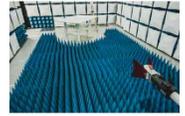




**PCTEST**  
 7185 Oakland Mills Road, Columbia, MD 21046 USA  
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<http://www.pctest.com>



## MEASUREMENT REPORT Part 96 LTE

**Applicant Name:**  
 LG Electronics USA, Inc.  
 1000 Sylvan Avenue  
 Englewood Cliffs, NJ 07632  
 United States

**Date of Testing:**  
 01/02 - 02/21/2020  
**Test Site/Location:**  
 PCTEST Lab. Columbia, MD, USA  
**Test Report Serial No.:**  
 1M1912300227-05.ZNF

<b>FCC ID:</b>	<b>ZNFV600VM</b>
<b>APPLICANT:</b>	<b>LG Electronics USA, Inc.</b>

**Application Type:** Class II Permissive Change  
**Model:** LM-V600VM  
**Additional Models:** LMV600VM, V600VM, LM-V600QM5, LMV600QM5, V600QM5, LM-V600QM6, LMV600QM6, V600QM6  
**EUT Type:** Portable Handset  
**FCC Classification:** Citizens Band End User Devices (CBE)  
**FCC Rule Part(s):** 96  
**Test Procedure(s):** ANSI C63.26-2015, ANSI/TIA-603-E-2016, KDB 971168 D01 v03r01, KDB 648474 D03 v01r04, KDB 940660 D01 v02  
**Class II Permissive Change:** Please see FCC change document

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

I 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.

  
 Randy Ortanez  
 President



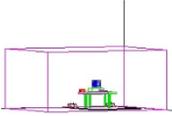
<b>FCC ID:</b> ZNFV600VM		<b>MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)</b>		<b>Approved by:</b> Quality Manager
<b>Test Report S/N:</b> 1M1912300227-05.ZNF	<b>Test Dates:</b> 01/02 - 02/21/2020	<b>EUT Type:</b> Portable Handset	Page 1 of 19	



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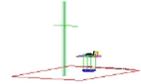
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## MEASUREMENT REPORT

### FCC Part 96



Mode	Bandwidth	Modulation	Tx Frequency Range [MHz]	EIRP	
				Max. Power [W]	Max. Power [dBm]
LTE Band 48	20 MHz	QPSK	3560.0 - 3690.0	0.077	18.85
		16QAM	3560.0 - 3690.0	0.066	18.21
		64QAM	3560.0 - 3690.0	0.061	17.87
		256QAM	3560.0 - 3690.0	0.030	14.77
	15 MHz	QPSK	3557.5 - 3692.5	0.074	18.67
		16QAM	3557.5 - 3692.5	0.055	17.40
		64QAM	3557.5 - 3692.5	0.041	16.10
		256QAM	3557.5 - 3692.5	0.023	13.54
	10 MHz	QPSK	3555.0 - 3695.0	0.072	18.55
		16QAM	3555.0 - 3695.0	0.053	17.28
		64QAM	3555.0 - 3695.0	0.040	16.07
		256QAM	3555.0 - 3695.0	0.022	13.37
	5 MHz	QPSK	3552.5 - 3697.5	0.070	18.47
		16QAM	3552.5 - 3697.5	0.053	17.22
		64QAM	3552.5 - 3697.5	0.040	15.99
		256QAM	3552.5 - 3697.5	0.022	13.42

**EUT Overview (LTE B48)**

**Note:** EIRP levels shown in the table above are measured over the full channel bandwidth. These values will appear on the Grant of Authorization.

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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.

### 1.2 PCTEST Test Location

These measurement tests were conducted at the PCTEST Engineering Laboratory, Inc. facility located at 7185 Oakland Mills Road, Columbia, MD 21046. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014.

### 1.3 Test Facility / Accreditations

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

- PCTEST is a CBRS Alliance (OnGo) Approved Test Lab
- PCTEST is a WinnForum Approved Test Lab
- PCTEST is an ISO 17025-2005 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.01 for CBRS Alliance Certification Test Plan and WinnForum Conformance and Performance Test Technical Standard.
- PCTEST is an ISO 17025-2005 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.01 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.
- PCTEST TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC 17065-2012 by A2LA (Certificate number 2041.03) in all scopes of FCC Rules and ISSED Standards (RSS).
- PCTEST facility is a registered (2451B) test laboratory with the site description on file with ISSED.

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## 2.0 PRODUCT INFORMATION

### 2.1 Equipment Description

The Equipment Under Test (EUT) is the **LG Portable Handset FCC ID: ZNFV600VM**. The test data contained in this report pertains only to the emissions due to the EUT's LTE Band 48 operation in the CBRS band. Per FCC Part 96, this device is evaluated under Citizens Band End User Devices (CBE).

**Test Device Serial No.:**

### 2.2 Device Capabilities

This device contains the following capabilities:

850/1900 CDMA/EvDO Rev0/A, 1x Advanced (BC1, BC10), 850/1900 GSM/GPRS/EDGE, 850/1700/1900 WCDMA/HSPA, Multi-band LTE, 5G NR (n66, n2, n5, n260, n261), 802.11b/g/n/ac/ax WLAN, 802.11a/n/ac/ax UNII, Bluetooth (1x, EDR, LE), NFC

### 2.3 Test Configuration

The EUT was tested per the guidance of ANSI/TIA-603-E-2016 and KDB 971168 D01 v03r01. See Section 7.0 of this test report for a description of the radiated and antenna port conducted emissions tests.

This device supports wireless charging capability and, thus, is subject to the test requirements of KDB 648474 D03 v01r04. Additional radiated spurious emission measurements were performed with the EUT placed on an authorized wireless charging pad (WCP) Model: EP-N5100 while operating under normal conditions in a simulated call or data transmission configuration. The worst case radiated emissions data is shown in this report.

### 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 TESTS

### 3.1 Measurement Procedure

The measurement procedures described in the document titled “Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards” (ANSI/TIA-603-E-2016) and “Procedures for Compliance Measurement of the Fundamental Emission Power of Licensed Wideband (> 1 MHz) Digital Transmission Systems” (KDB 971168 D01 v03r01) were used in the measurement of the EUT.

### 3.2 Radiated Power and Radiated Spurious 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 of Clause 5 in ANSI C63.4-2014. 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. For measurements below 1GHz, the absorbers are removed. A raised turntable is used for radiated measurement. The turn table is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm tall test table made of Styrodur is placed on top of the turn table. A Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m.

The equipment under test was transmitting while connected to its integral antenna and is placed on a turntable 3 meters from the receive antenna. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer. Radiated power levels are also investigated with the receive antenna horizontally and vertically polarized. The maximized power level is recorded using the spectrum analyzer “Channel Power” function with the integration band set to the emissions’ occupied bandwidth, a RMS detector, RBW = 100kHz, VBW = 300kHz, and a 1 second sweep time over a minimum of 10 sweeps, per the guidelines of KDB 971168 D01 v03r01.

Per the guidance of ANSI/TIA-603-E-2016, a half-wave dipole is then substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT. The power of the emission is calculated using the following formula:

$$P_d [dBm] = P_g [dBm] - \text{cable loss} [dB] + \text{antenna gain} [dBd/dBi]$$

Where,  $P_d$  is the dipole equivalent power,  $P_g$  is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to  $P_g [dBm] - \text{cable loss} [dB]$ .

The calculated  $P_d$  levels are then compared to the absolute spurious emission limit of -40dBm/MHz for End User Devices.

All radiated measurements are performed in a chamber that meets the site requirements per ANSI C63.4-2014. Additionally, radiated emissions below 30MHz are also validated on an Open Area Test Site to assert correlation with the chamber measurements per the requirements of KDB 414788 D01.

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## 4.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. All measurement uncertainty values are shown with a coverage factor of  $k = 2$  to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the  $U_{\text{CISPR}}$  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)
Conducted Bench Top Measurements	1.13
Radiated Disturbance (<1GHz)	4.98
Radiated Disturbance (>1GHz)	5.07
Radiated Disturbance (>18GHz)	5.09

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## 5.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST). Measurements antennas used during testing were calibrated in accordance to the requirements of ANSI C63.5-2017.

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	N9020A	MXA Signal Analyzer	4/20/2019	Annual	4/20/2020	US46470561
Agilent	N9030A	PXA Signal Analyzer (44GHz)	6/12/2019	Annual	6/12/2020	MY52350166
Com-Power	AL-130	9kHz - 30MHz Loop Antenna	10/10/2019	Biennial	10/10/2021	121034
Com-Power	PAM-103	Pre-Amplifier (1-1000MHz)	5/10/2019	Annual	5/10/2020	441112
ETS Lindgren	3164-08	Quad Ridge Horn Antenna	3/28/2018	Biennial	3/28/2020	128337
ETS Lindgren	3164-08	Quad Ridge Horn Antenna	2/22/2019	Biennial	2/22/2021	128338
Mini Circuits	TVA-11-422	RF Power Amp	N/A			QA1317001
Mini Circuits	PWR-SEN-4GHS	USB Power Sensor	4/19/2019	Annual	4/19/2020	11401010036
Mini-Circuits	SSG-4000HP	Synthesized Signal Generator	N/A			11208010032
Mini-Circuits	PWR-SEN-4RMS	USB Power Sensor	4/20/2019	Annual	4/20/2020	11210140001
Mini-Circuits	SSG-4000HP	Synthesized Signal Generator	N/A			11403100002
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			100976
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			112347
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			102060
Rohde & Schwarz	TS-PR26	18-26.5 GHz Pre-Amplifier	1/31/2019	Annual	1/31/2020	100040
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	6/5/2019	Annual	6/5/2020	100342
Rohde & Schwarz	ESU40	EMI Test Receiver (40GHz)	9/23/2019	Annual	9/23/2020	100348
Rohde & Schwarz	SFUNIT-Rx	Shielded Filter Unit	7/11/2019	Annual	7/11/2020	102134
Rohde & Schwarz	SFUNIT-Rx	Shielded Filter Unit	7/8/2019	Annual	7/8/2020	102133
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	4/19/2018	Biennial	4/19/2020	A051107
Sunol	DRH-118	Horn Antenna (1-18 GHz)	8/27/2019	Biennial	8/27/2021	A042511

**Table 5-1. Test Equipment**

**Notes:**

- For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.
- Equipment with a calibration date of "N/A" shown in this list was not used to make direct calibrated measurements.

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## 6.0 SAMPLE CALCULATIONS

### Spurious Radiated Emission – LTE Band

#### Example: Middle Channel LTE Mode 2<sup>nd</sup> Harmonic (7250 MHz)

The average spectrum analyzer reading at 3 meters with the EUT on the turntable was  $-81.0$  dBm. The gain of the substituted antenna is  $8.1$  dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of  $-81.0$  dBm on the spectrum analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is  $2.0$  dB at  $1564$  MHz. So  $6.1$  dB is added to the signal generator reading of  $-30.9$  dBm yielding  $-24.80$  dBm. The fundamental EIRP was  $25.501$  dBm so this harmonic was  $25.501$  dBm  $-$  ( $-24.80$ ).

FCC ID: ZNFV600VM		<b>MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)</b>		<b>Approved by:</b> Quality Manager
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## 7.0 TEST RESULTS

### 7.1 Summary

Company Name: LG Electronics USA, Inc.  
 FCC ID: ZNFV600VM  
 FCC Classification: Citizens Band End User Devices (CBE)  
 Mode(s): LTE

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
96.41(b)	Equivalent Isotropic Radiated Power (EIRP)	23 dBm/10MHz	RADIATED	PASS	Section 7.5
2.1053 96.41(e)	Undesirable Emissions	-40 dBm/MHz		PASS	Section 7.3

**Table 7-1. Summary of Radiated Test Results**

**Notes:**

All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.

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**7.2 Radiated Power (EIRP)**  
**§96.41(b)**

**Test Overview**

Equivalent Isotropic Radiated Power (EIRP) measurements are performed using the substitution method described in ANSI/TIA-603-E-2016 with the EUT transmitting into an integral antenna. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

**Test Procedures Used**

KDB 971168 D01 v03r01 – Section 5.2.1

ANSI/TIA-603-E-2016 – Section 2.2.17

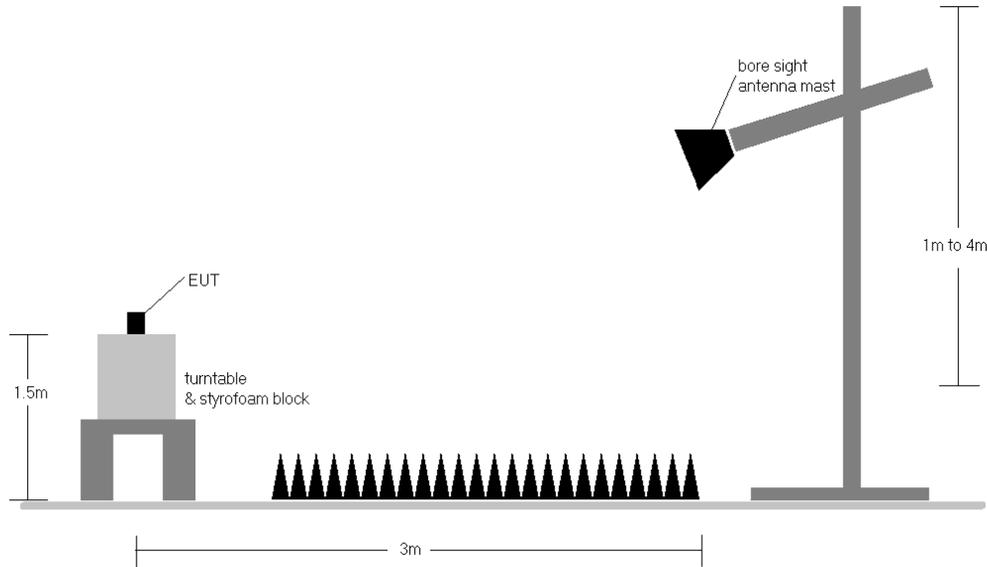
**Test Settings**

1. Radiated power measurements are performed using the signal analyzer’s “channel power” measurement capability for signals with continuous operation.
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW ≥ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points ≥ 2 x span / RBW
6. Detector = RMS
7. Trigger is set to “free run” for signals with continuous operation with the sweep times set to “auto”.
8. The integration bandwidth was set equal to 10MHz.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The 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 7-1. Radiated Test Setup >1GHz**

**Test Notes**

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- 3) The worst case EIRP shown in this section is found with LTE operating only using 1RB. As such, the EIRP/10MHz and full channel EIRP values will be identical since 1RB is fully contained within all available channel bandwidths for LTE Band 48 (i.e. 5, 10, 15, 20MHz).

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Bandwidth	Modulation	Channel	Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Sig. Gen. Level (Substitution Input) [dBm]	Analyzer Level (Substitution Reading) [dBm]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	EIRP [dBm/10MHz]	EIRP [Watts/10MHz]	EIRP Limit [dBm/10MHz]	Margin [dB]
20 MHz	QPSK	55340	3560.0	V	198	356	18.82	-22.95	7.21	1 / 0	11.64	<b>18.85</b>	0.08	23.00	-4.15
		55990	3625.0	V	129	4	18.82	-22.95	6.96	1 / 50	10.79	17.75	0.06	23.00	-5.25
		56640	3690.0	V	101	6	18.82	-22.95	6.47	1 / 50	10.47	16.94	0.05	23.00	-6.06
	16-QAM	55340	3560.0	V	198	356	18.82	-22.95	7.21	1 / 0	11.00	<b>18.21</b>	0.07	23.00	-4.79
	64-QAM	55340	3560.0	V	198	356	18.82	-22.95	7.21	1 / 0	10.66	<b>17.87</b>	0.06	23.00	-5.13
256-QAM	55340	3560.0	V	198	356	18.82	-22.95	7.21	1 / 0	7.56	<b>14.77</b>	0.03	23.00	-8.23	
15 MHz	QPSK	55315	3557.5	V	188	355	18.82	-22.95	7.22	1 / 0	11.45	<b>18.67</b>	0.07	23.00	-4.33
		55990	3625.0	V	120	3	18.82	-22.95	6.96	1 / 0	11.59	18.55	0.07	23.00	-4.45
		56665	3692.5	V	108	3	18.82	-22.95	6.45	1 / 0	11.84	18.29	0.07	23.00	-4.71
	16-QAM	55315	3557.5	V	188	355	18.82	-22.95	7.22	1 / 0	10.18	<b>17.40</b>	0.05	23.00	-5.60
	64-QAM	55315	3557.5	V	188	355	18.82	-22.95	7.22	1 / 0	8.88	<b>16.10</b>	0.04	23.00	-6.90
256-QAM	55315	3557.5	V	188	355	18.82	-22.95	7.22	1 / 0	6.32	<b>13.54</b>	0.02	23.00	-9.46	
10 MHz	QPSK	55290	3555.0	V	196	352	18.82	-22.95	7.22	1 / 0	11.33	<b>18.55</b>	0.07	23.00	-4.45
		55990	3625.0	V	122	355	18.82	-22.95	6.96	1 / 0	11.46	18.42	0.07	23.00	-4.58
		56690	3695.0	V	100	12	18.82	-22.95	6.43	1 / 0	11.93	18.36	0.07	23.00	-4.64
	16-QAM	55290	3555.0	V	196	352	18.82	-22.95	7.22	1 / 0	10.06	<b>17.28</b>	0.05	23.00	-5.72
	64-QAM	55290	3555.0	V	196	352	18.82	-22.95	7.22	1 / 0	8.85	<b>16.07</b>	0.04	23.00	-6.93
256-QAM	55290	3555.0	V	196	352	18.82	-22.95	7.22	1 / 0	6.15	<b>13.37</b>	0.02	23.00	-9.63	
5 MHz	QPSK	55265	3552.5	V	208	354	18.82	-22.95	7.23	1 / 0	11.24	<b>18.47</b>	0.07	23.00	-4.53
		55990	3625.0	V	126	14	18.82	-22.95	6.96	1 / 0	11.32	18.28	0.07	23.00	-4.72
		56715	3697.5	V	103	4	18.82	-22.95	6.41	1 / 0	11.91	18.32	0.07	23.00	-4.68
	16-QAM	55265	3552.5	V	208	354	18.82	-22.95	7.23	1 / 0	9.99	<b>17.22</b>	0.05	23.00	-5.78
	64-QAM	55265	3552.5	V	208	354	18.82	-22.95	7.23	1 / 0	8.76	<b>15.99</b>	0.04	23.00	-7.01
256-QAM	55265	3552.5	V	208	354	18.82	-22.95	7.23	1 / 0	6.19	<b>13.42</b>	0.02	23.00	-9.58	
	QPSK	55340	3560.00	H	100	58	18.82	-22.95	6.96	1 / 0	9.21	16.17	0.04	23.00	-6.83

Table 7-2. EIRP Data (Band 48)

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**7.3 Radiated Spurious Emissions Measurements**  
**§2.1053 §96.41(e)**

**Test Overview**

Radiated spurious emissions measurements are performed using the substitution method described in ANSI/TIA-603-E-2016 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas.

**Test Procedures Used**

KDB 971168 D01 v03r01 – Section 5.8

ANSI/TIA-603-E-2016 – Section 2.2.12

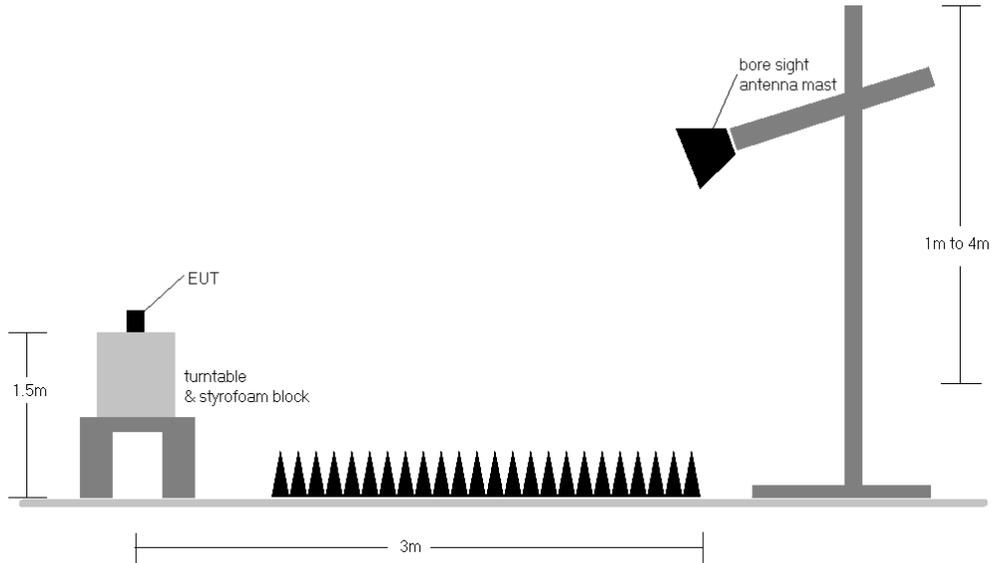
**Test Settings**

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW ≥ 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points ≥ 2 x span / RBW
5. Detector = RMS
6. Trace mode = Max Hold (In cases where the level is within 2dB of the limit, the final measurement is taken using triggering/gating and trace averaging.)
7. The 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 7-2. Test Instrument & Measurement Setup**

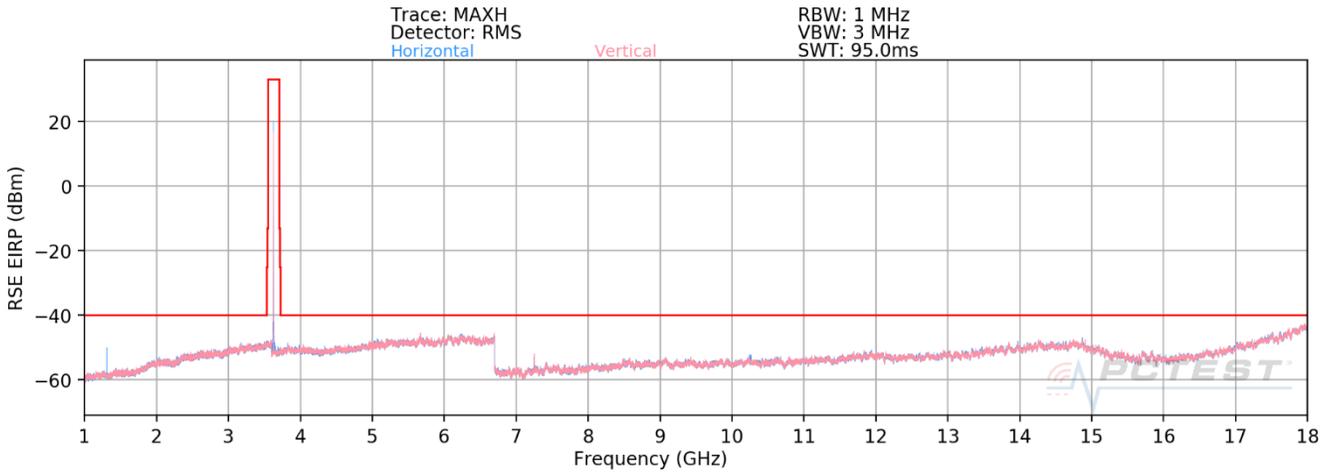
**Test Notes**

- 1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.
- 2) This unit was tested with its standard battery.
- 3) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 4) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
- 5) The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 6) Per KDB 971168, Field Strength Level (dBµV/m) is converted to EIRP Spurious Emission Level (dBm) using the formula in Section 5.8.4 (d):

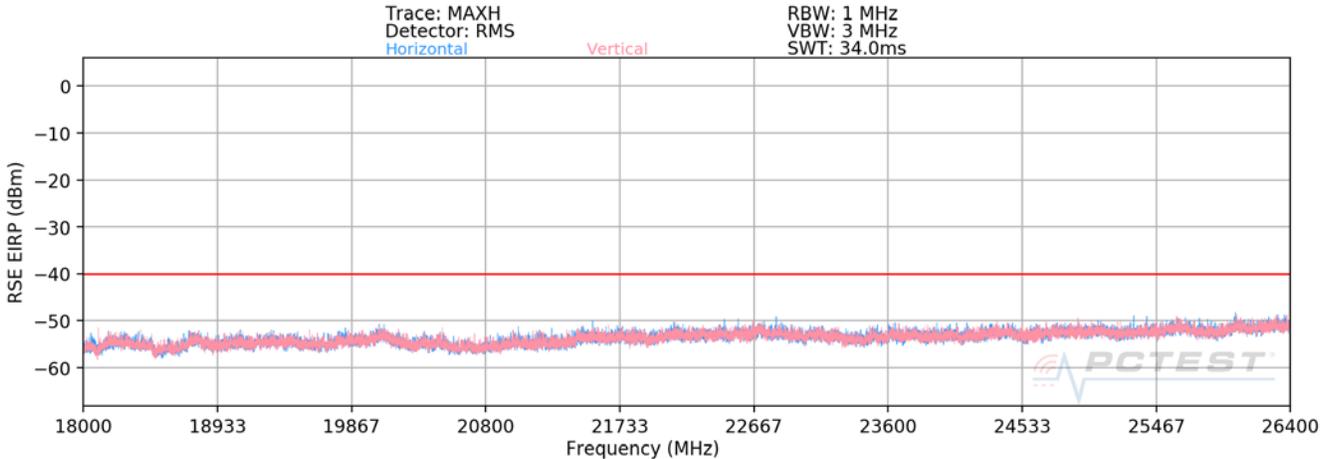
$$\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20 \log D - 104.8; \text{ where } D \text{ is the measurement distance in meters}$$

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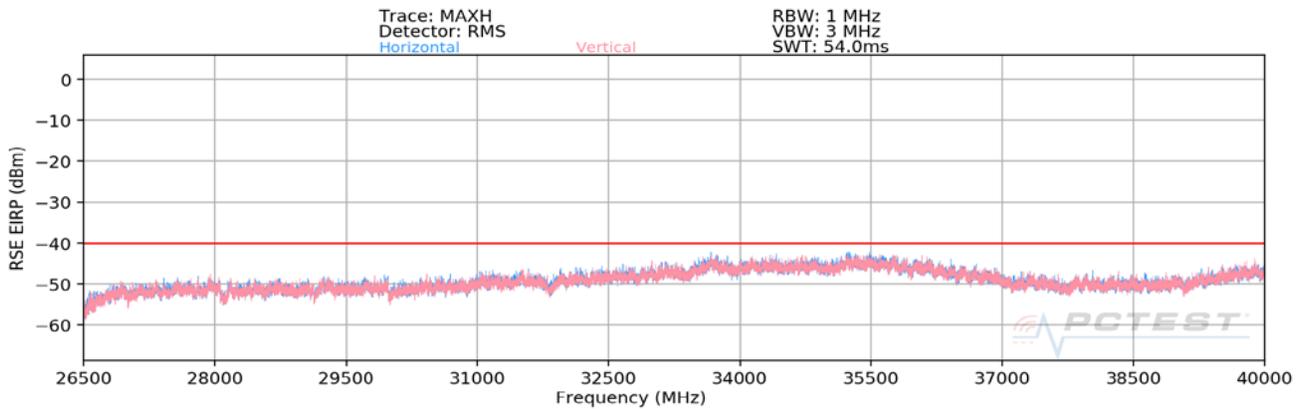
# LTE Band 48



**Plot 7-1. Radiated Spurious Plot 1 - 18GHz (Band 48)**



**Plot 7-2. Radiated Spurious Plot 18 - 26.5GHz (Band 48)**



**Plot 7-3. Radiated Spurious Plot 26.5 - 40GHz (Band 48)**

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<b>Bandwidth (MHz):</b>	20
<b>Frequency (MHz):</b>	3560.0
<b>Modulation Signal:</b>	QPSK
<b>RB Config (Size / Offset):</b>	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7120.0	V	126	124	-71.76	13.50	48.74	-46.52	-40.00	-6.52
10680.0	V	-	-	-75.77	18.88	50.11	-45.15	-40.00	-5.15

**Table 7-3. Radiated Spurious Data (Band 48 – Low Channel)**

<b>Bandwidth (MHz):</b>	20
<b>Frequency (MHz):</b>	3625.0
<b>Modulation Signal:</b>	QPSK
<b>RB Config (Size / Offset):</b>	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7250.0	V	362	152	-69.11	13.97	51.86	-43.40	-40.00	-3.40
10875.0	V	-	-	-74.76	19.92	52.16	-43.10	-40.00	-3.10

**Table 7-4. Radiated Spurious Data (Band 48 – Mid Channel)**

<b>Bandwidth (MHz):</b>	20
<b>Frequency (MHz):</b>	3690.0
<b>Modulation Signal:</b>	QPSK
<b>RB Config (Size / Offset):</b>	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
7380.00	V	142	132	-70.59	14.51	50.92	-44.34	-40.00	-4.34
11070.00	V	-	-	-75.09	20.00	51.91	-43.35	-40.00	-3.35

**Table 7-5. Radiated Spurious Data (Band 48 – High Channel)**

<b>FCC ID:</b> ZNFV600VM		<b>MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)</b>		<b>Approved by:</b> Quality Manager
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Bandwidth (MHz):	20
Frequency (MHz):	3625.0
Modulation Signal:	QPSK
RB Config (Size / Offset):	1 / 50

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Level at Antenna Terminals [dBm]	Substitute Antenna Gain [dBi]	Spurious Emission Level [dBm]	Margin [dB]
7250.00	V	304	83	-55.86	11.84	-44.01	-4.0
10875.00	V	289	108	-57.20	13.05	-44.15	-4.2
14500.00	V	-	-	-65.76	14.08	-51.68	-11.7

**Table 7-6. Radiated Spurious Data with WCP (Band 48 – High Channel)**

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## 8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **LG Portable Handset FCC ID: ZNFV600VM** complies with all of the End User Device requirements of Part 96 of the FCC Rules for LTE operation only.

<b>FCC ID:</b> ZNFV600VM		<b>MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)</b>		<b>Approved by:</b> Quality Manager
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