



TEST REPORT

FCC MPE Test for SZB23W
Certification

APPLICANT
LG Electronics Inc.

REPORT NO.
HCT-RF-2210-FI005

DATE OF ISSUE
October 27, 2022

Tested by
Kyung Jun Woo



Technical Manager
Kwon Jeong



Accredited by KOLAS, Republic of KOREA

HCT CO., LTD.
BongJai Huh
BongJai Huh / CEO



HCT Co., Ltd.

74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA
Tel. +82 31 634 6300 Fax. +82 31 645 6401



<h1 style="margin: 0;">TEST REPORT</h1> <p style="margin: 0;">FCC MPE Test for SZB23W</p>	<p>REPORT NO. HCT-RF-2210-FI005</p> <p>DATE OF ISSUE October 27, 2022</p> <p>Additional Model -</p>
---	--

Applicant	LG Electronics Inc. 222, LG-ro, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 451-713, Republic of Korea
------------------	---

Eut Type Model Name	RF Module SZB23W
FCC ID	BEJSZB23W
Frequency range	2405 MHz ~ 2480 MHz (Zigbee)

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	October 27, 2022	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

KOLAS Statement:

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. (KOLAS Accreditation No. KT197)

If this report is required to confirmation of authenticity, please contact to www.hct.co.kr



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. Zigbee

Max. Average output Power at antenna input terminal	9.00	dBm
Max. Average output Power at antenna input terminal	7.94	mW
Prediction distance	20.00	cm
Prediction frequency	2405 – 2480	MHz
Antenna Gain(typical)	1.46	dBi
Antenna Gain(numeric)	1.400	-
Power density at prediction frequency(S)	0.0022	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

2.1091

EIRP	10.46	(dBm)
ERP	8.31	(dBm)
ERP	0.007	(W)
ERP Limit	3.00	(W)
MARGIN	26.46	(dB)