

NAN-EA Series External GPS, GLONASS, LTE & WIFI Antennas

Active Antennas with Integrated Low Noise Amplifiers (LNA)

<i>Page</i>	<i>Size (L x DØ)</i>	<i>Protocol</i>	<i>Coverage</i>	<i>NIC PN</i>
<i>Page 2</i>	45 mm x 35mm	GPS + GLONASS	Single Band	NAN-EA45X35B1AMDF
<i>Page 5</i>	81mm x 14mm	GPS + GLONASS + LTE (2)	Tri-Band	NAN-EA81X14B3AMDF
<i>Page 9</i>	181 mm x 69 mm <i>FAKRA</i>	GPS + LTE (2) + WIFI	Quad-Band	NAN-EA181X69B4AKDF
<i>Page 14</i>	181 mm x 69 mm <i>SMA</i>	GPS + LTE (2) + WIFI	Quad-Band	NAN-EA181X69B4AMDF



FEATURES

- GPS & GLONASS Protocols
- Single Band Frequency
- RoHs Compliant



APPLICATION

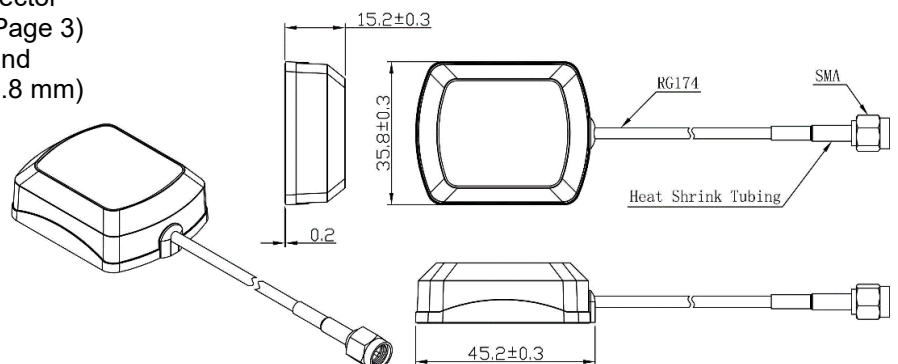
- Tracking
- Fleet Management

RoHS Compliant
 includes all homogeneous materials
 (see part numbering system for details)

SPECIFICATIONS

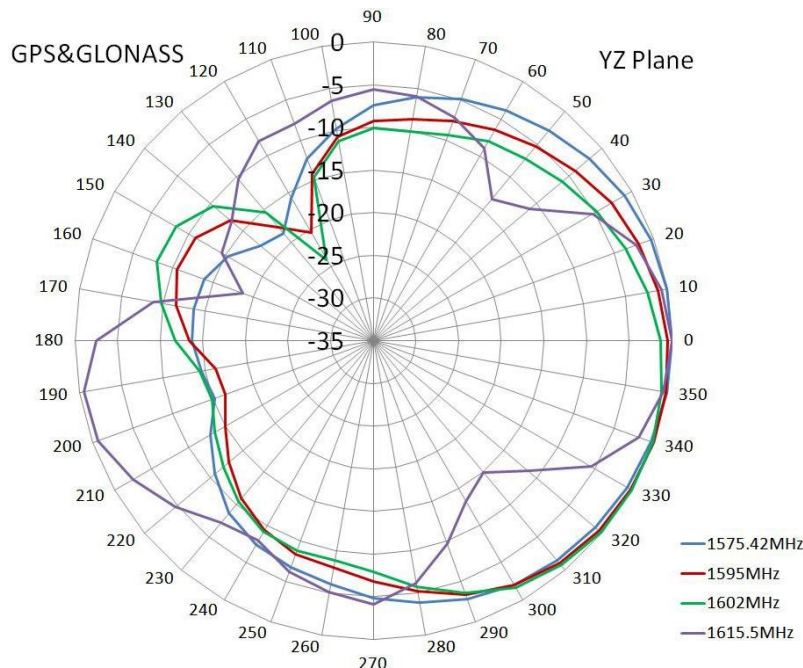
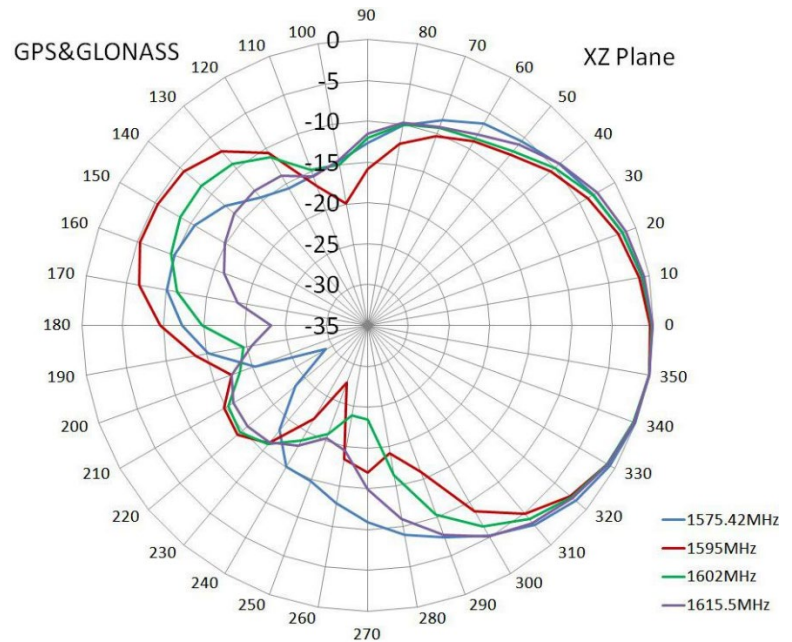
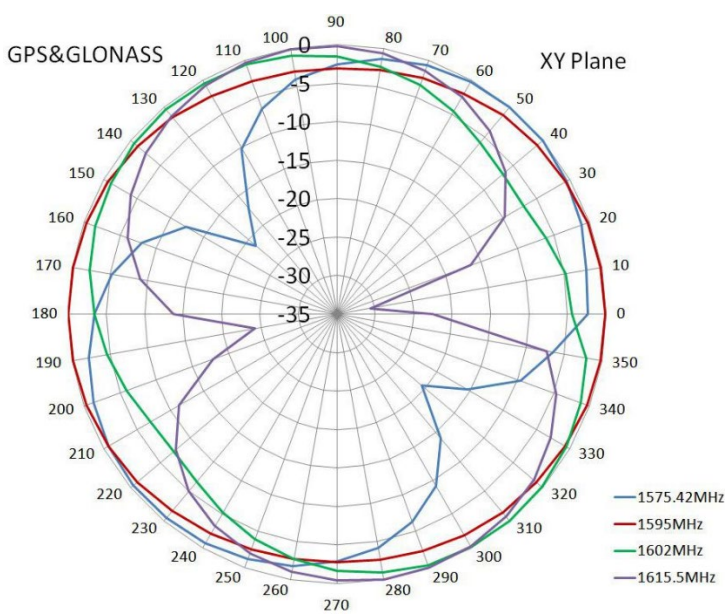
Electrical	
Frequency Range	1575.42~1602MHz
Polarization	RHCP
Gain	2dBic (Zenith)
Axial Ration	3dB (max.)
V.S.W.R	<1.5
Impedance	50Ω
LNA	
Gain	28 ± 2dB
Noise Figure	<1.5
Filter Insertion Loss	<3.0dB
Ex-Band Attenuation	12dB@CF+50MHz 16dB@CF-50MHz
Supply Voltage	2.2 - 5VDC
Current Consumption	5 - 15mA
V.S.W.R.	<2.0
Dimensions (mm):	
Length (L)	45.2 ± 0.30
Width (W)	35.8 ± 0.30
Height (H)	15.2 ± 0.30
Connection Type	SMA
Cable	RG174
Mounting Method	Magnet/Adhesive

NAN-E A 45X35 B1 A M D F
 F = RoHS compliant
 D = RG174 Cable
 M = SMA connector
 A = REV 1 (See Page 3)
 B1 = 1 Frequency Band
 45x35 = Size (45.2 mm x 35.8 mm)
 A = Active Antenna
 NAN-E = Series



Environmental	
Operating Temperature	-40°C~+85°C
Relative Humidity	Up to 95%
Ingress Protection	IP65 ~ 67
Vibration	10 ~ 55Hz 1.5mm Amplitude 2 Hours
RoHS Compliant	Yes

RADIATION PATTERN



Revision History and Status

Revision	Date Issued	Details	Status
A	Nov 4 th , 2020	Initial Release	Supported

- NIC Technical Support: tpmg@niccomp.com
- Compliance Support: rohs@niccomp.com

FEATURES

- Combination Antenna (GPS & GLONASS + LTE)
- Triband Frequency
- RoHS Compliant

APPLICATION

- Tracking
- Fleet Management

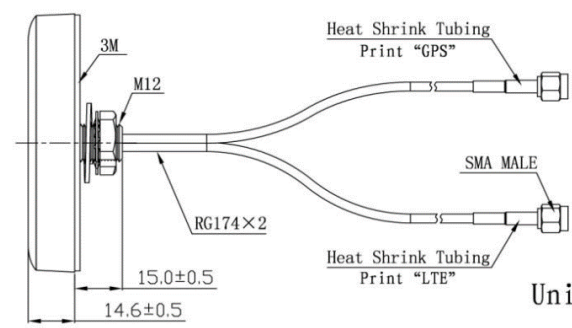
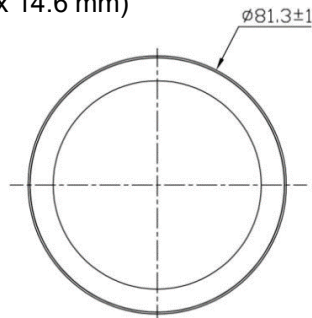
SPECIFICATIONS

Electrical	
Frequency Range	1575.42Mhz ~ 1602MHz
Polarization	RHCP
Gain	2dBic (Zenith)
V.S.W.R	<1.5
Impedance	50Ω
LNA	
Gain	28 ± 2 dB
Noise Figure	<2 dB
Supply Voltage	3 ~ 5VDC
Current Consumption	<20mA
V.S.W.R.	<2.0
LTE	
Frequency Range	698~960MHz/1710~2690MHz
V.S.W.R	< 3.0
Polarization	Linear
Gain	2.5dBi
Impedance	50Ω
Dimensions (mm):	
Diameter (D)	81.3 ± 1.0
Width (W)	14.6 ± 0.5
Height (H)	15.0 ± 0.5
Connection Type	SMA
Cable	RG174
Mounting Method	Screw



RoHS Compliant
includes all homogeneous materials
(see part numbering system for details)

NAN-E A 81X14 B3 A M D F
 ↳ F = RoHS compliant
 ↳ D = RG174 Cable
 ↳ M = SMA connector
 ↳ A = REV 1 (See Page 4)
 ↳ B3 = 3 Frequency Band
 ↳ 81x14 = Size (81.3 mm x 14.6 mm)
 ↳ A = Active Antenna
 ↳ NAN-E = Series

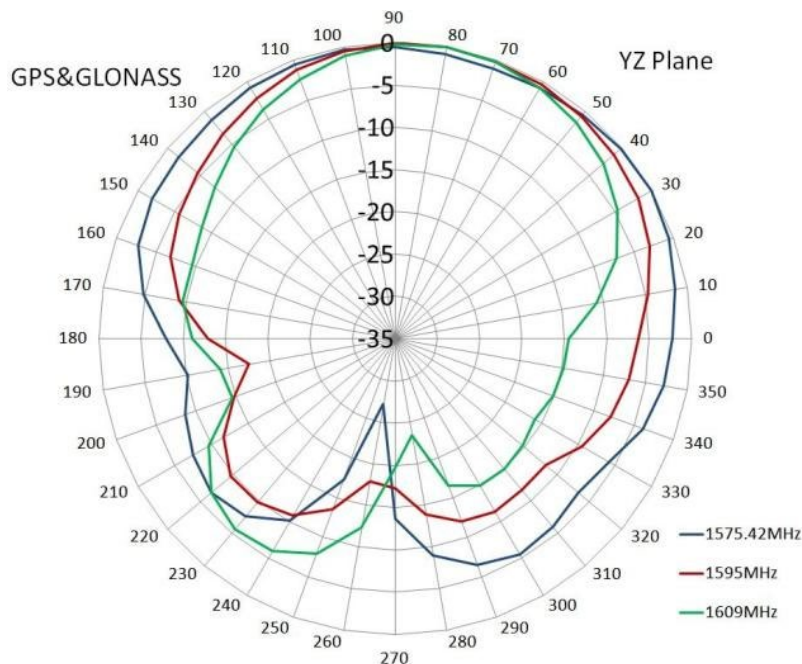
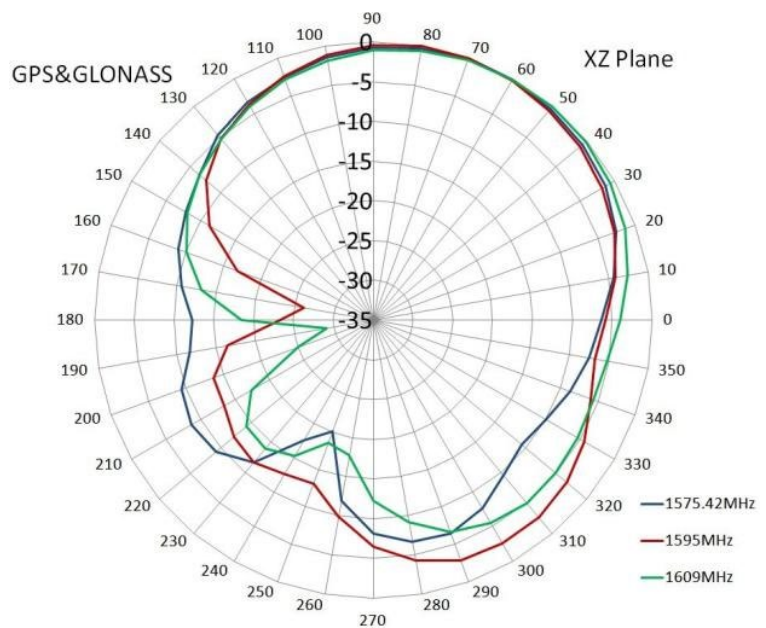
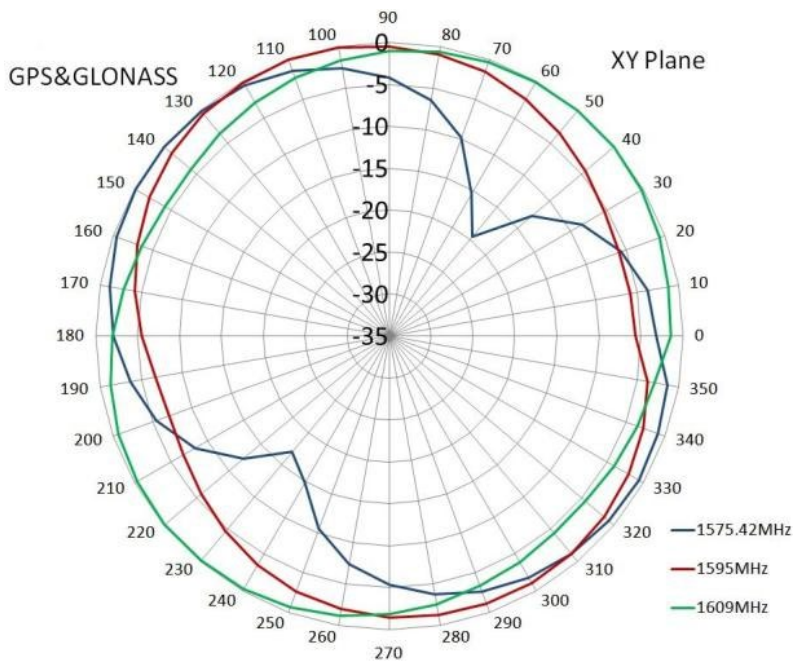


Unit: mm

Environmental	
Operating Temperature	-40°C~+85°C
Relative Humidity	Up to 95%
Ingress Protection	IP67 (exclude cable outlet)
Vibration	10 ~ 55Hz 1.5mm Amplitude 2 Hours
RoHS Compliant	Yes

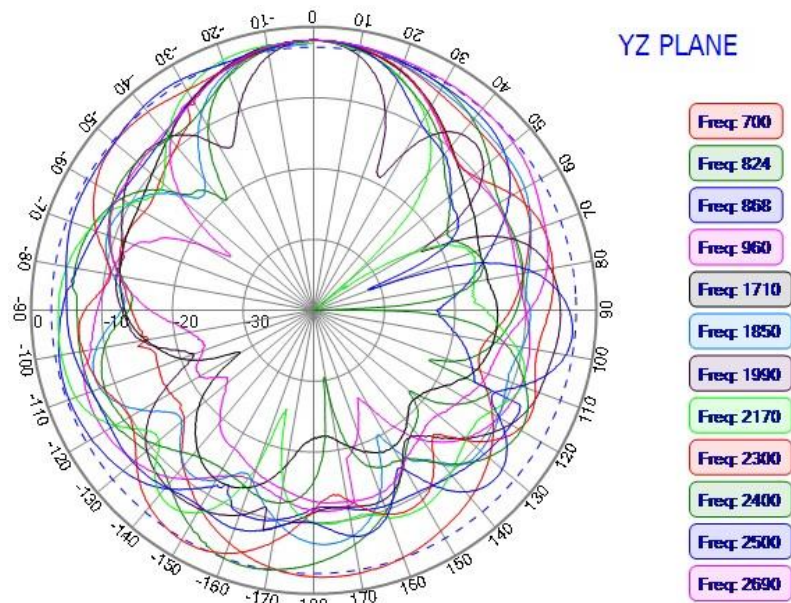
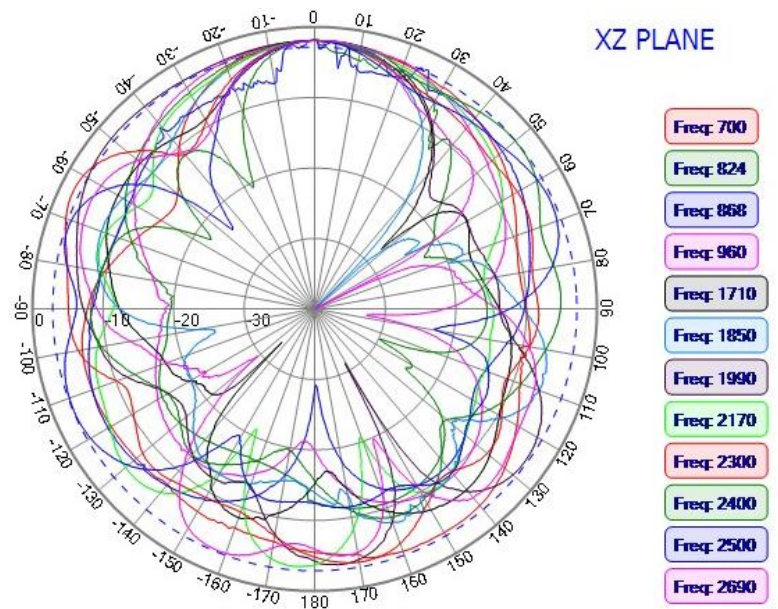
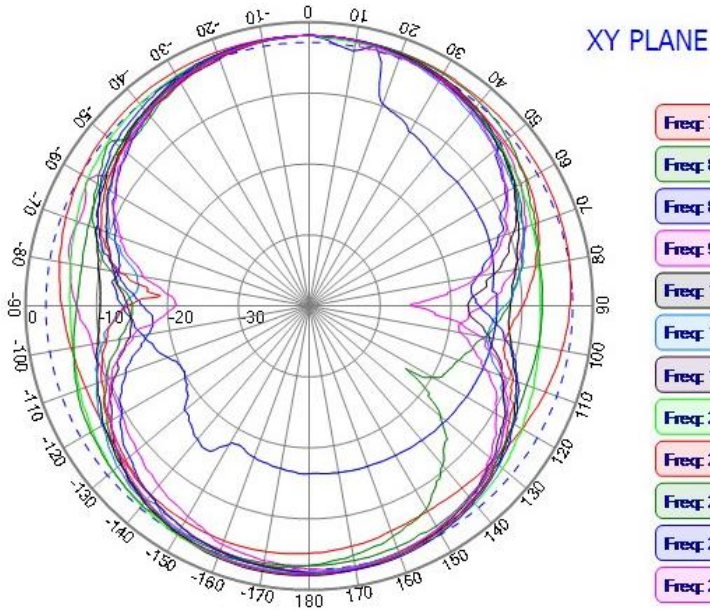
RADIATION PATTERN

GPS&GLONASS



RADIATION PATTERN

LTE



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A	Nov 4 th , 2020	Initial Release	Supported

- NIC Technical Support: tpmg@niccomp.com
- Compliance Support: rohs@niccomp.com

FEATURES

- Combination Antenna (GPS+LTE+WIFI)
- Quadband Frequency
- RoHS Compliant

APPLICATION

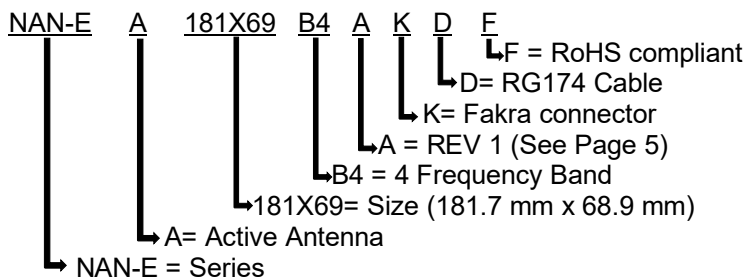
- Tracking
- Fleet Management

SPECIFICATIONS

Electrical	
Frequency Range	1575.42MHz ± 3MHz
Polarization	RHCP
Gain	2dBic (Zenith)
V.S.W.R	<1.5
Impedance	50W
LNA	
Gain	28 ± 2 dB
Noise Figure	<2.0 dB
Supply Voltage	3 ~ 5VDC
Current Consumption	<15mA
V.S.W.R.	<2.0
LTE	
Frequency Range	698~960MHz/1710~2690MHz
V.S.W.R	<3.0
Polarization	Linear
Gain	3.5dBi (Zenith)
Impedance	50Ω
WIFI	
Frequency Range	2400~2483.5MHz
V.S.W.R	<2.0
Polarization	Linear
Gain	3.0 dBi (Zenith)
Impedance	50Ω
Dimensions (mm):	
Diameter (D)	181.7± 3.0
Width (W)	68.9 ± 3.0
Height (H)	69.1± 3.0
Connection Type	Fakra
Cable	RG174
Mounting Method	Screw



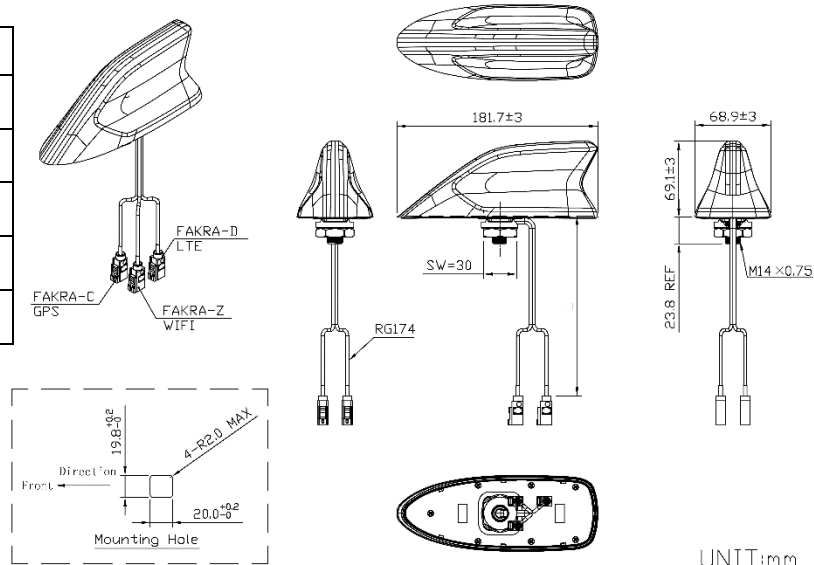
RoHS Compliant
 includes all homogeneous materials
 (see part numbering system for details)



GPS+ LTE+WIFI ANTENNA

NAN-EA SERIES

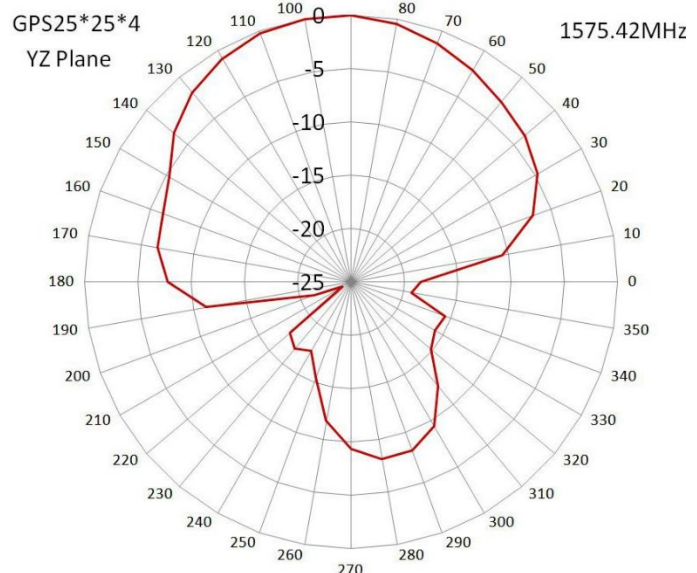
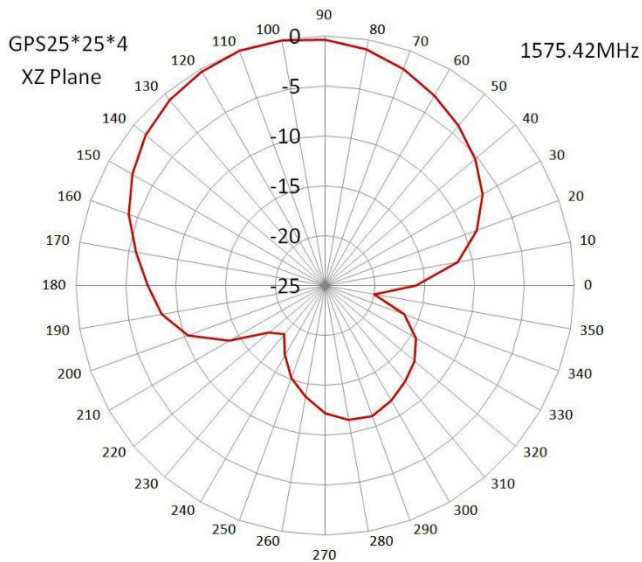
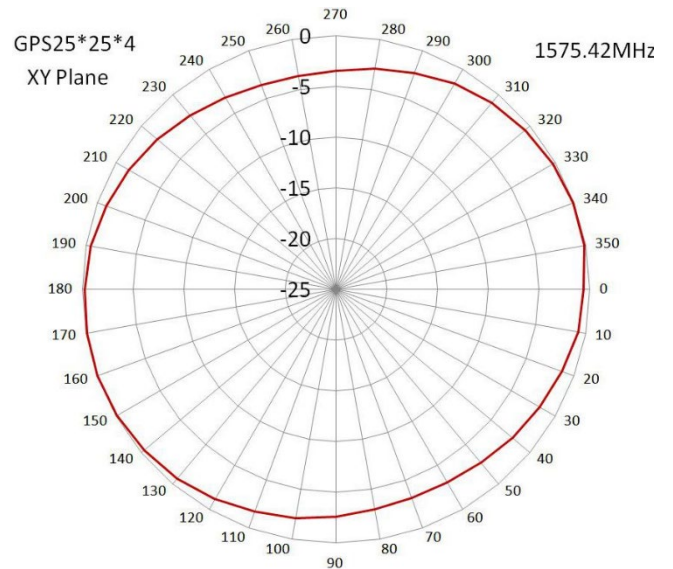
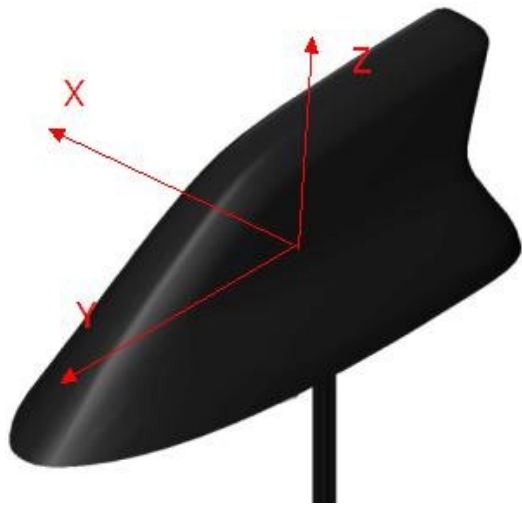
Environmental	
Operating Temperature	-40°C~+85°C
Relative Humidity	Up to 95%
Ingress Protection	IP67 (exclude cable outlet)
Vibration	10 ~ 1000Hz G=28.7m/s ²
RoHS Compliant	Yes



UNIT:mm

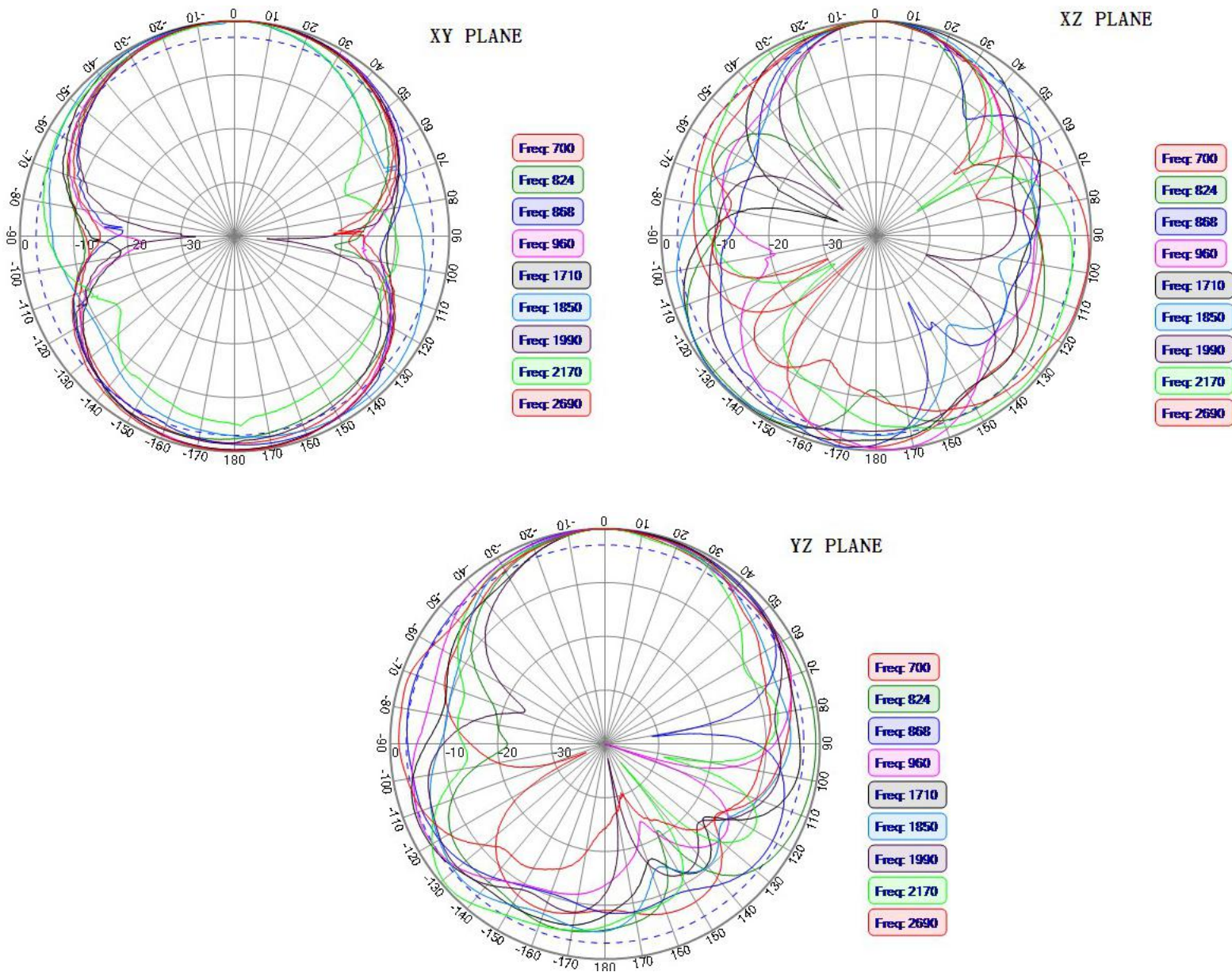
RADIATION PATTERN

GPS



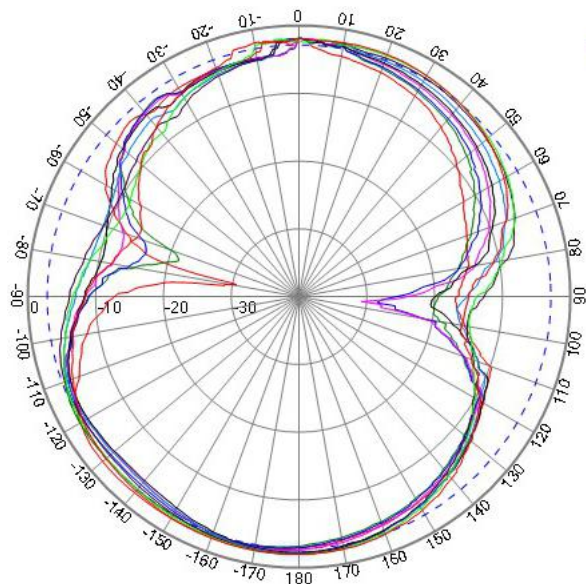
RADIATION PATTERN

LTE



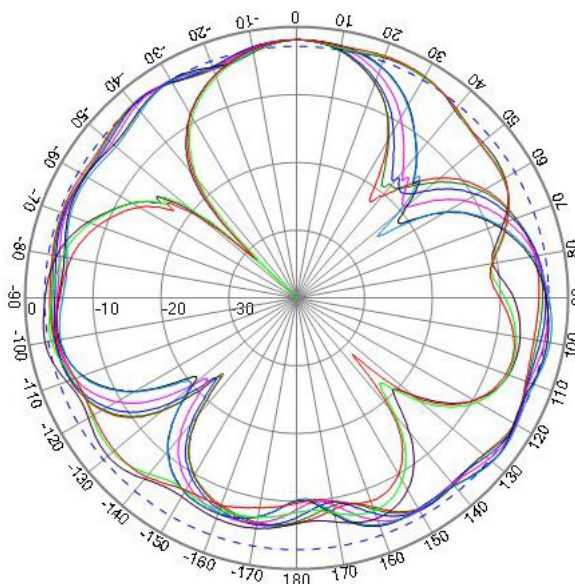
RADIATION PATTERN

WIFI



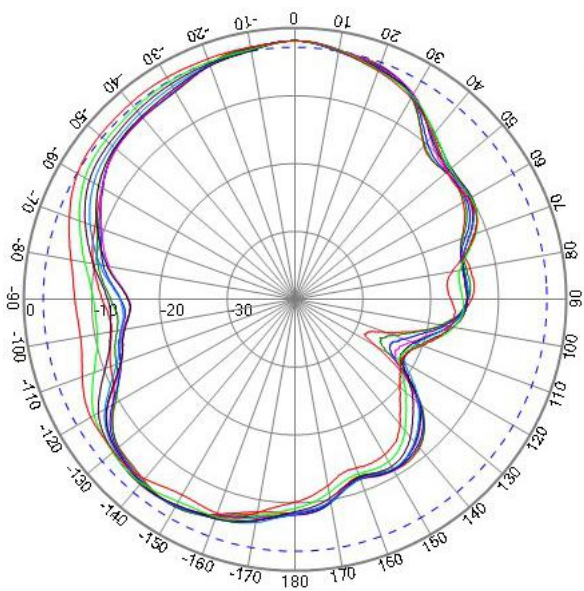
XY PLANE

- Freq: 2400
- Freq: 2410
- Freq: 2420
- Freq: 2430
- Freq: 2440
- Freq: 2450
- Freq: 2460
- Freq: 2470
- Freq: 2483



XZ PLANE

- Freq: 2400
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- Quadband Frequency
- RoHs Complaint

APPLICATION

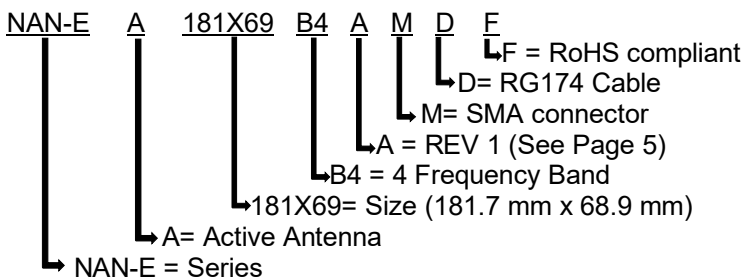
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SPECIFICATIONS

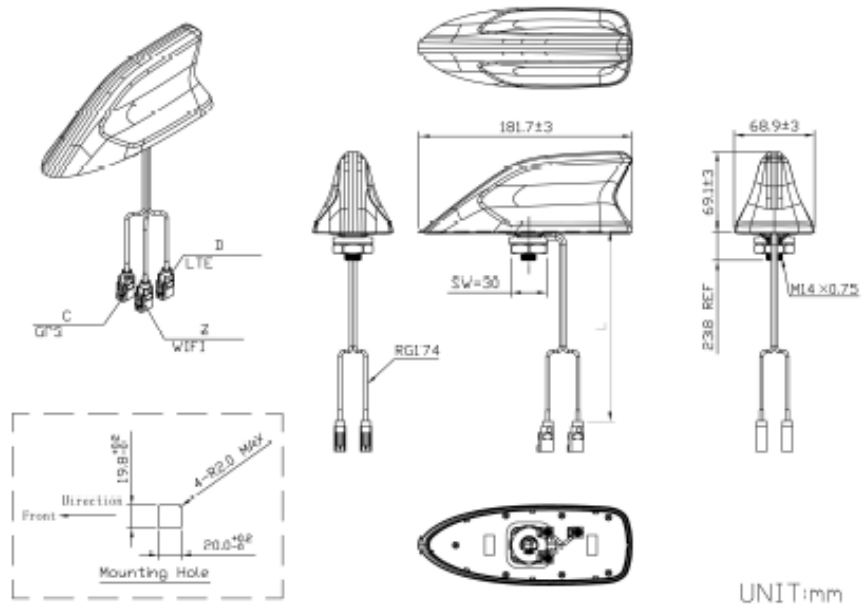
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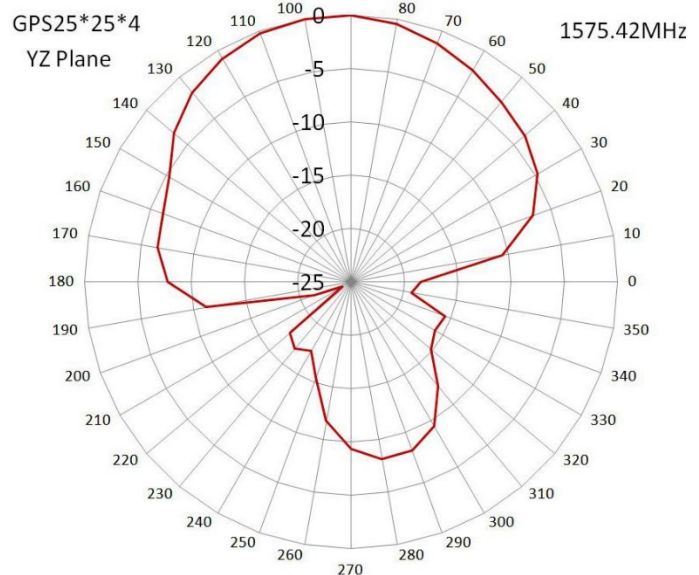
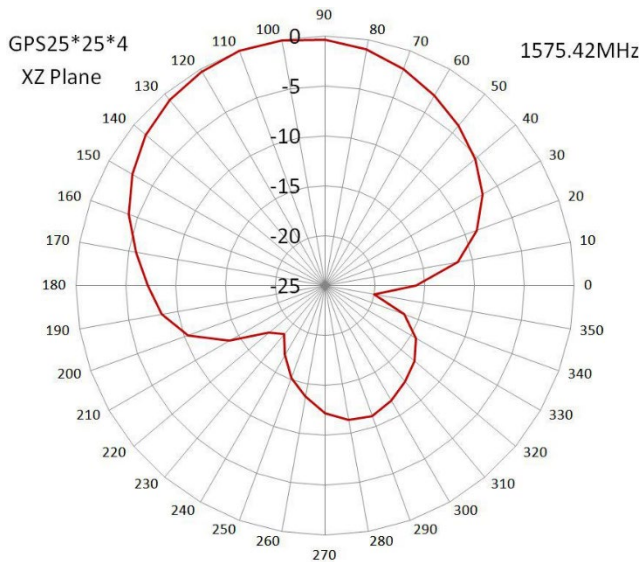
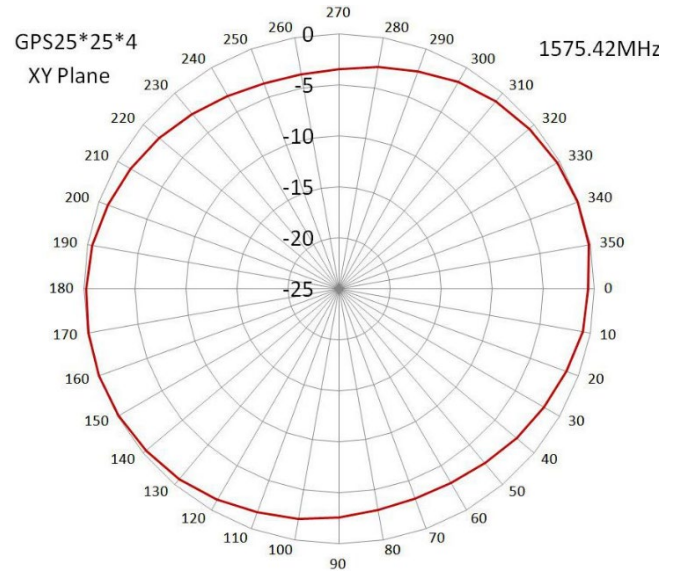
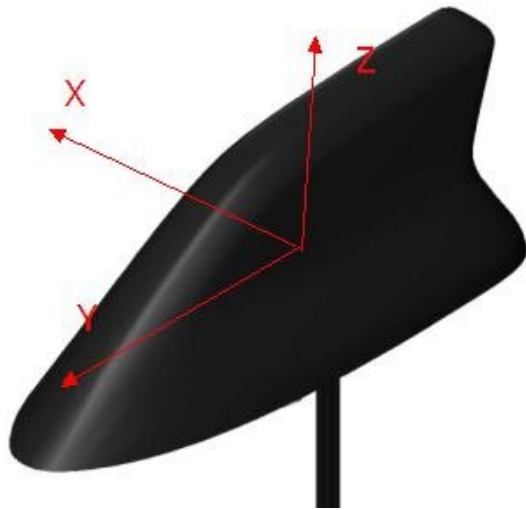


Environmental	
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Relative Humidity	Up to 95%
Ingress Protection	IP67 (exclude cable outlet)
Vibration	10 ~ 1000Hz G=28.7m/s ²
RoHS Compliant	Yes



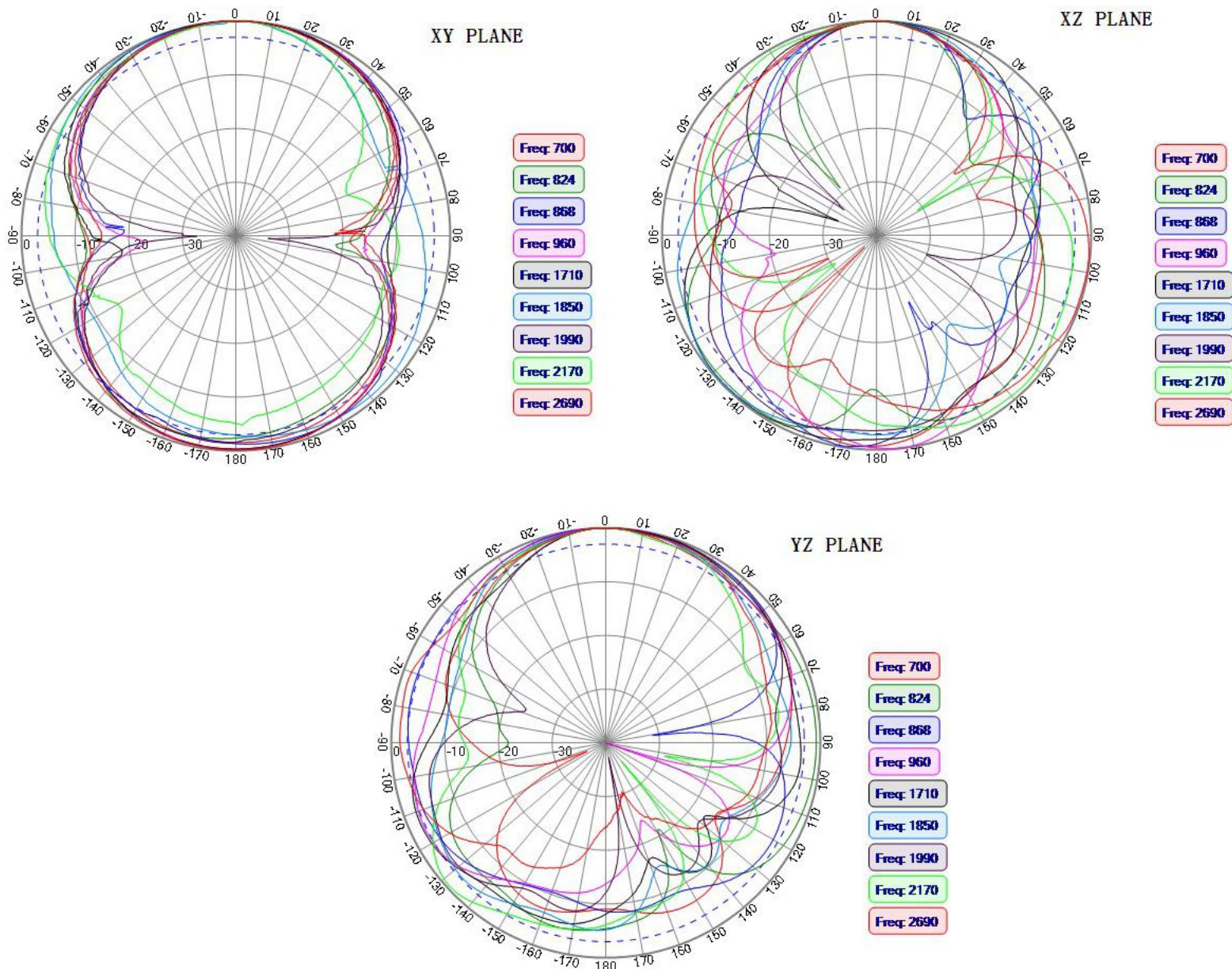
RADIATION PATTERN

GPS



RADIATION PATTERN

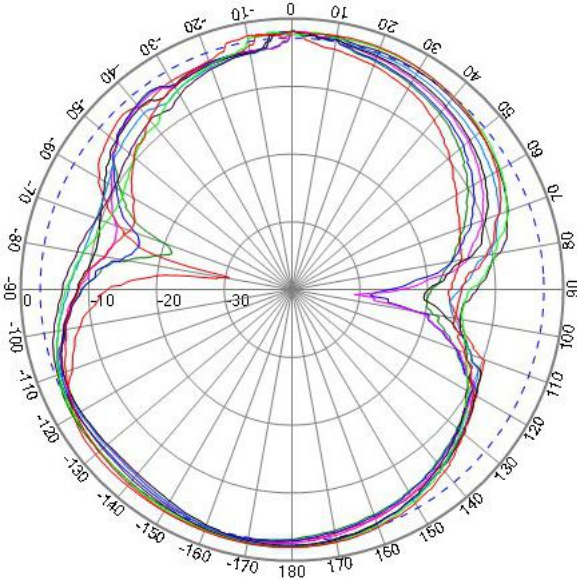
LTE



RADIATION PATTERN

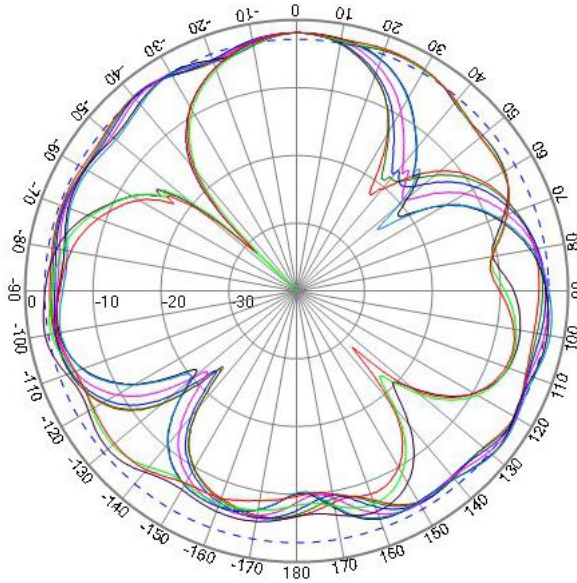
WIFI

XY PLANE



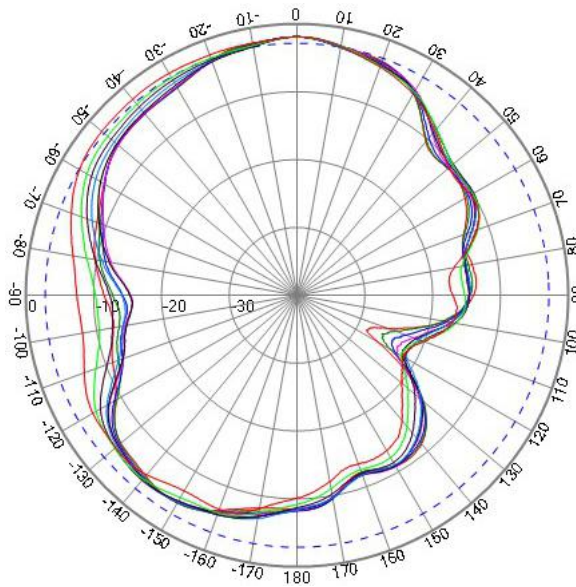
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