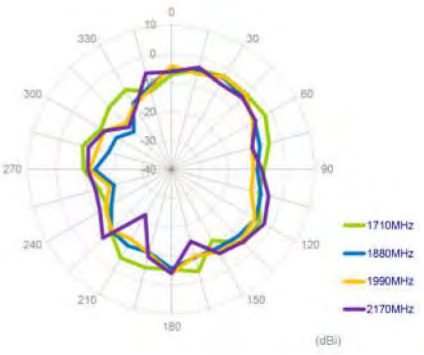




X-Z plane

LTE-MIMO1





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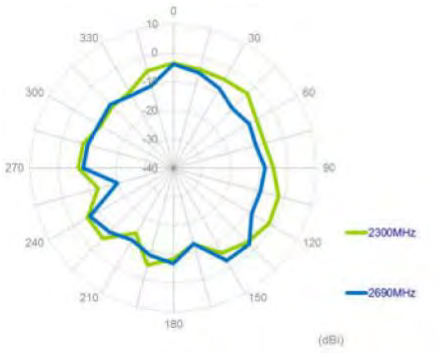
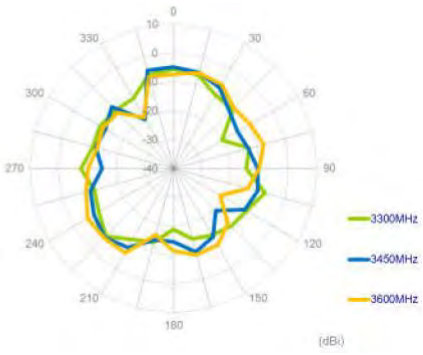
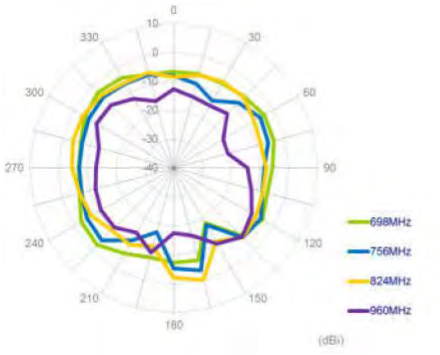
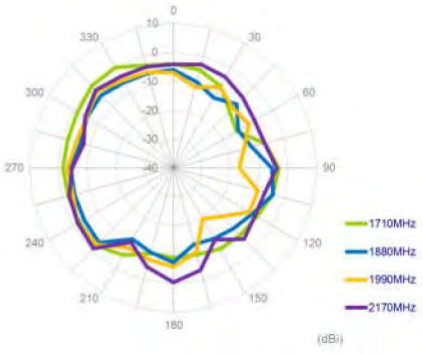


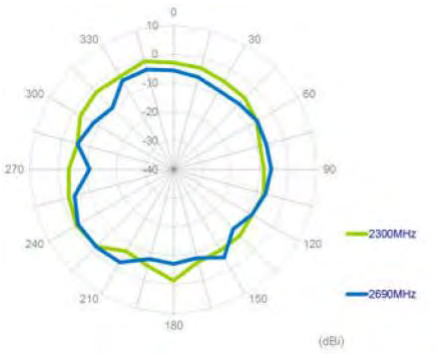


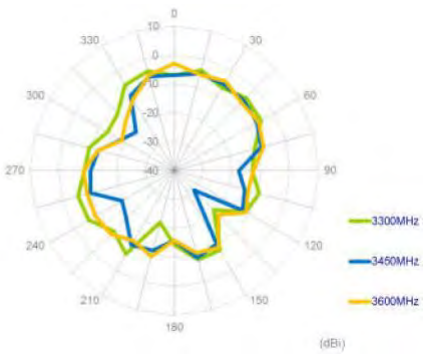
X-Z plane

LTE-MIMO2









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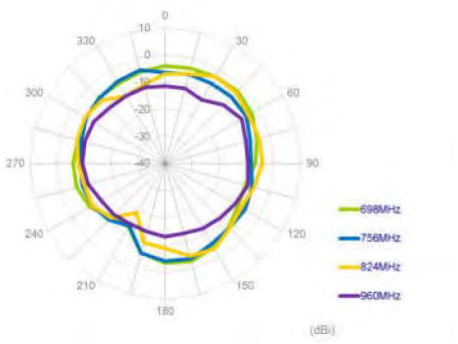
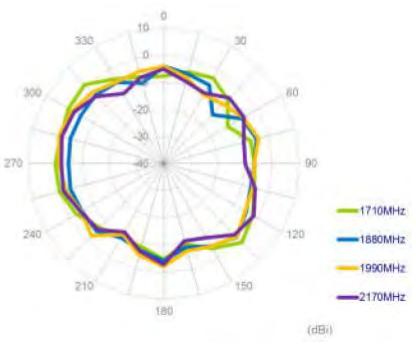
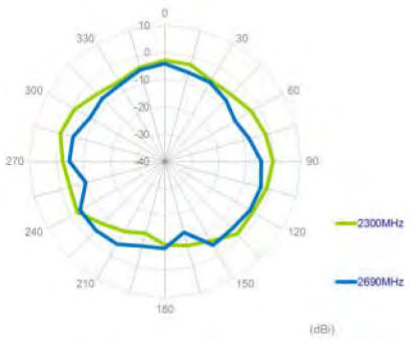
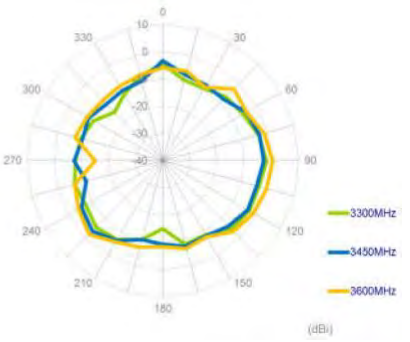
Y-Z plane

LTE-MIMO1



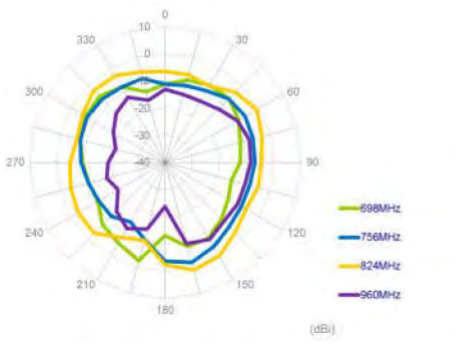


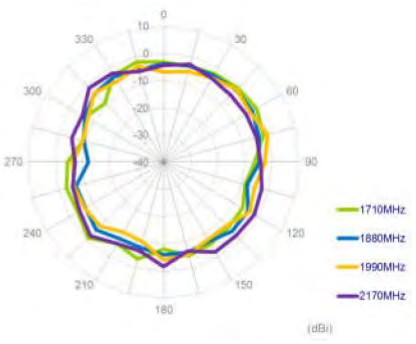


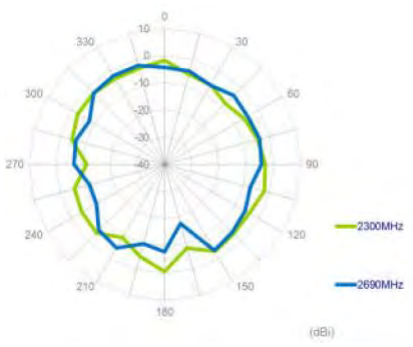


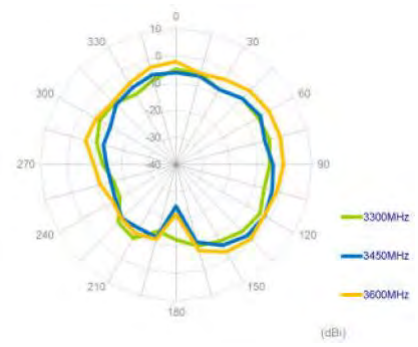
Y-Z plane

LTE-MIMO2



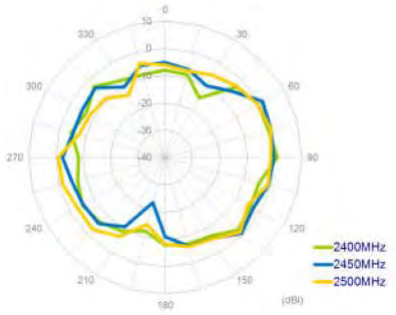


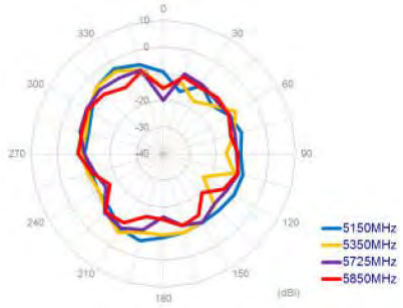




X-Y plane

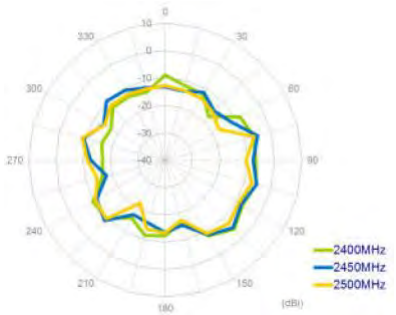
WIFI-MIMO1

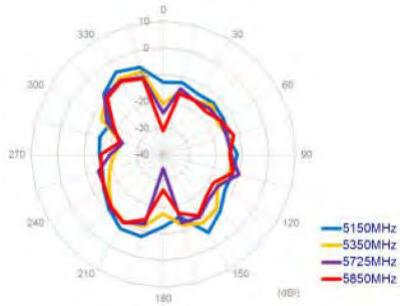




X-Y plane

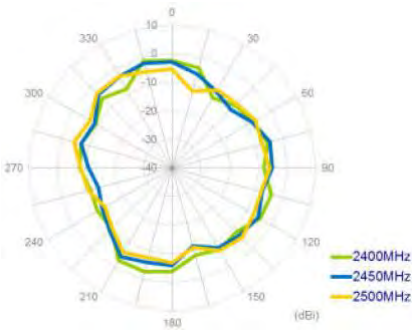
WIFI-MIMO2

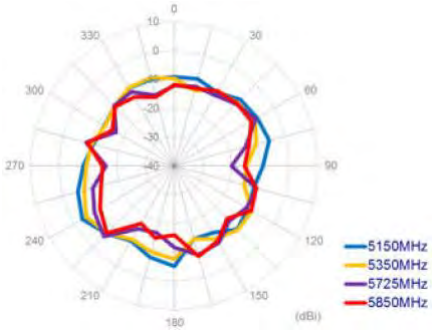




X-Z plane

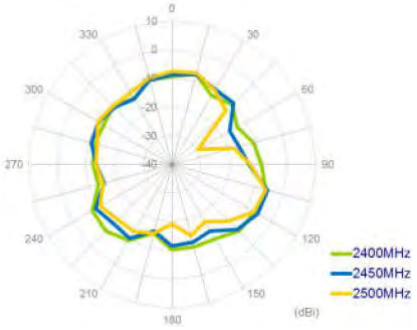
WIFI-MIMO1

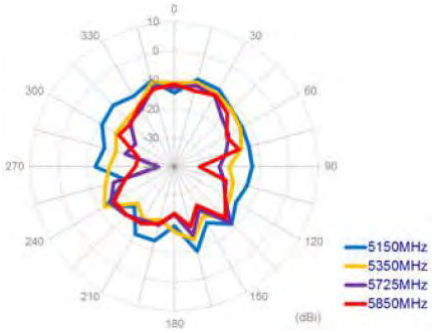




X-Z plane

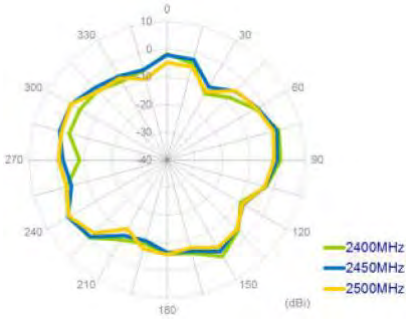
WIFI-MIMO2

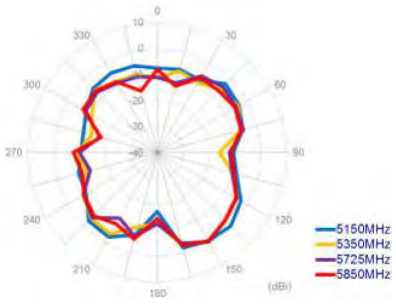




Y-Z plane

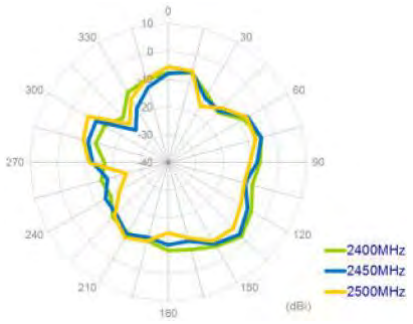
WIFI-MIMO1

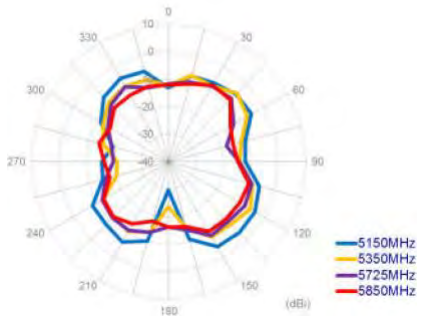




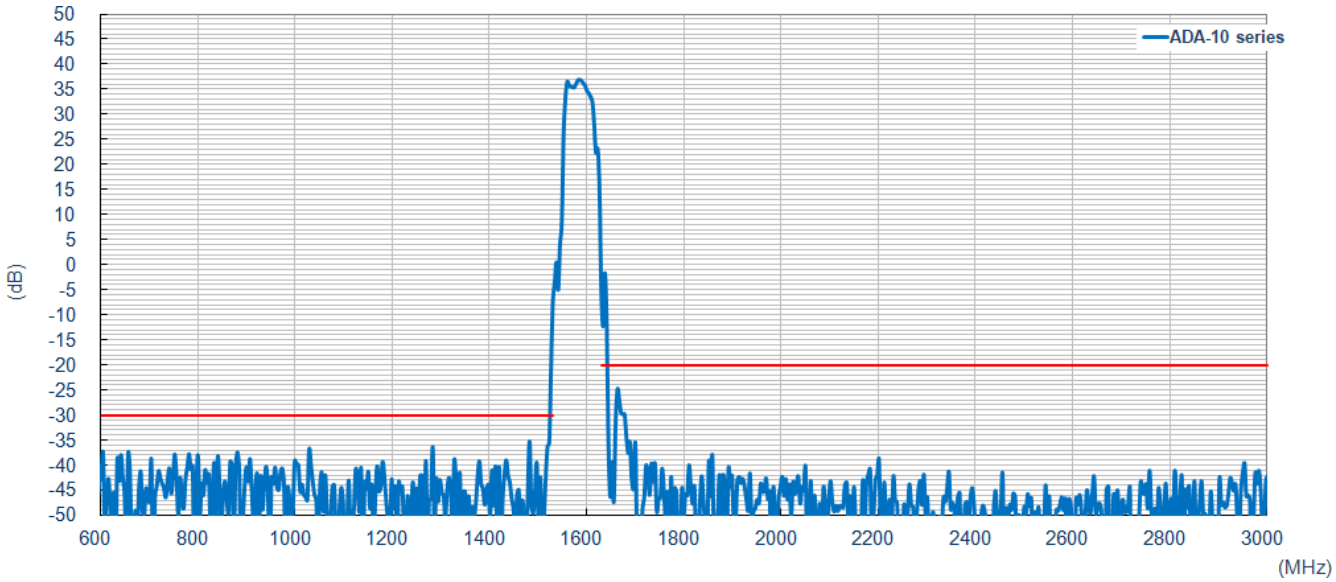
Y-Z plane

WIFI-MIMO2





III. out-of-band rejection



IV. ESD

ESD	
Contact	±8KV
Air	±15KV

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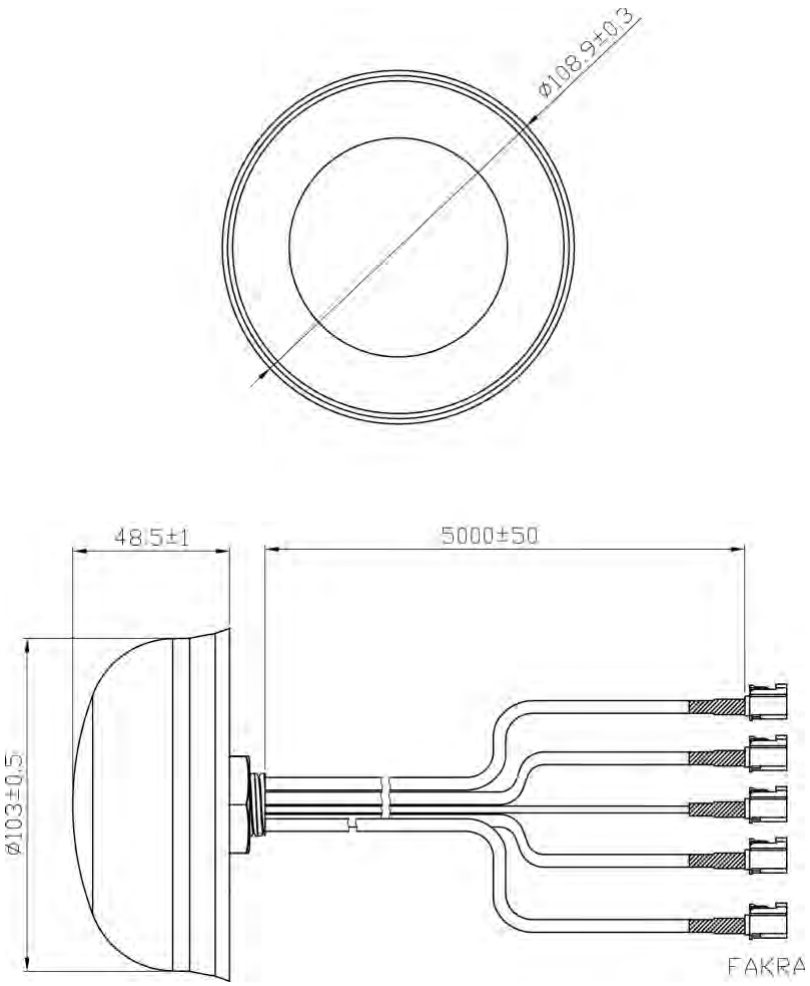
V. Mechanical Drawing (Unit:mm):



Ordering Codes:

ADA-10-WXYZ

W = 0 (Nothing)
W = 1 (GPS)
W = 2 (Full Band GNSS)

X = 0 (Nothing)
X = 1 (5G/LTE)
X = 2 (5G/LTE x 2)

Y = 0 (Nothing)
Y = 1 (WIFI 2.4/5-5.8)
Y = 2 (WIFI 2.4/5-5.8 x 2

Z = 0 (NOTHING)
Z = 1 (DSRC)
Z = 2 (430-450/TETRA)

Example ADA-10-2121 has the configuration: Full Band GNSS + 5G/LTE x 1 + WIFI x 2 + DSRC