

TEST REPORT

of

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


FCC ID: BEJIA0R370TEJK

1. Equipment Under Test : Car Navigation System
2. Model Name : GEN6 JK EUR
3. Variant Model Name(s) : Refer to page 3
4. Applicant : LG Electronics USA
5. Manufacturer : LG Electronics Inc.
6. Date of Receipt : 2020.06.15
7. Date of Test(s) : 2020.08.05 ~ 2020.09.24
8. Date of Issue : 2020.09.24

In the configuration tested, the EUT complied with the standards specified above. This test report does not assure KOLAS accreditation.

- 1) The results of this test report are effective only to the items tested.
- 2) The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received.

Tested by:



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1. General Information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)

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- Designation number: KR0150

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>.

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1.2. Details of Applicant

Applicant : LG Electronics USA.

Address : 1000 Sylvan Avenue, Englewood Cliffs, New Jersey, United States, 07632

Contact Person : Han, Kyung-Su

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1.3. Details of Manufacturer

Company : LG Electronics Inc.

Address : 10, Magokjungang 10-ro, Gangseo-gu, Seoul, Republic of Korea, 07796

1.4. Description of EUT

Kind of Product	Car Navigation System
Model Name	GEN6 JK EUR
Variant Model Name(s)	GEN6 JK BRZ, GEN6 JK CAN, GEN6 JK KOR, GEN6 JK MID, GEN6 JK ROC, GEN6 JK USA, IA0R370TEJK
Power Supply	DC 12 V
Frequency Range	2 500 MHz ~ 2 570 MHz
Antenna Type	C/PAD antenna
Antenna Gain	1.63 dBi

1.5. Test Report Revision

Revision	Report Number	Date of Issue	Description
0	F690501-RF-RTL001203	2020.09.24	Initial

1.6. Information of Variant Models

Model Name	LG P/N	HMC P/N	LTE	Navigation	Tuner (Default : AM/FM)	Voice recognition	Market	Vehicle Category
GEN6 JK BRZ	IA0R160NSJK	96560-AR###	X	O	X	O	Brazil	ICE
	IA0S160NSJK	96560-AR###	X	O	X	O	Brazil	EV
GEN6 JK CAN	IA0R500TNJK	96560-AR###	O	O	SXM	O	Canada	ICE
	IA0S500TNJK	96560-AR###	O	O	SXM	O	Canada	EV
GEN6 JK EUR	ID0R140NEJK	96560-AR###	X	X	DAB	X	Turkmenistan	ICE
	ID0R350EEJK	96560-AR###	X	X	DAB	O	Europe	ICE
	IA0R360EEJK	96560-AR###	X	O	DAB	O	Europe	ICE
	IA0R370TEJK Note 1)	96560-AR###	O	O	DAB	O	Europe	ICE
	IA0R400NCJK	96560-AR###	X	O	DAB	X	Australia	ICE
	IA0R380EEJK	96560-AR###	X	O	DAB	O	Turkey	ICE
	IA0R810TRJK	96560-AR###	O	O	X	O	Russia	ICE
	IA0R820EEJK	96560-AR###	X	O	X	O	Belarus	ICE
	ID0R800EEJK	96560-AR###	X	X	X	O	Kazakhstan	ICE
	ID0R320NEJK	96560-AR###	X	X	X	O	Uzbekistan	ICE
	ID0S140NEJK	96560-AR###	X	X	DAB	X	Turkmenistan	EV
	ID0S350EEJK	96560-AS###	X	X	DAB	O	Europe	EV
	IA0S360EEJK	96560-AS###	X	O	DAB	O	Europe	EV
	IA0S370TEJK	96560-AS###	O	O	DAB	O	Europe	EV
	IA0S400NCJK	96560-AR###	X	O	DAB	X	Australia	EV
	IA0S380EEJK	96560-AR###	X	O	DAB	O	Turkey	EV
	IA0S810TRJK	96560-AR###	X	O	X	O	Russia	EV
	IA0S820TRJK	96560-AR###	X	O	X	O	Belarus	EV
	ID0S800EEJK	96560-AR###	X	X	X	O	Kazakhstan	EV
	ID0S320NEJK	96560-AR###	X	X	X	O	Uzbekistan	EV
GEN6 JK KOR	IA0R000TKJK	96560-AR###	O	O	DMB	O	Korea	ICE
	IA0S000TKJK	96560-DS###	O	O	DMB	O	Korea	EV
GEN6 JK MID	IA0R120NMJK	96560-AR###	X	O	RDS	X	Middle East	ICE
	ID0R200NMJK	96560-AR###	X	X	RDS	X	Middle East	ICE
	IA0R210EMJK	96560-AR###	X	O	RDS	X	UAE	ICE
	IA0S120NMJK	96560-AR###	X	O	RDS	X	Middle East	EV
	ID0S200NMJK	96560-AR###	X	X	RDS	X	Middle East	EV

Model Name	LG P/N	HMC P/N	LTE	Navigation	Tuner (Default : AM/FM)	Voice recognition	Market	Vehicle Category
GEN6 JK ROC	ID0R330NNJK	96560-AR###	X	X	RDS	X	Mexico	ICE
	ID0R100NGJK	96560-AR###	X	X	X	X	Global	ICE
	ID0R300NGJK	96560-AR###	X	X	X	X	Global	ICE
	ID0R110NIJK	96560-AR###	X	X	DRM	X	India	ICE
	ID0R130NGJK	96560-AR###	X	X	X	X	Global	ICE
	ID0R150NSJK	96560-AR###	X	X	X	X	Colombia	ICE
	ID0R310NMJK	96560-AR###	X	X	X	X	Iran	ICE
	ID0R340NAJK	96560-AR###	X	X	X	X	Global	ICE
	ID0S330NNJK	96560-AR###	X	X	RDS	X	Mexico	EV
	ID0S100NGJK	96560-AR###	X	X	X	X	Global	EV
	ID0S300NGJK	96560-AR###	X	X	X	X	Global	EV
	ID0S110NIJK	96560-AR###	X	X	DRM	X	India	EV
	ID0S130NGJK	96560-AR###	X	X	X	X	Global	EV
	ID0S150NSJK	96560-AR###	X	X	X	X	Colombia	EV
	ID0S310NMJK	96560-AR###	X	X	X	X	Iran	EV
	ID0S340NAJK	96560-AR###	X	X	X	X	Global	EV
GEN6 JK USA	IA0R600TNJK	96560-AR###	O	O	SXM	O	USA	ICE
	IA0R610TNJK	96560-AR###	O	O	SXM	O	Guam	ICE
	IA0S600TNJK	96560-AR###	O	O	SXM	O	UAE	EV
	IA0S610TNJK	96560-AR###	O	O	SXM	O	Guam	EV

Note;

- The tested model's LG P/N is IA0R370TEJK.
 - The above table describes model differences by part numbers.
- 1) EUT Part Number
 - 2) Applicant consigns only basic model to test, therefore this test report just guarantees the units which have been tested.
 - 3) The applicant/manufacturer is responsible for the compliance of all variants.
 - 4) HCM means Hyundai and P/N means part number.
 - 5) LG P/N can be changed according to different options, not related to safety.
 - 6) The symbol “#” in the part number can be 0 to 9 or A to Z according to soft-ware update, colour of enclosure, front design, etc. not related to safety.

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 (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	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
<u>1 500-100 000</u>	-	-	<u>1.0</u>	<u>30</u>

2.1.1. Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where P_d = power density in mW/cm^2

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

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

P_d the limit of MPE, $1 mW/cm^2$. 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.

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

LTE Band 7
- Maximum tune up tolerance

Frequency Range (MHz)	Output Average Power to Antenna (dB m)	Antenna Gain (dB i)	Power Density at 20 cm (mW/cm ²)	Limits (mW/cm ²)
2 500 ~ 2 570	25.7	1.63	0.107 580	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 cm between the radiator and your body.
- The antenna gain of this transmitter is less than 6 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.
- According to KDB 447498 D01 RF Exposure Guidance 4.1.

- End of the Test Report -