WA-P-LELE-04-025 Specification

1. Explanation of part number :

WA	_	P	_	LELE	_	04	_	025
(1)		(2)		(3)		(4)		(5)

(1) **Product Type**：**Wireless Antenna**

(2) **PCB: PCB**

(3) **Frequency : 2400~2500MHz&5100~5800MHz&5925~7125MHz**

(4) **Coaxial Cable Type : With ∮0.81 Main Black (144.6mm) / AUX Gray（206.8mm）**

(5) **Suffix : 025**

2. Storage Condition:

Temperature	-40	to	+70℃
Humidity	20	to	65 %RH

3. Operating Condition:

Temperature	-40	to	+70℃
Humidity	10	to	85 %RH

4. Electrical Specification :

*Those specifications were specially defined for LG **14ZB90Q** WIFI model, and all characteristics were measured under the model's handset testing jig .*

4-1. Frequency Band:

Frequency Band	MHz
WIFI\BT	**2400~2500 & 5100~5800 & 5925~7125**

4-2. Impedance

50 ohm nominal

4-3. Matching circuit

None

4-4. VSWR

4-4.1 Measuring Method

1.A 50Ωcoaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the VSWR

2.Keeping this jig away from metal at least 20cm

4-4.2 Measurement frequency points and VSWR value

VSWR	Frequency (Unit MHz)	Spec	1
Main Antenna	2400	≦3.5	1.9
	2500	≦3.0	1.6
	5000	≦3.0	1.8
	6000	≦3.0	1.8
	Judgement		ok
Aux Antenna	2400	≦3.5	2.2
	2500	≦3.0	1.3
	5000	≦3.0	1.8
	6000	≦3.0	1.4
	Judgement		ok

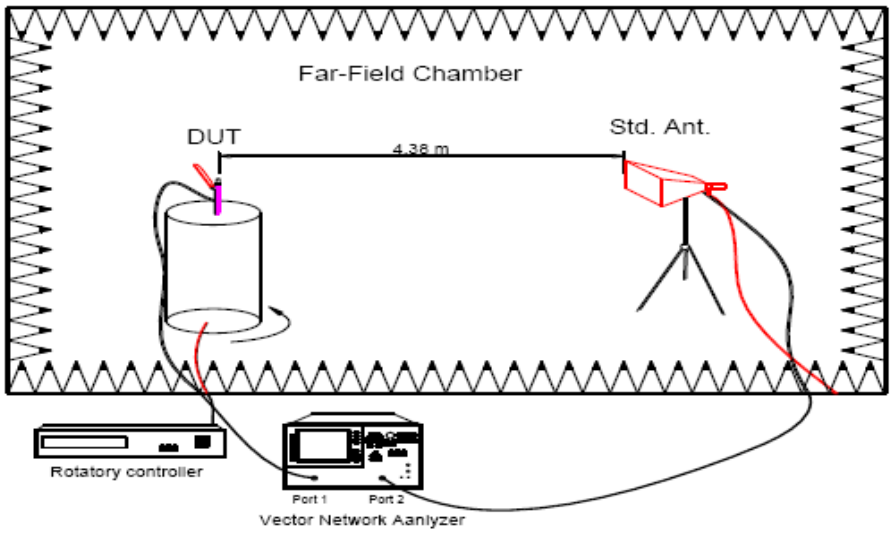
Main Anenna

AUX Anenna

4-5. Efficiency and Gain

4-5.1 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



1. An anechoic chamber (8mx4mx3.5m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quite 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)

4-5.3 Efficiency and Gain

Antenna gain is marked (dBi) and is based on STANDARD HORN antenna. The data shows Peak Gain and Average Gain.

4-5-3-1 Electrical specification

Frequency (MHz)	Average Efficiency (%)
2400~2500	>30
5100~5825	>30
5925~7125	>25

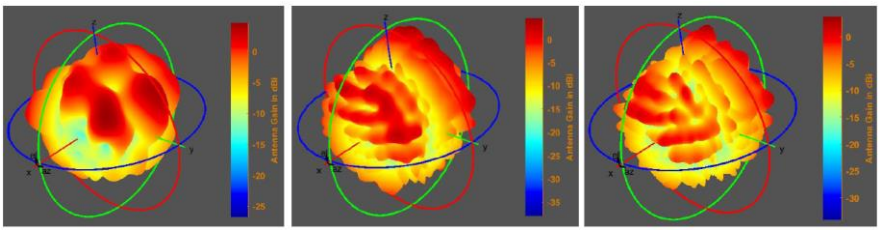
4-5.3-2 Efficiency and Gain Test Data

Frequency	Main Antenna		
	Efficiency	Average Gain	Peak Gain
2400MHz	46.1 %	-3.4 dBi	3.9 dBi
2425MHz	59.3 %	-2.3 dBi	4.2 dBi
2450MHz	51.0 %	-2.9 dBi	3.9 dBi
2475MHz	55.2 %	-2.6 dBi	4.4 dBi
2500MHz	58.0 %	-2.4 dBi	4.6 dBi
5150MHz	43.3 %	-3.6 dBi	3.7 dBi
5250MHz	42.3 %	-3.7 dBi	3.8 dBi
5350MHz	38.2 %	-4.2 dBi	3.4 dBi
5725MHz	43.3 %	-3.6 dBi	4.0 dBi
5825MHz	46.3 %	-3.3 dBi	4.7 dBi
5925MHz	37.0 %	-4.3 dBi	2.2 dBi
6525MHz	33.0 %	-4.8 dBi	2.1 dBi
7125MHz	32.0 %	-4.9 dBi	1.9 dBi

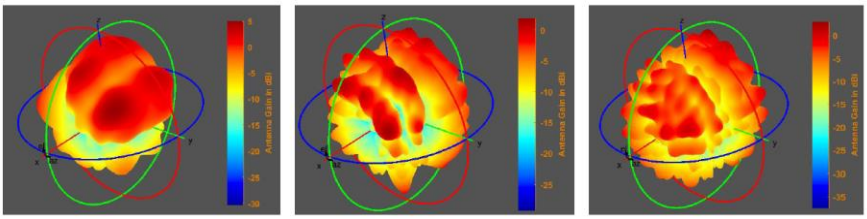
Frequency	AUX Antenna-4		
	Efficiency	Average Gain	Peak Gain
2400MHz	36.2 %	-4.4 dBi	2.8 dBi
2425MHz	39.9 %	-4.0 dBi	3.2 dBi
2450MHz	36.1 %	-4.4 dBi	2.8 dBi
2475MHz	47.1 %	-3.3 dBi	4.0 dBi
2500MHz	51.2 %	-2.9 dBi	4.4 dBi
5150MHz	32.9 %	-4.8 dBi	3.7 dBi
5250MHz	33.3 %	-4.8 dBi	3.8 dBi
5350MHz	33.2 %	-4.8 dBi	3.4 dBi
5725MHz	39.2 %	-4.1 dBi	4.0 dBi
5825MHz	40.7 %	-3.9 dBi	4.7 dBi
5925MHz	33.0 %	-4.8 dBi	1.7 dBi
6525MHz	34.0 %	-4.7 dBi	1.5 dBi
7125MHz	29.0 %	-5.4 dBi	1.4 dBi

4-5.3-3 Antenna 3D Radiation Pattern

Main Anenna



AUX Anenna



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