

TEST REPORT

FCC MPE Test for PWFSA2
Certification

APPLICANT
LG Electronics Inc.

REPORT NO.
HCT-RF-1906-FI002-R1

DATE OF ISSUE
11 June 2019

HCT Co., Ltd.

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Other ID
FCC: BEJ-PWFSA2

Applicant **LG Electronics Inc.**
170, Seongsanpaechong-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do,
51533, Republic of Korea

Eut Type **Voice Recognition Module**
Model Name **PWFSA2**

Date of Receipt **May 10, 2019**

Frequency range **2 412 MHz ~ 2 462 MHz(WLAN)**

Tested by
Jung Ki Lim



(signature)

Technical Manager
Kwon Jeong



(signature)

HCT CO., LTD.
Soo Chan Lee
SooChan Lee / CEO

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	June. 04, 2019	Initial Release
1	June. 11, 2019	Modified the applicant's address

The measurements shown in this report were made in accordance with the procedures specified in § 2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998, 21 U.S. C.853(a)

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. DTS

Average output Power at antenna input terminal	19.00	dBm
Average output Power at antenna input terminal	79.43	mW
Prediction distance	20.00	cm
Prediction frequency	2412 – 2462	MHz
Antenna Gain(typical)	2.87	dBi
Antenna Gain(numeric)	1.936	-
Power density at prediction frequency(S)	0.031	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm ²

2.1091

EIRP	21.87 (dBm)
ERP	19.72 (dBm)
ERP	0.094 (W)
ERP Limit	3.00 (W)
MARGIN	15.05 (dB)