

ZoneDAS Two Remote Unit

Antenna Specification

LTE Band 12, 699-746MHz

2025 June

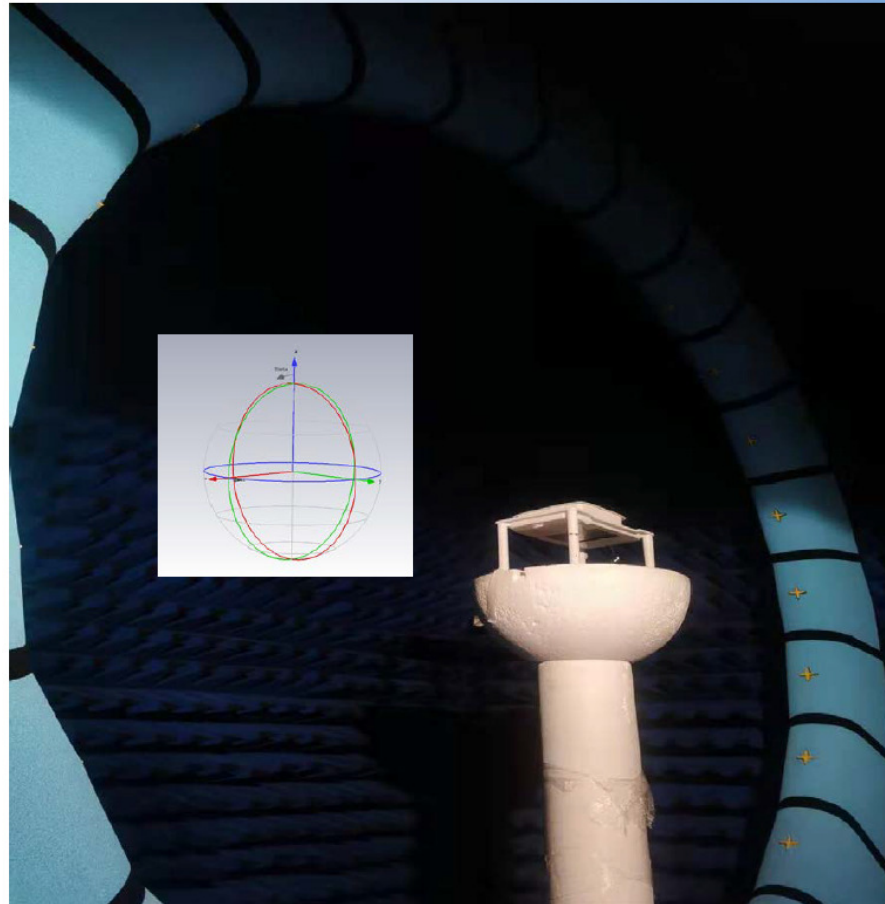
- Antenna Specification
- Antenna gain and radiation patterned
- VSWR and Isolation

Specification

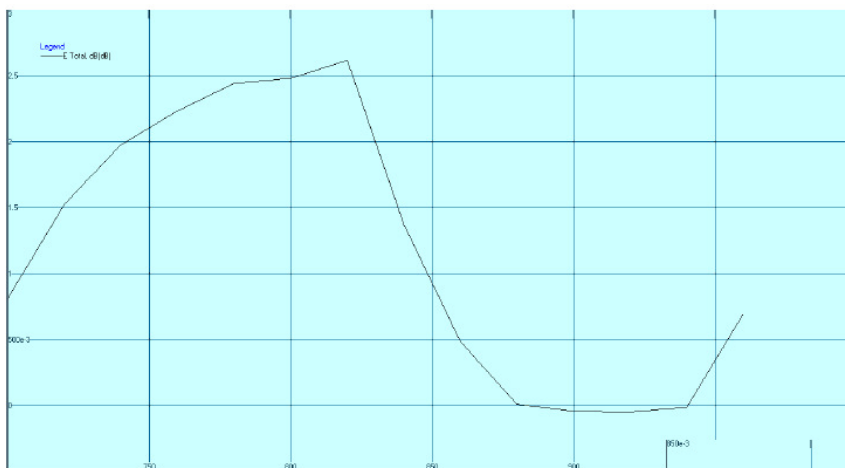
- Production Name: ZoneDAS Two Antenna for 699MHz to 746MHz
- LTE Operation frequency: Band 12
- Material of Antenna : Metal
- Cable/Connector: Coaxial cable 1.37mm/IPEX
- Antenna support: Threaded spacer(NYLON)
- Dimension: 80(L)*80(W)*22(H)mm

Performance Specification	
Frequency Range	699-746MHz
Peak Gain	1.94 dB
Gain table	Listed below
VSWR	3.0 Max@699-746MHz
Impedance	50Ω
Efficiency	≥ 45%@ 698MHz
	≥ 50%@704MHz
	≥ 50%@ 746MHz

ZYXEL Antenna gain and radiation pattern test conditions

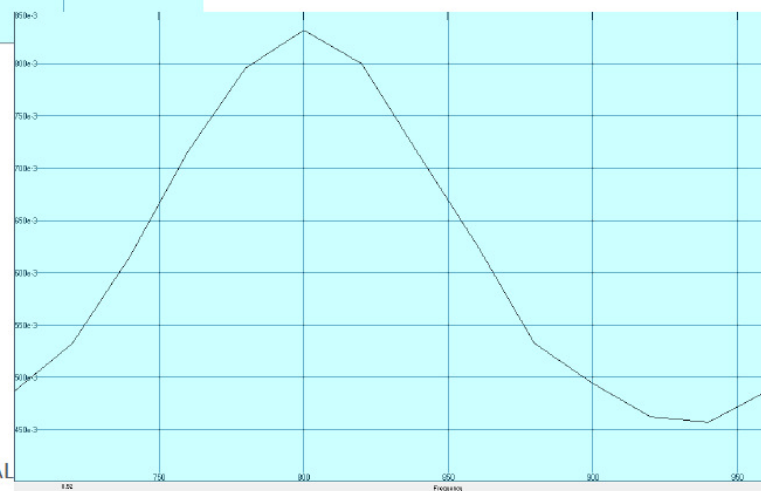
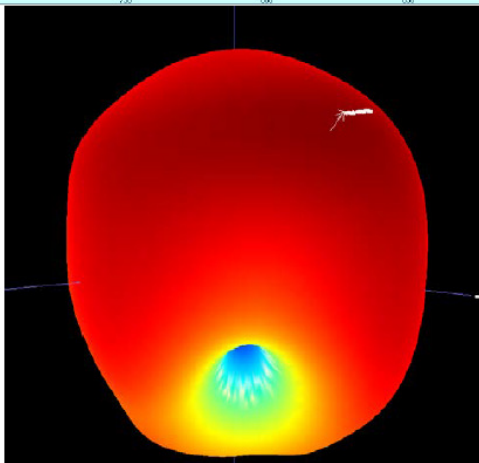


Antenna gain and radiation pattern



GAIN

efficiency

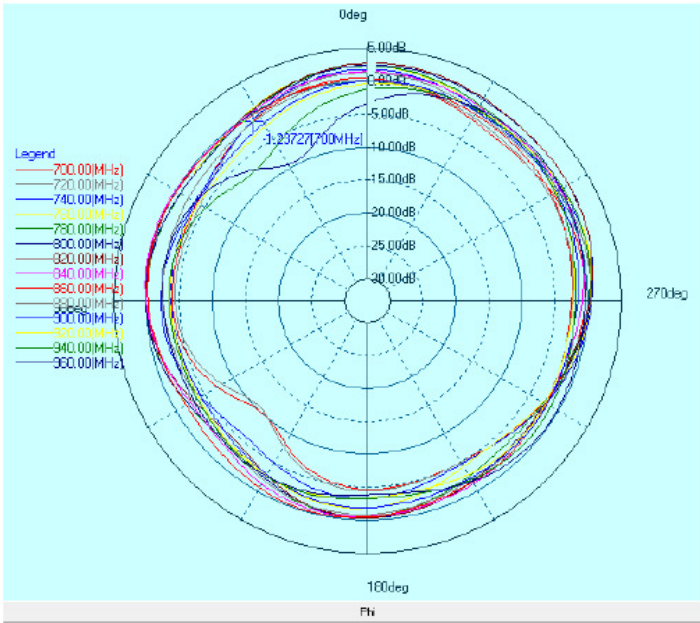


CONFIDENTIAL

Antenna gain and radiation pattern

90 degree

最大增益	不圆度	平均增益
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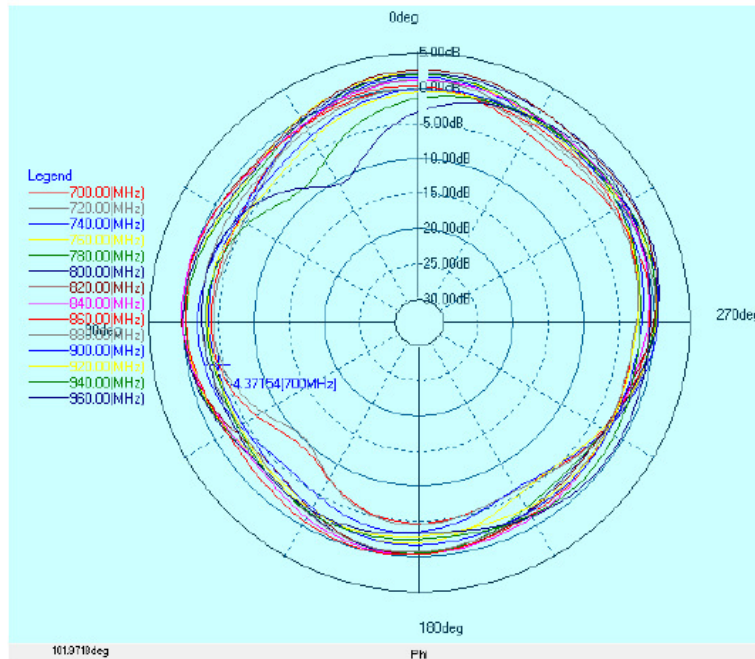


700(MHz)	0.34 dB	10.60 dB	-2.95 dB
720(MHz)	1.19 dB	11.82 dB	-2.53 dB
740(MHz)	1.61 dB	7.44 dB	-1.67 dB
760(MHz)	2.17 dB	6.76 dB	-0.70 dB
780(MHz)	2.16 dB	5.36 dB	-0.44 dB
800(MHz)	2.31 dB	5.66 dB	-0.15 dB
820(MHz)	2.62 dB	6.98 dB	-0.12 dB
840(MHz)	1.31 dB	4.09 dB	-0.49 dB
860(MHz)	0.10 dB	2.70 dB	-0.98 dB
880(MHz)	0.01 dB	3.74 dB	-1.81 dB
900(MHz)	-0.04 dB	4.41 dB	-2.05 dB
920(MHz)	-0.05 dB	4.16 dB	-2.36 dB
940(MHz)	-0.01 dB	7.44 dB	-2.50 dB
960(MHz)	0.69 dB	10.45 dB	-2.21 dB

Antenna gain and radiation pattern

85 degree

最大增益	不圆度	平均增益
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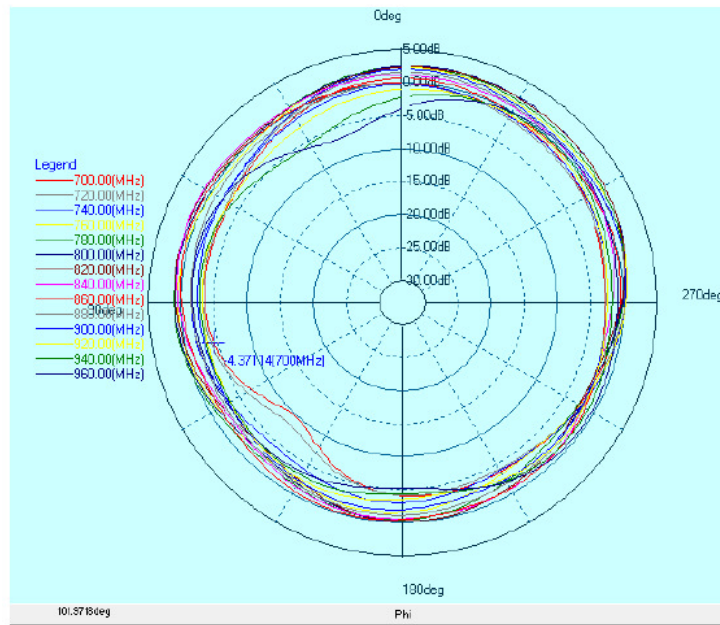


700(MHz)	0.24 dB	9.52 dB	-3.16 dB
720(MHz)	1.05 dB	11.36 dB	-2.78 dB
740(MHz)	1.42 dB	7.46 dB	-1.87 dB
760(MHz)	1.91 dB	7.38 dB	-1.10 dB
780(MHz)	1.75 dB	5.40 dB	-0.75 dB
800(MHz)	1.99 dB	5.29 dB	-0.39 dB
820(MHz)	2.48 dB	6.73 dB	-0.40 dB
840(MHz)	1.02 dB	3.83 dB	-0.69 dB
860(MHz)	-0.05 dB	2.82 dB	-1.18 dB
880(MHz)	-0.27 dB	3.72 dB	-2.00 dB
900(MHz)	-0.18 dB	4.36 dB	-2.16 dB
920(MHz)	-0.30 dB	4.52 dB	-2.44 dB
940(MHz)	-0.16 dB	8.17 dB	-2.45 dB
960(MHz)	0.62 dB	11.51 dB	-2.25 dB

Antenna gain and radiation pattern

80 degree

最大增益	不圆度	平均增益
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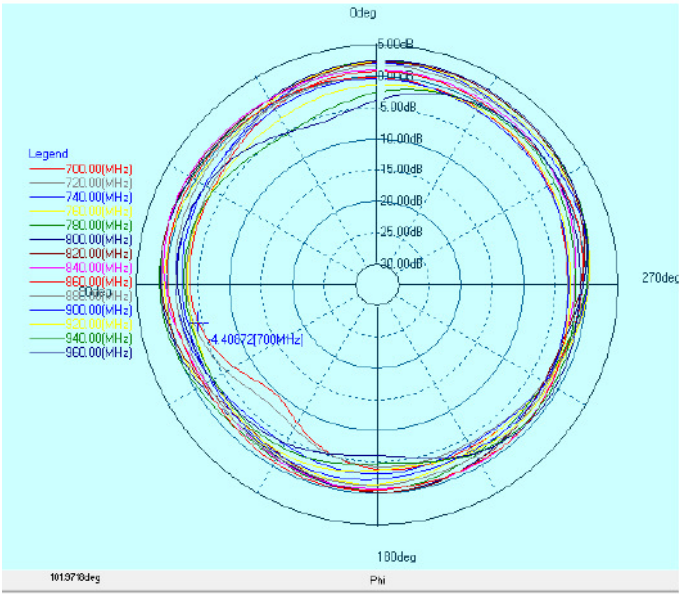


700(MHz)	0.49 dB	10.34 dB	-2.51 dB
720(MHz)	1.42 dB	9.78 dB	-1.94 dB
740(MHz)	1.86 dB	6.33 dB	-1.18 dB
760(MHz)	2.15 dB	5.82 dB	-0.28 dB
780(MHz)	2.28 dB	5.17 dB	0.11 dB
800(MHz)	2.41 dB	4.79 dB	0.23 dB
820(MHz)	2.35 dB	5.47 dB	0.12 dB
840(MHz)	1.11 dB	3.37 dB	-0.35 dB
860(MHz)	0.48 dB	3.33 dB	-0.85 dB
880(MHz)	-0.30 dB	2.34 dB	-1.52 dB
900(MHz)	-0.47 dB	2.70 dB	-1.94 dB
920(MHz)	-0.65 dB	3.21 dB	-2.36 dB
940(MHz)	-0.27 dB	5.58 dB	-2.54 dB
960(MHz)	0.35 dB	7.28 dB	-2.25 dB

Antenna gain and radiation pattern

75 degree

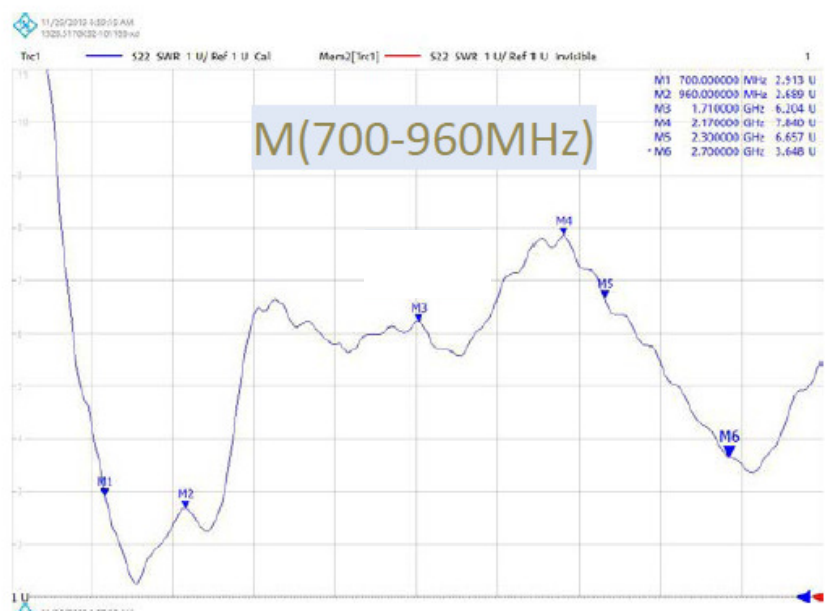
最大增益	不圆度	平均增益
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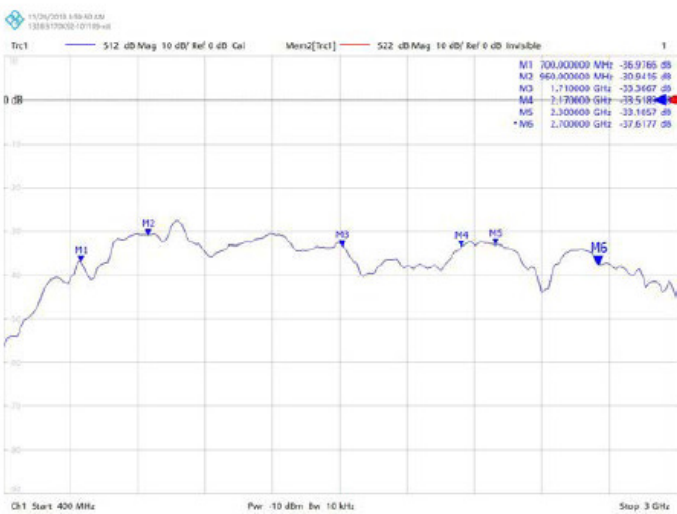
700(MHz)	0.62 dB	10.36 dB	-2.31 dB
720(MHz)	1.50 dB	9.34 dB	-1.78 dB
740(MHz)	1.94 dB	6.20 dB	-1.06 dB
760(MHz)	2.16 dB	5.34 dB	-0.21 dB
780(MHz)	2.33 dB	4.99 dB	0.27 dB
800(MHz)	2.45 dB	4.91 dB	0.28 dB
820(MHz)	2.25 dB	5.12 dB	0.10 dB
840(MHz)	1.25 dB	3.44 dB	-0.34 dB
860(MHz)	0.45 dB	3.38 dB	-0.88 dB
880(MHz)	-0.38 dB	2.47 dB	-1.50 dB
900(MHz)	-0.57 dB	2.34 dB	-2.01 dB
920(MHz)	-1.00 dB	3.03 dB	-2.47 dB
940(MHz)	-0.35 dB	5.08 dB	-2.57 dB
960(MHz)	0.17 dB	6.45 dB	-2.37 dB

VSWR and Isolation

VSWR



Isolation



ZoneDAS Two Remote Unit

Antenna Specification

LTE Band 13, 746-787MHz

2025 June

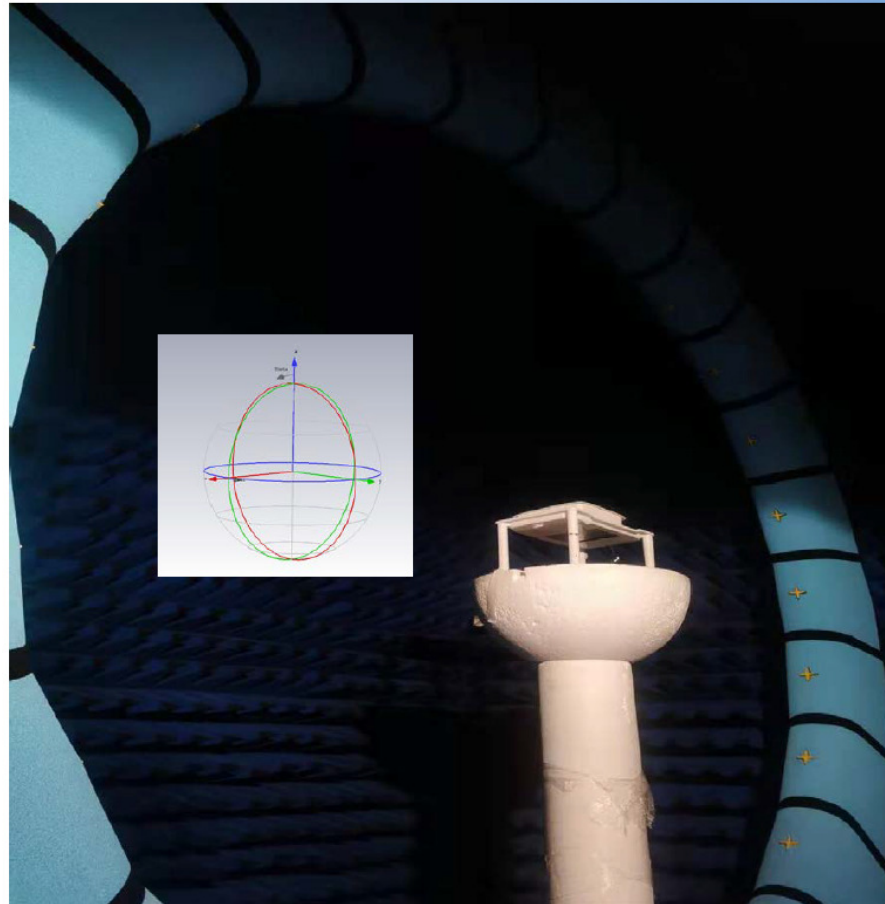
- Antenna Specification
- Antenna gain and radiation patterned
- VSWR and Isolation

Specification

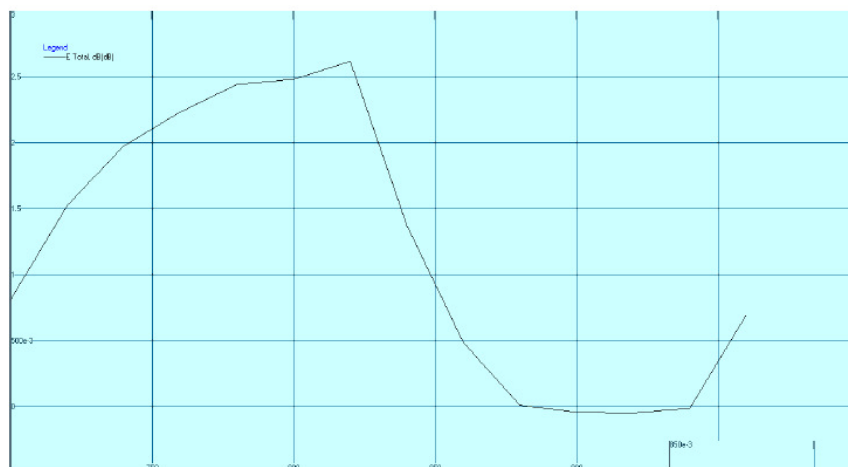
- Production Name: ZoneDAS Two Antenna for 746MHz to 787MHz
- LTE Operation frequency: Band 13
- Material of Antenna : Metal
- Cable/Connector: Coaxial cable 1.37mm/IPEX
- Antenna support: Threaded spacer(NYLON)
- Dimension: 80(L)*80(W)*22(H)mm

Performance Specification	
Frequency Range	746-787MHz
Peak Gain	2.33 dB
Gain table	Listed below
VSWR	3.0 Max@746-787MHz
Impedance	50Ω
Efficiency	≥ 50%@ 746MHz
	≥ 65%@760MHz
	≥ 70%@ 787MHz

ZYXEL Your Networking Ally Antenna gain and radiation pattern test conditions

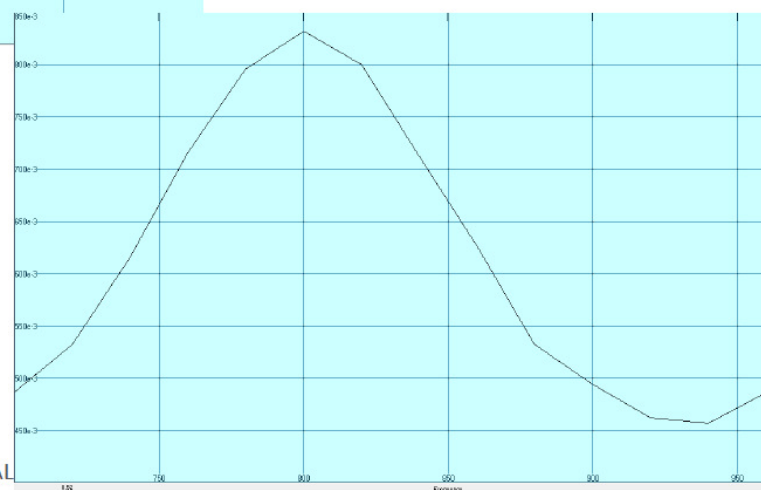
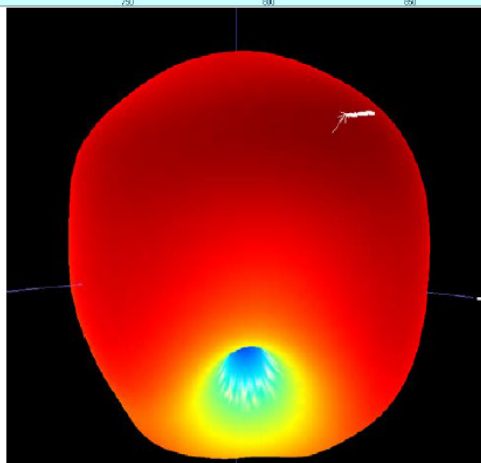


Antenna gain and radiation pattern



GAIN

efficiency

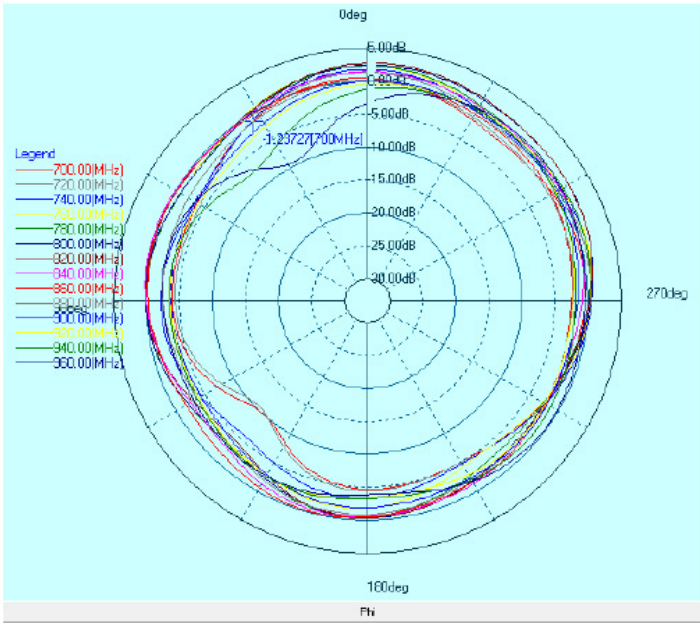


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Antenna gain and radiation pattern

90 degree

最大增益	不圆度	平均增益
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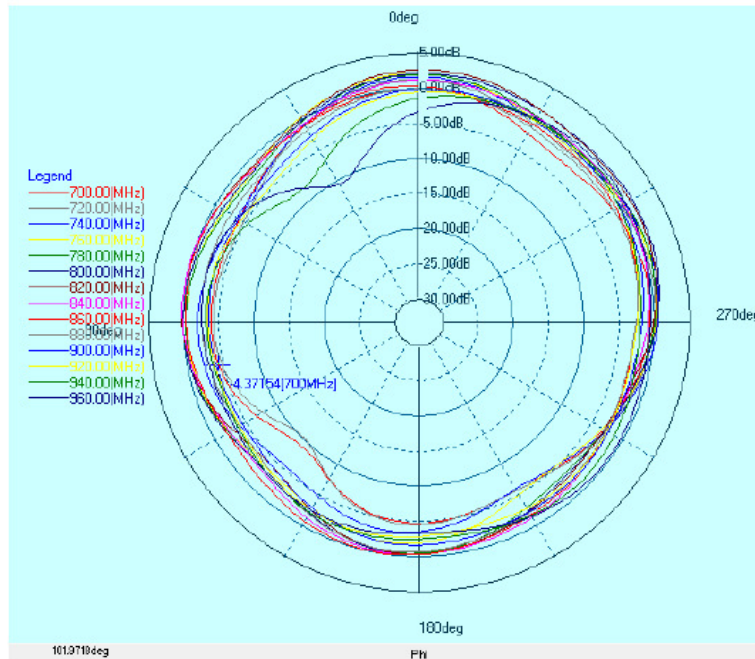


700(MHz)	0.34 dB	10.60 dB	-2.95 dB
720(MHz)	1.19 dB	11.82 dB	-2.53 dB
740(MHz)	1.61 dB	7.44 dB	-1.67 dB
760(MHz)	2.17 dB	6.76 dB	-0.70 dB
780(MHz)	2.16 dB	5.36 dB	-0.44 dB
800(MHz)	2.31 dB	5.66 dB	-0.15 dB
820(MHz)	2.62 dB	6.98 dB	-0.12 dB
840(MHz)	1.31 dB	4.09 dB	-0.49 dB
860(MHz)	0.10 dB	2.70 dB	-0.98 dB
880(MHz)	0.01 dB	3.74 dB	-1.81 dB
900(MHz)	-0.04 dB	4.41 dB	-2.05 dB
920(MHz)	-0.05 dB	4.16 dB	-2.36 dB
940(MHz)	-0.01 dB	7.44 dB	-2.50 dB
960(MHz)	0.69 dB	10.45 dB	-2.21 dB

Antenna gain and radiation pattern

85 degree

最大增益	不圆度	平均增益
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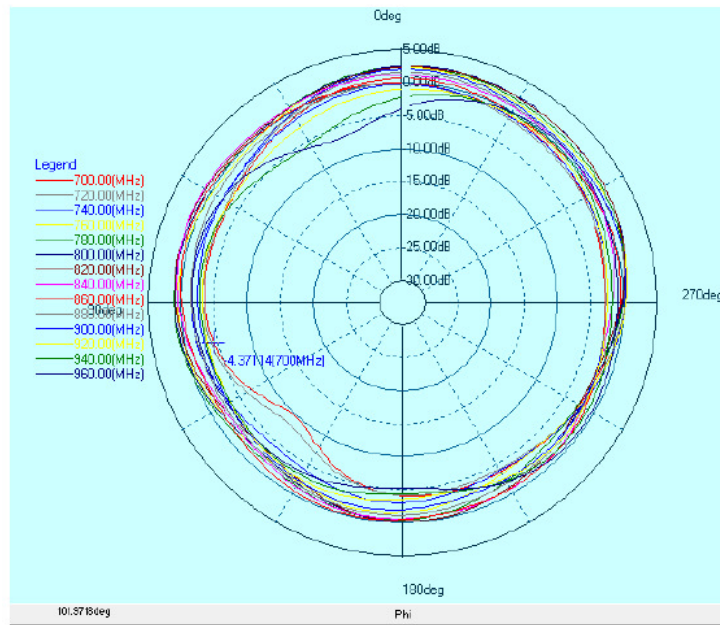


700(MHz)	0.24 dB	9.52 dB	-3.16 dB
720(MHz)	1.05 dB	11.36 dB	-2.78 dB
740(MHz)	1.42 dB	7.46 dB	-1.87 dB
760(MHz)	1.91 dB	7.38 dB	-1.10 dB
780(MHz)	1.75 dB	5.40 dB	-0.75 dB
800(MHz)	1.99 dB	5.29 dB	-0.39 dB
820(MHz)	2.48 dB	6.73 dB	-0.40 dB
840(MHz)	1.02 dB	3.83 dB	-0.69 dB
860(MHz)	-0.05 dB	2.82 dB	-1.18 dB
880(MHz)	-0.27 dB	3.72 dB	-2.00 dB
900(MHz)	-0.18 dB	4.36 dB	-2.16 dB
920(MHz)	-0.30 dB	4.52 dB	-2.44 dB
940(MHz)	-0.16 dB	8.17 dB	-2.45 dB
960(MHz)	0.62 dB	11.51 dB	-2.25 dB

Antenna gain and radiation pattern

80 degree

最大增益	不圆度	平均增益
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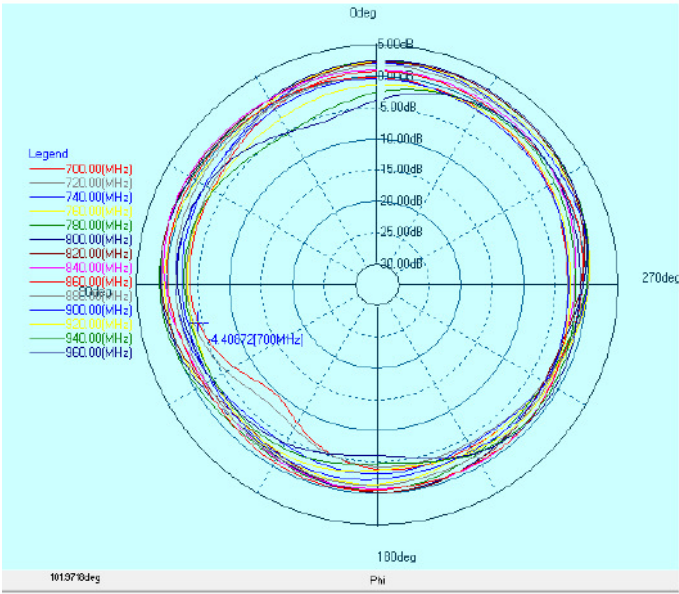


700(MHz)	0.49 dB	10.34 dB	-2.51 dB
720(MHz)	1.42 dB	9.78 dB	-1.94 dB
740(MHz)	1.86 dB	6.33 dB	-1.18 dB
760(MHz)	2.15 dB	5.82 dB	-0.28 dB
780(MHz)	2.28 dB	5.17 dB	0.11 dB
800(MHz)	2.41 dB	4.79 dB	0.23 dB
820(MHz)	2.35 dB	5.47 dB	0.12 dB
840(MHz)	1.11 dB	3.37 dB	-0.35 dB
860(MHz)	0.48 dB	3.33 dB	-0.85 dB
880(MHz)	-0.30 dB	2.34 dB	-1.52 dB
900(MHz)	-0.47 dB	2.70 dB	-1.94 dB
920(MHz)	-0.65 dB	3.21 dB	-2.36 dB
940(MHz)	-0.27 dB	5.58 dB	-2.54 dB
960(MHz)	0.35 dB	7.28 dB	-2.25 dB

Antenna gain and radiation pattern

75 degree

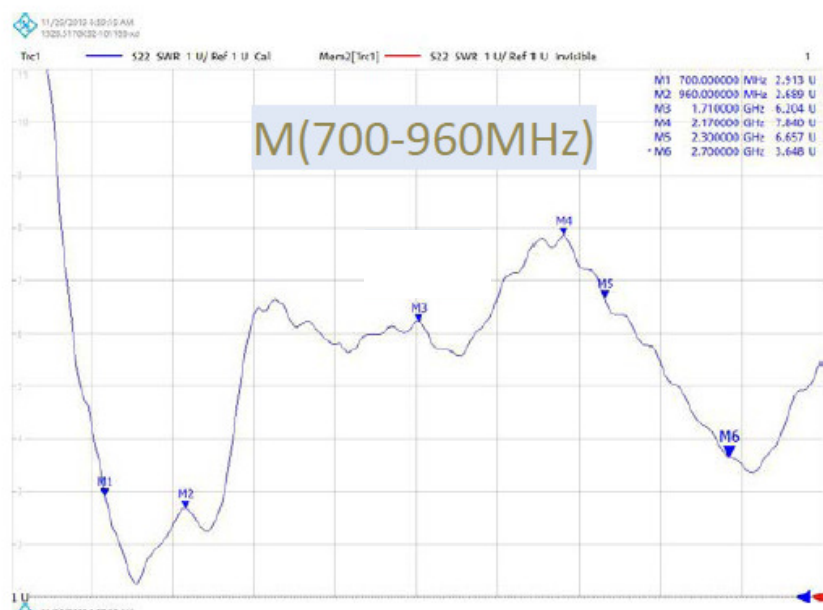
最大增益	不圆度	平均增益
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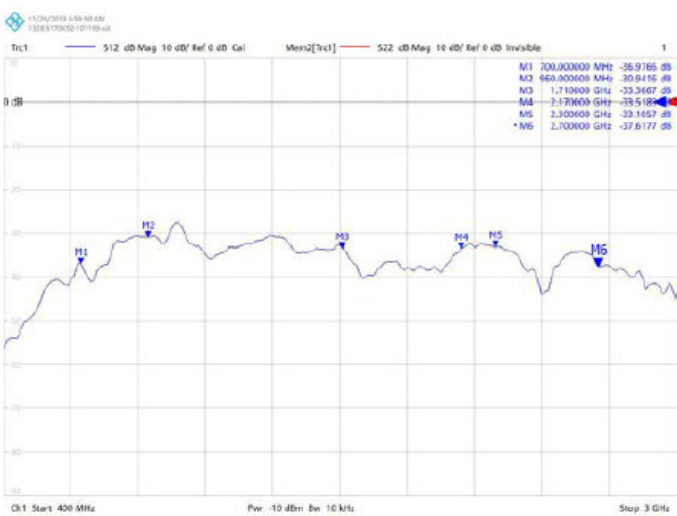
700(MHz)	0.62 dB	10.36 dB	-2.31 dB
720(MHz)	1.50 dB	9.34 dB	-1.78 dB
740(MHz)	1.94 dB	6.20 dB	-1.06 dB
760(MHz)	2.16 dB	5.34 dB	-0.21 dB
780(MHz)	2.33 dB	4.99 dB	0.27 dB
800(MHz)	2.45 dB	4.91 dB	0.28 dB
820(MHz)	2.25 dB	5.12 dB	0.10 dB
840(MHz)	1.25 dB	3.44 dB	-0.34 dB
860(MHz)	0.45 dB	3.38 dB	-0.88 dB
880(MHz)	-0.38 dB	2.47 dB	-1.50 dB
900(MHz)	-0.57 dB	2.34 dB	-2.01 dB
920(MHz)	-1.00 dB	3.03 dB	-2.47 dB
940(MHz)	-0.35 dB	5.08 dB	-2.57 dB
960(MHz)	0.17 dB	6.45 dB	-2.37 dB

VSWR and Isolation

VSWR



Isolation



ZoneDAS Two Remote Unit Antenna Specification

LTE Band 25, 1850-1995MHz

2025 June

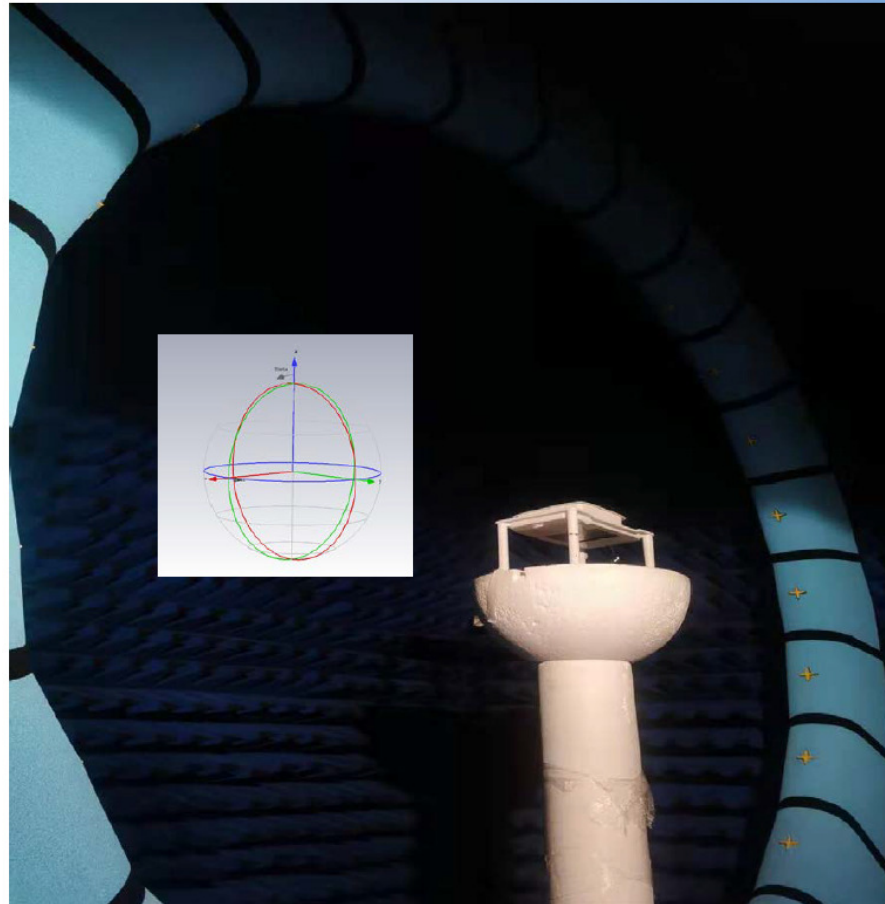
- Antenna Specification
- Antenna gain and radiation patterned
- VSWR and Isolation

Specification

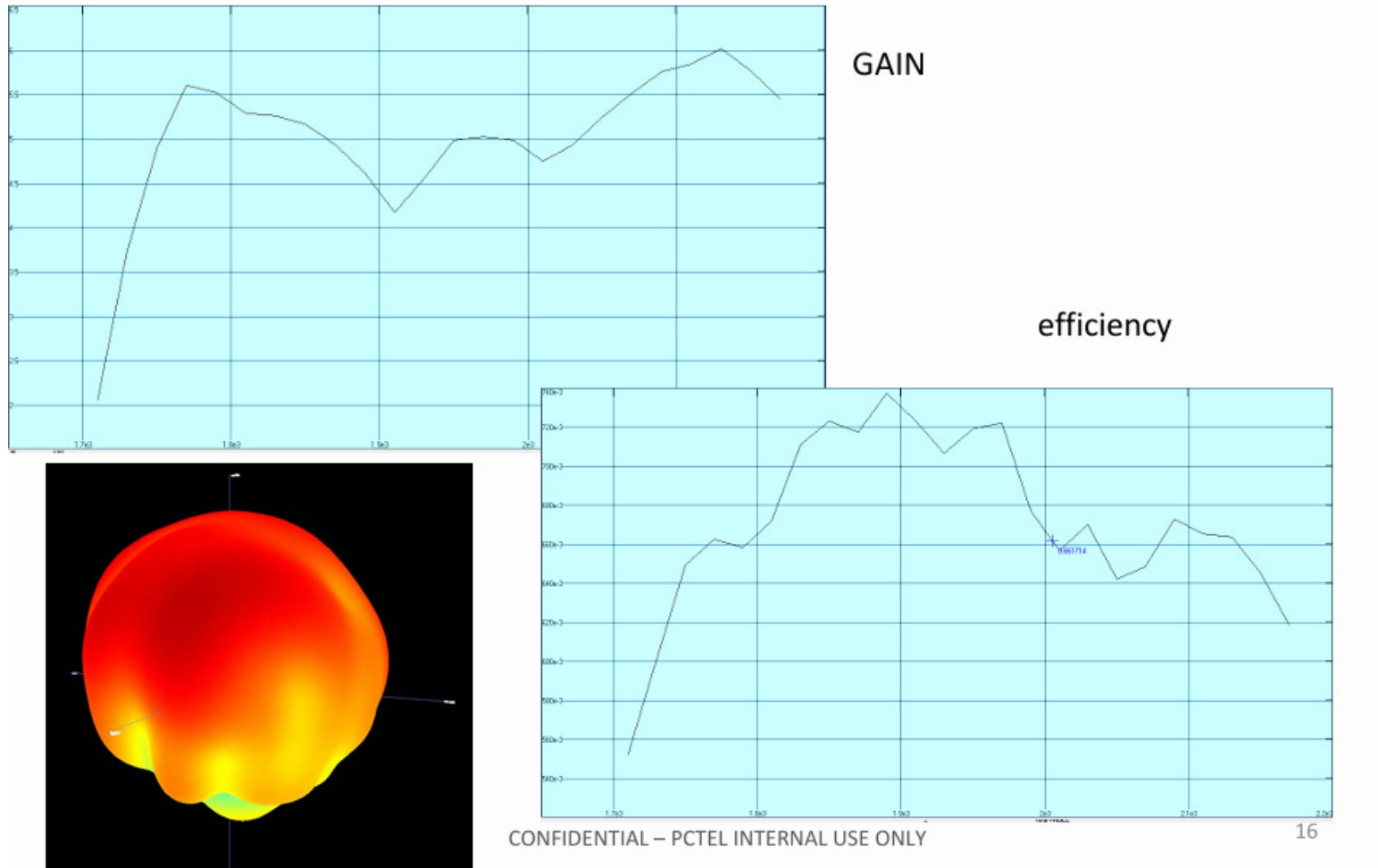
- Production Name: ZoneDAS Two Antennas for 1850MHz to 1995MHz
- LTE Operation frequency: Band 25
- Material of Antenna : Metal
- Cable/Connector: Coaxial cable 1.37mm/IPEX
- Antenna support: Threaded spacer(NYLON)
- Dimension:
80(L)*80(W)*14.4(H)mm

Performance Specification	
Frequency Range	1850-1995MHz
Peak Gain	3.17dB
Gain table	Listed below
VSWR	3.0 Max@1850-1995MHz
Impedance	50Ω
Efficiency	≥ 70%@ 1850MHz
	≥ 70%@ 1870MHz
	≥ 70%@ 1890MHz
	≥ 70%@ 1910MHz
	≥ 70%@ 1930MHz
	≥ 70%@ 1950MHz
	≥ 68%@ 1970MHz
	≥ 66%@ 1990MHz
	≥ 66%@ 1995MHz

ZYXEL Antenna gain and radiation pattern test conditions

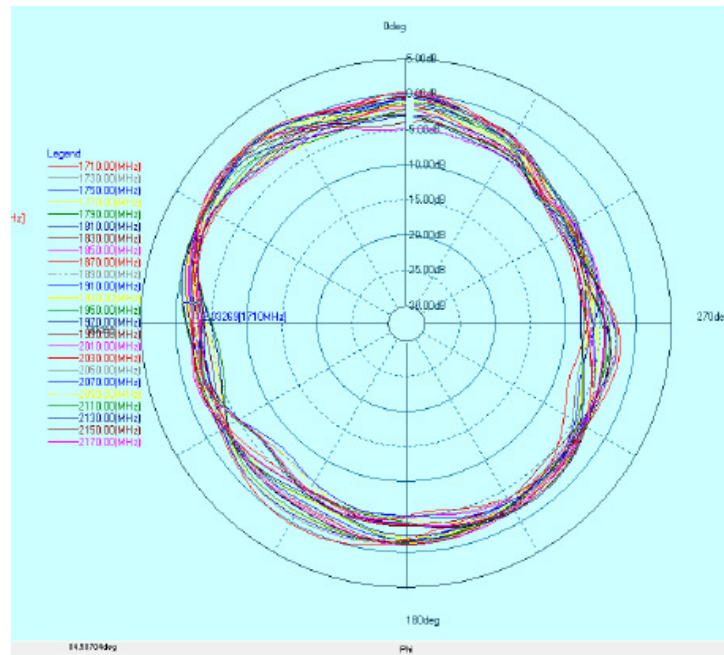


Antenna gain and radiation pattern



Antenna gain and radiation pattern

90 degree

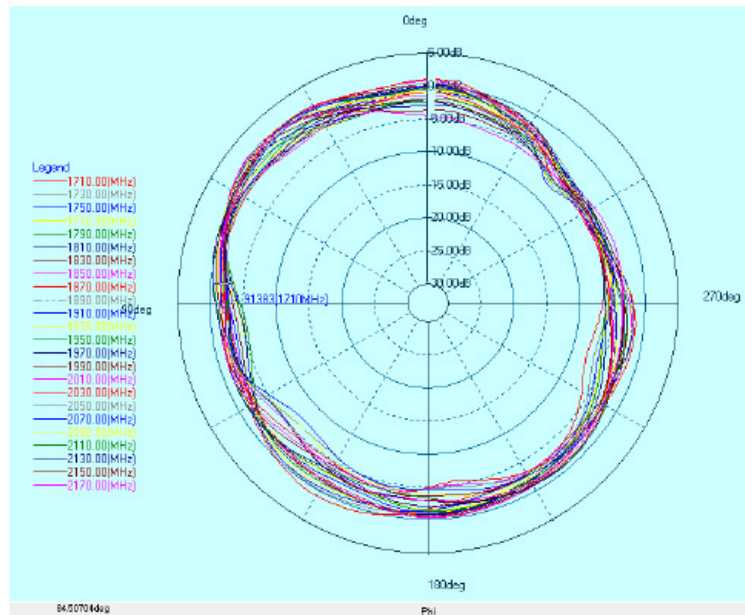


最大增益	不圆度	平均增益
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1710(MHz)	0.25 dB	8.37 dB	-2.70 dB
1730(MHz)	-0.82 dB	6.36 dB	-2.69 dB
1750(MHz)	-0.84 dB	5.94 dB	-2.85 dB
1770(MHz)	-0.73 dB	6.24 dB	-3.19 dB
1790(MHz)	-0.07 dB	7.36 dB	-3.43 dB
1810(MHz)	0.47 dB	8.29 dB	-3.41 dB
1830(MHz)	0.89 dB	8.13 dB	-2.97 dB
1850(MHz)	1.34 dB	8.41 dB	-2.76 dB
1870(MHz)	1.26 dB	8.88 dB	-2.90 dB
1890(MHz)	1.33 dB	7.81 dB	-2.51 dB
1910(MHz)	1.13 dB	7.79 dB	-2.63 dB
1930(MHz)	0.95 dB	7.64 dB	-2.69 dB
1950(MHz)	1.02 dB	7.09 dB	-2.34 dB
1970(MHz)	0.96 dB	7.09 dB	-2.27 dB
1990(MHz)	0.69 dB	7.24 dB	-2.65 dB
2010(MHz)	0.86 dB	6.93 dB	-2.56 dB
2030(MHz)	1.27 dB	7.21 dB	-2.57 dB
2050(MHz)	0.83 dB	7.97 dB	-3.15 dB
2070(MHz)	0.68 dB	8.36 dB	-3.21 dB
2090(MHz)	0.16 dB	7.32 dB	-3.05 dB
2110(MHz)	-0.75 dB	5.83 dB	-3.33 dB
2130(MHz)	-1.12 dB	5.67 dB	-3.55 dB
2150(MHz)	-1.06 dB	5.35 dB	-3.65 dB
2170(MHz)	-0.91 dB	5.61 dB	-3.85 dB

Antenna gain and radiation pattern

85 degree

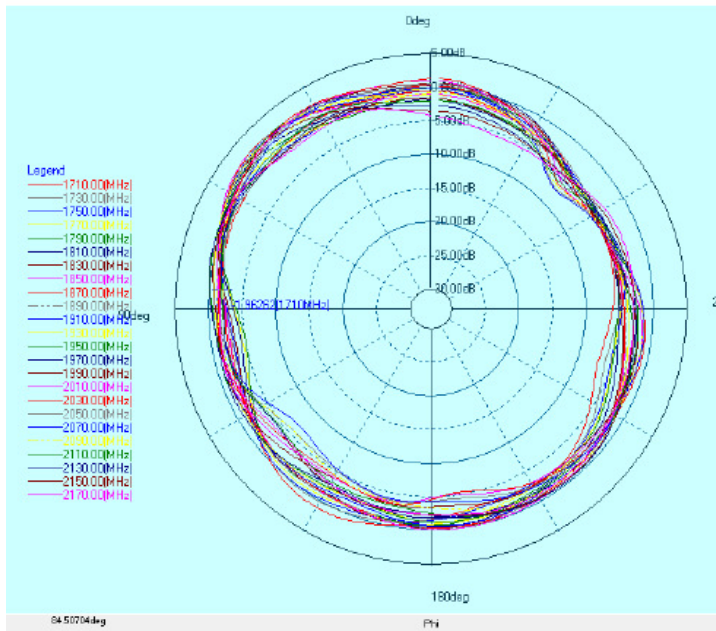


最大增益	不圆度	平均增益
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1710(MHz)	0.72 dB	8.33 dB	-2.29 dB
1730(MHz)	-0.26 dB	6.31 dB	-2.31 dB
1750(MHz)	-0.39 dB	5.59 dB	-2.43 dB
1770(MHz)	-0.11 dB	5.85 dB	-2.66 dB
1790(MHz)	0.55 dB	6.70 dB	-2.77 dB
1810(MHz)	1.04 dB	7.27 dB	-2.66 dB
1830(MHz)	1.41 dB	7.38 dB	-2.23 dB
1850(MHz)	2.01 dB	8.15 dB	-1.99 dB
1870(MHz)	1.97 dB	8.33 dB	-2.04 dB
1890(MHz)	1.98 dB	7.42 dB	-1.74 dB
1910(MHz)	1.74 dB	6.89 dB	-1.83 dB
1930(MHz)	1.63 dB	6.97 dB	-1.92 dB
1950(MHz)	1.77 dB	6.61 dB	-1.66 dB
1970(MHz)	1.66 dB	6.54 dB	-1.59 dB
1990(MHz)	1.42 dB	6.99 dB	-2.03 dB
2010(MHz)	1.48 dB	7.52 dB	-2.08 dB
2030(MHz)	1.84 dB	8.29 dB	-2.07 dB
2050(MHz)	1.38 dB	8.51 dB	-2.56 dB
2070(MHz)	1.14 dB	8.64 dB	-2.67 dB
2090(MHz)	0.61 dB	7.61 dB	-2.47 dB
2110(MHz)	-0.31 dB	6.39 dB	-2.67 dB
2130(MHz)	-0.55 dB	5.84 dB	-2.80 dB
2150(MHz)	-0.21 dB	5.59 dB	-2.78 dB
2170(MHz)	-0.10 dB	5.88 dB	-3.00 dB

Antenna gain and radiation pattern

80 degree

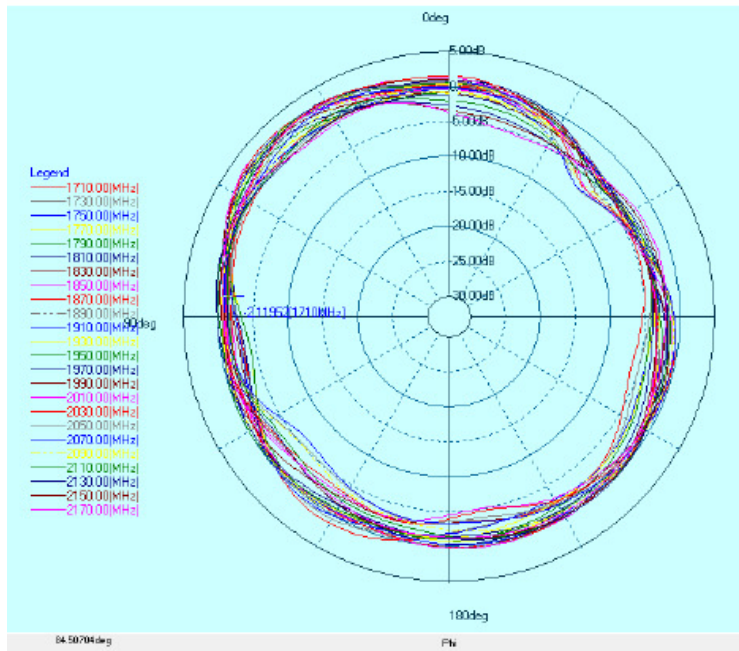


最大增益	不圆度	平均增益
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1710(MHz)	0.95 dB	7.95 dB	-2.04 dB
1730(MHz)	0.08 dB	6.06 dB	-2.08 dB
1750(MHz)	-0.07 dB	5.19 dB	-2.13 dB
1770(MHz)	0.33 dB	5.50 dB	-2.30 dB
1790(MHz)	0.98 dB	6.30 dB	-2.35 dB
1810(MHz)	1.47 dB	6.65 dB	-2.14 dB
1830(MHz)	1.85 dB	7.03 dB	-1.72 dB
1850(MHz)	2.48 dB	7.99 dB	-1.47 dB
1870(MHz)	2.44 dB	7.99 dB	-1.46 dB
1890(MHz)	2.41 dB	7.38 dB	-1.22 dB
1910(MHz)	2.16 dB	6.85 dB	-1.29 dB
1930(MHz)	2.07 dB	7.01 dB	-1.41 dB
1950(MHz)	2.23 dB	7.01 dB	-1.23 dB
1970(MHz)	2.11 dB	6.64 dB	-1.17 dB
1990(MHz)	1.88 dB	7.50 dB	-1.62 dB
2010(MHz)	1.87 dB	8.16 dB	-1.78 dB
2030(MHz)	2.16 dB	8.81 dB	-1.74 dB
2050(MHz)	1.73 dB	9.07 dB	-2.19 dB
2070(MHz)	1.40 dB	8.91 dB	-2.32 dB
2090(MHz)	0.87 dB	7.72 dB	-2.11 dB
2110(MHz)	-0.03 dB	6.20 dB	-2.24 dB
2130(MHz)	-0.26 dB	5.43 dB	-2.31 dB
2150(MHz)	0.26 dB	5.44 dB	-2.26 dB
2170(MHz)	0.34 dB	6.01 dB	-2.47 dB

Antenna gain and radiation pattern

75 degree

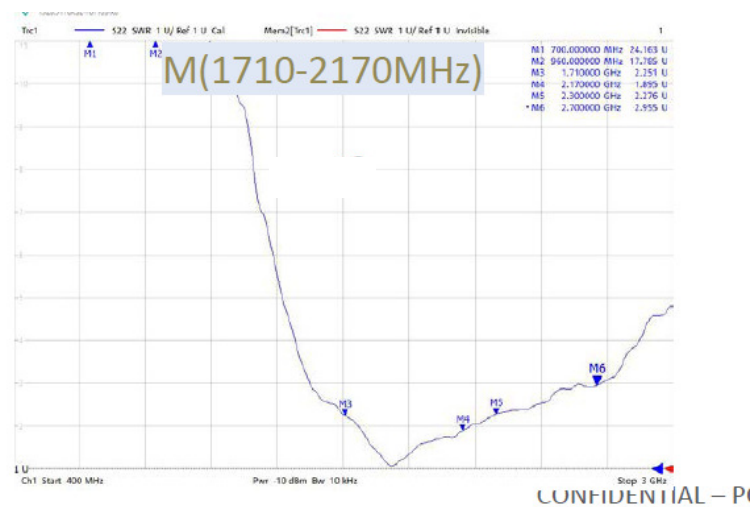


最大增益	不圆度	平均增益
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1710(MHz)	1.14 dB	7.12 dB	-1.73 dB
1730(MHz)	0.52 dB	5.48 dB	-1.73 dB
1750(MHz)	0.49 dB	4.61 dB	-1.69 dB
1770(MHz)	1.06 dB	5.34 dB	-1.79 dB
1790(MHz)	1.70 dB	6.00 dB	-1.72 dB
1810(MHz)	2.18 dB	6.01 dB	-1.36 dB
1830(MHz)	2.59 dB	6.53 dB	-0.95 dB
1850(MHz)	3.17 dB	7.49 dB	-0.71 dB
1870(MHz)	3.11 dB	7.33 dB	-0.64 dB
1890(MHz)	3.03 dB	7.09 dB	-0.46 dB
1910(MHz)	2.76 dB	6.74 dB	-0.53 dB
1930(MHz)	2.67 dB	7.05 dB	-0.69 dB
1950(MHz)	2.82 dB	7.30 dB	-0.61 dB
1970(MHz)	2.74 dB	7.27 dB	-0.60 dB
1990(MHz)	2.50 dB	8.00 dB	-1.07 dB
2010(MHz)	2.39 dB	8.78 dB	-1.36 dB
2030(MHz)	2.55 dB	8.94 dB	-1.30 dB
2050(MHz)	2.18 dB	9.24 dB	-1.70 dB
2070(MHz)	1.72 dB	8.64 dB	-1.83 dB
2090(MHz)	1.16 dB	7.22 dB	-1.64 dB
2110(MHz)	0.33 dB	5.40 dB	-1.64 dB
2130(MHz)	0.20 dB	4.74 dB	-1.63 dB
2150(MHz)	0.82 dB	5.28 dB	-1.56 dB
2170(MHz)	0.86 dB	6.31 dB	-1.70 dB

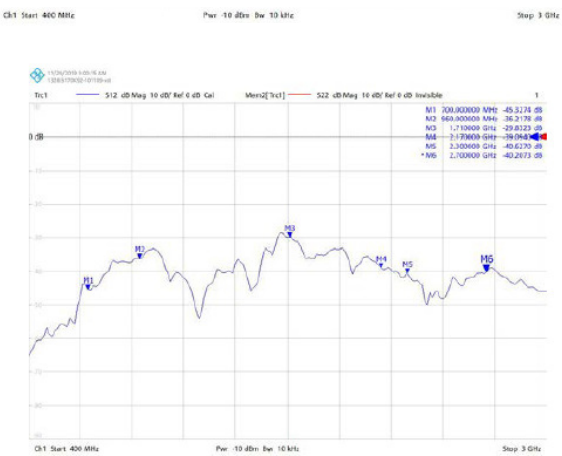
VSWR and Isolation

VSWR



CONFIDENTIAL - P1

Isolation



ZoneDAS Two Remote Unit

Antenna Specification

LTE Band 30, 2305-2360MHz

2025 June

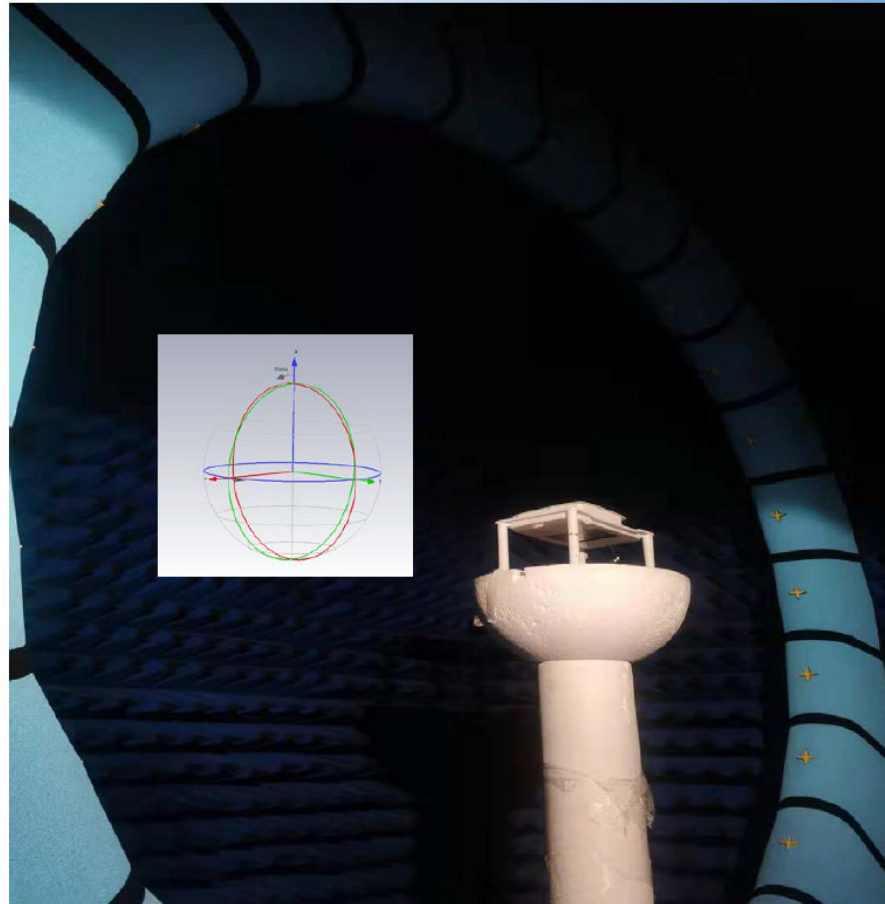
- Antenna Specification
- Antenna gain and radiation patterned
- VSWR and Isolation

Specification

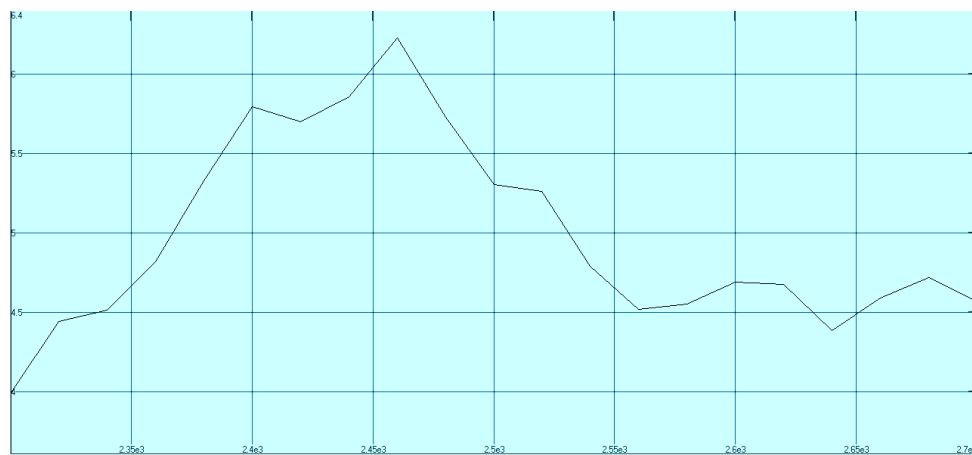
- Production Name: ZoneDAS Two Antennas for 2305MHz to 2360MHz
- LTE Operation frequency: Band 30
- Material of Antenna : Metal
- Cable/Connector: Coaxial cable 1.37mm/IPEX
- Antenna support: Threaded spacer(NYLON)
- Dimension:
80(L)*80(W)*13.4(H)mm

Performance Specification	
Frequency Range	2305-2360MHz
Peak Gain	2.46dB
Gain table	Listed below
VSWR	3.0 Max@2305-2360MHz
Impedance	50Ω
Efficiency	≥ 70%@ 2300MHz
	≥ 70%@ 2320MHz
	≥ 70%@ 2340MHz
	≥ 70%@ 2360MHz

ZYXEL Antenna gain and radiation pattern test conditions

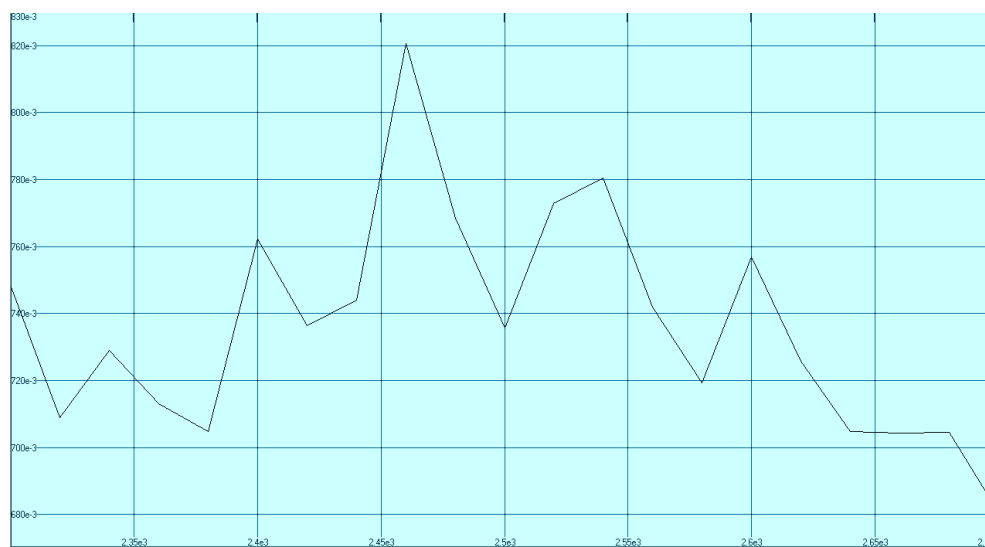
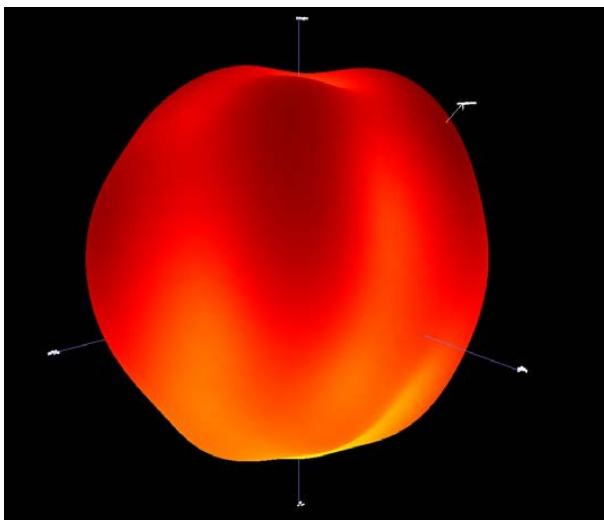


Antenna gain and radiation pattern



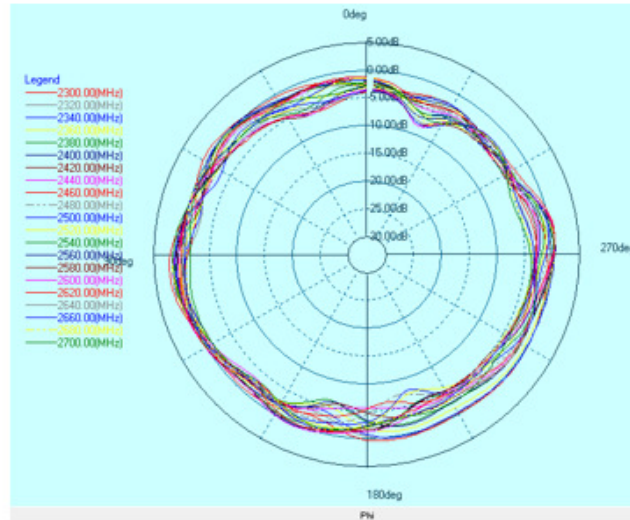
GAIN

efficiency



Antenna gain and radiation pattern

90 degree

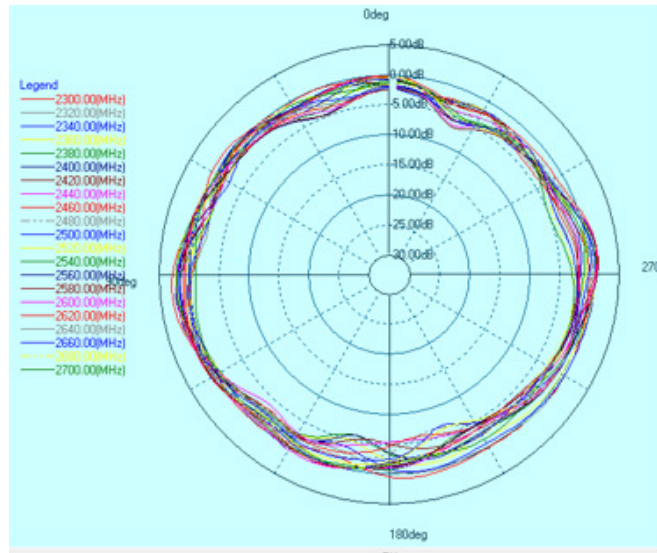


最大增益	不圆度	平均增益
------	-----	------

2300(MHz)	0.72 dB	5.63 dB	-1.17 dB
2320(MHz)	0.16 dB	4.80 dB	-1.49 dB
2340(MHz)	0.45 dB	4.77 dB	-1.39 dB
2360(MHz)	0.54 dB	5.90 dB	-1.71 dB
2380(MHz)	1.19 dB	7.57 dB	-1.97 dB
2400(MHz)	1.70 dB	7.90 dB	-1.59 dB
2420(MHz)	1.49 dB	7.47 dB	-1.91 dB
2440(MHz)	1.63 dB	7.41 dB	-2.20 dB
2460(MHz)	2.28 dB	8.78 dB	-1.82 dB
2480(MHz)	1.72 dB	9.19 dB	-2.11 dB
2500(MHz)	1.26 dB	9.16 dB	-2.37 dB
2520(MHz)	1.56 dB	8.87 dB	-2.33 dB
2540(MHz)	1.51 dB	7.51 dB	-2.15 dB
2560(MHz)	0.94 dB	7.81 dB	-2.45 dB
2580(MHz)	0.73 dB	8.88 dB	-2.74 dB
2600(MHz)	0.82 dB	9.39 dB	-2.42 dB
2620(MHz)	0.50 dB	8.55 dB	-2.76 dB
2640(MHz)	0.13 dB	7.91 dB	-2.83 dB
2660(MHz)	-0.13 dB	8.01 dB	-2.78 dB
2680(MHz)	-0.16 dB	7.24 dB	-2.72 dB
2700(MHz)	-0.60 dB	6.16 dB	-2.80 dB

Antenna gain and radiation pattern

85 degree

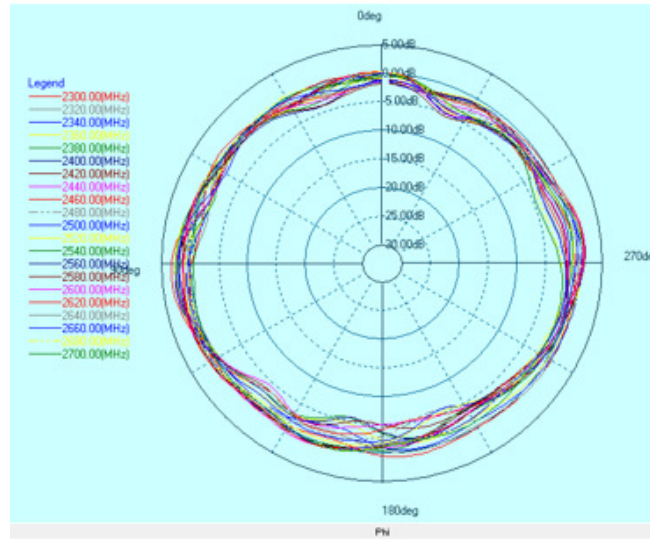


最大增益	不圆度	平均增益
------	-----	------

2300(MHz)	0.84 dB	4.88 dB	-0.66 dB
2320(MHz)	0.52 dB	4.06 dB	-1.01 dB
2340(MHz)	1.07 dB	5.10 dB	-0.99 dB
2360(MHz)	1.22 dB	6.37 dB	-1.22 dB
2380(MHz)	1.74 dB	7.79 dB	-1.49 dB
2400(MHz)	2.34 dB	8.34 dB	-1.12 dB
2420(MHz)	2.15 dB	7.89 dB	-1.37 dB
2440(MHz)	2.30 dB	7.91 dB	-1.60 dB
2460(MHz)	2.93 dB	8.94 dB	-1.16 dB
2480(MHz)	2.31 dB	9.01 dB	-1.47 dB
2500(MHz)	1.82 dB	8.59 dB	-1.69 dB
2520(MHz)	2.14 dB	8.34 dB	-1.56 dB
2540(MHz)	2.08 dB	6.98 dB	-1.34 dB
2560(MHz)	1.57 dB	7.28 dB	-1.59 dB
2580(MHz)	1.30 dB	8.00 dB	-1.88 dB
2600(MHz)	1.42 dB	7.79 dB	-1.52 dB
2620(MHz)	1.19 dB	6.89 dB	-1.72 dB
2640(MHz)	0.78 dB	6.26 dB	-1.77 dB
2660(MHz)	0.43 dB	6.00 dB	-1.76 dB
2680(MHz)	0.43 dB	5.37 dB	-1.70 dB
2700(MHz)	0.03 dB	4.99 dB	-1.80 dB

Antenna gain and radiation pattern

80 degree

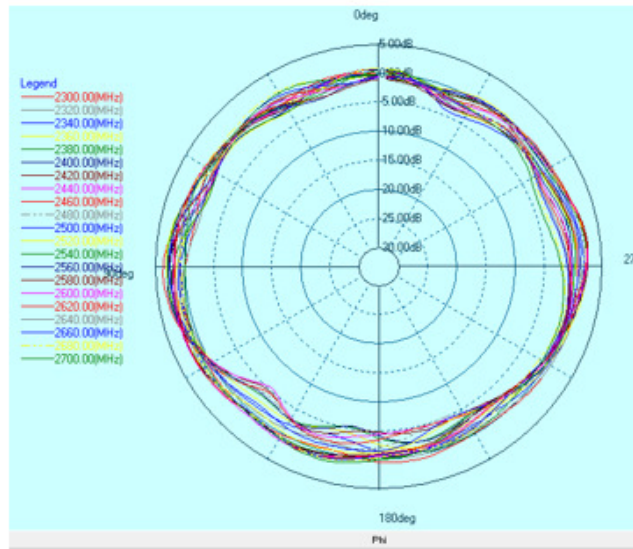


最大增益	不圆度	平均增益
------	-----	------

2300(MHz)	0.73 dB	3.64 dB	-0.36 dB
2320(MHz)	0.84 dB	3.54 dB	-0.76 dB
2340(MHz)	1.38 dB	5.17 dB	-0.75 dB
2360(MHz)	1.74 dB	6.67 dB	-0.92 dB
2380(MHz)	2.01 dB	7.86 dB	-1.21 dB
2400(MHz)	2.67 dB	8.56 dB	-0.85 dB
2420(MHz)	2.51 dB	8.03 dB	-1.05 dB
2440(MHz)	2.65 dB	7.95 dB	-1.22 dB
2460(MHz)	3.29 dB	8.79 dB	-0.77 dB
2480(MHz)	2.67 dB	8.68 dB	-1.05 dB
2500(MHz)	2.20 dB	8.10 dB	-1.23 dB
2520(MHz)	2.56 dB	7.94 dB	-1.05 dB
2540(MHz)	2.45 dB	6.66 dB	-0.80 dB
2560(MHz)	1.95 dB	6.85 dB	-1.04 dB
2580(MHz)	1.63 dB	7.14 dB	-1.31 dB
2600(MHz)	1.79 dB	6.82 dB	-0.94 dB
2620(MHz)	1.57 dB	5.89 dB	-1.07 dB
2640(MHz)	1.11 dB	5.27 dB	-1.15 dB
2660(MHz)	0.77 dB	4.89 dB	-1.15 dB
2680(MHz)	0.82 dB	4.68 dB	-1.09 dB
2700(MHz)	0.42 dB	4.93 dB	-1.20 dB

Antenna gain and radiation pattern

70 degree

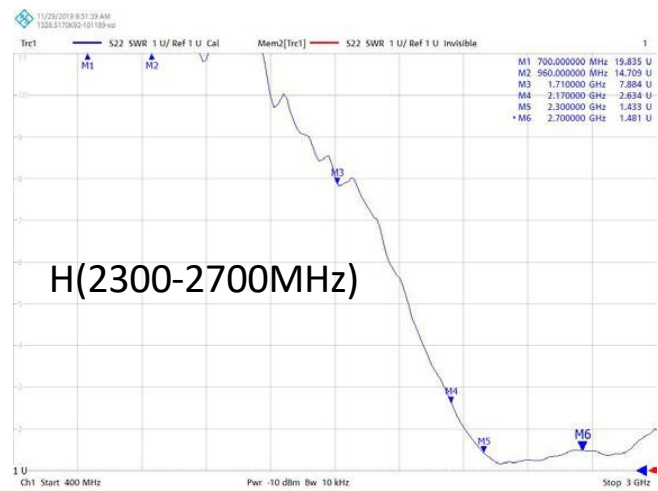


最大增益	不圆度	平均增益
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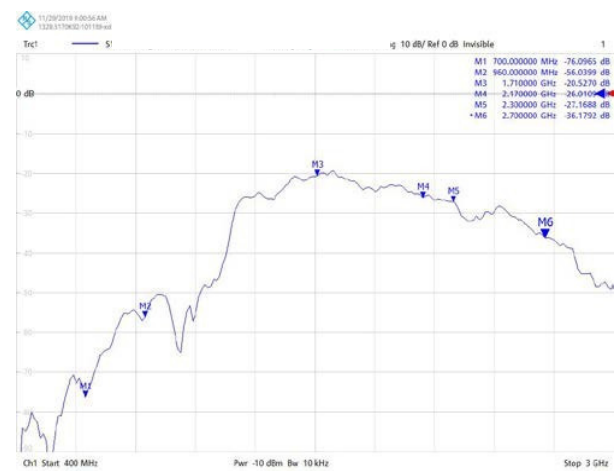
2300(MHz)	0.91 dB	2.19 dB	-0.02 dB
2320(MHz)	1.34 dB	3.46 dB	-0.44 dB
2340(MHz)	1.85 dB	5.23 dB	-0.44 dB
2360(MHz)	2.46 dB	6.94 dB	-0.56 dB
2380(MHz)	2.43 dB	7.82 dB	-0.84 dB
2400(MHz)	3.03 dB	8.52 dB	-0.50 dB
2420(MHz)	2.92 dB	7.89 dB	-0.64 dB
2440(MHz)	3.05 dB	8.51 dB	-0.72 dB
2460(MHz)	3.71 dB	8.52 dB	-0.29 dB
2480(MHz)	3.16 dB	8.27 dB	-0.49 dB
2500(MHz)	2.75 dB	7.46 dB	-0.60 dB
2520(MHz)	3.17 dB	7.38 dB	-0.35 dB
2540(MHz)	2.97 dB	6.39 dB	-0.10 dB
2560(MHz)	2.48 dB	5.85 dB	-0.32 dB
2580(MHz)	2.08 dB	5.63 dB	-0.54 dB
2600(MHz)	2.29 dB	5.36 dB	-0.17 dB
2620(MHz)	2.01 dB	4.64 dB	-0.27 dB
2640(MHz)	1.49 dB	3.94 dB	-0.40 dB
2660(MHz)	1.23 dB	3.95 dB	-0.40 dB
2680(MHz)	1.40 dB	4.70 dB	-0.32 dB
2700(MHz)	1.26 dB	5.11 dB	-0.41 dB

VSWR and Isolation

VSWR



Isolation



ZoneDAS Two Remote Unit Antenna Specification

LTE Band 66, 1710-2200MHz

2025 June

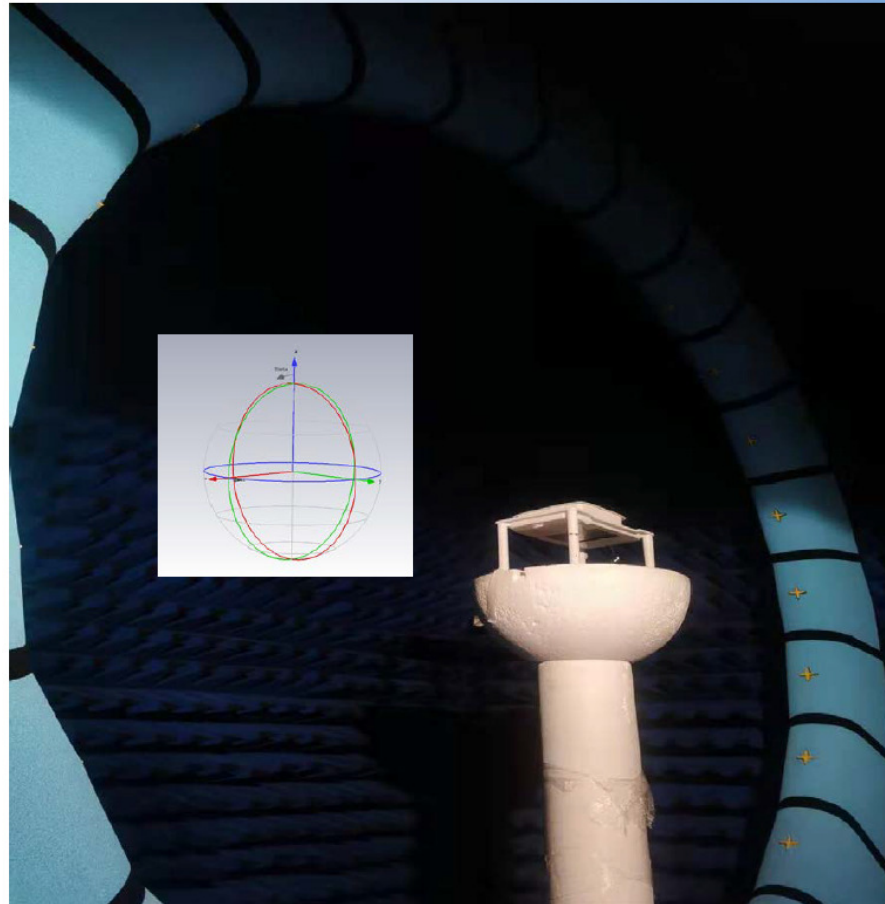
- Antenna Specification
- Antenna gain and radiation patterned
- VSWR and Isolation

Specification

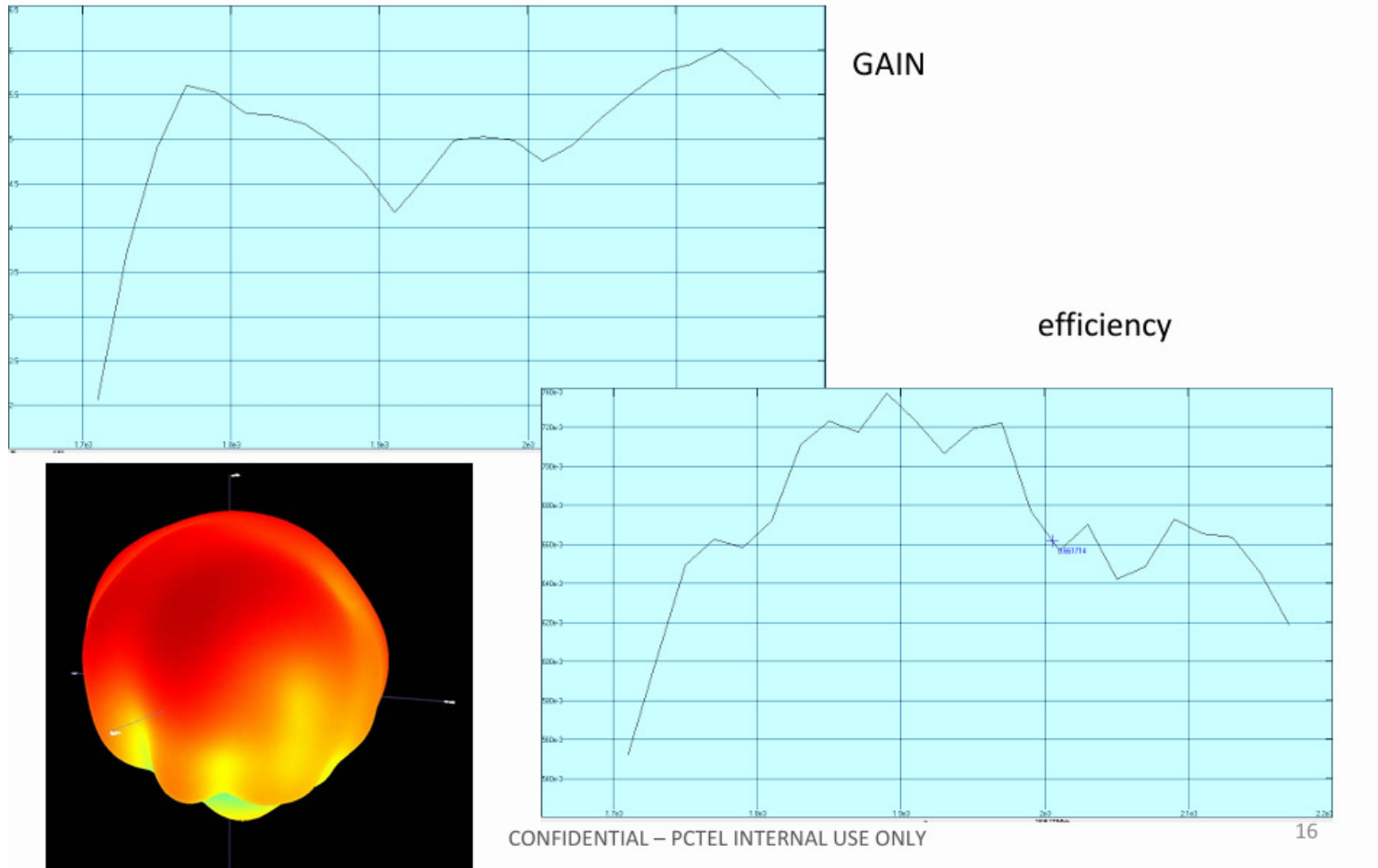
- Production Name: ZoneDAS Two Antennas for 1710MHz to 2200MHz
- LTE Operation frequency: Band 66
- Material of Antenna : Metal
- Cable/Connector: Coaxial cable 1.37mm/IPEX
- Antenna support: Threaded spacer(NYLON)
- Dimension:
80(L)*80(W)*14.4(H)mm

Performance Specification	
Frequency Range	1710-2200MHz
Peak Gain	3.17dB
Gain table	Listed below
VSWR	3.0 Max@1850-1995MHz
Impedance	50Ω
Efficiency	≥ 54%@ 1710MHz
	≥ 60%@ 1750MHz
	≥ 64%@ 1790MHz
	≥ 66%@ 1830MHz
	≥ 66%@ 1870MHz
	≥ 66%@ 1910MHz
	≥ 70%@ 1950MHz
	≥ 68%@ 1990MHz
	≥ 64%@ 2030MHz
	≥ 64%@ 2070MHz
	≥ 64%@ 2110MHz
	≥ 62%@ 2150MHz
	≥ 54%@ 2200MHz

ZYXEL Antenna gain and radiation pattern test conditions

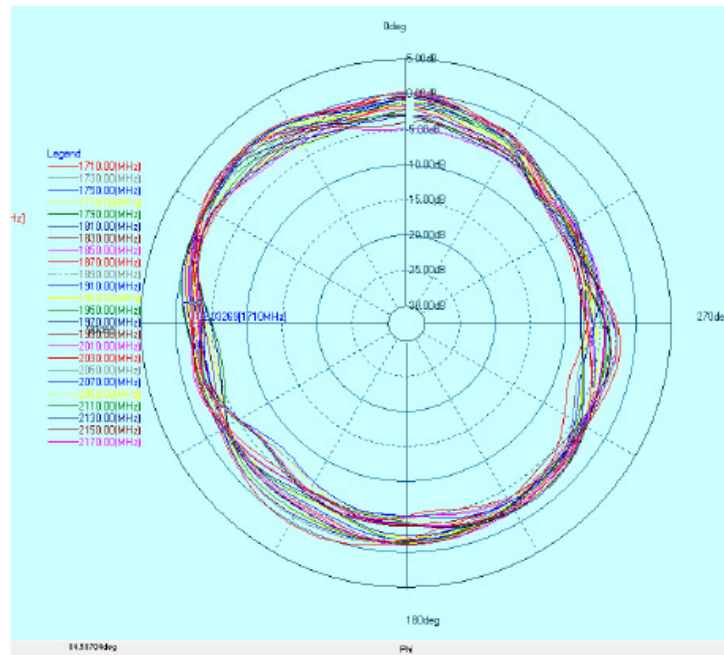


Antenna gain and radiation pattern



Antenna gain and radiation pattern

90 degree

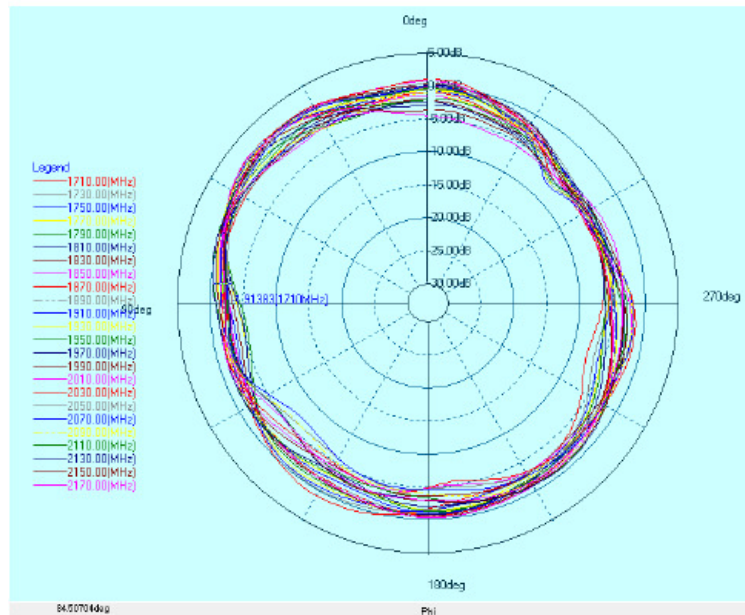


最大增益	不圆度	平均增益
------	-----	------

1710(MHz)	0.25 dB	8.37 dB	-2.70 dB
1730(MHz)	-0.82 dB	6.36 dB	-2.69 dB
1750(MHz)	-0.84 dB	5.94 dB	-2.85 dB
1770(MHz)	-0.73 dB	6.24 dB	-3.19 dB
1790(MHz)	-0.07 dB	7.36 dB	-3.43 dB
1810(MHz)	0.47 dB	8.29 dB	-3.41 dB
1830(MHz)	0.89 dB	8.13 dB	-2.97 dB
1850(MHz)	1.34 dB	8.41 dB	-2.76 dB
1870(MHz)	1.26 dB	8.88 dB	-2.90 dB
1890(MHz)	1.33 dB	7.81 dB	-2.51 dB
1910(MHz)	1.13 dB	7.79 dB	-2.63 dB
1930(MHz)	0.95 dB	7.64 dB	-2.69 dB
1950(MHz)	1.02 dB	7.09 dB	-2.34 dB
1970(MHz)	0.96 dB	7.09 dB	-2.27 dB
1990(MHz)	0.69 dB	7.24 dB	-2.65 dB
2010(MHz)	0.86 dB	6.93 dB	-2.56 dB
2030(MHz)	1.27 dB	7.21 dB	-2.57 dB
2050(MHz)	0.83 dB	7.97 dB	-3.15 dB
2070(MHz)	0.68 dB	8.36 dB	-3.21 dB
2090(MHz)	0.16 dB	7.32 dB	-3.05 dB
2110(MHz)	-0.75 dB	5.83 dB	-3.33 dB
2130(MHz)	-1.12 dB	5.67 dB	-3.55 dB
2150(MHz)	-1.06 dB	5.35 dB	-3.65 dB
2170(MHz)	-0.91 dB	5.61 dB	-3.85 dB

Antenna gain and radiation pattern

85 degree

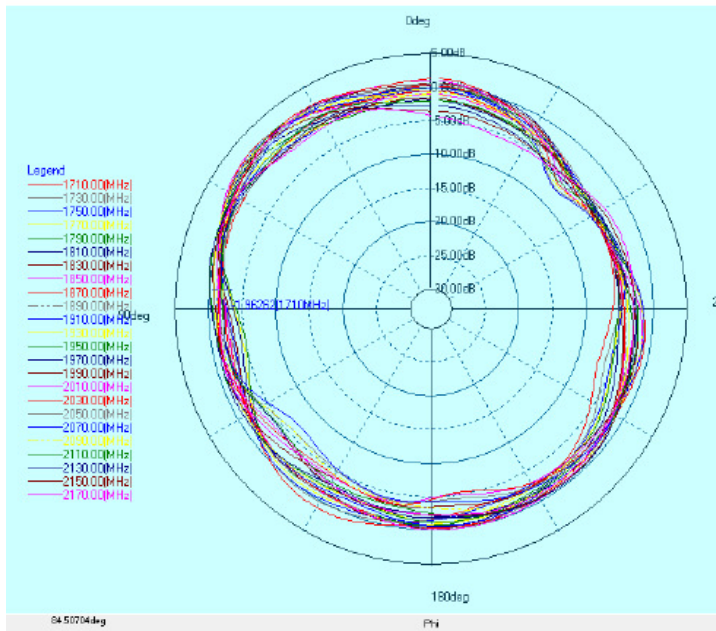


最大增益	不圆度	平均增益
------	-----	------

1710(MHz)	0.72 dB	8.33 dB	-2.29 dB
1730(MHz)	-0.26 dB	6.31 dB	-2.31 dB
1750(MHz)	-0.39 dB	5.59 dB	-2.43 dB
1770(MHz)	-0.11 dB	5.85 dB	-2.66 dB
1790(MHz)	0.55 dB	6.70 dB	-2.77 dB
1810(MHz)	1.04 dB	7.27 dB	-2.66 dB
1830(MHz)	1.41 dB	7.38 dB	-2.23 dB
1850(MHz)	2.01 dB	8.15 dB	-1.99 dB
1870(MHz)	1.97 dB	8.33 dB	-2.04 dB
1890(MHz)	1.98 dB	7.42 dB	-1.74 dB
1910(MHz)	1.74 dB	6.89 dB	-1.83 dB
1930(MHz)	1.63 dB	6.97 dB	-1.92 dB
1950(MHz)	1.77 dB	6.61 dB	-1.66 dB
1970(MHz)	1.66 dB	6.54 dB	-1.59 dB
1990(MHz)	1.42 dB	6.99 dB	-2.03 dB
2010(MHz)	1.48 dB	7.52 dB	-2.08 dB
2030(MHz)	1.84 dB	8.29 dB	-2.07 dB
2050(MHz)	1.38 dB	8.51 dB	-2.56 dB
2070(MHz)	1.14 dB	8.64 dB	-2.67 dB
2090(MHz)	0.61 dB	7.61 dB	-2.47 dB
2110(MHz)	-0.31 dB	6.39 dB	-2.67 dB
2130(MHz)	-0.55 dB	5.84 dB	-2.80 dB
2150(MHz)	-0.21 dB	5.59 dB	-2.78 dB
2170(MHz)	-0.10 dB	5.88 dB	-3.00 dB

Antenna gain and radiation pattern

80 degree

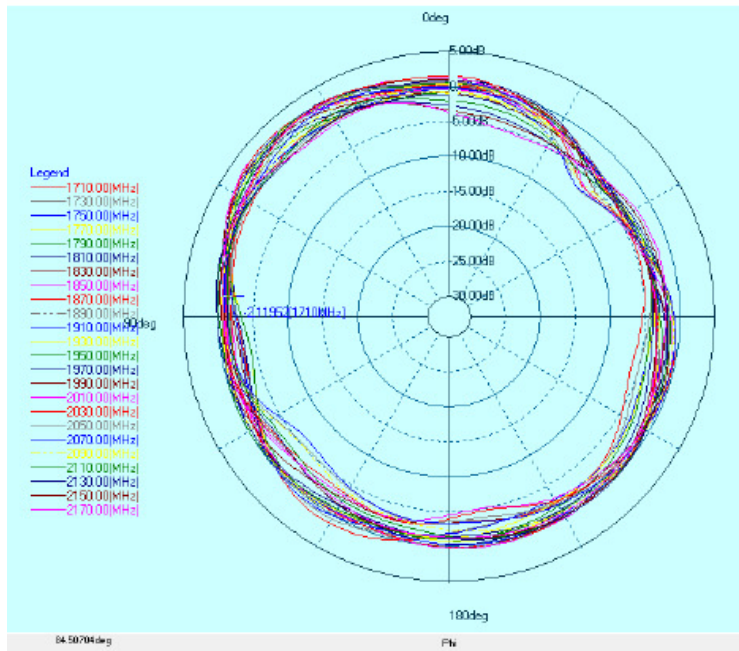


最大增益	不圆度	平均增益
------	-----	------

1710(MHz)	0.95 dB	7.95 dB	-2.04 dB
1730(MHz)	0.08 dB	6.06 dB	-2.08 dB
1750(MHz)	-0.07 dB	5.19 dB	-2.13 dB
1770(MHz)	0.33 dB	5.50 dB	-2.30 dB
1790(MHz)	0.98 dB	6.30 dB	-2.35 dB
1810(MHz)	1.47 dB	6.65 dB	-2.14 dB
1830(MHz)	1.85 dB	7.03 dB	-1.72 dB
1850(MHz)	2.48 dB	7.99 dB	-1.47 dB
1870(MHz)	2.44 dB	7.99 dB	-1.46 dB
1890(MHz)	2.41 dB	7.38 dB	-1.22 dB
1910(MHz)	2.16 dB	6.85 dB	-1.29 dB
1930(MHz)	2.07 dB	7.01 dB	-1.41 dB
1950(MHz)	2.23 dB	7.01 dB	-1.23 dB
1970(MHz)	2.11 dB	6.64 dB	-1.17 dB
1990(MHz)	1.88 dB	7.50 dB	-1.62 dB
2010(MHz)	1.87 dB	8.16 dB	-1.78 dB
2030(MHz)	2.16 dB	8.81 dB	-1.74 dB
2050(MHz)	1.73 dB	9.07 dB	-2.19 dB
2070(MHz)	1.40 dB	8.91 dB	-2.32 dB
2090(MHz)	0.87 dB	7.72 dB	-2.11 dB
2110(MHz)	-0.03 dB	6.20 dB	-2.24 dB
2130(MHz)	-0.26 dB	5.43 dB	-2.31 dB
2150(MHz)	0.26 dB	5.44 dB	-2.26 dB
2170(MHz)	0.34 dB	6.01 dB	-2.47 dB

Antenna gain and radiation pattern

75 degree

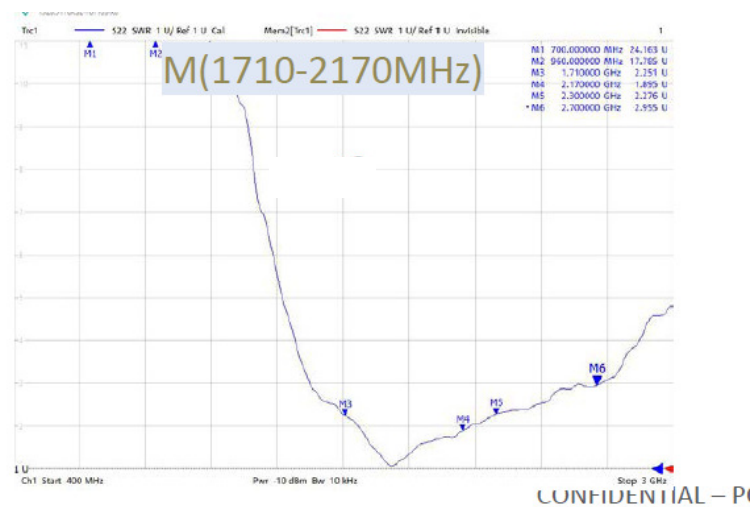


最大增益	不圆度	平均增益
------	-----	------

1710(MHz)	1.14 dB	7.12 dB	-1.73 dB
1730(MHz)	0.52 dB	5.48 dB	-1.73 dB
1750(MHz)	0.49 dB	4.61 dB	-1.69 dB
1770(MHz)	1.06 dB	5.34 dB	-1.79 dB
1790(MHz)	1.70 dB	6.00 dB	-1.72 dB
1810(MHz)	2.18 dB	6.01 dB	-1.36 dB
1830(MHz)	2.59 dB	6.53 dB	-0.95 dB
1850(MHz)	3.17 dB	7.49 dB	-0.71 dB
1870(MHz)	3.11 dB	7.33 dB	-0.64 dB
1890(MHz)	3.03 dB	7.09 dB	-0.46 dB
1910(MHz)	2.76 dB	6.74 dB	-0.53 dB
1930(MHz)	2.67 dB	7.05 dB	-0.69 dB
1950(MHz)	2.82 dB	7.30 dB	-0.61 dB
1970(MHz)	2.74 dB	7.27 dB	-0.60 dB
1990(MHz)	2.50 dB	8.00 dB	-1.07 dB
2010(MHz)	2.39 dB	8.78 dB	-1.36 dB
2030(MHz)	2.55 dB	8.94 dB	-1.30 dB
2050(MHz)	2.18 dB	9.24 dB	-1.70 dB
2070(MHz)	1.72 dB	8.64 dB	-1.83 dB
2090(MHz)	1.16 dB	7.22 dB	-1.64 dB
2110(MHz)	0.33 dB	5.40 dB	-1.64 dB
2130(MHz)	0.20 dB	4.74 dB	-1.63 dB
2150(MHz)	0.82 dB	5.28 dB	-1.56 dB
2170(MHz)	0.86 dB	6.31 dB	-1.70 dB

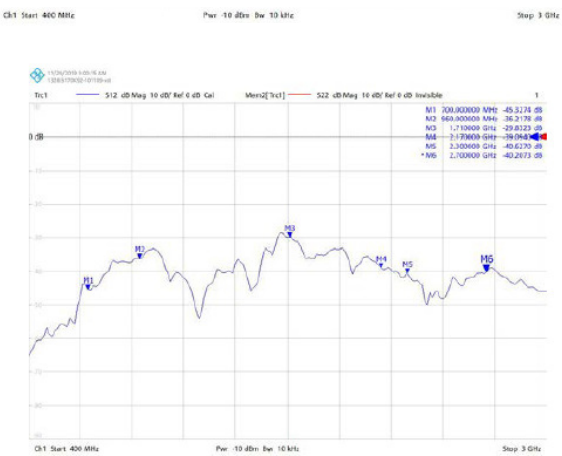
VSWR and Isolation

VSWR



CONFIDENTIAL - P1

Isolation



ZoneDAS Two Remote Unit Antenna Specification

NR Band 77, 3700-3980MHz

2025 June

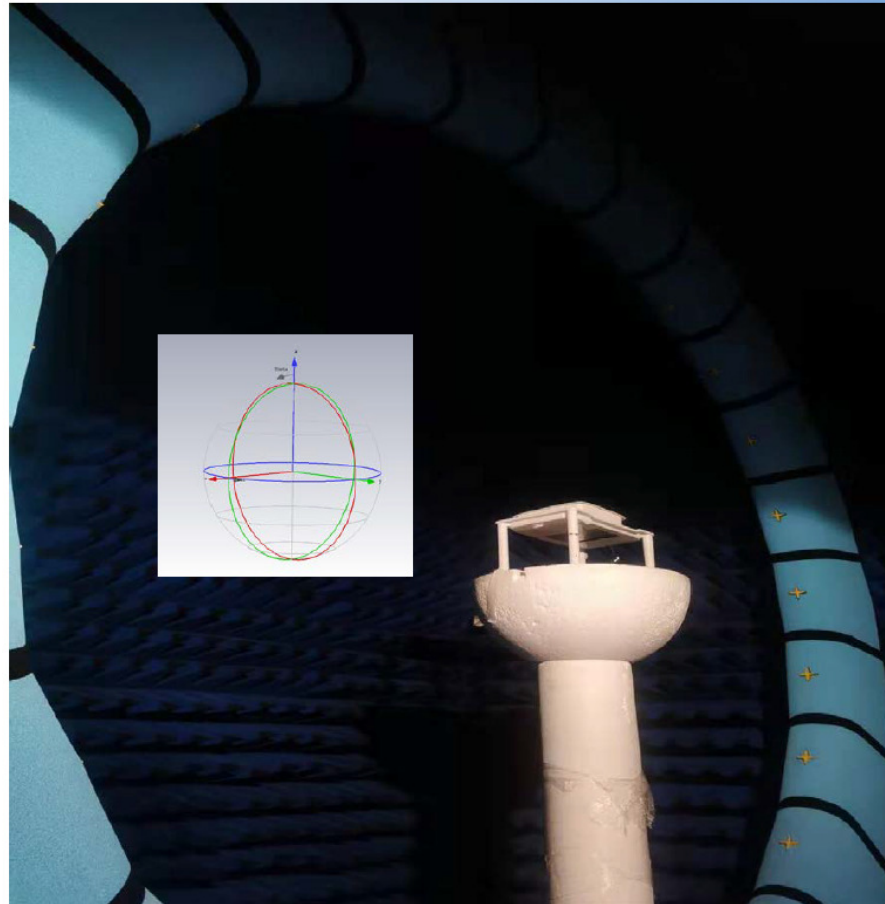
- Antenna Specification
- Antenna gain and radiation patterned
- VSWR and Isolation

Specification

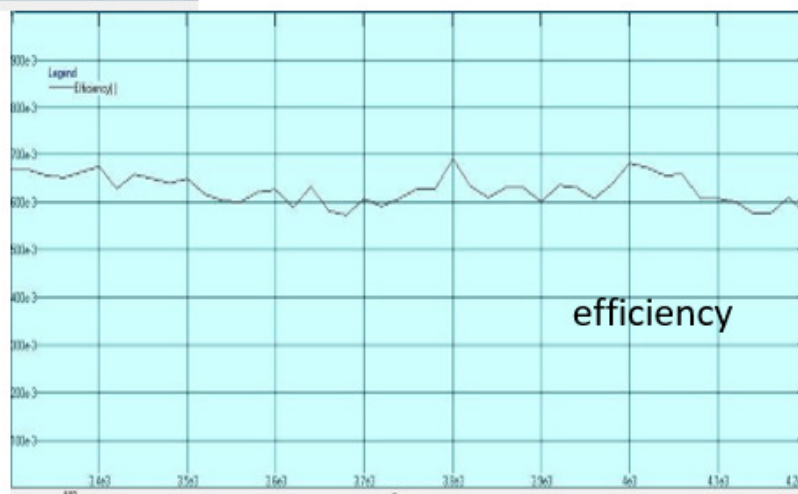
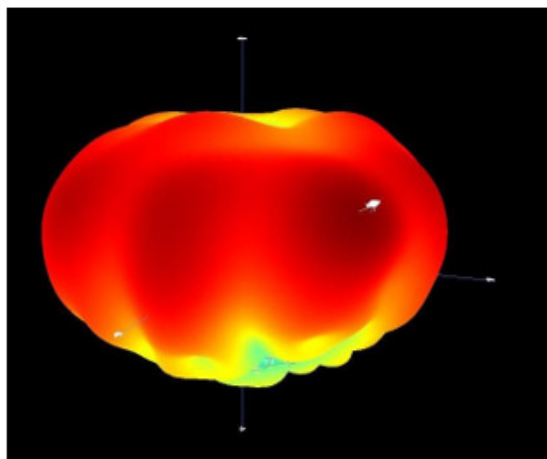
- Production Name: ZoneDAS Two Antennas for 3700MHz to 3980MHz
- NR Operation frequency: Band 77
- Material of Antenna : Metal
- Cable/Connector: Coaxial cable 1.37mm/IPEX
- Antenna support: Threaded spacer(NYLON)
- Dimension:
80(L)*80(W)*10.4(H)mm

Performance Specification	
Frequency Range	3700-3980MHz
Peak Gain	4.14dB
Gain table	Listed below
VSWR	3.0 Max@3700-3980MHz
Impedance	50Ω
Efficiency	≥ 55%@ 3700MHz
	≥ 55%@ 3800MHz
	≥ 55%@ 3900MHz
	≥ 55%@ 4000MHz

ZYXEL Antenna gain and radiation pattern test conditions



Antenna gain and radiation pattern



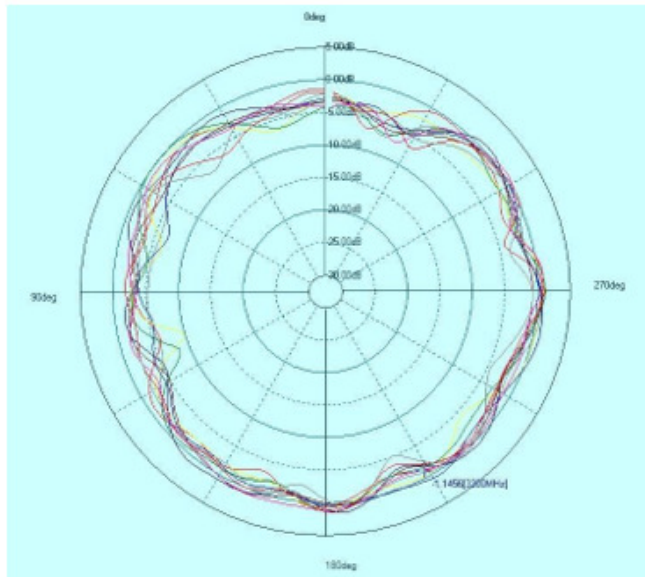
Antenna gain and radiation pattern

90 degree

最大增益

不圆度

平均增益



3300(MHz)	0.85 dB	7.62 dB	-1.93 dB
3400(MHz)	0.83 dB	7.98 dB	-2.12 dB
3500(MHz)	1.02 dB	8.12 dB	-1.96 dB
3600(MHz)	0.86 dB	8.77 dB	-2.20 dB
3700(MHz)	1.29 dB	9.02 dB	-2.10 dB
3800(MHz)	1.42 dB	6.83 dB	-1.33 dB
3900(MHz)	0.65 dB	6.63 dB	-1.98 dB
4000(MHz)	0.97 dB	8.34 dB	-1.41 dB
4100(MHz)	1.35 dB	8.39 dB	-2.09 dB
4200(MHz)	0.43 dB	7.91 dB	-2.45 dB

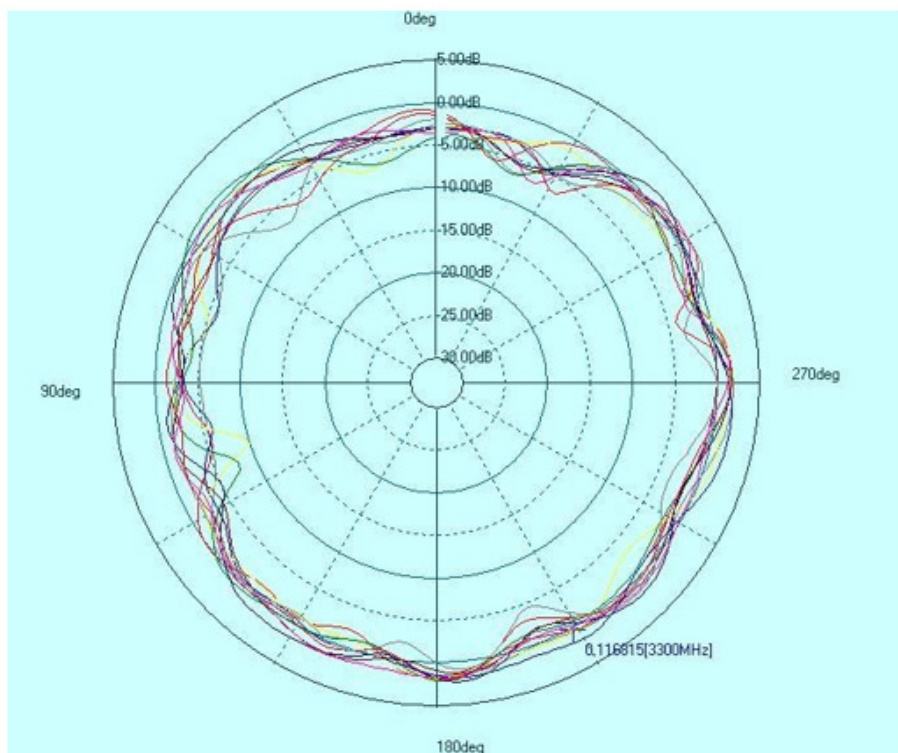
Antenna gain and radiation pattern

85 degree

最大增益

不圆度

平均增益



3300(MHz)	2.82 dB	8.37 dB	-0.44 dB
3400(MHz)	3.12 dB	9.53 dB	-0.58 dB
3500(MHz)	3.04 dB	9.45 dB	-0.38 dB
3600(MHz)	2.58 dB	7.55 dB	-0.70 dB
3700(MHz)	2.67 dB	8.90 dB	-0.66 dB
3800(MHz)	3.16 dB	8.76 dB	0.00 dB
3900(MHz)	2.59 dB	7.64 dB	-0.66 dB
4000(MHz)	2.93 dB	8.81 dB	-0.09 dB
4100(MHz)	2.41 dB	9.16 dB	-0.74 dB
4200(MHz)	3.33 dB	8.00 dB	-0.95 dB

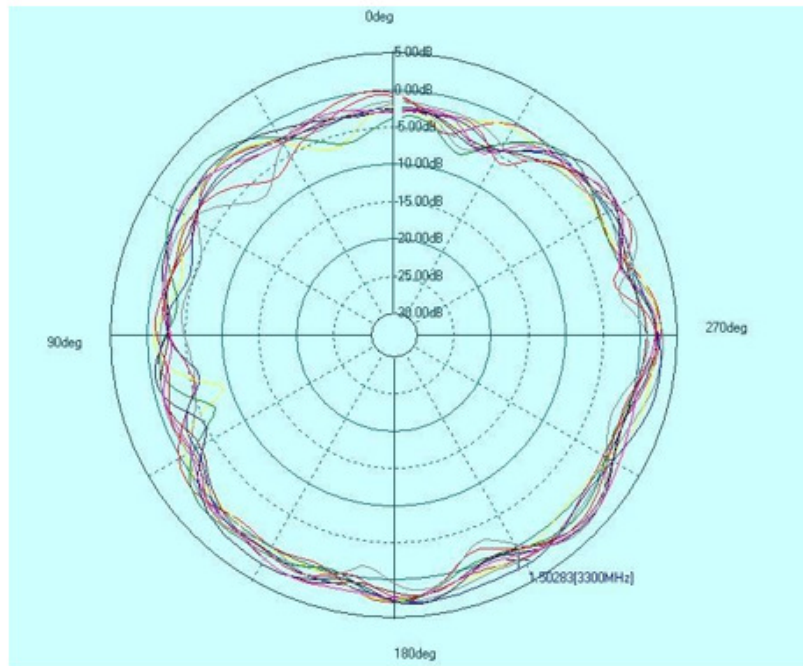
Antenna gain and radiation pattern

80 degree

最大增益

不圆度

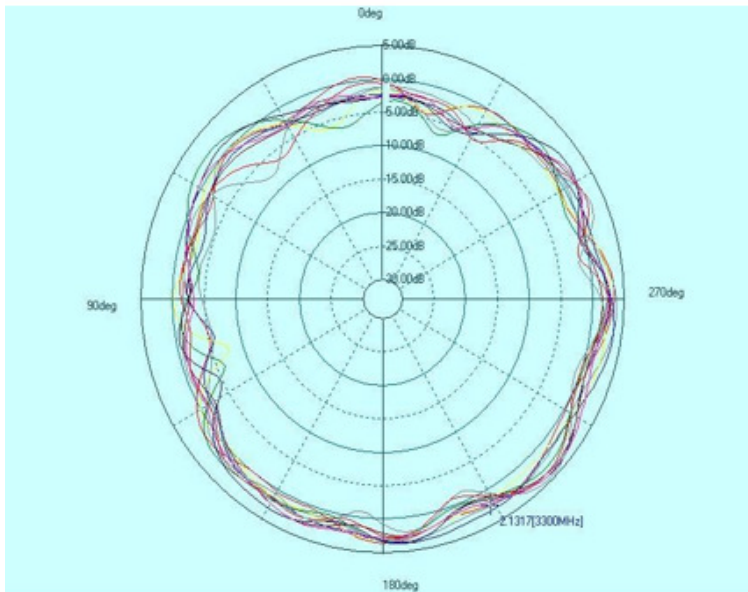
平均增益



3300(MHz)	1.73 dB	7.84 dB	-1.31 dB
3400(MHz)	1.86 dB	8.68 dB	-1.47 dB
3500(MHz)	1.94 dB	8.06 dB	-1.27 dB
3600(MHz)	1.71 dB	8.65 dB	-1.57 dB
3700(MHz)	1.97 dB	8.07 dB	-1.50 dB
3800(MHz)	2.20 dB	7.72 dB	-0.79 dB
3900(MHz)	1.25 dB	7.06 dB	-1.46 dB
4000(MHz)	1.62 dB	8.63 dB	-0.88 dB
4100(MHz)	1.82 dB	8.64 dB	-1.54 dB
4200(MHz)	1.24 dB	8.75 dB	-1.87 dB

Antenna gain and radiation pattern

75 degree

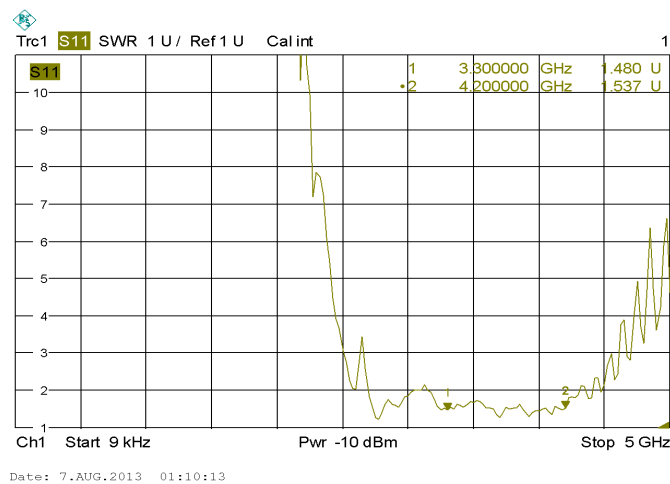


最大增益	不圆度	平均增益
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3300(MHz)	3.43 dB	8.71 dB	0.07 dB
3400(MHz)	3.82 dB	9.37 dB	-0.05 dB
3500(MHz)	3.66 dB	9.46 dB	0.12 dB
3600(MHz)	2.97 dB	8.69 dB	-0.15 dB
3700(MHz)	3.03 dB	8.03 dB	-0.15 dB
3800(MHz)	4.14 dB	9.55 dB	0.47 dB
3900(MHz)	3.78 dB	8.12 dB	-0.13 dB
4000(MHz)	4.09 dB	8.09 dB	0.41 dB
4100(MHz)	3.69 dB	7.50 dB	-0.23 dB
4200(MHz)	4.56 dB	8.39 dB	-0.37 dB

VSWR and Isolation

VSWR



Isolation

