

TEST REPORT

FCC MPE Test for LCWB-001
Certification

APPLICANT
LG Electronics Inc.

REPORT NO.
HCT-RF-2009-FI011

DATE OF ISSUE
15 September 2020

Tested by
Jeong Ho Kim



Technical Manager
Jong Seok Lee



Accredited by KOLAS, Republic of KOREA

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고객비밀
CUSTOMER SECRET



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LCWB-001

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Additional Model

-

Applicant

LG Electronics Inc.

170, Seongsanpaechong-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do, 51533, Republic of Korea

Eut Type Model Name

RF Module
LCWB-001

FCC ID

BEJ-LCWB001

Date of Receipt

July 28, 2020

Frequency range

2 402 MHz ~ 2 480 MHz (Bluetooth LE)
2 412 MHz ~ 2 462 MHz (WLAN)

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.

This test results were applied only to the test methods required by the standard.

REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	September 15, 2020	Initial Release

Engineering Statement:

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC Rules under normal use and maintenance

This laboratory is not accredited for the test results marked *.

The above Test Report is the accredited test result by (KS Q) ISO/IEC 17025 AND KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA.(HCT Accreditation No.: KT197)

* The report shall not be reproduced except in full(only partly) without approval of the laboratory.

RF Exposure Statement

1. Limit

According to § 1.1310, § 2.1091 RF exposure is calculated.

(B) Limits for General Population/Uncontrolled Exposures

Frequency range (MHz)	Electric field Strength (V/m)	Magnetic field Strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
0.3 - 1.34.....	614	1.63	*(100)	30
1.34 - 30.....	824/f	2.19/f	*(180/ f ²)	30
30 - 300.....	27.5	0.073	0.2	30
300 - 1500.....			f/1500	30
1500 - 100.000.....			1.0	30

F = frequency in MHz

* = Plane-wave equivalent power density

2. Maximum Permissible Exposure Prediction

Prediction of MPE limit at a given distance

$$S = PG/4\pi R^2$$

S = Power density

P = Power input to antenna

G = Power gain to the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

3. RESULTS

3-1. BT LE

Average output Power at antenna input terminal	7.50	dBm
Average output Power at antenna input terminal	5.62	mW
Prediction distance	20.00	cm
Prediction frequency	2402 – 2480	MHz
Antenna Gain(typical)	1.500	dBi
Antenna Gain(numeric)	1.413	-
Power density at prediction frequency(S)	0.0016	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²

2.1091

EIRP	9.00 (dBm)
ERP	6.85 (dBm)
ERP	0.005 (W)
ERP Limit	3.00 (W)
MARGIN	27.92 (dB)

3-1. DTS

Average output Power at antenna input terminal	20.00	dBm
Average output Power at antenna input terminal	100.00	mW
Prediction distance	20.00	cm
Prediction frequency	2412 – 2462	MHz
Antenna Gain(typical)	1.500	dBi
Antenna Gain(numeric)	1.413	-
Power density at prediction frequency(S)	0.0281	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²

2.1091

EIRP	21.50 (dBm)
ERP	19.35 (dBm)
ERP	0.086 (W)
ERP Limit	3.00 (W)
MARGIN	15.42 (dB)