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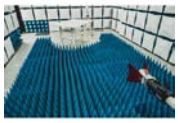

MEASUREMENT REPORT
GSM / GPRS / EDGE / CDMA / WCDMA

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

Date of Testing:
02/20 - 03/13/2020
Test Site/Location:
PCTEST Lab. Columbia, MD, USA
Test Report Serial No.:
1M2002170022-02.ZNF

FCC ID:	**ZNFQ730TM**
APPLICANT:	**LG Electronics USA, Inc.**

Application Type:	Class II Permissive Change
Model:	LM-Q730TM
Additional Model(s):	LM-Q730MM, LMQ730TM, LMQ730MM, Q730TM, Q730MM
EUT Type:	Portable Handset
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	22, 24, & 27
Test Procedure(s):	ANSI C63.26-2015, ANSI/TIA-603-E-2016, KDB 971168 D01 v03r01
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

ACCREDITED
TESTING CERT#2041.01

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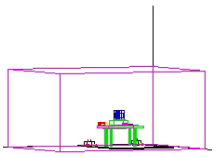
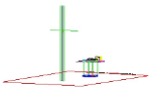


MEASUREMENT REPORT
GSM / GPRS / EDGE / CDMA / WCDMA



Mode	FCC Rule Part	Tx Frequency (MHz)	ERP		EIRP		Emission Designator
			Max. Power (W)	Max. Power (dBm)	Max. Power (W)	Max. Power (dBm)	
GPRS850	22H	824.2 - 848.8	0.485	26.86	0.796	29.01	247KGXW
EDGE850	22H	824.2 - 848.8	0.175	22.42	0.286	24.57	247KG7W
CDMA850	22H	824.70 - 848.31	0.045	16.55	0.074	18.70	1M28F9W
WCDMA850	22H	826.4 - 846.6	0.046	16.65	0.076	18.80	4M19F9W
WCDMA1700	27	1712.4 - 1752.6			0.125	20.97	4M21F9W
GPRS1900	24E	1850.2 - 1909.8			0.813	29.10	246KGXW
EDGE1900	24E	1850.2 - 1909.8			0.298	24.74	246KG7W
CDMA1900	24E	1851.25 - 1908.75			0.129	21.11	1M28F9W
WCDMA1900	24E	1852.4 - 1907.6			0.111	20.45	4M20F9W

EUT Overview

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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 Innovation, Science and Economic Development Canada.

1.2 PCTEST Test Location

These measurement tests were conducted at the PCTEST 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 located in Columbia, MD 21046, U.S.A.

- 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 ISED Standards (RSS).

- PCTEST facility is a registered (2451B) test laboratory with the site description on file with ISED.

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **LG Portable Handset FCC ID: ZNFQ730TM**. The test data contained in this report pertains only to the emissions due to the EUT's 2G/3G licensed transmitters.

Test Device Serial No.: 04880, 04898, 04849, 04856, 04864, 04872

2.2 Device Capabilities

This device contains the following capabilities:

800/850/1900 CDMA/EvDO (BC0, BC1, BC10), 850/1900 GSM/GPRS/EDGE, 850/1700/1900 WCDMA/HSPA, Multi-band LTE, 802.11b/g/n WLAN, 802.11a/n/ac 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 6.0 of this test report for a description of the radiated and antenna port conducted emissions tests.

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 Evaluation Procedure

The measurement procedures described in the "Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards" (ANSI/TIA-603-E-2016) and "Measurement Guidance for Certification of Licensed Digital Transmitters" (KDB 971168 D01 v03r01) were used in the measurement of the EUT.

Deviation from Measurement Procedure……..None

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3.2 Radiated Measurements

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.

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 $P_{g\ [dBm]}$ – cable loss $_{[dB]}$.

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 474788 D01.

Radiated power and radiated spurious emission levels are investigated with the receive antenna horizontally and vertically polarized per ANSI/TIA-603-E-2016.

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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_{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 (±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
-	LTx1	Licensed Transmitter Cable Set	6/4/2019	Annual	6/4/2020	LTx1
Agilent	N9038A	MXE EMI Receiver	7/17/2019	Annual	7/17/2020	MY51210133
Agilent	N9030A	PXA Signal Analyzer (44GHz)	6/12/2019	Annual	6/12/2020	MY52350166
Anritsu	MT8821C	Radio Communication Analyzer	N/A			6200901190
Emco	3115	Horn Antenna (1-18GHz)	3/28/2018	Biennial	3/28/2020	9704-5182
Emco	3116	Horn Antenna (18 - 40GHz)	6/7/2018	Biennial	6/7/2020	9203-2178
Emco	3160-09	Small Horn (18 - 26.5GHz)	8/9/2018	Biennial	8/9/2020	135427
Emco	3160-10	Small Horn (26.5 - 40GHz)	8/9/2018	Biennial	8/9/2020	130993
Keysight Technologies	N9020A	MXA Signal Analyzer	4/29/2019	Annual	4/29/2020	MY54500644
Rohde & Schwarz	CMW500	Radio Communication Tester	N/A			140144
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
Seekonk	NC-100	Torque Wrench (8" lb)	5/10/2018	Biennial	5/10/2020	N/A

Table 5-1. Test Equipment

Notes:

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 TEST RESULTS

6.1 Summary

Company Name: LG Electronics USA, Inc.

FCC ID: ZNFQ730TM

FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)

Mode(s): GSM / GPRS / EDGE / CDMA / WCDMA

FCC Part Section(s)	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
22.913(a)(5)	RSS-132(5.4)	Effective Radiated Power	< 7 Watts max. ERP	RADIATED	PASS	Section 6.2
24.232(c)	RSS-133(6.4)	Equivalent Isotropic Radiated Power	< 2 Watts max. EIRP		PASS	Section 6.2
27.50(d)(4)	RSS-139(6.5)	Equivalent Isotropic Radiated Power	< 1 Watts max. EIRP		PASS	Section 6.2
2.1053 22.917(a) 24.238(a) 27.53(h)	RSS-132(5.5) RSS-133(6.5) RSS-139(6.6)	Radiated Spurious Emissions	> 43 + 10 $\log_{10}$ (P[Watts]) for all out-of-band emissions		PASS	Section 6.3

Table 6-1. Summary of 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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6.2 Radiated Power (ERP/EIRP)

Test Overview

Effective Radiated Power (ERP) and 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 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. All measurements are performed as RMS average measurements while the EUT is operating 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. For signals with burst transmission, the signal analyzer's "time domain power" measurement capability is used
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". Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power
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.

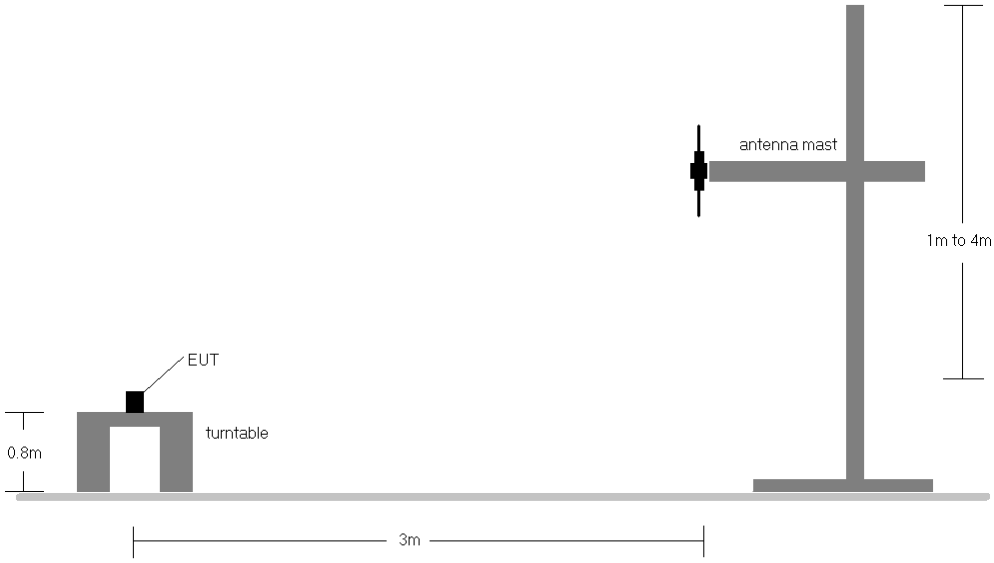

Figure 6-1. Radiated Test Setup <1GHz

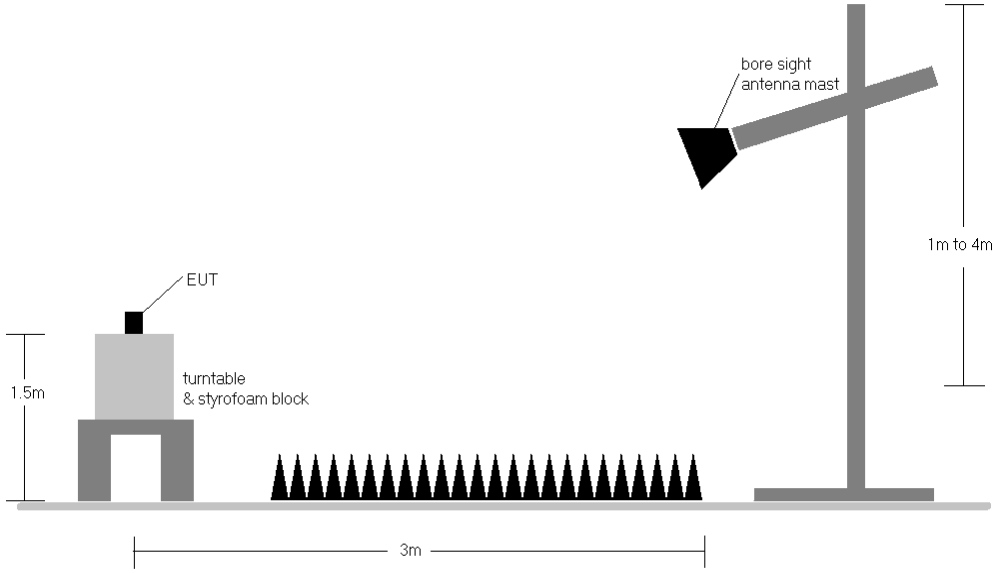

Figure 6-2. Radiated Test Setup >1GHz

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Test Notes

1) This device employs GSM, GPRS, and EDGE capabilities. The EUT was tested under all configurations and the highest power is reported in GPRS mode while transmitting with one slot active.

2) This device employs UMTS technology with WCDMA (AMR/RMC), HSDPA, and HSUPA capabilities. For WCDMA and HSUPA transmission, all configurations were investigated and the worst case UMTS emissions were found in RMC WCDMA mode at 12.2kbps with HSDPA inactive and TPC bits all set to "1."

3) This device was tested under all RC and SO combinations and the worst case is reported with RC3/SO55 with "All Up" power control bits.

4) This unit was tested with its standard battery.

5) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case setup is reported in the tables below.

Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
824.20	GPRS850	V	145	152	21.28	6.30	25.43	0.349	38.45	-13.02	27.58	0.573	40.61	-13.03
836.60	GPRS850	V	146	187	22.61	6.40	**26.86**	**0.485**	38.45	-11.59	**29.01**	**0.796**	40.61	-11.60
848.80	GPRS850	V	163	246	21.16	6.50	25.51	0.356	38.45	-12.94	27.66	0.583	40.61	-12.95
836.60	GPRS850	H	225	60	21.06	6.70	25.61	0.364	38.45	-12.84	27.76	0.597	40.61	-12.85
836.60	EDGE850	V	146	187	18.17	6.40	**22.42**	0.175	38.45	-16.03	**24.57**	**0.286**	40.61	-16.04

Table 6-2. ERP/EIRP (Cellular GPRS)

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Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP Limit [dBm]	Margin [dB]
824.70	CDMA850	H	218	49	12.27	6.30	16.42	38.45	-22.03	18.57	40.61	-22.04
836.52	CDMA850	H	202	174	12.30	6.40	**16.55**	38.45	-21.90	**18.70**	40.61	-21.91
848.31	CDMA850	H	225	49	11.60	6.50	15.95	38.45	-22.50	18.10	40.61	-22.51
836.52	CDMA850	V	143	202	11.53	6.40	15.78	38.45	-22.67	17.93	40.61	-22.68

Table 6-3. ERP/EIRP (Cellular CDMA)

Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP Limit [dBm]	Margin [dB]	EIRP [dBm]	EIRP Limit [dBm]	Margin [dB]
826.40	WCDMA850	V	136	170	12.50	6.30	**16.65**	38.45	-21.80	**18.80**	40.61	-21.81
836.60	WCDMA850	V	149	168	12.39	6.40	16.64	38.45	-21.81	18.79	40.61	-21.82
846.60	WCDMA850	V	115	299	11.10	6.50	15.45	38.45	-23.00	17.60	40.61	-23.01
826.40	WCDMA850	H	224	45	11.48	6.30	15.63	38.45	-22.82	17.78	40.61	-22.83

Table 6-4. ERP/EIRP (Cellular WCDMA)

Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Margin [dB]
1712.40	WCDMA1700	H	177	124	11.45	9.43	20.88	30.00	-9.12
1732.60	WCDMA1700	H	101	2	11.66	9.31	**20.97**	30.00	-9.03
1752.60	WCDMA1700	H	100	63	10.18	9.21	19.39	30.00	-10.61
1732.60	WCDMA1700	V	139	163	10.75	9.31	20.06	30.00	-9.94

Table 6-5. EIRP (AWS WCDMA)

Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Margin [dB]
1850.20	GPRS1900	H	136	7	18.35	9.48	27.83	33.01	-5.18
1880.00	GPRS1900	H	118	177	19.20	9.90	**29.10**	33.01	-3.91
1909.80	GPRS1900	H	109	25	18.24	10.26	28.50	33.01	-4.51
1880.00	GPRS1900	V	139	157	17.26	9.90	27.16	33.01	-5.85
1880.00	EDGE1900	H	118	177	14.84	9.90	**24.74**	33.01	-8.27

Table 6-6. EIRP (PCS GPRS)

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Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1851.25	CDMA1900	V	107	133	11.34	9.49	20.83	0.121	33.01	-12.18
1880.00	CDMA1900	V	115	126	11.21	9.90	**21.11**	**0.129**	33.01	-11.90
1908.75	CDMA1900	V	139	45	10.68	10.25	20.93	0.124	33.01	-12.08
1880.00	CDMA1900	H	115	10	10.16	9.90	20.06	0.101	33.01	-12.95

Table 6-7. EIRP (PCS CDMA)

Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Margin [dB]
1852.40	WCDMA1900	H	179	5	10.69	9.51	20.20	33.01	-12.81
1880.00	WCDMA1900	H	160	192	10.55	9.90	**20.45**	33.01	-12.56
1907.60	WCDMA1900	H	104	2	9.92	10.24	20.16	33.01	-12.85
1880.00	WCDMA1900	V	102	134	9.34	9.90	19.24	33.01	-13.77

Table 6-8. EIRP (PCS WCDMA)

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6.3 Radiated Spurious Emissions Measurements

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 horizontally and vertically polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as peak measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

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 = Average (Max Hold for pulsed emissions)
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.

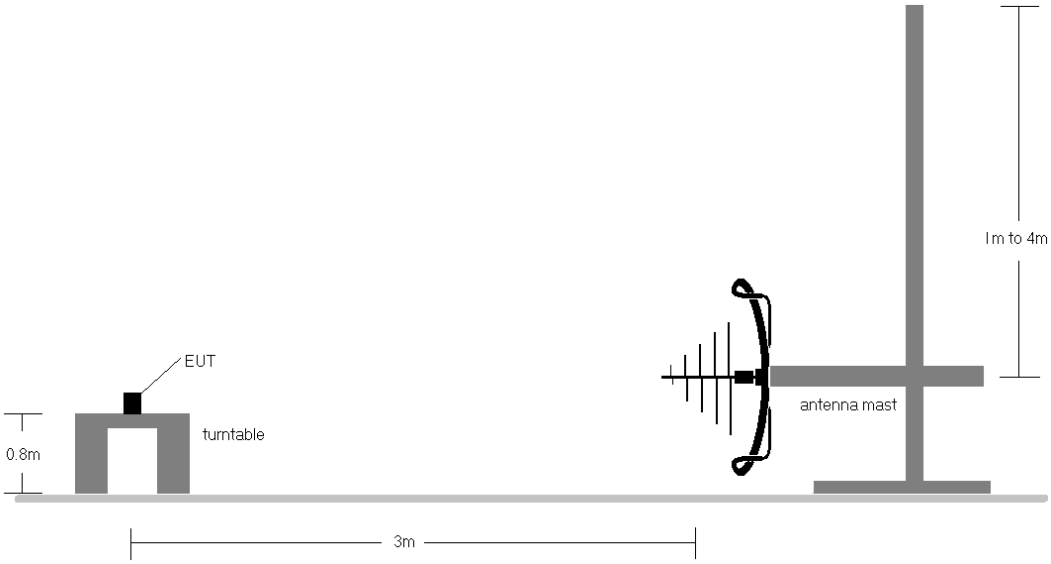

Figure 6-3. Test Instrument & Measurement Setup < 1GHz

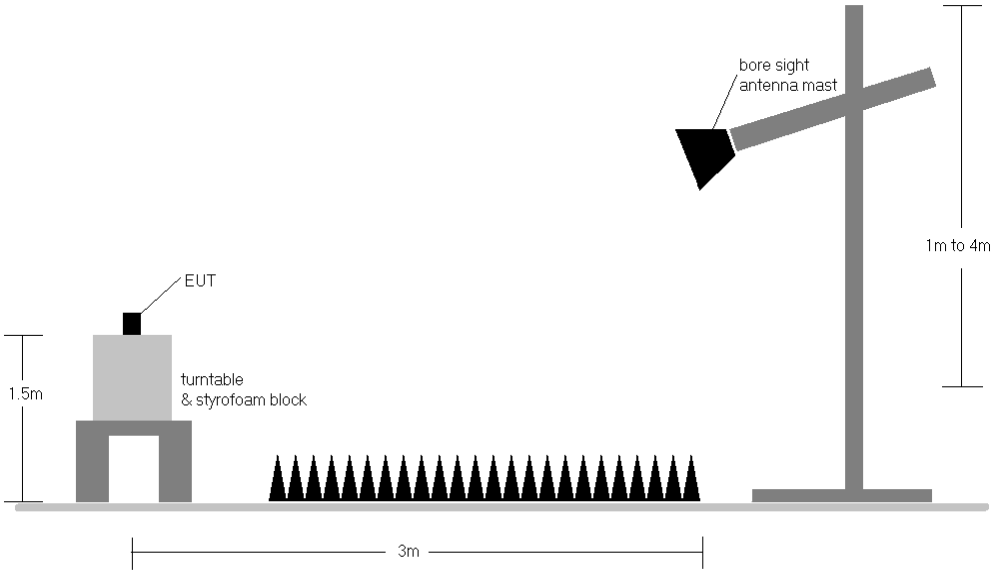

Figure 6-4. Test Instrument & Measurement Setup >1 GHz

Test Notes

1) This device employs GSM, GPRS, and EDGE capabilities. The EUT was tested under all configurations and the highest power is reported in GPRS mode while transmitting with one slot active.

2) This device employs UMTS technology with WCDMA (AMR/RMC), HSDPA, and HSUPA capabilities. For WCDMA and HSUPA transmission, all configurations were investigated and the worst case UMTS emissions were found in RMC WCDMA mode at 12.2kbps with HSDPA inactive and TPC bits all set to "1."

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3) This device was tested under all RC and SO combinations and the worst case is reported with RC3/SO55 with "All Up" power control bits.

4) This unit was tested with its standard battery.

5) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case setup is reported in the tables below.

6) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.

7) 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.

8) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

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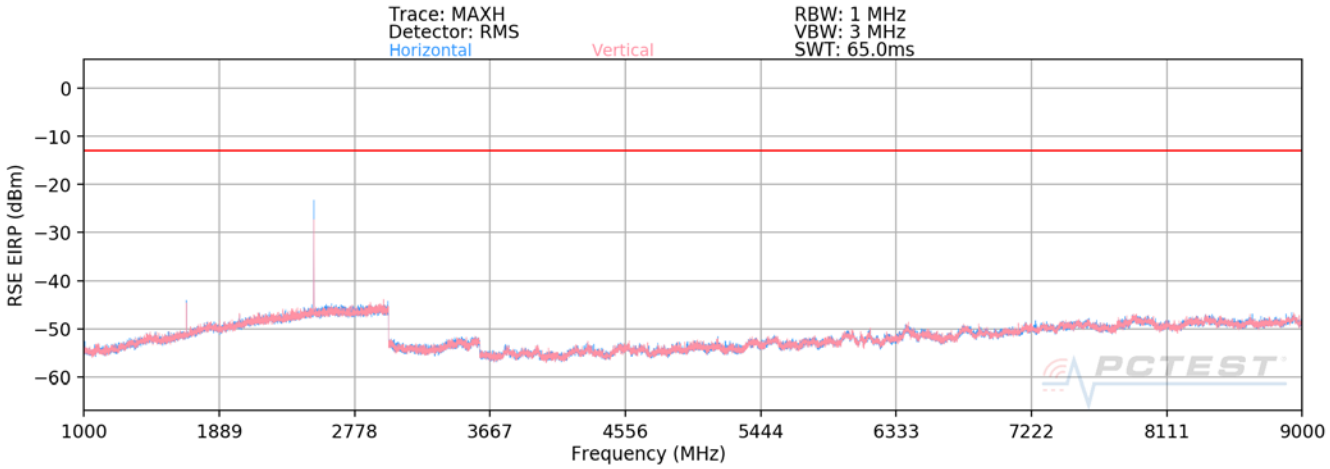
Cellular GPRS Mode



Plot 6-1. Radiated Spurious Plot above 1GHz (Cellular GPRS Mode)

OPERATING FREQUENCY:	824.20	MHz
MODULATION SIGNAL:	GPRS (GMSK)	
DISTANCE:	3	meters
LIMIT:	-13	dBm

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]
1648.40	V	120	117	-60.02	9.57	-50.46	-37.5
2472.60	V	118	135	-44.68	9.47	-35.21	-22.2
3296.80	V	121	21	-60.75	7.54	-53.21	-40.2
4121.00	V	304	195	-60.98	7.97	-53.00	-40.0
4945.20	V	-	-	-62.45	10.59	-51.86	-38.9
5769.40	V	-	-	-63.23	12.44	-50.79	-37.8

Table 6-9. Radiated Spurious Data (Cellular GPRS Mode – Ch. 128)

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OPERATING FREQUENCY:	836.60	MHz
MODULATION SIGNAL:	GPRS (GMSK)	
DISTANCE:	3	meters
LIMIT:	-13	dBm

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]
1673.20	V	146	339	-61.52	9.54	-51.99	-39.0
2509.80	V	111	152	-37.42	9.42	-28.00	-15.0
3346.40	V	371	8	-59.16	7.31	-51.85	-38.8
4183.00	V	103	210	-60.35	8.16	-52.19	-39.2
5019.60	V	-	-	-62.48	10.80	-51.69	-38.7
5856.20	V	383	18	-63.56	12.39	-51.17	-38.2
6692.80	V	-	-	-53.94	11.98	-41.96	-29.0
7529.40	V	-	-	-60.29	12.56	-47.73	-34.7

Table 6-10. Radiated Spurious Data (Cellular GPRS Mode – Ch. 190)

OPERATING FREQUENCY:	848.80	MHz
MODULATION SIGNAL:	GPRS (GMSK)	
DISTANCE:	3	meters
LIMIT:	-13	dBm

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]
1697.60	V	157	8	-58.46	9.51	-48.95	-35.9
2546.40	V	109	317	-38.42	9.38	-29.03	-16.0
3395.20	V	123	57	-60.46	7.32	-53.14	-40.1
4244.00	V	100	66	-59.08	8.49	-50.59	-37.6
5092.80	V	169	151	-63.18	10.93	-52.25	-39.2
5941.60	V	-	-	-60.62	12.39	-48.23	-35.2
6790.40	V	-	-	-55.03	11.82	-43.20	-30.2

Table 6-11. Radiated Spurious Data (Cellular GPRS Mode – Ch. 251)

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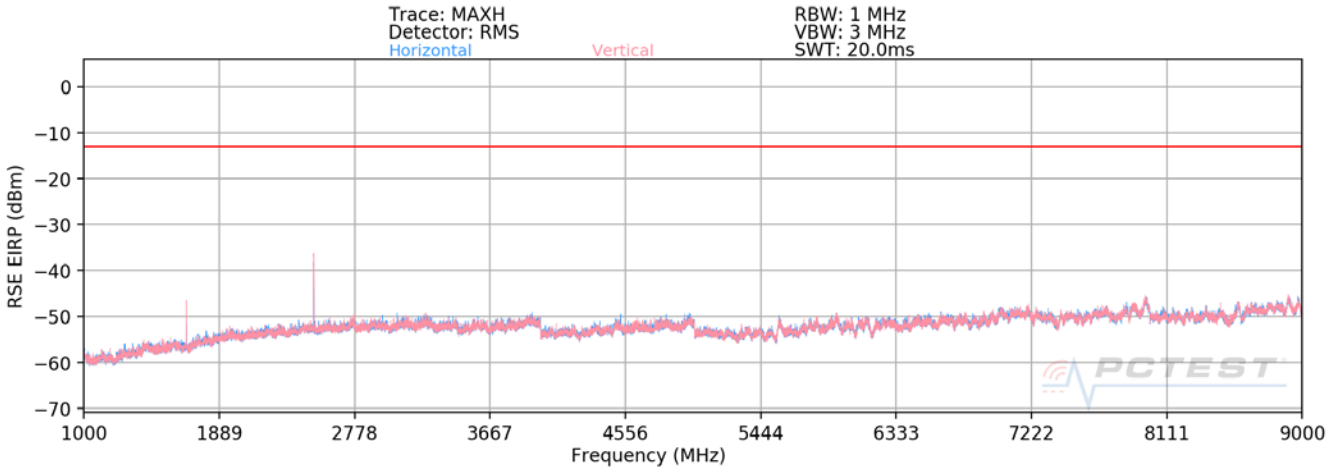
Cellular CDMA Mode



Plot 6-2. Radiated Spurious Plot above 1GHz (Cellular CDMA Mode)

OPERATING FREQUENCY:	824.70	MHz
MODULATION SIGNAL:	CDMA	
DISTANCE:	3	meters
LIMIT:	-13	dBm

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]
1649.40	H	310	49	-79.43	9.56	-69.87	-56.9
2474.10	H	138	62	-71.58	9.47	-62.11	-49.1
3298.80	H	-	-	-74.31	7.52	-66.79	-53.8
4123.50	H	-	-	-74.04	7.98	-66.06	-53.1

Table 6-12. Radiated Spurious Data (Cellular CDMA Mode – Ch. 1013)

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OPERATING FREQUENCY: 836.52 MHz
MODULATION SIGNAL: CDMA
DISTANCE: 3 meters
LIMIT: -13 dBm

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]
1673.04	H	169	160	-78.95	9.54	-69.41	-56.4
2509.56	H	232	10	-56.09	9.42	-46.66	-33.7
3346.08	H	-	-	-74.47	7.32	-67.16	-54.2
4182.60	H	144	82	-74.64	8.16	-66.48	-53.5
5019.12	H	-	-	-76.11	10.80	-65.32	-52.3
5855.64	H	-	-	-77.57	12.39	-65.18	-52.2

Table 6-13. Radiated Spurious Data (Cellular CDMA Mode – Ch. 384)

OPERATING FREQUENCY: 848.31 MHz
MODULATION SIGNAL: CDMA
DISTANCE: 3 meters
LIMIT: -13 dBm

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]
1696.62	H	299	10	-76.24	9.51	-66.73	-53.7
2544.93	H	332	195	-60.72	9.38	-51.33	-38.3
3393.24	H	186	306	-75.19	7.32	-67.87	-54.9
4241.55	H	303	119	-72.65	8.47	-64.18	-51.2
5089.86	H	-	-	-75.67	10.93	-64.75	-51.7
5938.17	H	-	-	-76.63	12.39	-64.24	-51.2

Table 6-14. Radiated Spurious Data (Cellular CDMA Mode – Ch. 777)

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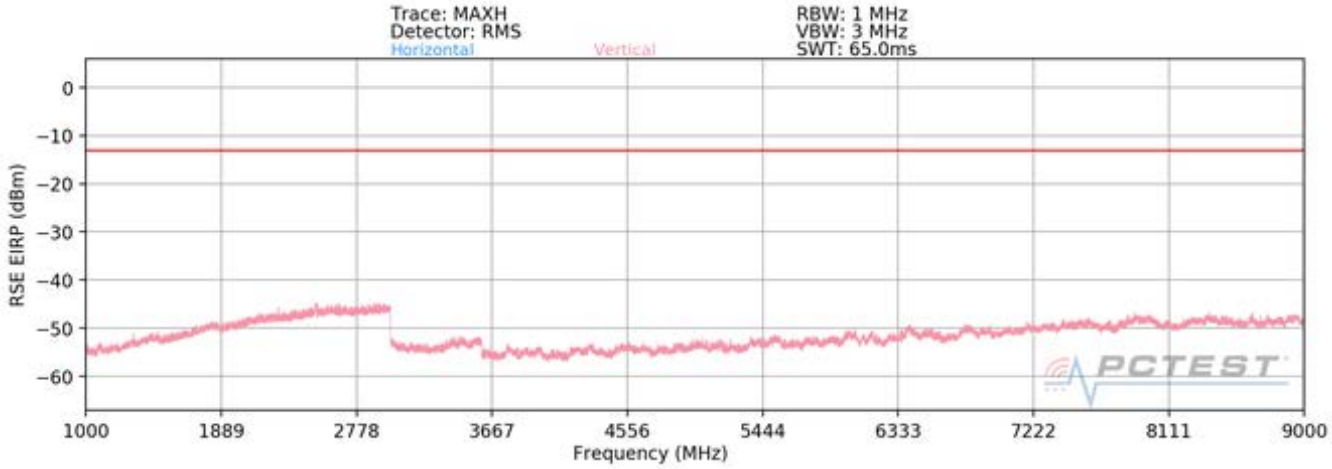
Cellular WCDMA Mode



Plot 6-3. Radiated Spurious Plot above 1GHz (Cellular WCDMA Mode)

OPERATING FREQUENCY:	826.40	MHz
MODULATION SIGNAL:	WCDMA	
DISTANCE:	3	meters
LIMIT:	-13	dBm

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]
1652.80	H	112	7	-73.02	9.56	-63.46	-50.5
2479.20	H	100	13	-60.11	9.46	-50.65	-37.7
3305.60	H	-	-	-69.84	7.49	-62.35	-49.4
4132.00	H	-	-	-69.99	8.01	-61.98	-49.0

Table 6-15. Radiated Spurious Data (Cellular WCDMA Mode – Ch. 4132)

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OPERATING FREQUENCY:	836.60	MHz
MODULATION SIGNAL:	WCDMA	
DISTANCE:	3	meters
LIMIT:	-13	dBm

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]
1673.20	H	141	73	-73.18	9.54	-63.64	-50.6
2509.80	H	234	354	-54.24	9.42	-44.82	-31.8
3346.40	H	-	-	-69.13	7.31	-61.82	-48.8
4183.00	H	-	-	-70.23	8.16	-62.07	-49.1

Table 6-16. Radiated Spurious Data (Cellular WCDMA Mode – Ch. 4183)

OPERATING FREQUENCY:	846.60	MHz
MODULATION SIGNAL:	WCDMA	
DISTANCE:	3	meters
LIMIT:	-13	dBm

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]
1693.20	H	322	1	-74.51	9.52	-65.00	-52.0
2539.80	H	107	2	-66.08	9.39	-56.69	-43.7
3386.40	H	-	-	-69.22	7.31	-61.91	-48.9
4233.00	H	-	-	-69.21	8.42	-60.79	-47.8

Table 6-17. Radiated Spurious Data (Cellular WCDMA Mode – Ch. 4233)

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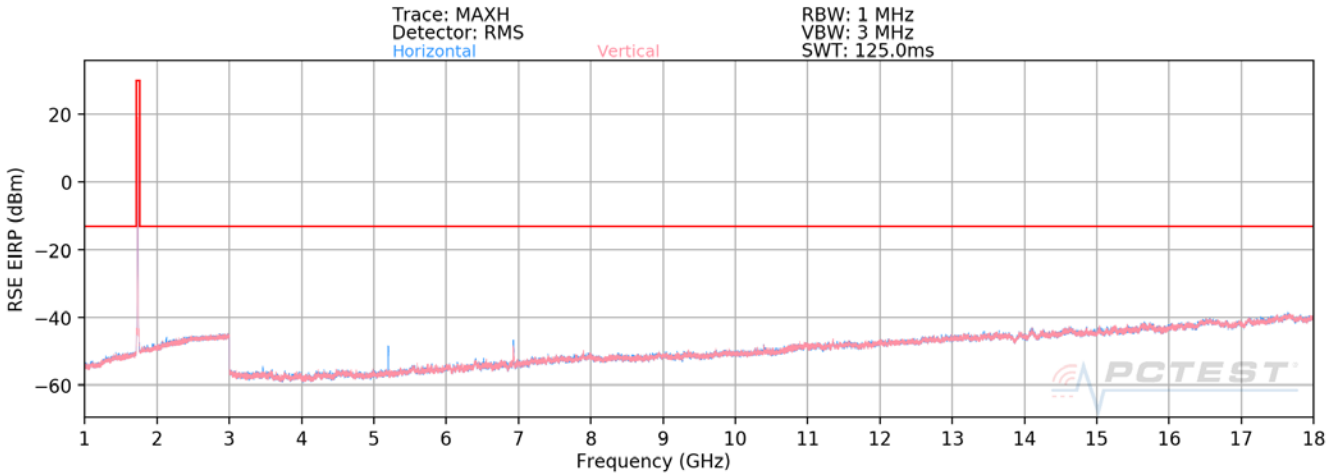
AWS WCDMA Mode



Plot 6-4. Radiated Spurious Plot above 1GHz (AWS WCDMA Mode)

OPERATING FREQUENCY:	1712.40	MHz
MODULATION SIGNAL:	WCDMA	
DISTANCE:	3	meters
LIMIT:	-13	dBm

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]
3424.80	H	383	284	-67.35	6.64	-60.72	-47.7
5137.20	H	123	237	-69.26	9.01	-60.25	-47.3
6849.60	H	294	23	-57.61	9.56	-48.05	-35.1
8562.00	H	-	-	-65.50	9.62	-55.88	-42.9
10274.40	H	138	299	-61.04	9.54	-51.50	-38.5
11986.80	H	-	-	-60.98	9.28	-51.71	-38.7
13699.20	H	-	-	-58.36	8.94	-49.42	-36.4

Table 6-18. Radiated Spurious Data (AWS WCDMA Mode – Ch. 1312)

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OPERATING FREQUENCY:	1732.60	MHz
MODULATION SIGNAL:	WCDMA	
DISTANCE:	3	meters
LIMIT:	-13	dBm

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]
3465.20	H	174	348	-66.63	6.70	-59.93	-46.9
5197.80	H	302	333	-67.50	9.12	-58.38	-45.4
6930.40	H	109	312	-56.73	9.48	-47.25	-34.3
8663.00	H	-	-	-64.87	9.60	-55.27	-42.3
10395.60	H	182	1	-62.04	9.49	-52.55	-39.5
12128.20	H	-	-	-60.28	9.22	-51.06	-38.1
13860.80	H	-	-	-59.16	8.87	-50.29	-37.3

Table 6-19. Radiated Spurious Data (AWS WCDMA Mode – Ch. 1413)

OPERATING FREQUENCY:	1752.60	MHz
MODULATION SIGNAL:	WCDMA	
DISTANCE:	3	meters
LIMIT:	-13	dBm

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]
3505.20	H	109	334	-64.90	6.78	-58.12	-45.1
5257.80	H	306	339	-65.83	9.12	-56.71	-43.7
7010.40	H	308	26	-56.03	9.45	-46.59	-33.6
8763.00	H	-	-	-65.09	9.60	-55.49	-42.5
10515.60	H	179	356	-62.35	9.37	-52.98	-40.0
12268.20	H	-	-	-60.48	9.17	-51.32	-38.3
14020.80	H	-	-	-58.86	8.90	-49.96	-37.0

Table 6-20. Radiated Spurious Data (AWS WCDMA Mode – Ch. 1513)

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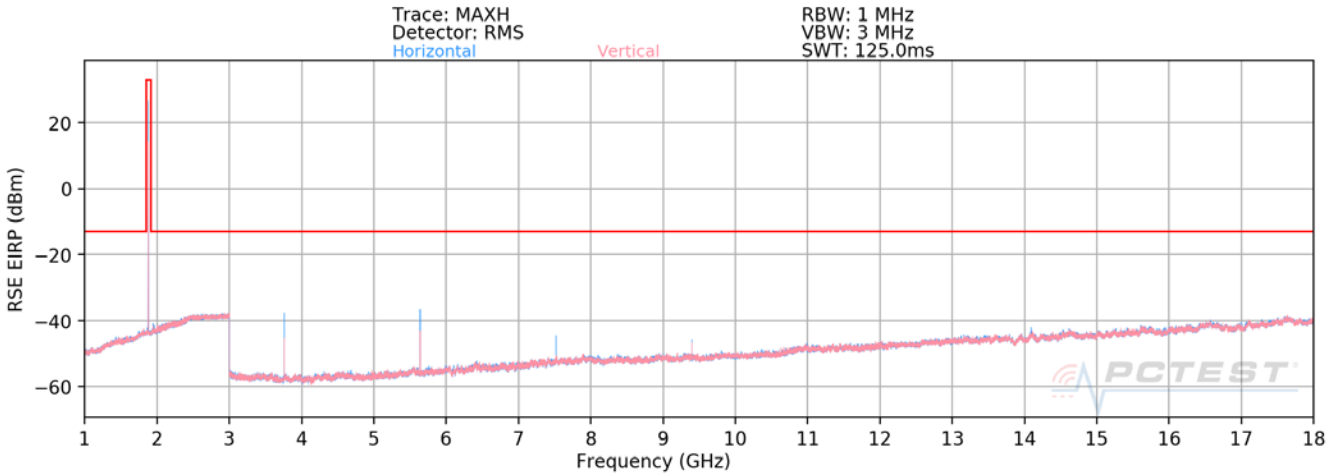
PCS GPRS Mode



Plot 6-5. Radiated Spurious Plot above 1GHz (PCS GPRS Mode)

OPERATING FREQUENCY:	1850.20	MHz
MODULATION SIGNAL:	GPRS (GMSK)	
DISTANCE:	3	meters
LIMIT:	-13	dBm

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]
3700.40	H	318	330	-43.72	7.26	-36.46	-23.5
5550.60	H	323	327	-46.89	9.29	-37.59	-24.6
7400.80	H	262	359	-51.30	9.40	-41.90	-28.9
9251.00	H	227	312	-52.78	9.51	-43.27	-30.3
11101.20	H	193	337	-49.03	9.74	-39.29	-26.3
12951.40	H	-	-	-51.61	9.13	-42.48	-29.5
14801.60	H	163	92	-51.17	9.01	-42.16	-29.2
16651.80	H	-	-	-45.81	8.69	-37.12	-24.1

Table 6-21. Radiated Spurious Data (PCS GPRS Mode – Ch. 512)

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OPERATING FREQUENCY: 1880.00 MHz
MODULATION SIGNAL: GPRS (GMSK)
DISTANCE: 3 meters
LIMIT: -13 dBm

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]
3760.00	H	296	312	-41.17	7.27	-33.90	-20.9
5640.00	H	300	56	-39.87	9.34	-30.53	-17.5
7520.00	H	243	356	-54.83	9.41	-45.42	-32.4
9400.00	H	361	18	-54.48	9.52	-44.97	-32.0
11280.00	H	203	312	-56.29	9.61	-46.68	-33.7
13160.00	H	-	-	-52.68	9.05	-43.63	-30.6
15040.00	H	152	337	-47.73	9.06	-38.68	-25.7
16920.00	H	-	-	-47.80	8.74	-39.06	-26.1

Table 6-22. Radiated Spurious Data (PCS GPRS Mode – Ch. 661)

OPERATING FREQUENCY: 1909.80 MHz
MODULATION SIGNAL: GPRS (GMSK)
DISTANCE: 3 meters
LIMIT: -13 dBm

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]
3819.60	H	267	339	-43.23	7.38	-35.85	-22.9
5729.40	H	178	297	-44.95	9.39	-35.57	-22.6
7639.20	H	193	10	-53.84	9.36	-44.48	-31.5
9549.00	H	400	310	-47.41	9.52	-37.89	-24.9
11458.80	H	350	69	-55.43	9.49	-45.94	-32.9
13368.60	H	-	-	-48.38	9.00	-39.38	-26.4
15278.40	H	203	300	-47.59	8.90	-38.69	-25.7
17188.20	H	-	-	-44.99	8.61	-36.38	-23.4

Table 6-23. Radiated Spurious Data (PCS GPRS Mode – Ch. 810)

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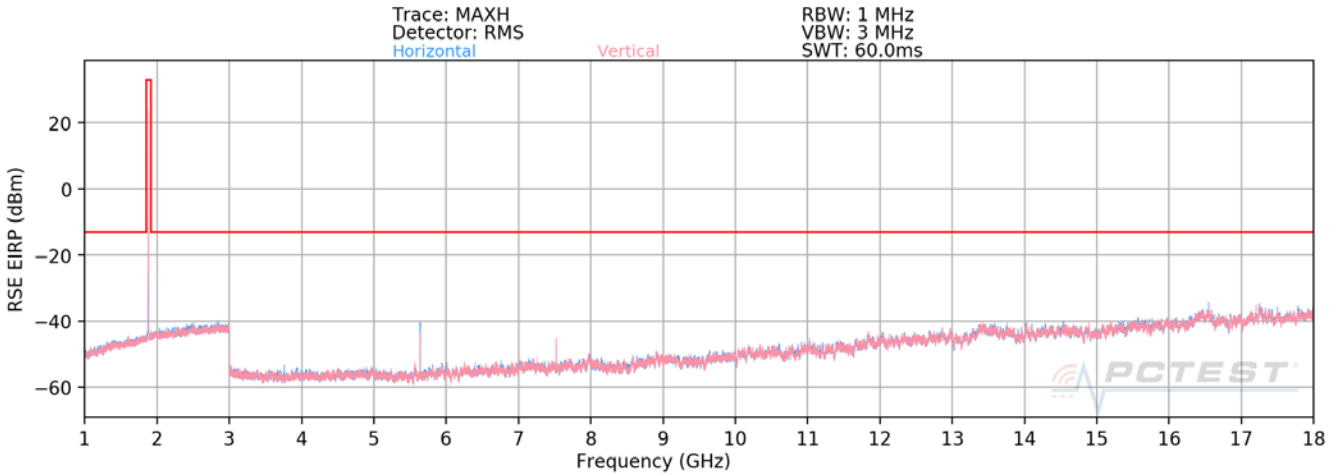
PCS CDMA Mode



Plot 6-6. Radiated Spurious Plot above 1GHz (PCS CDMA Mode)

OPERATING FREQUENCY:	1851.25	MHz
MODULATION SIGNAL:	CDMA	
DISTANCE:	3	meters
LIMIT:	-13	dBm

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]
3702.50	V	186	173	-72.01	7.26	-64.74	-51.7
5553.75	V	400	41	-62.59	9.30	-53.29	-40.3
7405.00	V	112	230	-51.88	9.40	-42.48	-29.5
9256.25	V	-	-	-69.32	9.51	-59.81	-46.8
11107.50	V	113	293	-66.16	9.74	-56.42	-43.4
12958.75	V	-	-	-65.80	9.13	-56.66	-43.7
14810.00	V	-	-	-63.86	9.00	-54.85	-41.9

Table 6-24. Radiated Spurious Data (PCS CDMA Mode – Ch. 25)

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OPERATING FREQUENCY: 1880.00 MHz
MODULATION SIGNAL: CDMA
DISTANCE: 3 meters
LIMIT: -13 dBm

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]
3760.00	V	400	172	-64.15	7.27	-56.88	-43.9
5640.00	V	104	29	-50.33	9.34	-40.99	-28.0
7520.00	V	114	235	-53.72	9.41	-44.30	-31.3
9400.00	V	117	157	-67.44	9.52	-57.92	-44.9
11280.00	V	115	284	-65.20	9.61	-55.59	-42.6
13160.00	V	-	-	-66.16	9.05	-57.11	-44.1
15040.00	V	-	-	-64.81	9.06	-55.75	-42.7

Table 6-25. Radiated Spurious Data (PCS CDMA Mode – Ch. 600)

OPERATING FREQUENCY: 1908.75 MHz
MODULATION SIGNAL: CDMA
DISTANCE: 3 meters
LIMIT: -13 dBm

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]
3817.50	V	202	82	-68.50	7.37	-61.12	-48.1
5726.25	V	118	122	-57.69	9.38	-48.31	-35.3
7635.00	V	293	348	-63.25	9.36	-53.89	-40.9
9543.75	V	-	-	-69.08	9.52	-59.56	-46.6
11452.50	V	116	286	-65.41	9.50	-55.92	-42.9
13361.25	V	-	-	-65.88	9.00	-56.88	-43.9
15270.00	V	-	-	-66.09	8.92	-57.17	-44.2

Table 6-26. Radiated Spurious Data (PCS CDMA Mode – Ch. 1175)

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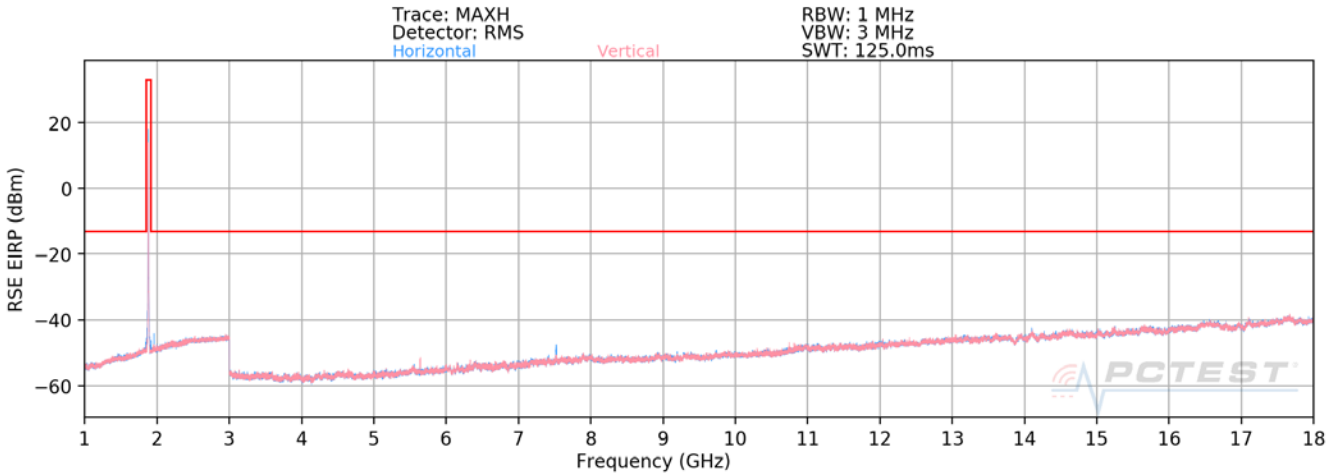
PCS WCDMA Mode



Plot 6-7. Radiated Spurious Plot above 1GHz (PCS WCDMA Mode)

OPERATING FREQUENCY:	1852.40	MHz
MODULATION SIGNAL:	WCDMA	
DISTANCE:	3	meters
LIMIT:	-13	dBm

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]
3704.80	H	400	323	-67.91	7.26	-60.65	-47.6
5557.20	H	131	347	-71.57	9.30	-62.26	-49.3
7409.60	H	291	3	-56.03	9.40	-46.63	-33.6
9262.00	H	-	-	-69.31	9.51	-59.80	-46.8
11114.40	H	190	335	-66.67	9.73	-56.94	-43.9
12966.80	H	-	-	-66.00	9.14	-56.86	-43.9
14819.20	H	-	-	-64.42	9.00	-55.42	-42.4

Table 6-27. Radiated Spurious Data (PCS WCDMA Mode – Ch. 9262)

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OPERATING FREQUENCY: 1880.00 MHz
MODULATION SIGNAL: WCDMA
DISTANCE: 3 meters
LIMIT: -13 dBm

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]
3760.00	H	135	301	-70.41	7.27	-63.14	-50.1
5640.00	H	124	316	-56.72	9.34	-47.38	-34.4
7520.00	H	316	357	-58.14	9.41	-48.72	-35.7
9400.00	H	-	-	-69.02	9.52	-59.50	-46.5
11280.00	H	232	334	-66.68	9.61	-57.07	-44.1
13160.00	H	-	-	-66.28	9.05	-57.23	-44.2
15040.00	H	-	-	-64.87	9.06	-55.81	-42.8

Table 6-28. Radiated Spurious Data (PCS WCDMA Mode – Ch. 9400)

OPERATING FREQUENCY: 1907.60 MHz
MODULATION SIGNAL: WCDMA
DISTANCE: 3 meters
LIMIT: -13 dBm

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]
3815.20	H	315	339	-65.95	7.36	-58.58	-45.6
5722.80	H	295	42	-65.89	9.37	-56.52	-43.5
7630.40	H	260	31	-61.85	9.36	-52.49	-39.5
9538.00	H	-	-	-69.42	9.53	-59.89	-46.9
11445.60	H	169	331	-67.48	9.50	-57.98	-45.0
13353.20	H	-	-	-65.33	9.00	-56.33	-43.3
15260.80	H	-	-	-65.91	8.94	-56.97	-44.0

Table 6-29. Radiated Spurious Data (PCS WCDMA Mode – Ch. 9538)

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7.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **LG Portable Handset FCC ID: ZNFQ730TM** complies with all the requirements of Part 22, 24, & 27 of the FCC Rules.

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