

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. : BEJLNM1980NMLX

Model Name : LNM1980NMLX

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:

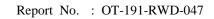
Jae-Ho Lee / Chief Engineer ONETECH Corp. Approved by:

Keun-Young, Choi / Vice President

Report No.: OT-191-RWD-047

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 : BEJLNM1980NMLX

Model Name : LNM1980NMLX

Brand Name : Serial Number : N/A

Date : January 17, 2019

EQUIPMENT CLASS	DSS – PART 15 SPREAD SPECTRUM TRANSMITTER
E.U.T. DESCRIPTION	CAR NAVIGATION
KIND OD EQUIPMENT	Modular Transmitter
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT	Certification
AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED	FOG DART 15 CURDART OF CALL 15 247
UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247
Modifications on the Equipment to Achieve	Name -
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 LNM1980NMLX (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		
	1 Mbps	-2.42 dBm	
RF Output Power	2 Mbps	0.15 dBm	
	3 Mbps	0.42 dBm	
Number of Channel	79 Channels		
Modulation Type	GFSK for 1 Mbps, π/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. >= 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/cm^2 for the device operating $1 500 \sim 100 000 \text{ MHz}$.

4.2 EUT Description

4.2 EU1 Description				
Kind of EUT	CAR NAVIGATION			
	☐ Wireless Microphone: 494.000 MHz ~ 501.000 MHz			
	and 498.200 MHz ~ 505.200 MHz			
	□ WLAN: 2 412 MHz ~ 2 462 MHz			
Operating Frequency Band	□ 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			
	1 Mbps	-2.42 dBm		
MAX. RF OUTPUT POWER	2 Mbps	0.15 dBm		
	3 Mbps	0.42 dBm		
Antenna Gain	3.46 dBi			
	■ MPE			
Exposure	□ SAR			
Evaluation Applied	□ N/A			

4.3 3 Calculated MPE Safe Distance

According to above equation, the following result was obtained.

Operating Freq. Band	Operating Mode	Target Power W/tolerance	Max tune up		Antenna Gain		Power Density (mW/cm²) @ 20 cm	Limit (mW/cm²)
(MHz)		(dBm)	(dBm)	(mW)	Log	Linear	Separation	
	1 Mbps	-2.92 ± 0.5	-2.42	0.57			0.000 025	1.00
2 402 ~ 2 480	2 Mbps	-0.35 ± 0.5	0.15	1.04	3.46	2.218	0.000 046	1.00
2 400	3 Mbps	-0.08 ± 0.5	0.42	1.10			0.000 049	1.00