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MEASUREMENT REPORT FCC Part 15.225 NFC

Applicant Name:

LG Electronics Inc.

222 LG-ro

Jinwi-myeon, Pyeongtaek-si

Gyeonggi-do, 17709, Korea

Date of Testing:

04/05/2016

Test Site/Location:

PCTEST Lab, Columbia, MD, USA

Test Report Serial No.:

0Y1604060724.BEJ

FCC ID:

BEJNM4HO

APPLICANT:

LG Electronics Inc.

Application Type:

Certification

Model(s):

NM4-HO

EUT Type:

Car NFC Unit

Frequency:

13.56MHz

FCC Classification:

Low Power Communications Device Transmitter (DXX)

FCC Rule Part(s):

FCC Part 15 Subpart C (15.225)

Test Procedure(s):

ANSI C63.10-2013

The device bearing the FCC Identifier specified above has been shown to comply with the applicable technical standards as indicated in the measurement report and has been tested in accordance with the measurement procedures specified in ANSI C63.10-2013 (See Test Report). These measurements were performed with no deviation from the standards. Test results reported herein relate only to the item(s) tested.

I authorize and attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

NVLAP accreditation does not constitute any product endorsement by NVLAP or any agency of the United States Government. This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.


Randy Ortanez
President

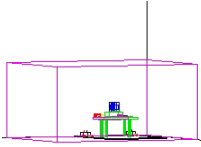

Lab Code 100431-0

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T A B L E O F C O N T E N T S

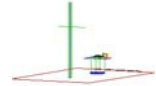
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MEASUREMENT REPORT

FCC Part 15.225

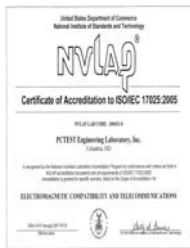
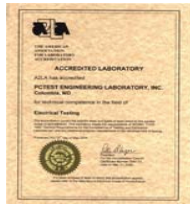


§ 2.1033 General Information

APPLICANT: LG Electronics Inc.
APPLICANT ADDRESS: 222 LG-ro
 Jinwi-myeon, Pyeongtaek-si
 Gyeonggi-do, 17709, Korea
TEST SITE: PCTEST ENGINEERING LABORATORY, INC.
TEST SITE ADDRESS: 7185 Oakland Mills Road, Columbia, MD 21046 USA
FCC RULE PART(S): Part 15 Subpart C (15.225)
BASE MODEL: NM4-HO
FCC ID: BEJNM4HO
FCC CLASSIFICATION: Low Power Communications Device Transmitter (DXX)
Test Device Serial No.: N/A ☐ Production ☒ Pre-Production ☐ Engineering
DATE(S) OF TEST: 04/05/2016
TEST REPORT S/N: 0Y1604060724.BEJ

Test Facility / Accreditations

Measurements were performed at PCTEST Engineering Lab located in Columbia, MD 21046, U.S.A.



- PCTEST facility is an FCC registered (PCTEST Reg. No. 159966) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules and Industry Canada (2451B-1).
- PCTEST Lab is accredited to ISO 17025 by U.S. National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP Lab code: 100431-0) in EMC, FCC and Telecommunications.
- PCTEST Lab is accredited to ISO 17025-2005 by the American Association for Laboratory Accreditation (A2LA) in Specific Absorption Rate (SAR) testing, Hearing Aid Compatibility (HAC) testing, CTIA Test Plans, and wireless testing for FCC and Industry Canada Rules.
- PCTEST Lab is a recognized U.S. Conformity Assessment Body (CAB) in EMC and R&TTE (n.b. 0982) under the U.S.-EU Mutual Recognition Agreement (MRA).
- PCTEST TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC Guide 65 by the American National Standards Institute (ANSI) in all scopes of FCC Rules and Industry Canada Standards (RSS).
- PCTEST facility is an IC registered (2451B-1) test laboratory with the site description on file at Industry Canada.
- PCTEST is a CTIA Authorized Test Laboratory (CATL) for AMPS, CDMA, and EvDO wireless devices and for Over-the-Air (OTA) Antenna Performance testing for AMPS, CDMA, GSM, GPRS, EGPRS, UMTS (W-CDMA), CDMA 1xEVDO, and CDMA 1xRTT.

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1.0 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2 PCTEST Test Location

The map below shows the location of the PCTEST LABORATORY, its proximity to the FCC Laboratory, the Columbia vicinity, the Baltimore-Washington Intern't'l (BWI) airport, the city of Baltimore and the Washington, DC area. (See Figure 1-1).

These measurement tests were conducted at the PCTEST Engineering Laboratory, Inc. facility located at 7185 Oakland Mills Road, Columbia, MD 21046. The site coordinates are 39° 10'23" N latitude and 76° 49'50" W longitude. The facility is 0.4 miles North of the FCC laboratory, and the ambient signal and ambient signal strength are approximately equal to those of the FCC laboratory. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2014 on January 22, 2015.

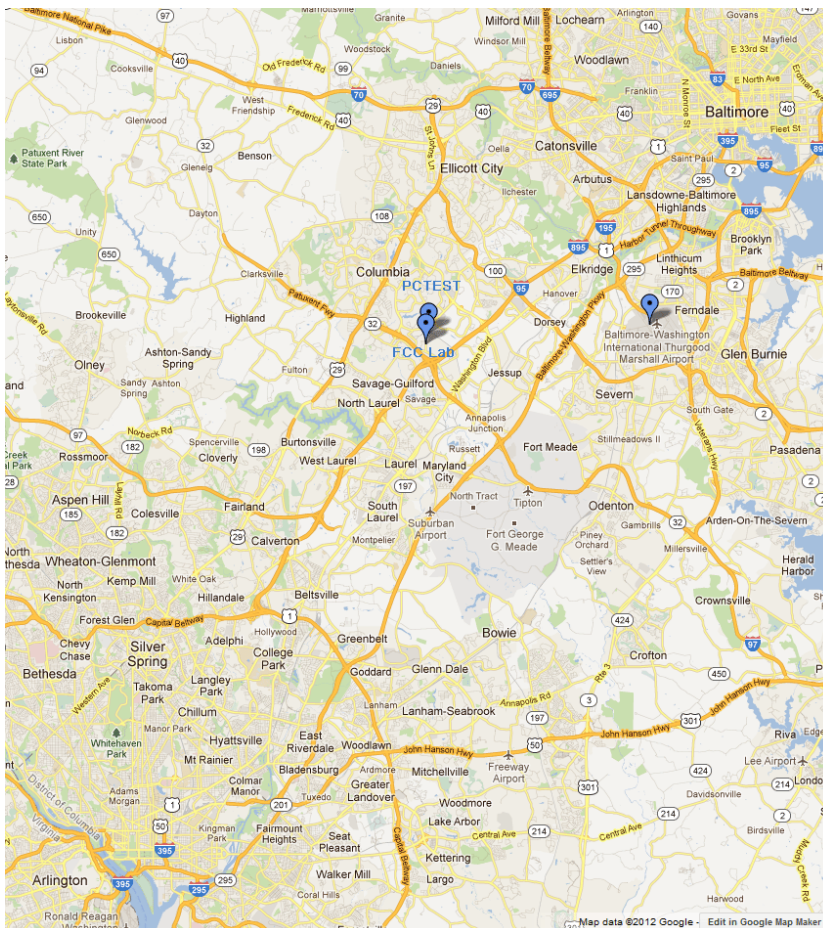


Figure 1-1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **LG Electronics Car NFC Unit FCC ID: BEJNM4HO**. The test data contained in this report pertains only to the emissions due to the NFC transmitter of the EUT.

2.2 Device Capabilities

This device contains the NFC capability.

2.3 Test Configuration

The LG Electronics Car NFC Unit FCC ID: BEJNM4HO was set to continuously transmit at 13.56MHz. This was performed using a manufacturer supplied NFC card. Testing was performed with the NFC card mounted onto a 15mm spacer block. The 15mm distance between the card and the car unit was used in order to simulate the distance between the NFC car unit and the car frame when installed. The NFC car unit itself was powered by a DC power supply set to 12V. This device was tested in accordance with the guidance of ANSI C63.10-2013. See Section 3.2 of this test report for a description of the radiated emissions test setup.

2.4 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

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3.0 DESCRIPTION OF TEST

3.1 Evaluation Procedure

The measurement procedure described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2013) was used in the measurement of the **LG Electronics Car NFC Unit FCC ID: BEJNM4HO**.

Deviation from measurement procedure.....None

3.2 Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. The test site inside the chamber is a 6m x 5.2m elliptical, obstruction-free area in accordance with Figure 5.7 in Clause 5 of ANSI C63.4-2014. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, a 72.4cm high PVC support structure is placed on top of the turntable. A 3" (~7.6cm) sheet of high density polystyrene is used as the table top and is placed on top of the PVC supports to bring the total height of the table to 80cm. For measurements above 1GHz, a high density expanded polystyrene block is placed on top of the test table to bring the total table height to 1.5m.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up was placed on top of the 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions.

3.3 Environmental Conditions

The temperature is controlled within range of 15°C to 35°C. The relative humidity is controlled within range of 10% to 75%. The atmospheric pressure is monitored within the range 86-106kPa (860-1060mbar).

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4.0 ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

The antenna of the LG Electronics Car NFC Unit are **permanently attached**.

Conclusion:

The **LG Electronics Car NFC Unit FCC ID: BEJNM4HO** unit complies with the requirement of §15.203.

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5.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013. All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95% level of confidence. The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Contribution	Expanded Uncertainty ($\pm$ dB)
Radiated Disturbance (<1GHz)	4.98

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6.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST).

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	RE1	Radiated Emissions Cable Set (UHF/EHF)	4/28/2015	Annual	4/28/2016	RE1
Agilent	8447D	Broadband Amplifier	6/12/2015	Annual	6/12/2016	1937A03348
Agilent	N9020A	MXA Signal Analyzer	11/5/2015	Annual	11/5/2016	US46470561
Agilent	N9038A	MXE EMI Receiver	4/24/2015	Annual	4/24/2016	MY51210133
Com-Power	AL-130	9kHz - 30MHz Loop Antenna	7/30/2015	Biennial	7/30/2017	121034
Espec	ESX-2CA	Environmental Chamber	4/17/2015	Annual	4/17/2016	17620
ETS-Lindgren	3816/2NM	Line Impedance Stabilization Network	11/11/2014	Biennial	11/11/2016	114451
Pasternack	NMLC-1	Line Conducted Emissions Cable (NM)	4/28/2015	Annual	4/28/2016	NMLC-1
Rohde & Schwarz	FSW67	Signal / Spectrum Analyzer	6/2/2015	Annual	6/2/2016	103200
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	3/14/2016	Biennial	3/14/2018	A051107

Table 6-1. Annual Test Equipment Calibration Schedule

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7.0 SAMPLE CALCULATIONS

7.1 Radiated Emission Measurement Sample Calculation

@ 66.7 MHz

Class B limit = 100 $\mu\text{V/m}$ = 40.0 dB $\mu\text{V/m}$

Reading = - 76.0 dBm (calibrated level)

Convert to dB μV = - 76.0 + 107 = 31.0 dB μV

Antenna Factor + Cable Loss = 5.8 dB/m

Total = 36.8 dB $\mu\text{V/m}$

Margin = 36.8 - 40.0 = - 3.2 dB

= 3.2 dB below limit

Note:

$$\text{Level [dB}\mu\text{V]} = 20 \log_{10} (\text{Level } [\mu\text{V/m}])$$

$$\text{Level [dB}\mu\text{V]} = \text{Level [dBm]} + 107$$

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8.0 TEST DATA

8.1 Summary

Company Name: LG Electronics Inc.
 FCC ID: BEJNM4HO
 FCC Classification: Low Power Communications Device Transmitter (DXX)
 Frequencies Examined: 13.56MHz

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
TRANSMITTER MODE (Tx)					
2.1049	20 dB Bandwidth	N/A	RADIATED	PASS	Section 8.2
15.225 (a)(b)(c)	In-Band Emissions	15,848 μ V/m @ 30m 13.553 – 13.567 MHz 334 μ V/m @ 30m 13.410 – 13.553 MHz 13.567 – 13.710 MHz 106 μ V/m @ 30m 13.110 – 13.410 MHz 13.710 – 14.010 MHz		PASS	Section 8.4
15.225 (d) 15.209	Out-of-Band Emissions	Emissions outside of the specified band (13.110 – 14.010 MHz) must meet the radiated limits detailed in 15.209		PASS	Section 8.5
15.225 (e)	Frequency Stability Tolerance	$\pm$ 0.01% of Operating Frequency	Temperature Chamber	PASS	Section 8.3

Table 8-1. Summary of Test Results

Note:

This unit was tested while powered by an DC power source.

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8.2 20dB Bandwidth Measurement

§2.1049

Test Overview and Limit

The bandwidth at 20dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the receive antenna while the EUT is operating in transmission mode at the appropriate frequency.

Test Procedure Used

ANSI C63.10-2013 – Section 6.9.2

Test Settings

1. Spectrum analyzer frequency is set to the nominal EUT channel center frequency.
2. RBW = 1 – 5% OBW
3. VBW $\geq 3 \times$ RBW
4. Reference level set to keep signal from exceeding maximum input mixer level for linear operation.
5. Detector = Peak
6. Trace mode = max hold
7. Sweep = auto couple
8. The trace was allowed to stabilize
9. Using the marker-delta function, determine the “-20dB down amplitude” using [(highest in band spectral density) – 20dB].
10. Set a marker at the lowest frequency of the envelope of the spectral density, such that the marker is at or slightly below the “-20dB down amplitude” determined in Step 9.
11. Reset marker-delta function and move the marker to other side of the emission until the delta marker amplitude is the same level as reference level amplitude. The marker delta frequency reading at this point is the specified emission bandwidth.

Test Notes

None.

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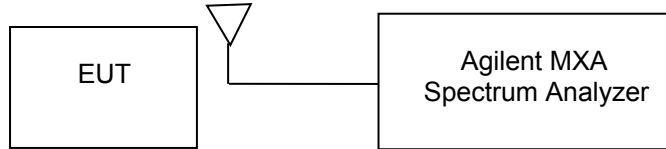


Figure 8-1. Test Instrument & Measurement Setup

Frequency	20dB Bandwidth
13.56MHz	28.1 kHz

Table 8-2. 20dB Bandwidth Measurement

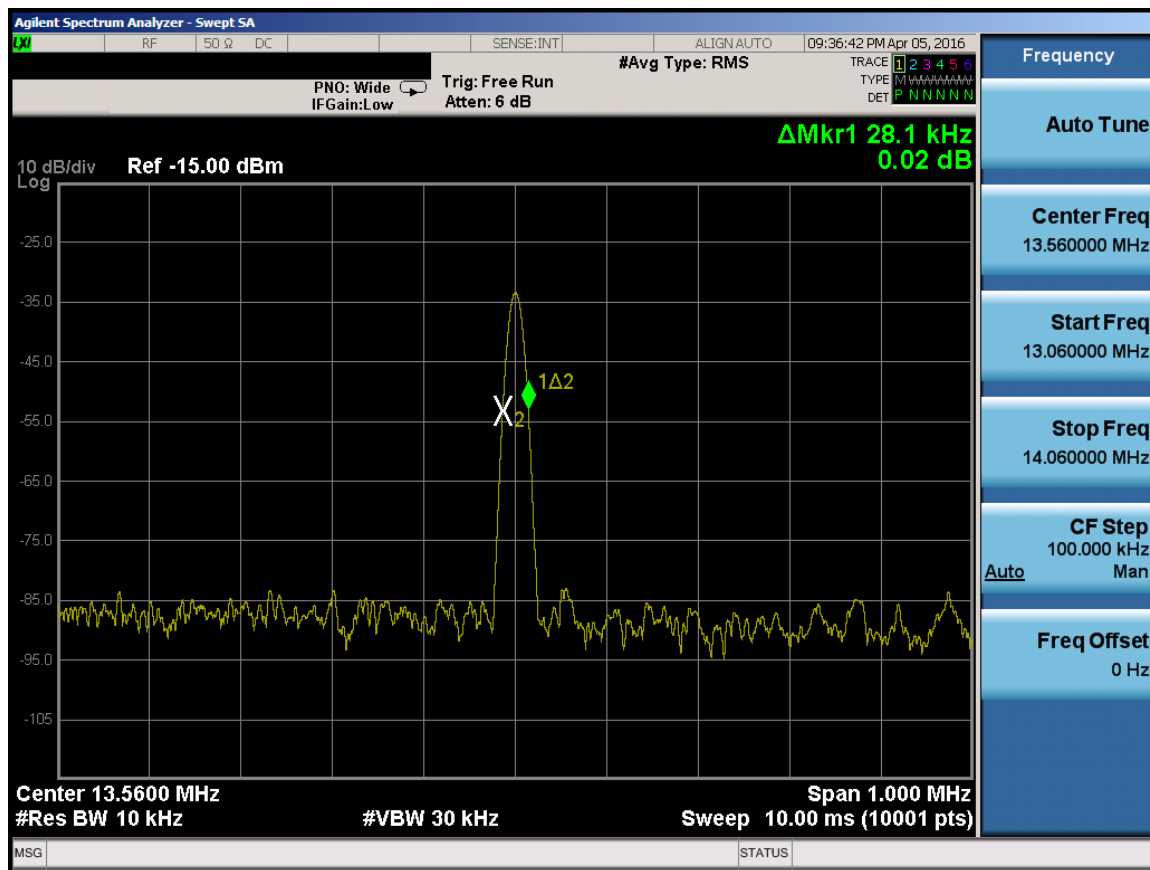


Figure 8-2. 20dB Bandwidth Plot

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8.3 Frequency Stability Test Data

§15.225

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.10-2013. The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -20°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

For Part 15.225, the frequency stability of the transmitter shall be maintained within $\pm 0.01\%$ of the center frequency.

Test Procedure Used

ANSI C63.10-2013 – Section 6.8

Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -20°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

Test Setup

The EUT was connected via an RF cable to a spectrum analyzer with the EUT placed inside an environmental chamber.

Test Notes

None.

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Frequency Stability Test Data

§15.225

OPERATING FREQUENCY: 13,560,000 Hz

REFERENCE VOLTAGE: 12.00 VDC

DEVIATION LIMIT: $\pm 0.01\%$ = 1356Hz

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	12.00	+ 20 (Ref)	13,559,875	-125	-0.0009218
100 %		- 30	13,559,981	-19	-0.0001401
100 %		- 20	13,560,085	85	0.0006268
100 %		- 10	13,560,199	199	0.0014676
100 %		0	13,559,863	-137	-0.0010103
100 %		+ 10	13,560,023	23	0.0001696
100 %		+ 20	13,559,954	-46	-0.0003392
100 %		+ 30	13,559,838	-162	-0.0011947
100 %		+ 40	13,560,105	105	0.0007743
100 %		+ 50	13,560,145	145	0.0010693
85 %	10.20	+ 20	13,560,076	76	0.0005605
115 %	13.80	+ 20	13,560,070	70	0.0005162

Table 8-3. Frequency Stability Test Data

Frequency Stability Test Data

§15.225

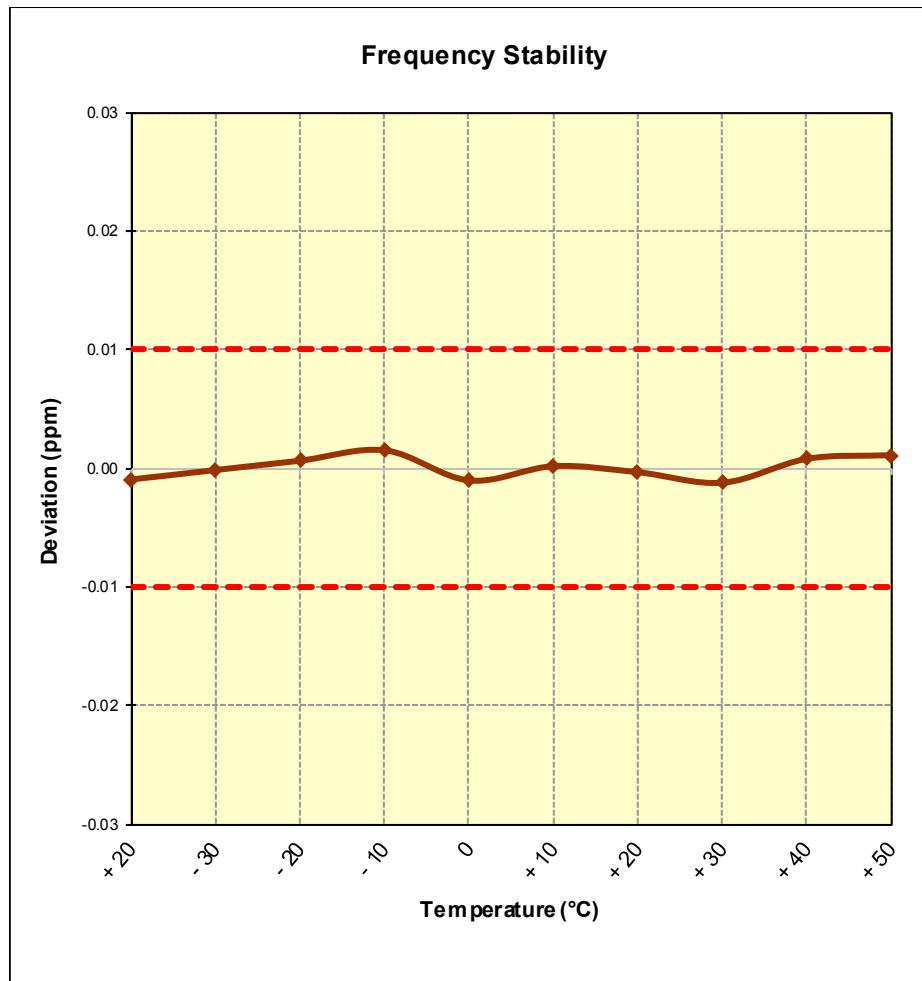


Figure 8-3. Frequency Stability Plot

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8.4 In-Band Radiated Spurious Emission Measurements

§15.225(a)(b)(c)

Test Overview and Limit

The EUT was tested from 13.110 – 14.010 MHz. All in-band radiated spurious emissions are measured with a spectrum analyzer connected to a loop antenna while the EUT is operating at appropriate frequencies. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

All in-band emissions must not exceed the limits shown in Table 8-4, per 15.225 of the Title 47 CFR.

Frequency [MHz]	Field Strength [μ V/m]	Measured Distance [Meters]
13.553-13.567 MHz	15,848	30
13.410-13.553 MHz and 13.567-13.710 MHz	334	30
13.110-13.410 MHz	106	30

Table 8-4. Radiated Limits

Test Procedures Used

ANSI C63.10-2013 – Section 6.4.7

Test Settings

1. RBW = 9kHz
2. VBW $\geq$ 3 x RBW
3. Detector = peak
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

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Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

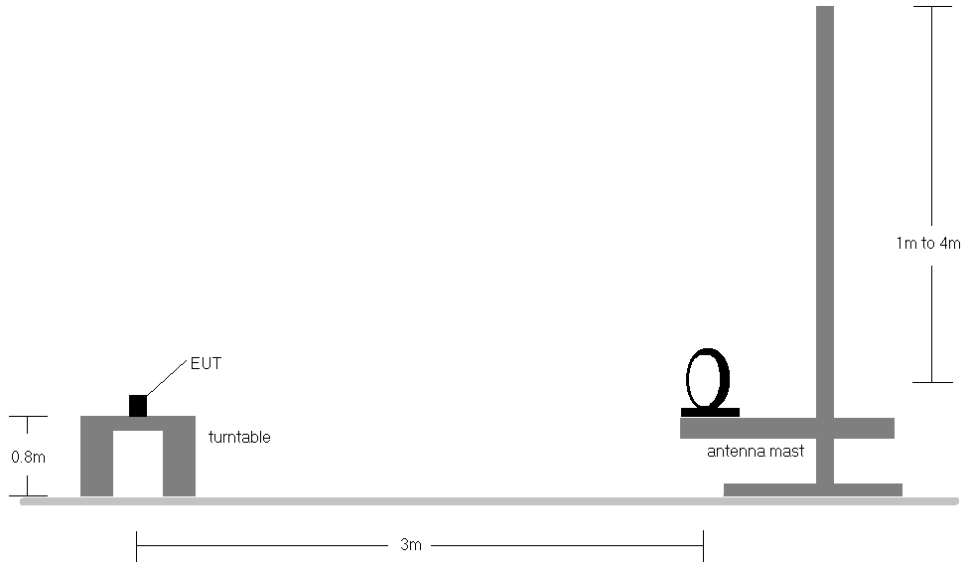


Figure 8-4. Radiated Test Setup

Test Notes:

1. All emissions lying in restricted bands specified in §15.225 are below the limit shown in Table 8-4.
2. All measurements were performed using a loop antenna. The antenna was positioned in three orthogonal positions (X front, Y side, Z top) and the position with the highest emission level was recorded.
3. The EUT was positioned in three orthogonal planes to determine the orientation resulting in the worst case emissions.
4. Measurements were performed at 3m and the data was extrapolated to the specified measurement distance of 30m using the square of an inverse linear distance extrapolation factor (40 dB/decade) as specified in §15.31(f)(2). Extrapolation Factor = $20 \log_{10}(30/3)^2 = 40\text{dB}$.
5. The spectrum was investigated from 9kHz up to 30MHz using the loop antenna. Only the emissions shown in the table below were found to be significant.
6. All measurements were recorded using a spectrum analyzer employing a quasi-peak detector.

Sample Calculation

- Field Strength Level $[\text{dB}\mu\text{V/m}] = \text{Analyzer Level} [\text{dBm}] + 107 + \text{AFCL} [\text{dB/m}]$
- $\text{AFCL} [\text{dB/m}] = \text{Antenna Factor} [\text{dB/m}] + \text{Cable Loss} [\text{dB}]$
- $\text{Margin} [\text{dB}] = \text{Field Strength Level} [\text{dB}\mu\text{V/m}] - \text{Limit} [\text{dB}\mu\text{V/m}]$

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In-Band Radiated Spurious Emission Measurements

§15.225(a)(b)(c)

Frequency: 13.56MHz

Measurement Distance: 3 Meters

Frequency [MHz]	Antenna Position	Antenna Height [cm]	Turntable Azimuth [degree]	Level [dBm]	AFCL [dB/m]	3m Field Strength [dBμV/m]	30m Field Strength [dBμV/m]	Limit [μV/m]	Limit [dBμV/m]	Margin [dB]
13.228	X	110	291	-93.16	14.86	28.70	-11.30	106.00	40.51	-51.81
13.341	X	110	291	-91.21	14.85	30.64	-9.36	106.00	40.51	-49.86
13.463	X	110	291	-90.95	14.85	30.90	-9.10	334.00	50.47	-59.58
13.560	X	110	291	-71.35	14.84	50.50	10.50	15848.00	84.00	-73.50
13.676	X	110	291	-91.15	14.84	30.69	-9.31	334.00	50.47	-59.79
13.722	X	110	291	-88.95	14.83	32.88	-7.12	106.00	40.51	-47.62
13.921	X	110	291	-93.59	14.82	28.24	-11.76	106.00	40.51	-52.27

Table 8-5. In-Band Radiated Measurements

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8.5 Radiated Spurious Emission Measurements, Out-of-Band §15.209 §15.225(d)

Test Overview and Limit

The EUT was tested from 9kHz up to the 1GHz excluding the band 13.110 – 14.010 MHz. All measurements up to 960MHz were recorded with a spectrum analyzer employing a quasi-peak detector.

All out-of-band emissions appearing in a restricted band as specified in Section 15.225 of the Title 47 CFR must not exceed the limits shown in Table 8-6 per Section 15.209.

Frequency	Field Strength [μV/m]	Measured Distance [Meters]
0.009 – 0.490 MHz	2400/F (kHz)	300
0.490 – 1.705 MHz	24000/F (kHz)	30
1.705 – 30.00 MHz	30	30
30.00 – 88.00 MHz	100	3
88.00 – 216.0 MHz	150	3
216.0 – 960.0 MHz	200	3
Above 960.0 MHz	500	3

Table 8-6. Radiated Limits – Out of band

Test Procedures Used

ANSI C63.10-2013 – Section 6.5.4

Test Settings

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 9kHz for emissions below 30MHz and 100kHz for emissions between 30MHz and 1GHz
3. VBW ≥ 3 x RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

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Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

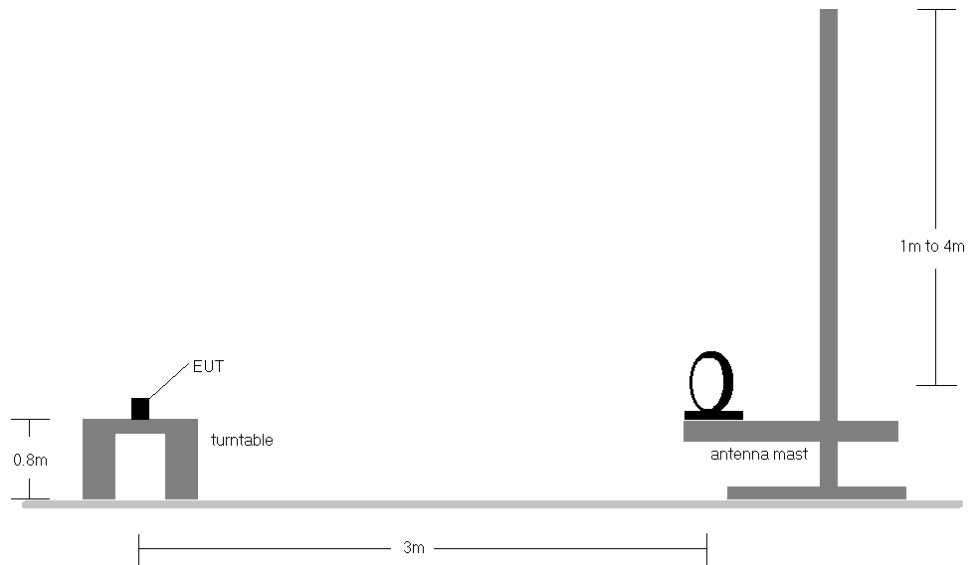


Figure 8-5. Radiated Test Setup < 30MHz

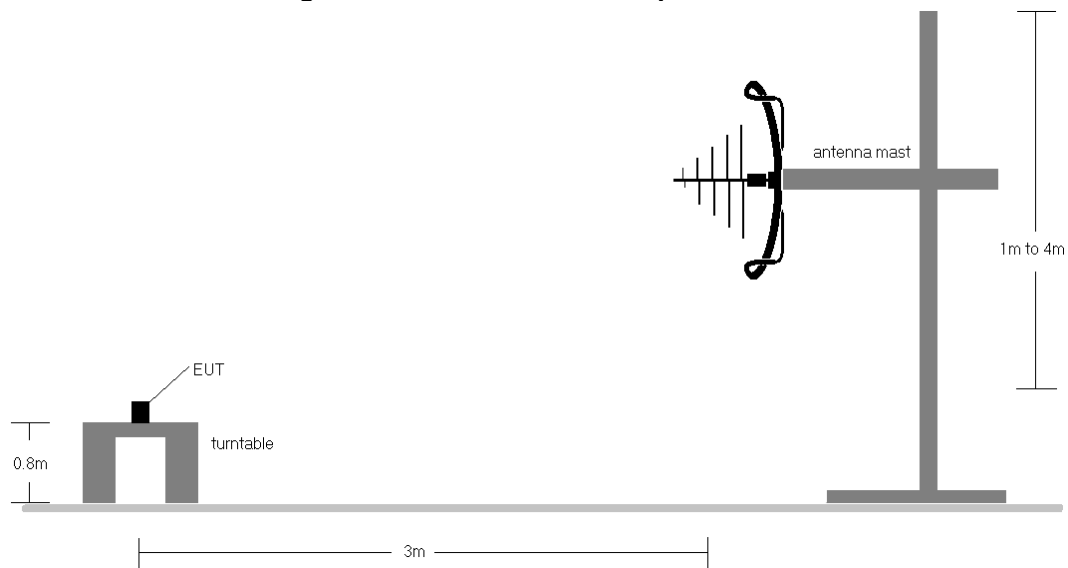


Figure 8-6. Radiated Test Setup > 30MHz

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Test Notes:

1. All measurements were recorded using a spectrum analyzer employing a quasi-peak detector for emissions below 960MHz.
2. A loop antenna was used to investigate emissions below 30MHz.
3. Both Vertical and Horizontal polarities of the receive antenna were evaluated with the worst case emissions being reported. Below 30MHz the loop antenna was positioned in 3 orthogonal planes (X front, Y side, Z top) to determine the orientation resulting in the worst case emissions.
4. The EUT was positioned in three orthogonal planes to determine the orientation resulting in the worst case emissions.
5. The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.
6. No spurious emissions levels were found to be greater than the level of the fundamental.

Sample Calculation

- Field Strength Level [dB μ V/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB]
- Margin [dB] = Field Strength Level [dB μ V/m] – Limit [dB μ V/m]

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Radiated Spurious Emission Measurements, Out-of-Band §15.209 §15.225(d)

Tx Frequency 13.56MHz

Measurement Distance: 3 Meters

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level [dBm]	AFCL [dB/m]	3m Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
27.12	X	-	-	-93.86	13.26	26.40	69.54	-43.15
40.68	H	110	276	-97.34	20.41	30.07	40.00	-9.93
54.24	H	110	294	-104.51	14.74	17.23	40.00	-22.77
67.80	H	110	288	-103.04	14.92	18.88	40.00	-21.12
81.36	H	110	284	-104.09	14.51	17.42	40.00	-22.58
94.92	H	110	137	-101.06	15.70	21.64	43.52	-21.88
108.48	H	-	-	-106.02	19.14	20.12	43.52	-23.40

Table 8-7. Radiated Measurements

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9.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **LG Electronics Car NFC Unit FCC ID: BEJNM4HO** has been tested to show compliance with the requirements specified in §15.225 of the FCC Rules.

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