

ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR LOW-POWER, NON-LICENSED TRANSMITTER

Test Report No. : OT-191-RWD-047
AGR No. : A189A-181
Applicant : LG Electronics USA
Address : 1000 Sylvan Avenue, Englewood Cliffs, New Jersey, United States, 07632
Manufacturer : LG Electronics Inc.
Address : 222 LG-ro, Jinwi-Myeon, Pyeongtaek -Si, Gyeonggi-Do, 451-713, Korea
Type of Equipment : CAR NAVIGATION
FCC ID. : BEJLNM1980NCLX
Model Name : LNM1980NCLX
Serial number : N/A
Total page of Report : 6 pages (including this page)
Date of Incoming : October 12, 2018
Date of issue : January 17, 2019

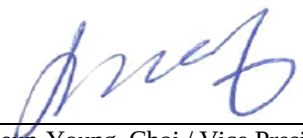
SUMMARY

The equipment complies with the regulation; **FCC PART 15 SUBPART C Section 15.247**

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by: 
 Jae-Ho Lee / Chief Engineer
 ONETECH Corp.

Approved by: 
 Keun-Young, Choi / Vice President
 ONETECH Corp.

CONTENTS

PAGE

1. VERIFICATION OF COMPLIANCE	4
2. GENERAL INFORMATION	5
2.1 PRODUCT DESCRIPTION.....	5
2.2 ALTERNATIVE TYPE(S)/MODEL(S); ALSO COVERED BY THIS TEST REPORT.....	5
3. EUT MODIFICATIONS.....	5
4. MAXIMUM PERMISSIBLE EXPOSURE	6
4.1 RF EXPOSURE CALCULATION	6
4.2 EUT DESCRIPTION.....	6
4.3 3 CALCULATED MPE SAFE DISTANCE.....	6

Revision History

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-191-RWD-047	January 17, 2019	Initial Issue	All

1. VERIFICATION OF COMPLIANCE

Applicant : LG Electronics USA
 Address : 1000 Sylvan Avenue, Englewood Cliffs, New Jersey, United States, 07632
 Contact Person : Kyung-su Han / Director
 Telephone No. : (201) 266-2215
 FCC ID : BEJLNM1980NCLX
 Model Name : LNM1980NCLX
 Brand Name : -
 Serial Number : N/A
 Date : January 17, 2019

EQUIPMENT CLASS	<i>DSS – PART 15 SPREAD SPECTRUM TRANSMITTER</i>
E.U.T. DESCRIPTION	CAR NAVIGATION
KIND OF EQUIPMENT	Modular Transmitter
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247
Modifications on the Equipment to Achieve Compliance	None
Final Test was Conducted On	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

2. GENERAL INFORMATION

2.1 Product Description

The LG Electronics USA, Model LNM1980NCLX (referred to as the EUT in this report) is a CAR NAVIGATION. The product specification described herein was obtained from product data sheet or user's manual.

Device Type	CAR NAVIGATION	
Operating Frequency	2 402 MHz ~ 2 480 MHz	
RF Output Power	1 Mbps	-2.42 dBm
	2 Mbps	0.15 dBm
	3 Mbps	0.42 dBm
Number of Channel	79 Channels	
Modulation Type	GFSK for 1 Mbps, $\pi/4$ -DQPSK for 2 Mbps, 8-DPSK for 3 Mbps	
Antenna Type	Metal Stamped Antenna	
Antenna Gain	3.46 dBi	
List of each Osc. or crystal Freq.(Freq. $\geq$ 1 MHz)	24 MHz, 26MHz, 27 MHz, 55.46667 MHz	
Rated Supply Voltage	DC 12.0 V	

2.2 Alternative type(s)/model(s); also covered by this test report.

-. None

3. EUT MODIFICATIONS

-. None

4. MAXIMUM PERMISSIBLE EXPOSURE

4.1 RF Exposure Calculation

According to the FCC rule §1.1310, the limit for General Population/Uncontrolled exposure is 1 mW/cm² for the device operating 1 500 ~ 100 000 MHz.

4.2 EUT Description

Kind of EUT	CAR NAVIGATION	
Operating Frequency Band	☐ Wireless Microphone: 494.000 MHz ~ 501.000 MHz and 498.200 MHz ~ 505.200 MHz ☐ WLAN: 2 412 MHz ~ 2 462 MHz ☐ WLAN: 5 180 MHz ~ 5 240 MHz ☐ WLAN: 5 745 MHz ~ 5 825 MHz ☒ Bluetooth: 2 402 MHz ~ 2 480 MHz ☐ Bluetooth BLE: 2 402 MHz ~ 2 480 MHz	
MAX. RF OUTPUT POWER	1 Mbps	-2.42 dBm
	2 Mbps	0.15 dBm
	3 Mbps	0.42 dBm
Antenna Gain	3.46 dBi	
Exposure Evaluation Applied	☒ MPE ☐ SAR ☐ N/A	

4.3 3 Calculated MPE Safe Distance

According to above equation, the following result was obtained.

Operating Freq. Band (MHz)	Operating Mode	Target Power W/tolerance	Max tune up power		Antenna Gain		Power Density (mW/cm ²) @ 20 cm Separation	Limit (mW/cm ²)
		(dBm)	(dBm)	(mW)	Log	Linear		
2 402 ~ 2 480	1 Mbps	-2.92 ± 0.5	-2.42	0.57	3.46	2.218	0.000 025	1.00
	2 Mbps	-0.35 ± 0.5	0.15	1.04			0.000 046	1.00
	3 Mbps	-0.08 ± 0.5	0.42	1.10			0.000 049	1.00