

WAG-F-LAG0-00-053 Specification

1. Explanation of part number :

WAG - **F** - **LAG0** - **00** - **053**
 (1) (2) (3) (4) (5)

(1) Product Type : Wireless Antenna (PIFA)

(2) Material : FPC

(3) Frequency : 1575.42Mhz, 2400~2500 Mhz, 5150~5850 Mhz

(4) Coaxial Cable Type : 00

(5) Suffix : 053

2. Electrical Specification :

2-1. Frequency Band:

Frequency Band	MHz
GPS+WIFI	1575.42Mhz; 2400~2500 Mhz; 5151~5850 Mhz

2-2. Impedance

50 ohm nominal

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=±2 X.X=±0.1 X.XX=±0.05

ANGLES=± HOLEDIA=±

SCALE :

UNIT : mm:

DRAWN BY : 王婷

CHECKED BY : 张涛

DESIGNED BY : 周振兴

APPROVED BY: 徐克文



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2-3 RL:

Frequency Band	1575.42	2400	2500	5150	5850
2-3-1. Typical Value:	≥-10	≥-10	≥-8	≥-7	≥-5
2-3-2 Measuring Method	<ol style="list-style-type: none"> 1. A 50Ω coaxial cable is connected to the fpcb antenna. Then this cable is connected to a network analyzer to measure the RL 2. Keeping this jig away from metal at least 20 cm. 				
2-3-3 Picture					

2-4. Measure and Chamber

2-4-1 Measure method

1. Using a low loss coaxial cable to link a standard handset jig
2. Fixed this handset jig on chamber's rotator plane
3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
4. Using another standard gain horn antenna to calibrated those data

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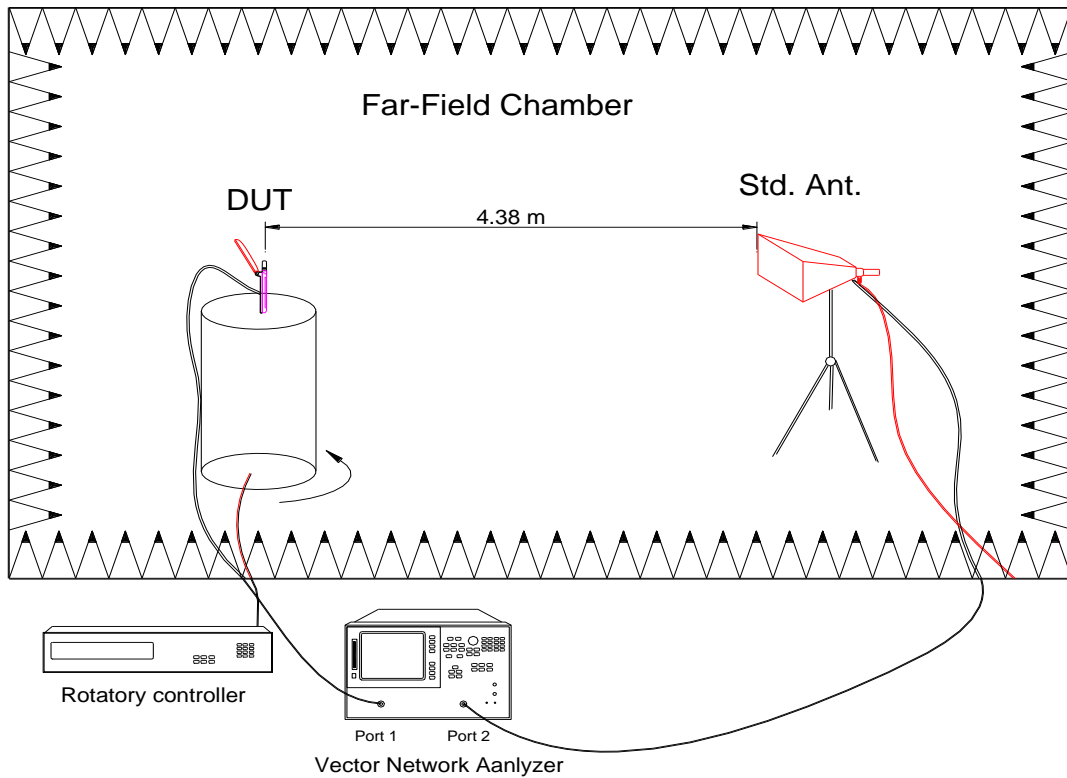
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2-4-2 Chamber definition



1. An anechoic chamber (8mx4mx3.5m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quiet room region is 40cmx40cmx40cm at the center of rotator
3. The distance between DUT and standard antenna is 4.38 m
4. Probing antenna (9120D horn antenna) and standard gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

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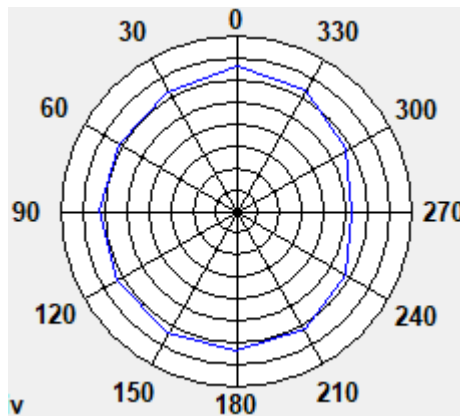
2-4-3 Efficiency

Frequency (MHz)	Peak Gain (dBi)	Avg Gain (dBi)	Efficiency (%)
1570	2.17	-2.34	58.30
1575.42	2.19	-2.40	57.52
1580	1.88	-2.72	53.41
2402	-1.63	-4.92	32.18
2441	-1.50	-4.92	32.22
2480	-1.58	-5.26	29.77
5150	-2.22	-4.80	33.08
5450	-2.19	-5.91	25.64
5850	-2.0	-6.77	21.04

2-4-4 Field pattern diagram

1 1575.42Mhz

1.1 Horizontal



Frequency(MHz):1575.42

Antenna Polarity: Horizontal

Maximum Value(dBi): -6.55

Minimum Value(dBi): -14.05

1.2 Vertical

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=±2 X.X=±0.1 X.XX=±0.05

ANGLES=±

HOLEDIA=±



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SCALE :

UNIT : mm:

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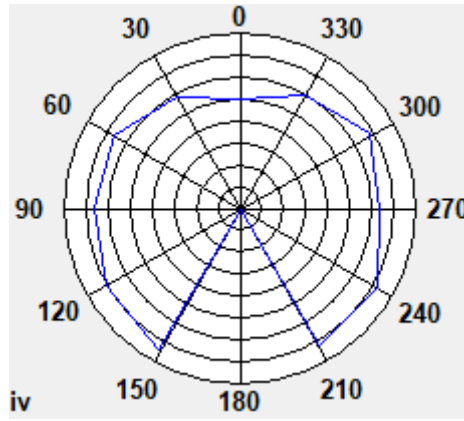
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Frequency(MHz):1575.42

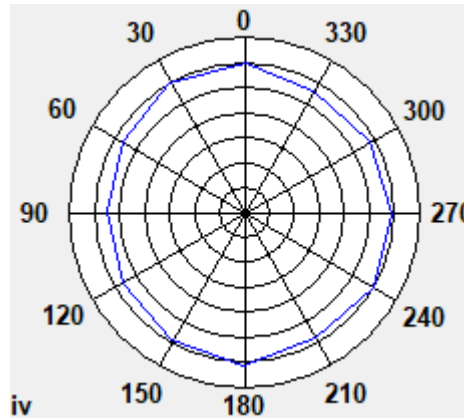
Antenna Polarity: Vertical

Maximum Value(dBi): 2.17

Minimum Value(dBi): -62.38

2 2402MHz

2.1 Horizontal



Frequency(MHz):2402

Antenna Polarity: Horizontal

Maximum Value(dBi): -4.85

Minimum Value(dBi): -8.36

2.2 Vertical

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=±2 X.X=±0.1 X.XX=±0.05

ANGLES=± HOLEDIA=±

SCALE :

UNIT : mm:

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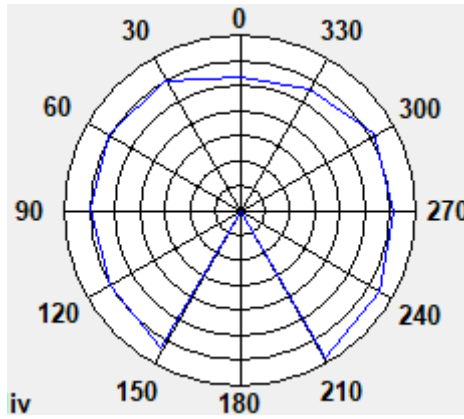
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Frequency(MHz):2402

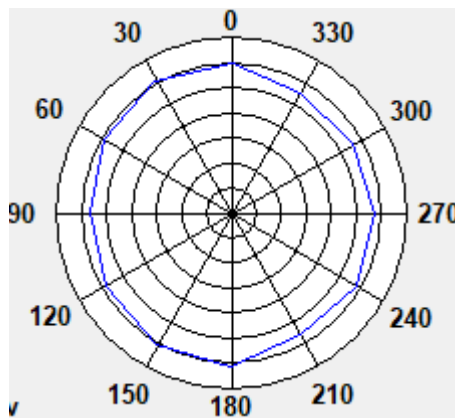
Antenna Polarity: Vertical

Maximum Value(dBi): -1.63

Minimum Value(dBi): -61.95

3. 2441MHz

3.1 Horizontal



Frequency(MHz):2441

Antenna Polarity: Horizontal

Maximum Value(dBi): -4.89

Minimum Value(dBi): -8.45

3.2 Vertical

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=±2 X.X=±0.1 X.XX=±0.05

ANGLES=± HOLEDIA=±

SCALE :

UNIT : mm:

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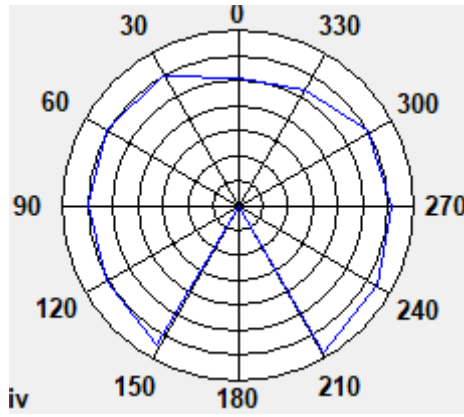
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Frequency(MHz):2441

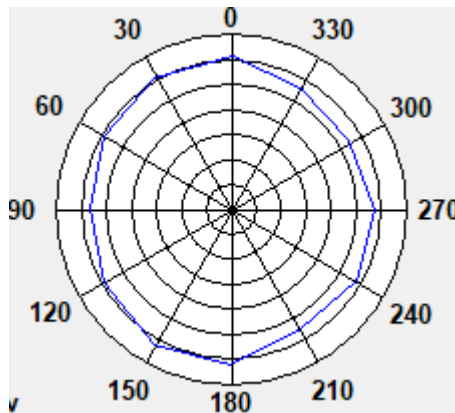
Antenna Polarity: Vertical

Maximum Value(dBi): -1.50

Minimum Value(dBi): -67.9

4. 2480MHz

4.1 Horizontal



Frequency(MHz):2480

Antenna Polarity: Horizontal

Maximum Value(dBi): -4.74

Minimum Value(dBi):-8.26

4.2 Vertical

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=±2 X.X=±0.1 X.XX=±0.05

ANGLES=± HOLEDIA=±

SCALE :

UNIT : mm:

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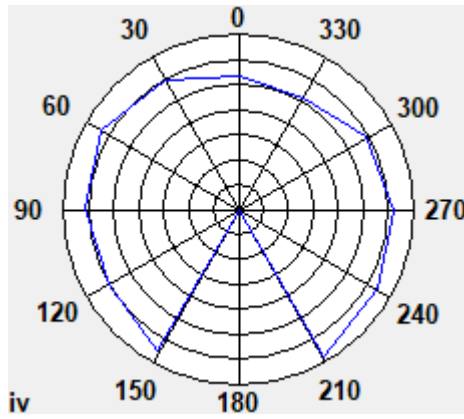
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Frequency(MHz):2480

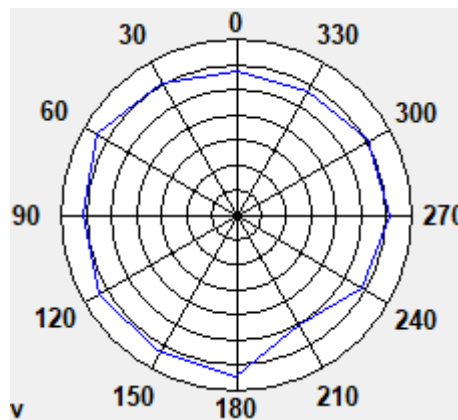
Antenna Polarity: Vertical

Maximum Value(dBi): -1.58

Minimum Value(dBi): -68.2

5. 5150MHz

5.1 Horizontal



Frequency(MHz):5150

Antenna Polarity: Horizontal

Maximum Value(dBi): -3.74

Minimum Value(dBi): -9.87

5.2 Vertical

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=±2 X.X=±0.1 X.XX=±0.05

ANGLES=± HOLEDIA=±

SCALE :

UNIT : mm:

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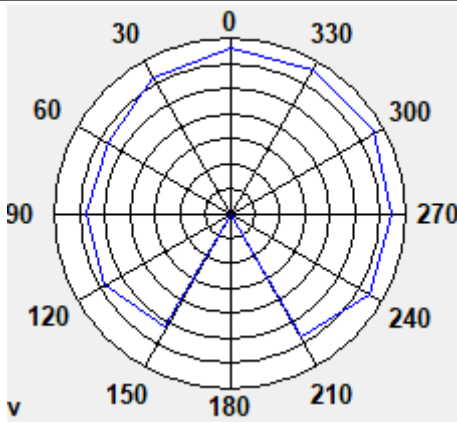
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Frequency(MHz):5150

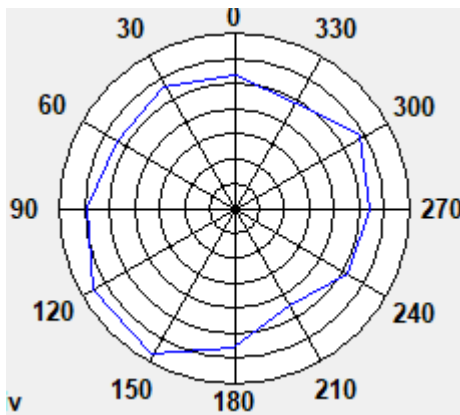
Antenna Polarity: Vertical

Maximum Value(dBi): -2.22

Minimum Value(dBi): -67.9

6. 5450MHz

6.1 Horizontal



Frequency(MHz):5450

Antenna Polarity: Horizontal

Maximum Value(dBi): -2.97

Minimum Value(dBi): -13.2

6.2 Vertical

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=±2 X.X=±0.1 X.XX=±0.05

ANGLES=± HOLEDIA=±

SCALE :

UNIT : mm:

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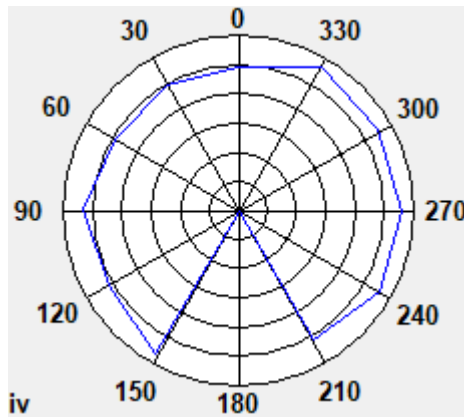
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Frequency(MHz):5450

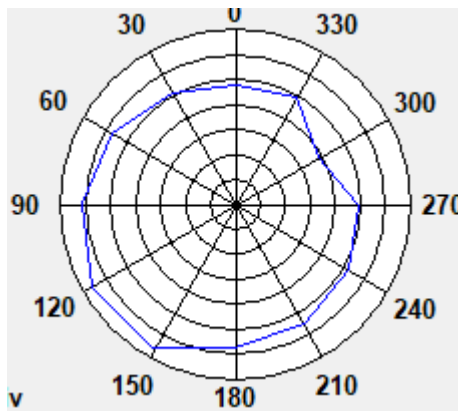
Antenna Polarity: Vertical

Maximum Value(dBi): -2.19

Minimum Value(dBi): -67.8

7.5850MHz

7.1 Horizontal



Frequency(MHz):5850

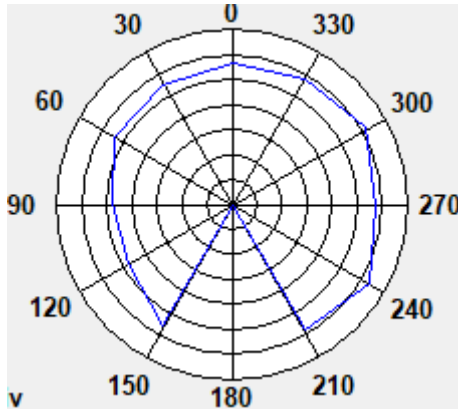
Antenna Polarity: Horizontal

Maximum Value(dBi): -2.0

Minimum Value(dBi): -16.8

7.2 Vertical

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ANGLES=±			
HOLEDIA=±			
SCALE :	UNIT : mm:		
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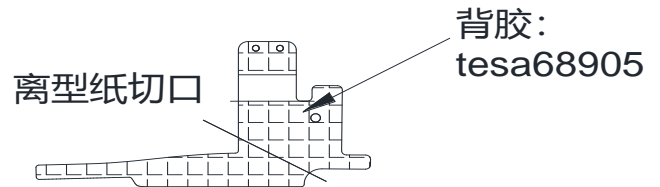
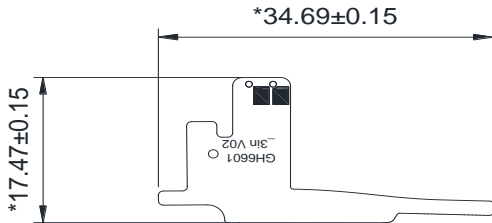
Frequency(MHz):5850

Antenna Polarity: Vertical

Maximum Value(dBi): -4.13

Minimum Value(dBi): -67.6

3. Antenna Dimensions:



黑色高亮丝印

油墨面

背胶面

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ANGLES=±

HOLEDIA=±

SCALE :

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