WA-P-LELE-04-026 Specification

1. Explanation of part number :

WA	_	P	_	LELE	_	04	_	026
(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 (155.6) / AUX Gray（224.8mm）

(5) Suffix : 026

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 15ZB90Q/16ZB90Q** 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

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DRAWN BY: 张涛	CHECKED BY: 张涛		
DESIGNED BY：胡志清	APPROVED BY：徐克文		
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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

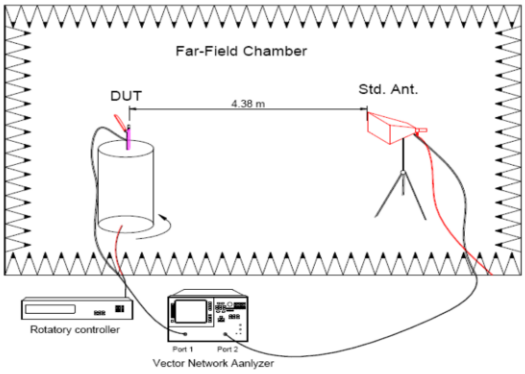
VSWR	Frequency (Unit MHz)	Spec	1 3
Main Antenna	2400	≦4.0	3.3
	2500	≦3.0	1.6
	5000	≦3.5	1.9
	6000	≦3.0	1.4
	Judgement		ok
Aux Antenna	2400	≦3.5	2.5
	2500	≦3.0	1.8
	5000	≦3.5	2.3
	6000	≦3.0	1.5
	Judgement		ok

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

4-5.2 Chamber definition



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

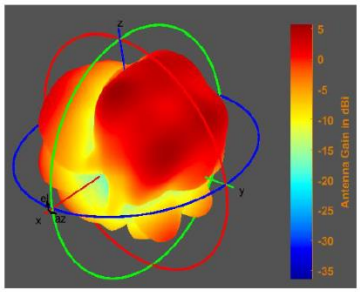
4-5.3-2 Efficiency and Gain Test Data

Frequency	Main Antenna			AUX Antenna		
	Efficiency	Average Gain	Peak Gain	Efficiency	Average Gain	Peak Gain
2400MHz	36.7 %	-4.3 dBi	3.1 dBi	35.0 %	-4.6 dBi	1.9 dBi
2425MHz	39.4 %	-4.0 dBi	4.8 dBi	36.8 %	-4.3 dBi	2.3 dBi
2450MHz	37.7 %	-4.2 dBi	4.4 dBi	39.2 %	-4.1 dBi	2.2 dBi
2475MHz	39.6 %	-4.0 dBi	4.5 dBi	40.1 %	-4.0 dBi	3.2 dBi
2500MHz	48.9 %	-3.1 dBi	5.3 dBi	41.2 %	-3.9 dBi	3.4 dBi
5150MHz	37.8 %	-4.2 dBi	2.7 dBi	38.9 %	-4.1 dBi	2.7 dBi
5250MHz	39.7 %	-4.0 dBi	3.7 dBi	43.4 %	-3.6 dBi	3.7 dBi
5350MHz	36.7 %	-4.4 dBi	3.1 dBi	39.3 %	-4.1 dBi	3.1 dBi
5725MHz	42.2 %	-3.7 dBi	3.1 dBi	42.7 %	-3.7 dBi	3.1 dBi
5825MHz	44.6 %	-3.5 dBi	3.0 dBi	44.6 %	-3.5 dBi	3.0 dBi
5925MHz	35.0 %	-4.6 dBi	2.0 dBi	33.0 %	-4.8 dBi	2.3 dBi
6525MHz	36.0 %	-4.4 dBi	1.9 dBi	33.0 %	-4.8 dBi	2.2 dBi
7125MHz	36.0 %	-4.4 dBi	1.9 dBi	32.0 %	-4.9 dBi	2.1 dBi

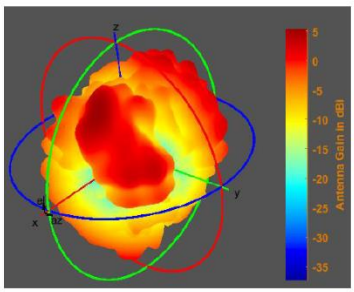
4-5.3-3 Antenna 3D Radiation Pattern

Main Antenna

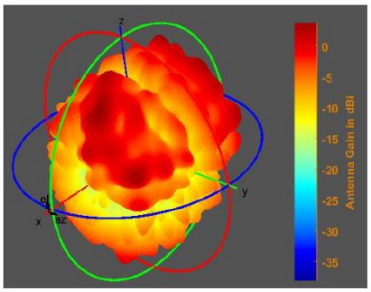
2450MHz



5400MHz

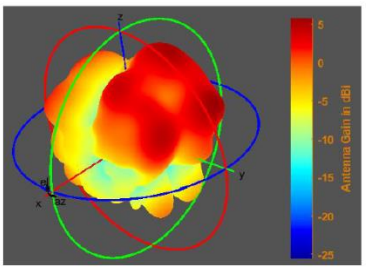


6525MHz

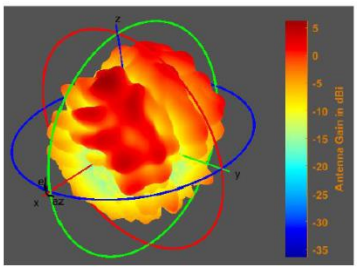


AUX Antenna

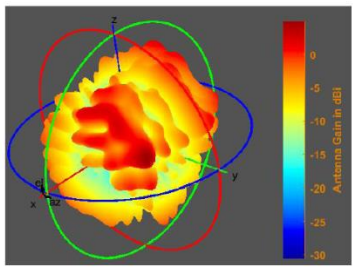
2450MHz



5400MHz



6525MHz



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