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TEST REPORT

of

FCC CFR 47 part 1, 1.1307(b), 1.1310

FCC ID: BEJLAN5810WR0

Equipment Under Test : RADIO - CAR

Model Name : LAN5810WR0

Applicant : LG Electronics Inc.

Manufacturer : LG Electronics Inc.

Date of Receipt : 2017.09.20

Date of Test(s) : 2017.09.26 ~ 2017.10.13

Date of Issue : 2017.11.09

In the configuration tested, the EUT complied with the standards specified above.

Tested By:

Date:

2017.11.09

Jinhyoung Cho

Hyunchae You

Technical Manager:

Date:

2017.11.09

The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This test report cannot be reproduced, except in full, without prior written permission of the Company. This test report does not assure KOLAS accreditation.



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1. General Information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)

-Wireless Div. 2FL, 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807

All SGS services are rendered in accordance with the applicable SGS conditions of service available on request and accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx.

Phone No. : +82 31 688 0901 Fax No. : +82 31 688 0921

1.2. Details of Applicant

: LG Electronics Inc. Applicant

Address : 222 LG-ro Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 17709, Korea

Contact Person : Kim, Hyun-Seung Phone No. : +82 10 2743 4708

1.3. Details of manufacturer

: LG Electronics Inc. Company

Address 222 LG-ro Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 17709, Korea

1.4. Description of EUT

Kind of Product	RADIO - CAR
Model Name	LAN5810WR0
Power Supply	DC 12.0 V
Frequency Range	2 402 吨 ~ 2 480 吨 (Bluetooth)
Modulation Technique	GFSK, π/4DQPSK, 8DPSK
Number of Channels	79 channels
Antenna Type	Multilayer Chip Antenna
Antenna Gain	3.5 dBi

1.5. Test report revision

Revision	Report number	Date of Issue	Description
0	F690501/RF-RTL011982	2017.11.09	Initial

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2. RF Exposure Evaluation

2.1. Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(b), 1.1310

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (썐)	Electric Field Strength(V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm²)	Average Time	
	(A) Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	*100	6	
3.0 – 30	1842/f	4.89/f	*900/f ²	6	
30 – 300	61.4	0.163	1.0	6	
300 – 1 500	-	-	f/300	6	
1 500 – 100 000	-	-	5	6	
(B) Limits for General Population/Uncontrolled Exposure					
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 – 1 500	-	-	f/1500	30	
1 500 – 100 000	-	-	1.0	<u>30</u>	

2.1.1. Friis transmission formula: $Pd = (Pout*G)/(4*pi*R^2)$

Where Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

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2.1.2. Test Result of RF Exposure Evaluation

Test Item : RF Exposure Evaluation Data

Test Mode : Normal Operation

2.1.3. Output Power into Antenna & RF Exposure Evaluation Distance

Bluetooth

- Maximum tune up tolerance

Operating Frequency (쌘)	Output Average Power to Antenna (dB m)	Antenna Gain (dB i)	Power Density at 20 cm (mW/cm²)	Limits (mW/cm²)
2 402 ~ 2 480	4	3.5	0.001 119	1

Note:

- The power density Pd (5th column) at a distance of 20 cm calculated from the friis transmission formula is far below the limit of 1 mW/cm².
- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
- This equipment should be installed and operated with minimum 20 $\,\mathrm{cm}$ between the radiator and your body.
- The antenna gain of this transmitter is less than 6 $\,\mathrm{dB}$ i and must not be collocated or operating in conjunction with any other antenna or transmitter unless authorized to do so by the FCC.

- End of the Test Report -