

客戶名稱 : LG 16Z90R TC
CUSTOMER

Document No.: _____
Approval Sheet Rev.: P1
Spec. Rev. : P1

承認書
APPROVAL SHEET

產品品名/Product Model No. : WA-P-LBLB-04-110

客戶料號/Customer No. : EAA65985101

產品描述/Product Model No. : Wifi Antenna

發行日期/ Issue Date : 2023/6/14

承認日期/ Approved Date : _____

Approved by customer: (signing or stamping here)

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WA-P-LBLB-04-110 Specification

1. Explanation of part number :

WA - P - LBLB - 04 - 110
(1) (2) (3) (4) (5)

(1) Product Type : Wireless Antenna

(2) P: PCB+Cable

(3) Frequency : 2400~2500MHz&5150~5850MHz&5925~7125MHz

(4) Coaxial Cable Type : With ϕ 0.81 Main Black / AUX Gray

(5) Suffix : 110

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 16290R 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 & 5150~5850 & 5925~7125

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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 50 Ω 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	2.3
	2500	≤ 3.5	2.6
	5150	≤ 4.0	2.0
	7125	≤ 4.0	2.7
	Judgement		ok
Aux Antenna	2400	≤ 3.5	1.7
	2500	≤ 3.5	1.8
	5150	≤ 4.5	1.4
	7125	≤ 4.5	2.9
	Judgement		ok

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range, the corresponding multi-probe array is switched quickly by electronic switch, greatly improved the measurement efficiency.

The probe model: MA186960A(400MHz~7.5GHz) . Because of its capability of broadband frequency and the orthogonal polarization function, the number of probes needed to be equipped with the system is reduced; The small size of the probe reduces the coupling between the probes, make it is possible to insert probes of other frequency bands between probes, then a single system can support a wider frequency range

4-5.2 Efficiency and Gain

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

4-5-2-1 Electrical specification

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

4-5.2-2 Efficiency and Gain Test Data

Frequency (MHz)	Main Antenna-2			Frequency (MHz)	Aux Antenna-2		
	Efficiency (%)	Gain w/ cable loss (dBi)	Peak Gain w/ cable loss (dBi)		Efficiency (%)	Gain w/ cable loss (dBi)	Peak Gain w/ cable loss (dBi)
2.4GHz (2400~2500MHz)	42.2	-3.8	3.1	2.4GHz (2400~2500MHz)	36.4	-4.4	2.9
5.2&5.3GHz (5150~5350MHz)	21.3	-6.7	-2.1	5.2&5.3GHz (5150~5350MHz)	36.9	-4.3	2.8
5.5GHz (5470~5725MHz)	34.9	-4.6	2.5	5.5GHz (5470~5725MHz)	52.8	-2.8	5.7
5.8GHz (5725~5850MHz)	52.1	-2.8	5.2	5.8GHz (5725~5850MHz)	59.2	-2.3	5.3
6.2GHz (5925~6425MHz)	47.9	-3.2	4.8	6.2GHz (5925~6425MHz)	44.9	-3.5	3.7
6.5GHz (6425~6525MHz)	44.2	-3.5	1	6.5GHz (6425~6525MHz)	27.4	-5.6	-1
6.7GHz (6525~6875MHz)	41.9	-3.8	1.6	6.7GHz (6525~6875MHz)	36.3	-4.4	2.8
6.9GHz (6875~7125MHz)	49.5	-3.1	2.9	6.9GHz (6875~7125MHz)	28.6	-5.4	-1.4

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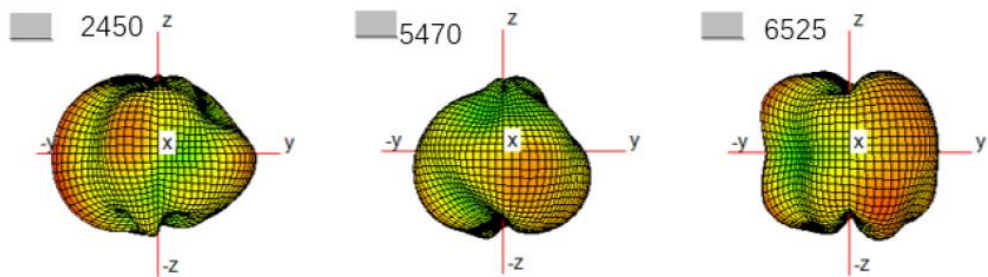
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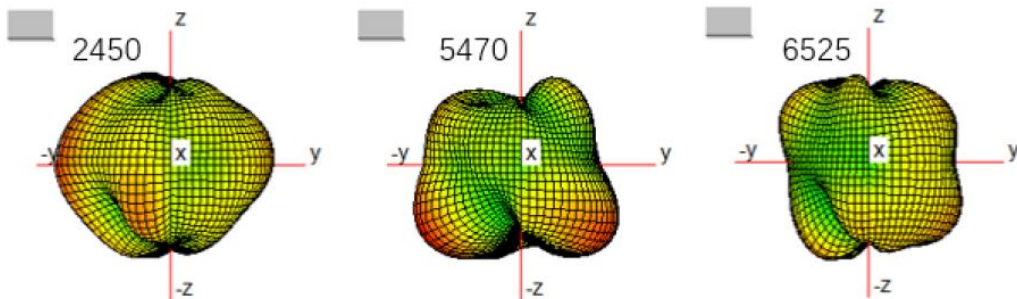
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4-5.2-3 Antenna 3D Radiation Pattern

Main Antenna-2



AUX Antenna-2

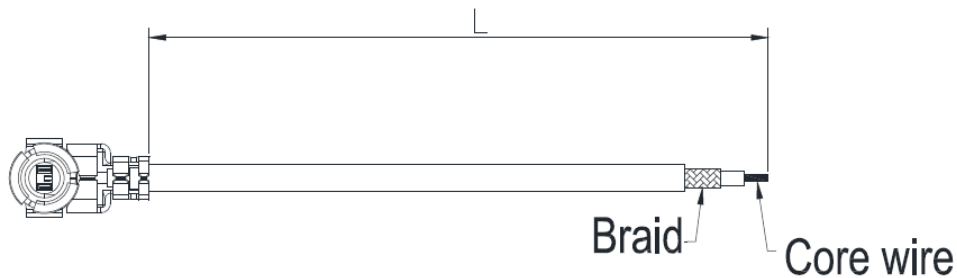


5. Mechanical Specification:

Connector: I-PEX MHF 4L: 20572; Cable: RF Cable 0.81 (Main Black/Aux Gray)

Cable length: Aux Antenna L: $194.7 \pm 2\text{mm}$ (Include connector)

Main Antenna L: $147.5 \pm 2\text{mm}$ (Include connector)



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