WA-P-LELE-04-009 Specification

1. Explanation of part number :

WA	_	P	_	LELE	_	04	_	009
(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 / AUX Gray

(5) Suffix : 009

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 16Z90Q** 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 50Ω coaxial 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

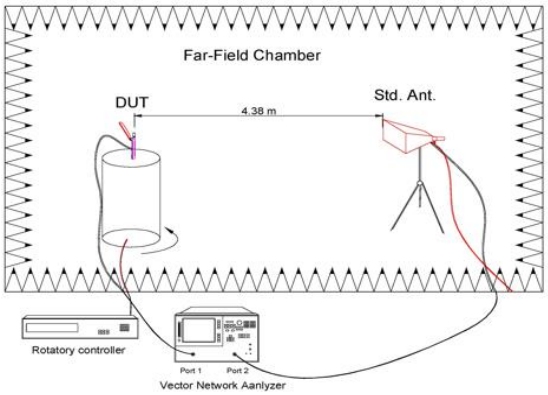
VSWR	Frequency (Unit MHz)	Spec	2
Main Antenna	2400	≦3.5	1.3
	2500	≦3.5	2.1
	5150	≦4.0	2.6
	7125	≦4.0	2.8
	Judgement		ok
Aux Antenna	2400	≦3.5	2.2
	2500	≦3.5	1.6
	5150	≦4.5	2.6
	7125	≦4.5	2.2
	Judgement		ok

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

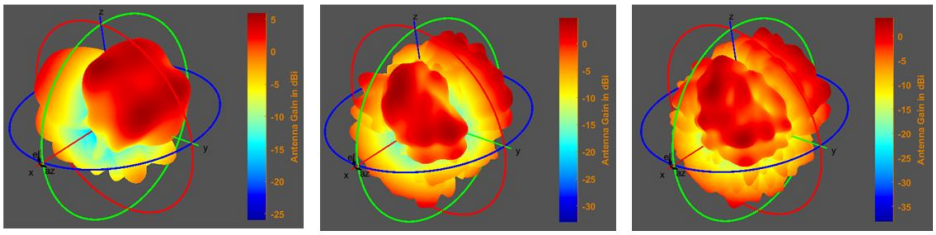
4-5.3-2 Efficiency and Gain Test Data

Frequency(MHz)	Main Antenna		
	Peak Gain (dBi)	Efficiency (dBi)	Efficiency(%)
2400	2.2	-4.9	32.6
2450	2.3	-4.7	33.9
2500	3.1	-4.7	34.1
5150	4.2	-4.0	39.8
5400	4.2	-3.1	48.8
5850	4.0	-2.8	52.0
5925	4.3	-3.1	49.5
6525	4.2	-2.9	51.3
7125	4.1	-3.4	45.3

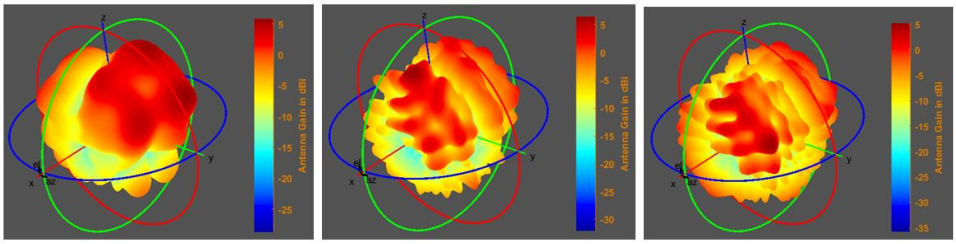
Frequency(MHz)	AUX Antenna		
	Peak Gain (dBi)	Efficiency (dBi)	Efficiency(%)
2400	1.9	-4.8	32.8
2450	2.4	-4.7	33.7
2500	2.3	-5.0	31.5
5150	3.6	-4.6	35.1
5400	3.7	-4.3	37.4
5850	3.5	-4.5	35.8
5925	3.5	-4.6	34.5
6525	3.5	-4.9	32.1
7125	2.3	-4.5	35.7

4-5.3-3 Antenna 3D Radiation Pattern

Main Antenna



AUX Antenna



UNLESS OTHER SPECIFIED TOLERANCES ON : X = ± X.X = ± X.XX = ± ANGLES = ± HOLEDIA = ±	佳邦科技股份有限公司 INPAQ TECHNOLOGY CO., LTD.
SCALE : / UNIT : mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DRAWN BY: 张涛 / CHECKED BY: 张涛	
DESIGNED BY : 胡志清 / APPROVED BY : 徐克文	
TITLE : WA-P-LELE-04-027 Specification	DOCUMENT NO. / PAGE P1 REV.