

TEST REPORT

FCC MPE Test for TM19FNEUHD2
Class II Permissive Change

APPLICANT
LG Electronics Inc.

REPORT NO.
HCT-RF-2501-FC057

DATE OF ISSUE
January 23, 2025

Tested by
Jung Ki Lim



Technical Manager
Jong Seok Lee



Accredited by KOLAS, Republic of KOREA

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Applicant

LG Electronics Inc.
128, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea

Product Name

Telematics

Model Name

TM19FNEUHD2

Date of Test

September 30, 2024 ~ January 23, 2025

Location of Test

☒ Permanent Testing Lab ☐ On Site Testing
(Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea)

FCC ID

BEJTM19FNEUHD2

FCC Classification:

PCS Licensed Transmitter (PCB)

Test Standard Used

FCC Rule Part(s) : § 1.1310, § 2.1091

Test Results

PASS

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	January 23, 2025	Initial Release

Notice

Content

The measurements shown in this report were made in accordance with the procedures specified in CFR47 section § 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)

The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.

The test results have only been applied with the test methods required by the standard(s).

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

Information provided by the applicant is marked **.

Test results provided by external providers are marked ***.

When confirmation of authenticity of this test report is required, please contact www.hct.co.kr

This test report provides test result(s) under the scope accredited by the Korea Laboratory Accreditation Scheme (KOLAS), which signed the ILAC-MRA.
(KOLAS (KS Q ISO/IEC 17025) Accreditation No. KT197)

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 2G3G

- GSM850-

Max output power at antenna input terminal	34.00	dBm
Max output power at antenna input terminal	2511.89	mW
Prediction distance	67.00	cm
Prediction frequency	824.2 ~ 848.8	MHz
Antenna gain (typical)	2.14	dBi
Antenna gain (numeric)	1.637	-
Power density at prediction frequency (S)	0.0729	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.5495	mW/cm ²

- GSM1900-

Max output power at antenna input terminal	29.20	dBm
Max output power at antenna input terminal	831.76	mW
Prediction distance	20.00	cm
Prediction frequency	1850.2 ~ 1909.8	MHz
Antenna gain (typical)	1.77	dBi
Antenna gain (numeric)	1.50	-
Power density at prediction frequency (S)	0.0751	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

-WCDMA B2

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	20.00	cm
Prediction frequency	1852.4 ~ 1907.6	MHz
Antenna gain (typical)	1.77	dBi
Antenna gain (numeric)	1.50	-
Power density at prediction frequency (S)	0.2487	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

-WCDMA B4

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	20.00	cm
Prediction frequency	1 712.4 ~ 1 752.6	MHz
Antenna gain (typical)	0.31	dBi
Antenna gain (numeric)	1.07	-
Power density at prediction frequency (S)	0.0537	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

-WCDMA B5

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	67.00	cm
Prediction frequency	826.4 ~ 846.6	MHz
Antenna gain (typical)	2.14	dBi
Antenna gain (numeric)	1.637	-
Power density at prediction frequency (S)	0.0073	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.5509	mW/cm ²

3.2 LTE Band

- LTE Band 2 -

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	20.00	cm
Prediction frequency	1850.7 ~ 1900.0	MHz
Antenna gain (typical)	3.90	dBi
Antenna gain (numeric)	2.45	-
Power density at prediction frequency (S)	0.1227	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- LTE Band 5 -

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	67.00	cm
Prediction frequency	824.7 ~ 844.0	MHz
Antenna gain (typical)	2.14	dBi
Antenna gain (numeric)	1.637	-
Power density at prediction frequency (S)	0.0073	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.5498	mW/cm ²

- LTE Band 7 -

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	20.00	cm
Prediction frequency	2502.5 ~ 2560.0	MHz
Antenna gain (typical)	1.20	dBi
Antenna gain (numeric)	1.32	-
Power density at prediction frequency (S)	0.0659	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- LTE Band 41(38) -

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	20.00	cm
Prediction frequency	2498.5 ~ 2680.0	MHz
Antenna gain (typical)	1.20	dBi
Antenna gain (numeric)	1.32	-
Power density at prediction frequency (S)	0.0659	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- LTE Band 42-

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	20.00	cm
Prediction frequency	3452.5 ~ 3540.0	MHz
Antenna gain (typical)	2.77	dBi
Antenna gain (numeric)	1.89	-
Power density at prediction frequency (S)	0.0946	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- LTE Band 66-

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	20.00	cm
Prediction frequency	1710.7 ~ 1770.0	MHz
Antenna gain (typical)	0.31	dBi
Antenna gain (numeric)	1.07	-
Power density at prediction frequency (S)	0.0537	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

3.3 NR Band

- NR5 -

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	20.00	cm
Prediction frequency	826.5 ~ 839.0	MHz
Antenna gain (typical)	2.14	dBi
Antenna gain (numeric)	1.637	-
Power density at prediction frequency (S)	0.0818	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.5510	mW/cm ²

- NR7 -

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	20.00	cm
Prediction frequency	2502.5 ~ 2550.0	MHz
Antenna gain (typical)	1.20	dBi
Antenna gain (numeric)	1.32	-
Power density at prediction frequency (S)	0.0659	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

-N26(Part22)-

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	20.00	cm
Prediction frequency	826.5 ~ 839.0	MHz
Antenna gain (typical)	2.14	dBi
Antenna gain (numeric)	1.637	-
Power density at prediction frequency (S)	0.0818	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.5510	mW/cm ²

-N26(Part90)-

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	20.00	cm
Prediction frequency	816.5 ~ 824.0	MHz
Antenna gain (typical)	2.63	dBi
Antenna gain (numeric)	1.832	-
Power density at prediction frequency (S)	0.0916	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	0.5443	mW/cm ²

-NR41 -

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	20.00	cm
Prediction frequency	2506.02 ~ 2649.99	MHz
Antenna gain (typical)	1.20	dBi
Antenna gain (numeric)	1.32	-
Power density at prediction frequency (S)	0.0659	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²

- NR77(78) -

Max output power at antenna input terminal	24.00	dBm
Max output power at antenna input terminal	251.19	mW
Prediction distance	20.00	cm
Prediction frequency	3460.02 ~ 3930.00	MHz
Antenna gain (typical)	2.77	dBi
Antenna gain (numeric)	1.89	-
Power density at prediction frequency (S)	0.0946	mW/cm ²
MPE limit for uncontrolled exposure at prediction frequency	1.0000	mW/cm ²