

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 ϕ 0.81 Main Black (155.6) / AUX Gray (224.8mm)

(5) Suffix : 026

2. Storage Condition:

Temperature -40 to +70°C
 Humidity 20 to 65 %RH

3. Operating Condition:


Temperature -40 to +70°C
 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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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

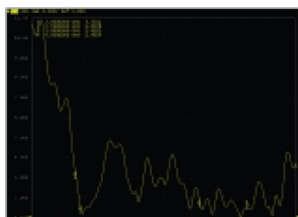
to a network analyzer to measure the VSWR

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

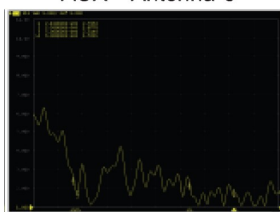
4-4.2 Measurement frequency points and VSWR value

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

Main Antenna-3



AUX Antenna-3



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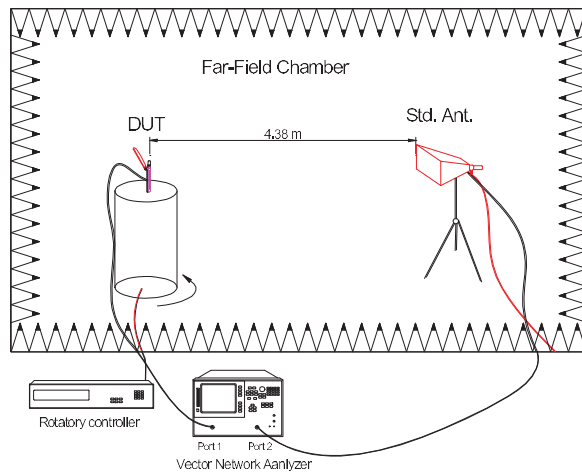
4-5. Efficiency and Gain

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

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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)

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

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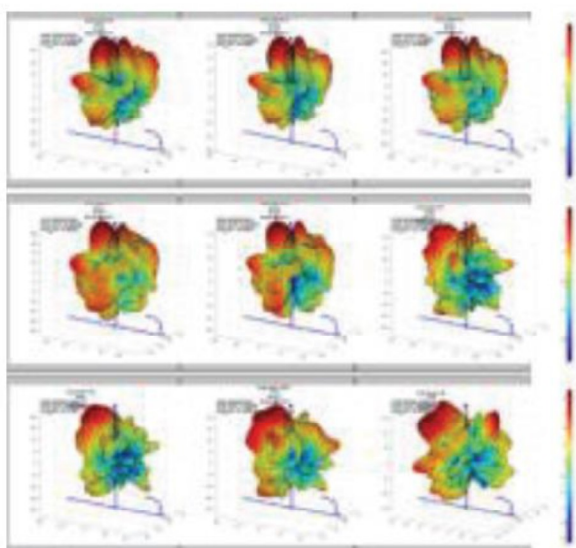
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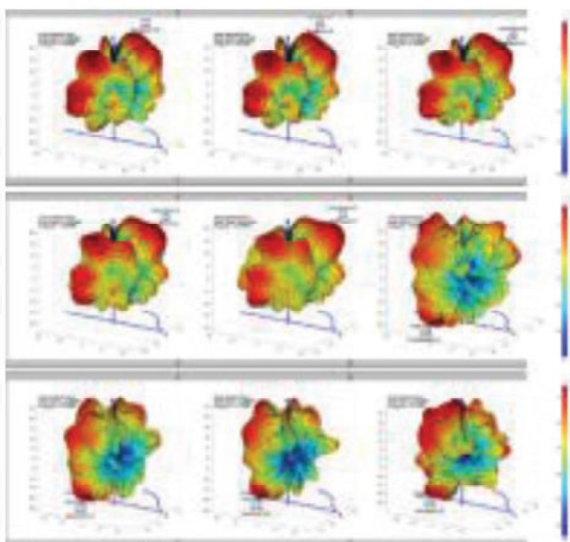
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4-5.3-3 Antenna 3D Radiation Pattern

Main Antenna-3



AUX Antenna-3



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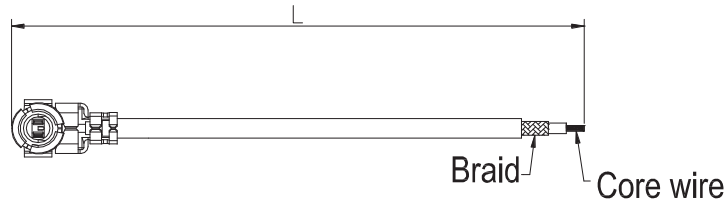
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5. Mechanical Specification:

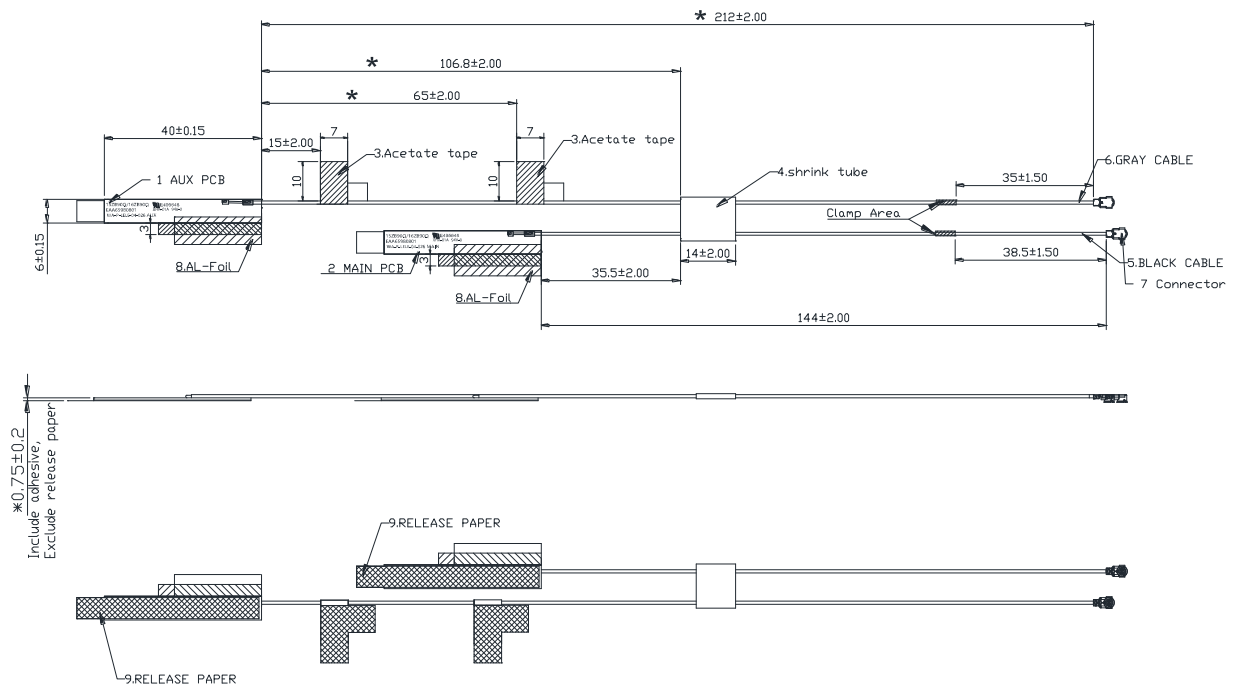
Connector: I-PEX MHF 4: 20611; Cable: RF Cable 0.81 (Main Black/Aux Gray)

Cable length: Main Antenna L: $155.6 \pm 2\text{mm}$ (Include connector)

Aux Antenna L: $224.8 \pm 2\text{mm}$ (Include connector)



Mechanical Configuration: (* dimension is important dimension)



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Material list :

Item	Description	Material	Quantity
1	PCB AUX	FR4 40x7mm,T0.6mm	1
2	PCB MAIN	FR4 40x7mm,T0.6mm	1
3	Acetate Tape	Acetate Tape 21x7mm, T0.12mm	2
4	Shrink Tube	Shrink Tube black, ϕ 1.5 x14mm	1
5	Cable black	Cable 0.81 black	1
6	Cable gray	Cable 0.81 gray	1
7	Connector	I-PEX MHF 4 for 0.81, 20611	2
8	AL-Foil	AL Foil	2
9	PCB TAPE	G9000 39.4x5.4mm, T0.15	2
10	Clamp	Clamp 0.81 5mm	2

6. UL File No:

ITEM	DESCRIPTION	SUPPLIER	UL File No
1	PCB	M00590	E495648
2	CABLE	HA0008	E318898
		HA0053	E464731

7. Product Picture:

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