FCC 47 CFR PART 22H, 24E, AND 27L
CERTIFICATION TEST REPORT

FOR

GSM850~1900 + WCDMA 850~1900 + LTE SMART PHONE

with BLUETOOTH + BLE and WLAN 2.4GHz

MODEL NUMBER: LGMS659, LG-MS659, MS659, LG-P659, LGP659, P659

FCC ID: ZNFMS659

REPORT NUMBER: 13U14990-1

ISSUE DATE: MAY 14, 2013

Prepared for

LG ELECTRONICS MOBILECOMM U.S.A., INC.
1000 SYLVAN AVENUE
ENGLEWOOD CLIFFS, NEW JERSEY 07632

Prepared by

UL VERIFICATION SERVICES
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888

NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	05/14/13	Initial Issue	P. Kim

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	LG ELECTRONICS MOBILECOMM U.S.A., INC. 1000 SYLVAN AVENUE ENGLEWOOD CLIFFS, NEW JERSEY 07632
EUT DESCRIPTION:	GSM850~1900 + WCDMA 850~1900 + LTE SMART PHONE with BLUETOOTH + BLE and WLAN 2.4GHz
MODEL:	LGMS659, LG-MS659, MS659, LG-P659, LGP659, P659
SERIAL NUMBER:	1625835
DATE TESTED:	May 8 – MAY 14, 2013

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 22H, 24E and 27L	PASS

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For

UL Verification Services Inc. By:

PHILIP KIM
WISE OPERATIONS MANAGER
UL Verification Services Inc.

Tested By:

MEGISTU MEKURIA
WISE EMC ENGINEER
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA-603-C, FCC CFR 47 Part 2, FCC CFR 47 Part 22, FCC CFR Part 24, and FCC Part 27.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://www.ccsemc.com.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a Tri-Band Cellphone with Bluetooth, WLAN and LTE.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak of both conducted and ERP / EIRP output powers as follows:

Part 22 Cellular Band			
Frequency range (MHz)	Modulation	ERP	
		dBm	mW
824.2 - 848.8	GPRS	27.88	613.8
824.2 - 848.8	EGPRS	23.43	220.3

Part 24 PCS Band			
Frequency range (MHz)	Modulation	EIRP	
		dBm	mW
1850.2 - 1909.8	GPRS	28.72	744.7
1850.2 - 1909.8	EGPRS	26.76	474.2

Part 22/24 Band			
Frequency range (MHz)	Modulation	ERP/EIRP	
		dBm	mW
826.4 - 846	REL 99	22.24	167.5
1852.4 - 1907.6		26.11	408.3

Part 22/24 Band			
Frequency range (MHz)	Modulation	ERP/EIRP	
		dBm	mW
826.4 - 846	HSDPA	19.50	89.1
1852.4 - 1907.6		23.34	215.8

Part 27 Band			
Frequency range (MHz)	Modulation	EIRP	
		dBm	mW
1712.4-1752.6	AWS Rel 99	24.82	303.4
	AWS HSDPA	24.06	254.7

Part 27 LTE Band 4 MODE (5 MHz BANDWIDTH)						
Frequency range (MHz)	Modulation	Start RB and RB offset	Conducted		EIRP	
			dBm	mW	dBm	mW
1712.5-1752.5	QPSK	25/0	28.63	729.5	23.87	243.8
	16QAM		28.56	717.8	22.87	193.6

Part 27 LTE Band 4 MODE (10.0- MHz BANDWIDTH)						
Frequency range (MHz)	Modulation	Start RB and RB offset	Conducted		EIRP	
			dBm	mW	dBm	mW
1715-1750	QPSK	50/0	28.90	776.2	24.19	262.4
	16QAM		28.96	787.0	23.90	245.5

Part 27 LTE Band 4 MODE (15.0 MHz BANDWIDTH)						
Frequency range (MHz)	Modulation	Start RB and RB offset	Conducted		EIRP	
			dBm	mW	dBm	mW
1717.5-1747.5	QPSK	75/0	29.13	818.5	23.87	243.8
	16QAM		28.60	724.4	22.87	193.6

Part 27 LTE Band 4 MODE (20.0 MHz BANDWIDTH)						
Frequency range (MHz)	Modulation	Start RB and RB offset	Conducted		EIRP	
			dBm	mW	dBm	mW
1720.0-1745	QPSK	100/0	28.50	707.9	23.87	243.8
	16QAM		28.78	755.1	22.87	193.6

Part 27 LTE Band 17 MODE (5 MHz BANDWIDTH)				
Frequency range (MHz)	Modulation	Start RB and RB offset	EIRP	
			dBm	mW
706.5-713.5	QPSK	25/0	21.65	146.2
	16QAM		20.65	116.1

Part 27 LTE Band 17 MODE (10.0- MHz BANDWIDTH)				
Frequency range (MHz)	Modulation	Start RB and RB offset	EIRP	
			dBm	mW
709 - 711	QPSK	50/0	21.55	142.9
	16QAM		20.35	108.4

5.3. SOFTWARE AND FIRMWARE

The EUT software installed during testing was LAP8960IR120417.

The EUT is linked with Agilent 8960 and CMW500 Communication Test Sets.

5.4. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an integral antenna with a maximum peak gain as follow:

BAND	Gain (dBi)
GSM850/WCDMA B2(824-894MHz)	-5.0
PCS WCDMA B2 (1850-1990MHz)	-5.0
WCDMA B4/LTE B4(1710-2155MHz)	-6.4
LTE band 17 (704-746MHz)	-7.4

5.5. WORST-CASE CONFIGURATION AND MODE

Based on the investigation results, the highest peak power and enhanced data rate is the worst-case scenario for all measurements.

Worst-case modes:
GPRS, UMTS WCDMA and UMTS HSDPA Sub-test 2
Worst-case modes:

- GPRS
- WCDMA
- LTE Band 4 and 17

Since the EUT is a portable device, to determine the worst/highest emissions, the X, Y, and Z orientations of the EUT with respect to the turntable and the worst among them with headset and an AC adapter were investigated. After the investigations, Y-Orientation without headset and AC adapter was turned out to be the worst case for cell and Z-Orientation without headset and AC adapter was turned out to be the worst case for PCS bands.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

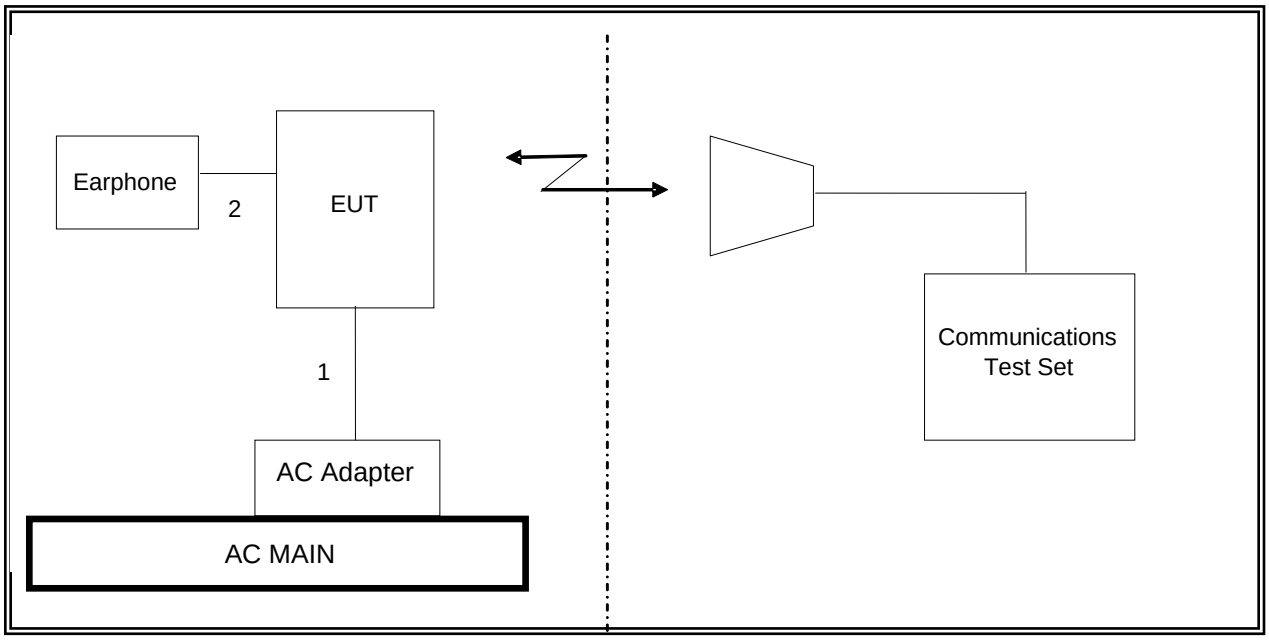
Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	MCS-01WR	EAY62768916	NA
Headset	LG	NA	EAB62209301	NA

I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	DC	1	DC	Un-shielded	1m	NA
2	Jack	1	Earphone	Un-shielded	1.2m	NA

TEST SETUP

SETUP DIAGRAM FOR RF RADIATED TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Antenna, Horn, 18 GHz	EMCO	3115	C00872	10/25/13
Antenna, Horn, 18 GHz	EMCO	3115	C00945	12/11/13
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A		04/10/14
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	10/22/13
Communication Test Set	Agilent / HP	E5515C	C01086	06/20/13
Communication Test Set	R & S	CMW500	None	06/28/13
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02689	CNR
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02687	CNR
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	C01011	03/06/14
Vector signal generator, 6 GHz	Agilent / HP	E4438C	None	07/06/13

7.1 RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232 and §27.50

LIMITS

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(c) - Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

27.50 (c) (10) the following power and antenna height requirements apply to stations transmitting in the 698–746 MHz band, the portable stations (hand-held devices) are limited to 3 watts ERP.

27.50 (d)(4) The following power and antenna height requirements apply to stations transmitting in the 1710–1755 MHz and 2110–2155 MHz bands: Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP.

TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 2.2.17

The ERP/EIRP power was measured with the spectrum analyzer which attached with receiver antenna via calibrated cable. The measurements have been taken at the low, middle and high channel in each band.

- Set the spectrum analyzer span wide enough or greater than the modulated signal BW.
- Set a spectrum analyzer at peak detection mode with VBW ≥ RBW.≥ 26dB BW, typically 3MHz.for GSM and 5MHz for WCDMA modes respectively.
- Set a marker to point the corresponding peak value.

MODES TESTED

- GPRS and EGPRS
- LTE Band 4 and 17

RESULTS

Mode	Channel	f (MHz)	ERP	
			dBm	mW
GPRS	128	824.20	25.19	330.37
	190	836.60	26.45	441.57
	251	848.80	27.88	613.76
EGPRS	128	824.20	22.79	190.11
	190	836.60	22.55	179.89
	251	848.80	23.43	220.29

Mode	Channel	f (MHz)	EIRP	
			dBm	mW
GPRS	512	1850.20	28.29	674.53
	661	1880.00	28.72	744.73
	810	1909.80	28.61	726.11
EGPRS	512	1850.20	26.42	438.53
	661	1880.00	26.52	448.75
	810	1909.80	26.76	474.24

Mode	Channel	f (MHz)	ERP	
			dBm	mW
REL 99	4357	826.40	20.40	109.65
	4408	836.60	22.24	167.49
	4458	846.60	21.01	126.18
	9662	1852.40	22.94	196.79
	9800	1880.00	26.11	408.32
	9938	1907.60	25.20	331.13

Mode	Channel	f (MHz)	ERP / EIRP	
			dBm	mW
HSDPA	4357	826.40	18.60	72.44
	4405	836.00	19.50	89.13
	4455	846.00	17.01	50.23
	9662	1852.40	23.24	210.86
	9800	1880.00	22.32	170.61
	9938	1907.60	22.90	194.98

Mode	Channel	f (MHz)	EIRP	
			dBm	mW
UMTS 1700, REL 99	1537	1712.40	24.82	303.39
	1638	1732.60	23.42	219.79
	1738	1752.50	24.60	288.40

Mode	Channel	f (MHz)	EIRP	
			dBm	mW
UMTS 1700, HSDPA	1537	1712.40	24.00	251.19
	1638	1732.60	23.08	203.24
	1738	1752.50	24.06	254.68

EIRP LTE Band 4 (5.0 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	1712.5	22.92	195.88
		1732.5	23.69	233.88
		1752.5	23.87	243.78
5.0 MHZ BAND 16QAM	25/0	1712.5	21.92	155.60
		1732.5	22.59	181.55
		1752.5	22.87	193.64

EIRP LTE Band 4 (10.0 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	1715.0	22.62	182.81
		1732.5	24.19	262.42
		1750.0	24.17	261.22
10.0 MHZ BAND 16QAM	50/0	1715.0	21.62	145.21
		1732.5	23.90	245.47
		1750.0	23.27	212.32

EIRP LTE Band 4 (15.0 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	1718.0	23.12	205.12
		1732.5	23.69	233.88
		1748.0	23.87	243.78
15.0 MHZ BAND 16QAM	75/0	1718.0	22.12	162.93
		1732.5	22.69	185.78
		1748.0	22.87	193.64

EIRP LTE Band 4 (20.0 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	1720.0	23.12	205.12
		1732.5	23.59	228.56
		1745.0	23.87	243.78
20.0 MHZ BAND 16QAM	100/0	1720.0	22.12	162.93
		1732.5	22.69	185.78
		1745.0	22.87	193.64

ERP LTE Band 17 (5.0 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP	
			dBm	mW
5MHz Band QPSK	25/0	706.5	21.57	143.55
		710.0	21.65	146.22
		713.5	21.25	133.35
5MHz Band 16QAM	25/0	706.5	20.65	116.14
		710.0	20.65	116.14
		713.5	20.35	108.39

ERP LTE Band 17 (10.0 MHz BAND WIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP	
			dBm	mW
10.0 MHZ BAND QPSK	25/0	709.0	21.55	142.89
		710.0	21.45	139.64
		711.0	21.36	136.77
10.0 MHZ BAND 16QAM	25/0	709.0	20.45	110.92
		710.0	20.35	108.39
		711.0	20.35	108.39

GPRS (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/07/13
Test Engineer: Steven Tran
Configuration: X config EUT only
Mode: GPRS GSM 850

Test Equipment:
Receiving: Sunol T243, and Chamber B N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
824.20	18.63	V	0.6	0.0	18.03	38.5	-20.4	
824.20	25.79	H	0.6	0.0	25.19	38.5	-13.3	
Mid Ch								
836.60	18.25	V	0.6	0.0	17.65	38.5	-20.8	
836.60	27.05	H	0.6	0.0	26.45	38.5	-12.0	
High Ch								
848.80	18.97	V	0.6	0.0	18.37	38.5	-20.1	
848.80	28.48	H	0.6	0.0	27.88	38.5	-10.6	

Rev. 3.17.11

EGPRS (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/11/13
Test Engineer: Chin Pang
Configuration: EUT Only
Mode: EGPRS 850

Test Equipment:
Receiving: Sunol T243, and Chamber B N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
824.20	18.63	V	0.6	0.0	18.03	38.5	-20.4	
824.20	22.79	H	0.6	0.0	22.19	38.5	-16.3	
Mid Ch								
836.60	18.25	V	0.6	0.0	17.65	38.5	-20.8	
836.60	23.15	H	0.6	0.0	22.55	38.5	-15.9	
High Ch								
848.80	18.97	V	0.6	0.0	18.37	38.5	-20.1	
848.80	24.03	H	0.6	0.0	23.43	38.5	-15.0	

Rev. 3.17.11

GPRS (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/07/13
Test Engineer: Steven Tran
Configuration: X position EUT only
Mode: GSM 1900 GPRS

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.850	12.0	V	0.85	8.05	19.22	33.0	-13.8	
1.850	21.3	H	0.85	7.89	28.29	33.0	-4.7	
Mid Ch								
1.880	12.4	V	0.85	8.10	19.67	33.0	-13.3	
1.880	21.7	H	0.85	7.88	28.72	33.0	-4.3	
High Ch								
1.910	12.6	V	0.85	8.19	19.89	33.0	-13.1	
1.910	21.5	H	0.85	7.95	28.61	33.0	-4.4	

Rev. 3.17.11

EGPRS (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/10/13
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Mode: EGPRS 1900

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.850	11.3	V	0.85	8.05	18.46	33.0	-14.5	
1.850	19.4	H	0.85	7.89	26.42	33.0	-6.6	
Mid Ch								
1.880	11.1	V	0.85	8.10	18.39	33.0	-14.6	
1.880	19.5	H	0.85	7.88	26.52	33.0	-6.5	
High Ch								
1.910	11.1	V	0.85	8.19	18.47	33.0	-14.5	
1.910	19.7	H	0.85	7.95	26.76	33.0	-6.2	

Rev. 3.17.11

UMTS 850 REL 99 (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/10/13
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter
Mode: TX, 850MHz BAND WCDMA Rel 99

Test Equipment:
Receiving: Sunol T243 and Chamber B N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
826.40	20.90	V	0.5	0.0	20.40	38.5	-18.0	
826.40	12.90	H	0.5	0.0	12.40	38.5	-26.0	
Mid Ch								
836.00	22.74	V	0.5	0.0	22.24	38.5	-16.2	
836.00	13.50	H	0.5	0.0	13.00	38.5	-25.4	
High Ch								
846.00	21.51	V	0.5	0.0	21.01	38.5	-17.4	
846.00	13.30	H	0.5	0.0	12.80	38.5	-25.6	

Rev. 3.17.11

UMTS 1900 REL 99 (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/10/13
Test Engineer: Lieu Nguyen
Configuration: EUT Model MS659 with AC Adapter
Mode: TX, WCDMA, PCS band

Test Equipment:
Receiving: Horn T59, and Camber A SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
1.852	15.2	V	0.85	8.62	22.94	33.0	-10.1	
1.852	17.5	H	0.85	8.47	25.12	33.0	-7.9	
1.880	17.7	V	0.85	8.46	25.32	33.0	-7.7	
1.880	18.6	H	0.85	8.36	26.11	33.0	-6.9	
1.908	17.8	V	0.85	8.30	25.20	33.0	-7.8	
1.908	17.2	H	0.85	8.25	24.60	33.0	-8.4	

Rev. 3.17.11

UMTS 850 HSDPA (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/10/13
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter
Mode: TX, 850MHz BAND WCDMA HSDPA

Test Equipment:
Receiving: Sunol T243 and Chamber B N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
826.40	16.70	V	0.5	0.0	16.20	38.5	-22.2	
826.40	19.10	H	0.5	0.0	18.60	38.5	-19.8	
Mid Ch								
836.00	16.70	V	0.5	0.0	16.20	38.5	-22.2	
836.00	20.00	H	0.5	0.0	19.50	38.5	-18.9	
High Ch								
846.00	17.51	V	0.5	0.0	17.01	38.5	-21.4	
846.00	16.20	H	0.5	0.0	15.70	38.5	-22.7	

Rev. 3.17.11

UMTS 1900 HSDPA (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/13/13
Test Engineer: Lieu Nguyen
Configuration: EUT Model MS659 with AC Adapter
Mode: TX, WCDMA-HSDPA, PCS band

Test Equipment:
Receiving: Horn T59, and Camber A SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
1.852	15.5	V	0.85	8.62	23.24	33.0	-9.8	
1.852	15.6	H	0.85	8.47	23.22	33.0	-9.8	
1.880	14.6	V	0.85	8.46	22.21	33.0	-10.8	
1.880	14.8	H	0.85	8.36	22.32	33.0	-10.7	
1.908	15.4	V	0.85	8.30	22.80	33.0	-10.2	
1.908	15.5	H	0.85	8.25	22.90	33.0	-10.1	

Rev. 3.17.11

UMTS 1700 REL 99 (AWS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/10/13
Test Engineer: Lieu Nguyen
Configuration: EUT only
Mode: TX, WCDMA, AWS 1700 band

Test Equipment:
Receiving: Horn T59, and Chamber BSMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
1.712	6.9	V	0.85	8.62	14.67	33.0	-18.3	
1.712	17.2	H	0.85	8.47	24.82	33.0	-8.2	
1.732	6.8	V	0.85	8.46	14.42	33.0	-18.6	
1.732	15.9	H	0.85	8.36	23.42	33.0	-9.6	
1.752	7.7	V	0.85	8.30	15.17	33.0	-17.8	
1.752	17.2	H	0.85	8.25	24.60	33.0	-8.4	

Rev. 3.17.11

UMTS 1700 HSDPA (AWS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/10/13
Test Engineer: Lieu Nguyen
Configuration: EUT only
Mode: WCDMA 1700 HSDPA

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
1.713	7.2	V	0.85	8.35	14.70	30.0	-15.3	
1.713	16.4	H	0.85	8.45	24.00	30.0	-6.0	
1.733	6.8	V	0.85	8.27	14.24	30.0	-15.8	
1.733	15.6	H	0.85	8.34	23.08	30.0	-6.9	
1.753	7.8	V	0.85	8.18	15.13	30.0	-14.9	
1.753	16.7	H	0.85	8.23	24.06	30.0	-5.9	

Rev. 3.17.11

LTE BAND 4

EIRP LTE QPSK Band 4 (5.0 MHz BAND WIDTH)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/08/13
Test Engineer: Lieu Nguyen
Configuration: EUT only
Mode: LTE band 4, 5MHz BW
QPSK, Peak

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.713	10.4	V	0.85	8.73	18.28	30.0	-11.7	
1.713	15.0	H	0.85	8.77	22.92	30.0	-7.1	
Mid Ch								
1.733	10.3	V	0.85	8.69	18.14	30.0	-11.9	
1.733	15.8	H	0.85	8.74	23.69	30.0	-6.3	
High Ch								
1.753	10.0	V	0.85	8.66	17.81	30.0	-12.2	
1.753	16.0	H	0.85	8.72	23.87	30.0	-6.1	

Rev. 3.17.11

EIRP LTE 16QAM Band 4 (5.0 MHz BAND WIDTH)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/08/13
Test Engineer: Lieu Nguyen
Configuration: EUT only
Mode: LTE band 4, 5MHz BW
16QAM, Peak

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.713	9.4	V	0.85	8.73	17.28	30.0	-12.7	
1.713	14.0	H	0.85	8.77	21.92	30.0	-8.1	
Mid Ch								
1.733	9.2	V	0.85	8.69	17.04	30.0	-13.0	
1.733	14.7	H	0.85	8.74	22.59	30.0	-7.4	
High Ch								
1.753	9.0	V	0.85	8.66	16.81	30.0	-13.2	
1.753	15.0	H	0.85	8.72	22.87	30.0	-7.1	

Rev. 3.17.11

EIRP LTE QPSK Band 4 (10.0 MHz BAND WIDTH)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/08/13
Test Engineer: Lieu Nguyen
Configuration: EUT only
Mode: LTE band 4, 10MHz BW
QPSK RB50_0

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.715	9.5	V	0.85	8.73	17.38	30.0	-12.6	
1.715	14.7	H	0.85	8.77	22.62	30.0	-7.4	
Mid Ch								
1.733	9.6	V	0.85	8.69	17.44	30.0	-12.6	
1.733	16.3	H	0.85	8.74	24.19	30.0	-5.8	
High Ch								
1.750	9.7	V	0.85	8.66	17.51	30.0	-12.5	
1.755	16.3	H	0.85	8.72	24.17	30.0	-5.8	

Rev. 3.17.11

EIRP LTE 16QAM Band 4 (10.0 MHz BAND WIDTH)

Company: LG
Project #: 13U14990
Date: 05/08/13
Test Engineer: Lieu Nguyen
Configuration: EUT only
Mode: LTE band 4, 10MHz BW
16QAM, RB50_0

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.715	8.5	V	0.85	8.73	16.38	30.0	-13.6	
1.715	13.7	H	0.85	8.77	21.62	30.0	-8.4	
Mid Ch								
1.733	8.7	V	0.85	8.69	16.54	30.0	-13.5	
1.733	15.3	H	0.85	8.74	23.19	30.0	-6.8	
High Ch								
1.750	8.7	V	0.85	8.66	16.51	30.0	-13.5	
1.755	15.4	H	0.85	8.72	23.27	30.0	-6.7	

Rev. 3.17.11

EIRP LTE QPSK Band 4 (15.0 MHz BAND WIDTH)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14916
Date: 05/08/13
Test Engineer: Lieu Nguyen
Configuration: EUT only
Mode: LTE band 4, 15MHz BW
QPSK, RB 75_0

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.718	9.3	V	0.85	8.73	17.18	30.0	-12.8	
1.718	15.2	H	0.85	8.77	23.12	30.0	-6.9	
Mid Ch								
1.733	10.0	V	0.85	8.69	17.84	30.0	-12.2	
1.733	15.8	H	0.85	8.74	23.69	30.0	-6.3	
High Ch								
1.748	10.0	V	0.85	8.66	17.81	30.0	-12.2	
1.748	16.0	H	0.85	8.72	23.87	30.0	-6.1	

Rev. 3.17.11

EIRP LTE 16QAM Band 4 (15.0 MHz BAND WIDTH)

Company: LG
Project #: 13U14916
Date: 05/08/13
Test Engineer: Lieu Nguyen
Configuration: EUT only
Mode: LTE band 4, 15MHz BW
16QAM, RB 75_0

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.718	8.3	V	0.85	8.73	16.18	30.0	-13.8	
1.718	14.2	H	0.85	8.77	22.12	30.0	-7.9	
Mid Ch								
1.733	9.0	V	0.85	8.69	16.84	30.0	-13.2	
1.733	14.8	H	0.85	8.74	22.69	30.0	-7.3	
High Ch								
1.748	9.0	V	0.85	8.66	16.81	30.0	-13.2	
1.748	15.0	H	0.85	8.72	22.87	30.0	-7.1	

Rev. 3.17.11

EIRP LTE QPSK Band 4 (20.0 MHz BAND WIDTH)

Company: LG
Project #: 13U14990
Date: 05/08/13
Test Engineer: Lieu Nguyen
Configuration: EUT only
Mode: LTE band 4, 20MHz BW
QPSK RB 100_0

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.720	8.1	V	0.85	8.73	15.98	30.0	-14.0	
1.720	15.2	H	0.85	8.77	23.12	30.0	-6.9	
Mid Ch								
1.733	8.3	V	0.85	8.69	16.14	30.0	-13.9	
1.733	15.7	H	0.85	8.74	23.59	30.0	-6.4	
High Ch								
1.745	8.5	V	0.85	8.66	16.31	30.0	-13.7	
1.745	16.0	H	0.85	8.72	23.87	30.0	-6.1	

Rev. 3.17.11

EIRP LTE 16QAM Band4 (20.0 MHz BAND WIDTH)

Company: LG
Project #: 13U14990
Date: 05/08/13
Test Engineer: Lieu Nguyen
Configuration: EUT only
Mode: LTE band 4, 20MHz BW
16QAM, RB 100_0

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.720	7.1	V	0.85	8.73	14.98	30.0	-15.0	
1.720	14.2	H	0.85	8.77	22.12	30.0	-7.9	
Mid Ch								
1.733	7.3	V	0.85	8.69	15.14	30.0	-14.9	
1.733	14.8	H	0.85	8.74	22.69	30.0	-7.3	
High Ch								
1.745	7.4	V	0.85	8.66	15.21	30.0	-14.8	
1.745	15.0	H	0.85	8.72	22.87	30.0	-7.1	

Rev. 3.17.11

LTE BAND 17

ERP LTE QPSK, Band 17 (5.0 MHz BAND WIDTH)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/10/13
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Mode: LTE Band 17, 5MHz BW
QPSK, RB25-0

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
706.50	17.32	V	0.5	0.0	16.82	34.8	-18.0	
706.50	22.07	H	0.5	0.0	21.57	34.8	-13.2	
Mid Ch								
710.00	19.12	V	0.5	0.0	18.62	34.8	-16.2	
710.00	22.15	H	0.5	0.0	21.65	34.8	-13.2	
High Ch								
713.50	18.42	V	0.5	0.0	17.92	34.8	-16.9	
713.50	21.75	H	0.5	0.0	21.25	34.8	-13.6	

Rev. 3.17.11

ERP LTE 16QAM Band 17 (5.0 MHz BAND WIDTH)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/10/13
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Mode: LTE Band 17, 5MHz BW
16QAM, RB25-0

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
706.50	16.42	V	0.5	0.0	15.92	34.8	-18.9	
706.50	21.15	H	0.5	0.0	20.65	34.8	-14.2	
Mid Ch								
710.00	18.32	V	0.5	0.0	17.82	34.8	-17.0	
710.00	21.15	H	0.5	0.0	20.65	34.8	-14.2	
High Ch								
713.50	17.42	V	0.5	0.0	16.92	34.8	-17.9	
713.50	20.85	H	0.5	0.0	20.35	34.8	-14.5	

Rev. 3.17.11

ERP LTE QPSK Band 17 (10.0 MHz BAND WIDTH)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/10/13
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Mode: LTE Band 17, 10MHz BW
QPSK, RB50-0

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
709.00	18.12	V	0.5	0.0	17.62	34.8	-17.2	
709.00	22.05	H	0.5	0.0	21.55	34.8	-13.3	
Mid Ch								
710.00	17.82	V	0.5	0.0	17.32	34.8	-17.5	
710.00	21.95	H	0.5	0.0	21.45	34.8	-13.4	
High Ch								
711.00	18.22	V	0.5	0.0	17.72	34.8	-17.1	
711.00	21.86	H	0.5	0.0	21.36	34.8	-13.4	

Rev. 3.17.11

ERP LTE 16QAM Band 17 (10.0 MHz BAND WIDTH)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 13U14990
Date: 05/10/13
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Mode: LTE Band 17, 10MHz BW
16QAM, RB50-0

Test Equipment:
Receiving: Horn T59, and Chamber B SMA Cables
Substitution: Horn T217 Substitution, 4ft SMA Cable (244639001) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
709.00	17.02	V	0.5	0.0	16.52	34.8	-18.3	
709.00	20.95	H	0.5	0.0	20.45	34.8	-14.4	
Mid Ch								
710.00	16.82	V	0.5	0.0	16.32	34.8	-18.5	
710.00	20.85	H	0.5	0.0	20.35	34.8	-14.5	
High Ch								
711.00	17.22	V	0.5	0.0	16.72	34.8	-18.1	
711.00	20.85	H	0.5	0.0	20.35	34.8	-14.5	

Rev. 3.17.11

7.2 FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238 and §27.53

LIMIT

§22.917 (e) and §24.238 (a): Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

§27.53 (g) For operations in the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB.

§27.53 (h) For operations in the 1710–1755 MHz and 2110–2155 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 + 10 log10(P) dB.

TEST PROCEDURE

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

MODES TESTED

- GPRS and EGPRS
- UMTS, REL 99, and HSDPA
- LTE Band 4 and 17

RESULTS

GPRS (Cellular Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:	LG
Project #:	13U14990
Date:	05/13/13
Test Engineer:	Kiya Kedida
Configuration:	EUT with AC adapter and headset
Mode:	Tx, WCDMA,GPRS

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 22

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (824.2MHz)									
1.648	-11.0	V	3.0	38.2	1.0	-48.2	-13.0	-35.2	
2.472	-0.2	V	3.0	37.5	1.0	-36.7	-13.0	-23.7	
3.296	-20.8	V	3.0	37.1	1.0	-56.9	-13.0	-43.9	
1.648	-12.5	H	3.0	38.2	1.0	-49.7	-13.0	-36.7	
2.472	0.8	H	3.0	37.5	1.0	-35.7	-13.0	-22.7	
3.296	-23.5	H	3.0	37.1	1.0	-59.7	-13.0	-46.7	
Mid Ch, (836.6MHz)									
1.673	-14.4	V	3.0	38.1	1.0	-51.5	-13.0	-38.5	
2.509	-1.6	V	3.0	37.5	1.0	-38.1	-13.0	-25.1	
3.345	-21.1	V	3.0	37.1	1.0	-57.2	-13.0	-44.2	
1.673	-9.9	H	3.0	38.1	1.0	-47.0	-13.0	-34.0	
2.509	1.5	H	3.0	37.5	1.0	-35.0	-13.0	-22.0	
3.345	-21.2	H	3.0	37.1	1.0	-57.3	-13.0	-44.3	
High Ch, (848.8MHz)									
1.697	-9.9	V	3.0	38.1	1.0	-47.0	-13.0	-34.0	
2.546	-0.8	V	3.0	37.5	1.0	-37.2	-13.0	-24.2	
3.395	-18.7	V	3.0	37.1	1.0	-54.7	-13.0	-41.7	
1.697	-9.9	H	3.0	38.1	1.0	-47.0	-13.0	-34.0	
2.546	1.8	H	3.0	37.5	1.0	-34.6	-13.0	-21.6	
3.395	-18.8	H	3.0	37.1	1.0	-54.9	-13.0	-41.9	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EGPRS (Cellular Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14990
Date: 05/13/13
Test Engineer: Kiya Kedida
Configuration: EUT with AC adapter and headset
Mode: Tx, WCDMA EGPRS

Chamber	Pre-amplifer	Filter	Limit
5m Chamber A	T144 8449B	Filter 1	Part 22

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (824.2MHz)									
1.648	-24.6	V	3.0	38.2	1.0	-61.8	-13.0	-48.8	
2.472	-10.6	V	3.0	37.5	1.0	-47.1	-13.0	-34.1	
3.296	-22.8	V	3.0	37.1	1.0	-58.9	-13.0	-45.9	
1.648	-21.8	H	3.0	38.2	1.0	-59.0	-13.0	-46.0	
2.472	-17.0	H	3.0	37.5	1.0	-53.4	-13.0	-40.4	
3.296	-23.9	H	3.0	37.1	1.0	-60.0	-13.0	-47.0	
Mid Ch, (836.6MHz)									
1.673	-23.3	V	3.0	38.1	1.0	-60.4	-13.0	-47.4	
2.509	-17.4	V	3.0	37.5	1.0	-53.9	-13.0	-40.9	
3.345	-22.7	V	3.0	37.1	1.0	-58.8	-13.0	-45.8	
1.673	-21.2	H	3.0	38.1	1.0	-58.3	-13.0	-45.3	
2.509	-12.1	H	3.0	37.5	1.0	-48.6	-13.0	-35.6	
3.345	-22.9	H	3.0	37.1	1.0	-59.0	-13.0	-46.0	
High Ch, (848.8MHz)									
1.697	-24.7	V	3.0	38.1	1.0	-61.8	-13.0	-48.8	
2.546	-16.1	V	3.0	37.5	1.0	-52.6	-13.0	-39.6	
3.395	-24.3	V	3.0	37.1	1.0	-60.4	-13.0	-47.4	
1.697	-21.4	H	3.0	38.1	1.0	-58.5	-13.0	-45.5	
2.546	-11.3	H	3.0	37.5	1.0	-47.7	-13.0	-34.7	
3.395	-24.4	H	3.0	37.1	1.0	-60.5	-13.0	-47.5	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

GPRS (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14990
Date:01/29/2013 05/13/13
Test Engineer: Kiya Kedida
Configuration: EUT with AC adapter and headset
Mode: WCDMA, PCS 1900

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1850.2MHz)									
3.705	-16.0	V	3.0	35.4	1.0	-50.4	-13.0	-37.4	
5.557	-15.1	V	3.0	35.4	1.0	-49.5	-13.0	-36.5	
7.410	-8.7	V	3.0	35.7	1.0	-43.4	-13.0	-30.4	
3.705	-16.5	H	3.0	35.4	1.0	-50.8	-13.0	-37.8	
5.557	-14.9	H	3.0	35.4	1.0	-49.3	-13.0	-36.3	
7.410	-13.1	H	3.0	35.7	1.0	-47.8	-13.0	-34.8	
Mid Ch, (1880MHz)									
3.760	-12.9	V	3.0	35.3	1.0	-47.2	-13.0	-34.2	
5.640	-10.2	V	3.0	35.4	1.0	-44.7	-13.0	-31.7	
7.520	-9.5	V	3.0	35.7	1.0	-44.2	-13.0	-31.2	
3.760	-17.8	H	3.0	35.3	1.0	-52.1	-13.0	-39.1	
5.640	-11.8	H	3.0	35.4	1.0	-46.2	-13.0	-33.2	
7.520	-11.1	H	3.0	35.7	1.0	-45.8	-13.0	-32.8	
High Ch, (1909.8MHz)									
3.815	-20.9	V	3.0	35.3	1.0	-55.2	-13.0	-42.2	
5.723	-12.0	V	3.0	35.4	1.0	-46.4	-13.0	-33.4	
7.630	-12.6	V	3.0	35.7	1.0	-47.3	-13.0	-34.3	
3.815	-20.7	H	3.0	35.3	1.0	-55.0	-13.0	-42.0	
5.723	-11.3	H	3.0	35.4	1.0	-45.8	-13.0	-32.8	
7.630	-9.6	H	3.0	35.7	1.0	-44.3	-13.0	-31.3	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EGPRS (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:	LG
Project #:	13U14990
Date:01/29/2013	05/13/13
Test Engineer:	Kiya Kedida
Configuration:	EUT with AC adapter and headset
Mode:	WCDMA, PCS 1900

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1850.2MHz)									
3.705	-22.1	V	3.0	35.4	1.0	-56.5	-13.0	-43.5	
5.557	-19.3	V	3.0	35.4	1.0	-53.7	-13.0	-40.7	
7.410	-14.5	V	3.0	35.7	1.0	-49.2	-13.0	-36.2	
3.705	-22.1	H	3.0	35.4	1.0	-56.4	-13.0	-43.4	
5.557	-20.2	H	3.0	35.4	1.0	-54.6	-13.0	-41.6	
7.410	-16.6	H	3.0	35.7	1.0	-51.3	-13.0	-38.3	
Mid Ch, (1880MHz)									
3.760	-22.4	V	3.0	35.3	1.0	-56.8	-13.0	-43.8	
5.640	-20.2	V	3.0	35.4	1.0	-54.6	-13.0	-41.6	
7.520	-10.7	V	3.0	35.7	1.0	-45.4	-13.0	-32.4	
3.760	-22.7	H	3.0	35.3	1.0	-57.0	-13.0	-44.0	
5.640	-20.0	H	3.0	35.4	1.0	-54.4	-13.0	-41.4	
7.520	-16.9	H	3.0	35.7	1.0	-51.6	-13.0	-38.6	
High Ch, (1909.8MHz)									
3.815	-21.8	V	3.0	35.3	1.0	-56.2	-13.0	-43.2	
5.723	-19.7	V	3.0	35.4	1.0	-54.2	-13.0	-41.2	
7.630	-15.1	V	3.0	35.7	1.0	-49.8	-13.0	-36.8	
3.815	-23.1	H	3.0	35.3	1.0	-57.4	-13.0	-44.4	
5.723	-17.3	H	3.0	35.4	1.0	-51.8	-13.0	-38.8	
7.630	-17.0	H	3.0	35.7	1.0	-51.7	-13.0	-38.7	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

WCDMA REL 99 (Cellular Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:	LG
Project #:	13U14990
Date:01/29/2013	05/14/13
Test Engineer:	Lieu Nguyen
Configuration:	EUT with AC adapter and headset
Mode:	Tx, WCDMA, CELL Rel 99

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 22

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (826.4MHz)									
1.653	-17.3	V	3.0	35.5	1.0	-51.8	-13.0	-38.8	
2.479	-13.0	V	3.0	35.4	1.0	-47.4	-13.0	-34.4	
1.653	-15.9	H	3.0	35.5	1.0	-50.5	-13.0	-37.5	
2.479	-14.1	H	3.0	35.4	1.0	-48.5	-13.0	-35.5	
Mid Ch, (836MHz)									
1.672	-16.5	V	3.0	35.5	1.0	-51.0	-13.0	-38.0	
2.508	-11.1	V	3.0	35.4	1.0	-45.5	-13.0	-32.5	
1.672	-14.9	H	3.0	35.5	1.0	-49.5	-13.0	-36.5	
2.508	-13.5	H	3.0	35.4	1.0	-47.9	-13.0	-34.9	
High Ch, (846.6MHz)									
1.693	-14.5	V	3.0	35.5	1.0	-49.0	-13.0	-36.0	
2.540	-8.7	V	3.0	35.4	1.0	-43.1	-13.0	-30.1	
1.693	-12.5	H	3.0	35.5	1.0	-47.1	-13.0	-34.1	
2.540	-11.2	H	3.0	35.4	1.0	-45.6	-13.0	-32.6	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

WCDMA HSDPA (Cellular Band)

Company: LG
Project #: 13U14990
Date: 05/13/13
Test Engineer: Lieu Nguyen
Configuration: EUT with AC adapter and headset
Mode: Tx, WCDMA, HSDPA

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 22

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (826.4MHz)									
1.653	-14.5	V	3.0	35.5	1.0	-49.0	-13.0	-36.0	
2.479	-12.0	V	3.0	35.4	1.0	-46.4	-13.0	-33.4	
1.653	-13.3	H	3.0	35.5	1.0	-47.9	-13.0	-34.9	
2.479	-14.1	H	3.0	35.4	1.0	-48.5	-13.0	-35.5	
Mid Ch, (836MHz)									
1.672	-13.0	V	3.0	35.5	1.0	-47.5	-13.0	-34.5	
2.508	-9.9	V	3.0	35.4	1.0	-44.3	-13.0	-31.3	
1.672	-12.7	H	3.0	35.5	1.0	-47.3	-13.0	-34.3	
2.508	-10.0	H	3.0	35.4	1.0	-44.4	-13.0	-31.4	
High Ch, (846.6MHz)									
1.693	-14.4	V	3.0	35.5	1.0	-48.9	-13.0	-35.9	
2.540	-11.0	V	3.0	35.4	1.0	-45.4	-13.0	-32.4	
1.693	-12.0	H	3.0	35.5	1.0	-46.6	-13.0	-33.6	
2.540	-14.0	H	3.0	35.4	1.0	-48.4	-13.0	-35.4	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

WCDMA REL 99 (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:	LG
Project #:	13U14990
Date:01/29/2013	05/13/13
Test Engineer:	Lieu Nguyen
Configuration:	EUT with AC adapter and headset
Mode:	WCDMA, Rel 99 PCS 1900

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1852.4MHz)									
3.705	-4.5	V	3.0	35.4	1.0	-38.8	-13.0	-25.8	
5.557	4.0	V	3.0	35.4	1.0	-30.4	-13.0	-17.4	
7.410	-8.6	V	3.0	35.7	1.0	-43.3	-13.0	-30.3	
3.705	-12.5	H	3.0	35.4	1.0	-46.8	-13.0	-33.8	
5.557	-1.9	H	3.0	35.4	1.0	-36.3	-13.0	-23.3	
7.410	-6.3	H	3.0	35.7	1.0	-41.0	-13.0	-28.0	
Mid Ch, (1880MHz)									
3.760	-7.1	V	3.0	35.3	1.0	-41.5	-13.0	-28.5	
5.640	5.3	V	3.0	35.4	1.0	-29.1	-13.0	-16.1	
7.520	-7.3	V	3.0	35.7	1.0	-42.0	-13.0	-29.0	
3.760	-13.3	H	3.0	35.3	1.0	-47.6	-13.0	-34.6	
5.640	0.7	H	3.0	35.4	1.0	-33.7	-13.0	-20.7	
7.520	-6.8	H	3.0	35.7	1.0	-41.5	-13.0	-28.5	
High Ch, (1907.6MHz)									
3.815	-2.7	V	3.0	35.3	1.0	-37.0	-13.0	-24.0	
5.723	-0.7	V	3.0	35.4	1.0	-35.2	-13.0	-22.2	
7.630	-7.6	V	3.0	35.7	1.0	-42.3	-13.0	-29.3	
3.815	-7.0	H	3.0	35.3	1.0	-41.3	-13.0	-28.3	
5.723	-1.3	H	3.0	35.4	1.0	-35.7	-13.0	-22.7	
7.630	-4.1	H	3.0	35.7	1.0	-38.8	-13.0	-25.8	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

WCDMA HSDPA (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:	LG
Project #:	13U14990
Date:01/29/2013	05/13/13
Test Engineer:	Lieu Nguyen
Configuration:	EUT with AC adapter and headset
Mode:	WCDMA, HSDPA PCS 1900

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1852.4MHz)									
3.705	-13.7	V	3.0	35.4	1.0	-48.1	-13.0	-35.1	
5.557	2.5	V	3.0	35.4	1.0	-31.9	-13.0	-18.9	
7.410	-5.8	V	3.0	35.7	1.0	-40.5	-13.0	-27.5	
3.705	-11.9	H	3.0	35.4	1.0	-46.2	-13.0	-33.2	
5.557	4.2	H	3.0	35.4	1.0	-30.2	-13.0	-17.2	
7.410	-3.7	H	3.0	35.7	1.0	-38.4	-13.0	-25.4	
Mid Ch, (1880MHz)									
3.760	-14.0	V	3.0	35.3	1.0	-48.4	-13.0	-35.4	
5.640	-1.0	V	3.0	35.4	1.0	-35.4	-13.0	-22.4	
7.520	-7.3	V	3.0	35.7	1.0	-42.0	-13.0	-29.0	
3.760	-12.1	H	3.0	35.3	1.0	-46.4	-13.0	-33.4	
5.640	0.7	H	3.0	35.4	1.0	-33.8	-13.0	-20.8	
7.520	-6.0	H	3.0	35.7	1.0	-40.7	-13.0	-27.7	
High Ch, (1907.6MHz)									
3.815	-8.9	V	3.0	35.3	1.0	-43.2	-13.0	-30.2	
5.723	3.2	V	3.0	35.4	1.0	-31.3	-13.0	-18.3	
11.446	5.9	V	3.0	34.6	1.0	-27.7	-13.0	-14.7	
3.815	-7.7	H	3.0	35.3	1.0	-42.0	-13.0	-29.0	
5.723	0.5	H	3.0	35.4	1.0	-33.9	-13.0	-20.9	
7.630	3.5	H	3.0	35.7	1.0	-31.2	-13.0	-18.2	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

WCDMA 1700 Rel 99 (AWS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14990
Date: 05/13/13
Test Engineer: Lieu Nguyen
Configuration: EUT with AC adapter and headset
Mode: WCDMA, AWS 1700, Rel 99

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1712.4MHz)									
3.425	2.1	V	3.0	35.5	1.0	-32.4	-13.0	-19.4	
5.137	-4.0	V	3.0	35.3	1.0	-38.3	-13.0	-25.3	
6.850	-7.6	V	3.0	35.7	1.0	-42.3	-13.0	-29.3	
3.425	-5.9	H	3.0	35.5	1.0	-40.4	-13.0	-27.4	
5.137	-8.2	H	3.0	35.3	1.0	-42.5	-13.0	-29.5	
6.850	-6.2	H	3.0	35.7	1.0	-40.9	-13.0	-27.9	
Mid Ch, (1732.6MHz)									
3.465	0.1	V	3.0	35.5	1.0	-34.4	-13.0	-21.4	
5.198	-7.9	V	3.0	35.3	1.0	-42.2	-13.0	-29.2	
6.930	-0.8	V	3.0	35.7	1.0	-35.5	-13.0	-22.5	
3.465	-4.0	H	3.0	35.5	1.0	-38.4	-13.0	-25.4	
5.198	-9.1	H	3.0	35.3	1.0	-43.4	-13.0	-30.4	
6.930	-1.5	H	3.0	35.7	1.0	-36.2	-13.0	-23.2	
High Ch, (1752.5MHz)									
3.505	3.8	V	3.0	35.4	1.0	-30.7	-13.0	-17.7	
5.258	-5.7	V	3.0	35.3	1.0	-40.1	-13.0	-27.1	
7.010	-2.6	V	3.0	35.7	1.0	-37.3	-13.0	-24.3	
3.505	-8.3	H	3.0	35.4	1.0	-42.8	-13.0	-29.8	
5.258	1.5	H	3.0	35.3	1.0	-32.9	-13.0	-19.9	
7.010	-3.2	H	3.0	35.7	1.0	-37.9	-13.0	-24.9	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

WCDMA 1700 HSDPA (AWS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14990
Date: 05/13/13
Test Engineer: Lieu Nguyen
Configuration: EUT with AC adapter and headset
Mode: WCDMA, AWS 1700, HSDPA

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1712.4MHz)									
3.425	-0.6	V	3.0	35.5	1.0	-35.1	-13.0	-22.1	
5.137	-3.3	V	3.0	35.3	1.0	-37.6	-13.0	-24.6	
6.850	-7.8	V	3.0	35.7	1.0	-42.5	-13.0	-29.5	
3.425	0.2	H	3.0	35.5	1.0	-34.3	-13.0	-21.3	
5.137	-7.1	H	3.0	35.3	1.0	-41.4	-13.0	-28.4	
6.850	-5.7	H	3.0	35.7	1.0	-40.4	-13.0	-27.4	
Mid Ch, (1732.6MHz)									
3.465	-2.6	V	3.0	35.5	1.0	-37.1	-13.0	-24.1	
5.198	-7.9	V	3.0	35.3	1.0	-42.2	-13.0	-29.2	
6.930	-1.7	V	3.0	35.7	1.0	-36.4	-13.0	-23.4	
3.465	-4.8	H	3.0	35.5	1.0	-39.2	-13.0	-26.2	
5.198	-9.1	H	3.0	35.3	1.0	-43.4	-13.0	-30.4	
6.930	-1.3	H	3.0	35.7	1.0	-36.0	-13.0	-23.0	
High Ch, (1752.5MHz)									
3.505	1.9	V	3.0	35.4	1.0	-32.5	-13.0	-19.5	
5.258	-5.0	V	3.0	35.3	1.0	-39.4	-13.0	-26.4	
7.010	-3.7	V	3.0	35.7	1.0	-38.4	-13.0	-25.4	
3.505	-6.7	H	3.0	35.4	1.0	-41.2	-13.0	-28.2	
5.258	-0.6	H	3.0	35.3	1.0	-34.9	-13.0	-21.9	
7.010	-2.9	H	3.0	35.7	1.0	-37.6	-13.0	-24.6	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

LTE Band 4, QPSK (5 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14990
Date: 05/09/13
Test Engineer: Kiya Kedida
Configuration: EUT and AC Adapter
Mode: TX, LTE Band 4 5MHz BW, QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1712.5MHz)									
3.425	-8.4	V	3.0	35.5	1.0	-42.9	-13.0	-29.9	
5.138	-3.2	V	3.0	35.3	1.0	-37.5	-13.0	-24.5	
6.850	-10.4	V	3.0	35.7	1.0	-45.1	-13.0	-32.1	
8.563	-16.8	V	3.0	35.6	1.0	-51.4	-13.0	-38.4	
3.425	-2.5	H	3.0	35.5	1.0	-37.0	-13.0	-24.0	
5.138	5.4	H	3.0	35.3	1.0	-28.9	-13.0	-15.9	
6.850	0.6	H	3.0	35.7	1.0	-34.1	-13.0	-21.1	
8.563	-12.5	H	3.0	35.6	1.0	-47.2	-13.0	-34.2	
Mid Ch, (1732.5MHz)									
3.465	-9.4	V	3.0	35.5	1.0	-43.9	-13.0	-30.9	
5.198	-6.7	V	3.0	35.3	1.0	-41.0	-13.0	-28.0	
6.930	-8.2	V	3.0	35.7	1.0	-42.9	-13.0	-29.9	
8.663	-14.2	V	3.0	35.6	1.0	-48.8	-13.0	-35.8	
10.395	-16.6	V	3.0	35.3	1.0	-50.9	-13.0	-37.9	
10.250	-8.8	V	3.0	35.4	1.0	-43.2	-13.0	-30.2	
3.465	1.0	H	3.0	35.5	1.0	-33.5	-13.0	-20.5	
5.198	2.6	H	3.0	35.3	1.0	-31.7	-13.0	-18.7	
6.930	-0.5	H	3.0	35.7	1.0	-35.2	-13.0	-22.2	
8.663	-8.9	H	3.0	35.6	1.0	-43.5	-13.0	-30.5	
10.525	-4.2	H	3.0	35.2	1.0	-38.4	-13.0	-25.4	
High Ch, (1752.5MHz)									
3.505	-12.5	V	3.0	35.4	1.0	-47.0	-13.0	-34.0	
5.258	-9.8	V	3.0	35.3	1.0	-44.2	-13.0	-31.2	
7.010	-10.2	V	3.0	35.7	1.0	-45.0	-13.0	-32.0	
8.763	-16.8	V	3.0	35.6	1.0	-51.4	-13.0	-38.4	
3.505	-5.4	H	3.0	35.4	1.0	-39.9	-13.0	-26.9	
5.258	0.0	H	3.0	35.3	1.0	-34.3	-13.0	-21.3	
7.010	-4.3	H	3.0	35.7	1.0	-39.0	-13.0	-26.0	
8.763	-13.2	H	3.0	35.6	1.0	-47.8	-13.0	-34.8	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

LTE Band 4, 16QAM (5 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14990
Date: 05/09/13
Test Engineer: Kiya Kedida
Configuration: EUT and AC Adapter
Mode: TX, LTE Band 4 5MHz BW, 16 QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1712.5MHz)									
3.425	-8.4	V	3.0	35.5	1.0	-42.9	-13.0	-29.9	
5.138	-2.2	V	3.0	35.3	1.0	-36.5	-13.0	-23.5	
6.850	-7.7	V	3.0	35.7	1.0	-42.4	-13.0	-29.4	
8.563	-16.9	V	3.0	35.6	1.0	-51.5	-13.0	-38.5	
3.425	-1.8	H	3.0	35.5	1.0	-36.3	-13.0	-23.3	
5.138	3.4	H	3.0	35.3	1.0	-30.9	-13.0	-17.9	
6.850	5.9	H	3.0	35.7	1.0	-28.8	-13.0	-15.8	
8.563	-13.1	H	3.0	35.6	1.0	-47.8	-13.0	-34.8	
Mid Ch, (1732.5MHz)									
3.465	-8.1	V	3.0	35.5	1.0	-42.6	-13.0	-29.6	
5.198	-2.9	V	3.0	35.3	1.0	-37.2	-13.0	-24.2	
6.930	-5.0	V	3.0	35.7	1.0	-39.7	-13.0	-26.7	
8.663	-14.7	V	3.0	35.6	1.0	-49.3	-13.0	-36.3	
3.465	-0.6	H	3.0	35.5	1.0	-35.0	-13.0	-22.0	
5.198	7.1	H	3.0	35.3	1.0	-27.3	-13.0	-14.3	
6.930	5.8	H	3.0	35.7	1.0	-28.9	-13.0	-15.9	
8.663	-10.0	H	3.0	35.6	1.0	-44.6	-13.0	-31.6	
High Ch, (1752.5MHz)									
3.505	-12.9	V	3.0	35.4	1.0	-47.4	-13.0	-34.4	
5.258	-6.3	V	3.0	35.3	1.0	-40.7	-13.0	-27.7	
7.010	-10.1	V	3.0	35.7	1.0	-44.8	-13.0	-31.8	
8.763	-16.3	V	3.0	35.6	1.0	-50.9	-13.0	-37.9	
3.505	-4.7	H	3.0	35.4	1.0	-39.1	-13.0	-26.1	
5.258	-2.3	H	3.0	35.3	1.0	-36.6	-13.0	-23.6	
7.010	-4.6	H	3.0	35.7	1.0	-39.4	-13.0	-26.4	
8.763	-13.3	H	3.0	35.6	1.0	-47.9	-13.0	-34.9	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

LTE Band 4, QPSK (10 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14990
Date: 05/08/13
Test Engineer: Kiya Kedida
Configuration: EUT and AC Adapter
Mode: TX, LTE Band 4 10MHz Bw. QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1715.0MHz)									
3.430	-7.8	V	3.0	35.5	1.0	-42.3	-13.0	-29.3	
5.145	1.4	V	3.0	35.3	1.0	-32.9	-13.0	-19.9	
6.860	-8.8	V	3.0	35.7	1.0	-43.5	-13.0	-30.5	
8.575	-17.2	V	3.0	35.6	1.0	-51.8	-13.0	-38.8	
3.430	-1.6	H	3.0	35.5	1.0	-36.1	-13.0	-23.1	
5.145	4.7	H	3.0	35.3	1.0	-29.6	-13.0	-16.6	
6.860	47.2	H	3.0	35.7	1.0	12.5	-13.0	25.5	
8.575	-12.5	H	3.0	35.6	1.0	-47.1	-13.0	-34.1	
Mid Ch, (1732.5MHz)									
3.465	-11.5	V	3.0	35.5	1.0	-46.0	-13.0	-33.0	
5.198	1.1	V	3.0	35.3	1.0	-33.2	-13.0	-20.2	
6.930	-5.2	V	3.0	35.7	1.0	-39.9	-13.0	-26.9	
8.663	-16.9	V	3.0	35.6	1.0	-51.5	-13.0	-38.5	
3.465	-4.9	H	3.0	35.5	1.0	-39.3	-13.0	-26.3	
5.198	5.9	H	3.0	35.3	1.0	-28.4	-13.0	-15.4	
6.930	-1.0	H	3.0	35.7	1.0	-35.7	-13.0	-22.7	
8.663	-9.6	H	3.0	35.6	1.0	-44.2	-13.0	-31.2	
High Ch, (1750.0MHz)									
3.500	-11.2	V	3.0	35.4	1.0	-45.7	-13.0	-32.7	
5.250	-8.7	V	3.0	35.3	1.0	-43.0	-13.0	-30.0	
7.000	-8.6	V	3.0	35.7	1.0	-43.3	-13.0	-30.3	
8.750	-17.9	V	3.0	35.6	1.0	-52.5	-13.0	-39.5	
3.500	-3.7	H	3.0	35.4	1.0	-38.2	-13.0	-25.2	
5.250	-4.8	H	3.0	35.3	1.0	-39.1	-13.0	-26.1	
7.000	-3.6	H	3.0	35.7	1.0	-38.3	-13.0	-25.3	
8.750	-13.1	H	3.0	35.6	1.0	-47.7	-13.0	-34.7	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

LTE Band 4, 16QAM (10 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14990
Date: 05/09/13
Test Engineer: Kiya Kedida
Configuration: EUT and AC Adapter
Mode: TX, LTE Band 4 10MHz Bw. 16 QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1715.0MHz)									
3.430	-8.6	V	3.0	35.5	1.0	-43.0	-13.0	-30.0	
5.145	0.2	V	3.0	35.3	1.0	-34.1	-13.0	-21.1	
6.860	-6.0	V	3.0	35.7	1.0	-40.7	-13.0	-27.7	
8.575	-16.7	V	3.0	35.6	1.0	-51.3	-13.0	-38.3	
3.430	-3.9	H	3.0	35.5	1.0	-38.4	-13.0	-25.4	
5.145	6.1	H	3.0	35.3	1.0	-28.2	-13.0	-15.2	
6.860	-4.0	H	3.0	35.7	1.0	-38.7	-13.0	-25.7	
8.575	-16.0	H	3.0	35.6	1.0	-50.6	-13.0	-37.6	
Mid Ch, (1732.5MHz)									
3.465	-12.7	V	3.0	35.5	1.0	-47.2	-13.0	-34.2	
5.198	-0.6	V	3.0	35.3	1.0	-34.9	-13.0	-21.9	
6.930	-6.3	V	3.0	35.7	1.0	-41.0	-13.0	-28.0	
8.663	-16.1	V	3.0	35.6	1.0	-50.7	-13.0	-37.7	
3.465	-4.5	H	3.0	35.5	1.0	-39.0	-13.0	-26.0	
5.198	7.5	H	3.0	35.3	1.0	-26.9	-13.0	-13.9	
6.930	4.9	H	3.0	35.7	1.0	-29.8	-13.0	-16.8	
8.663	-9.7	H	3.0	35.6	1.0	-44.3	-13.0	-31.3	
High Ch, (1750.0MHz)									
3.500	-11.8	V	3.0	35.4	1.0	-46.2	-13.0	-33.2	
5.250	-5.1	V	3.0	35.3	1.0	-39.5	-13.0	-26.5	
7.000	-9.1	V	3.0	35.7	1.0	-43.9	-13.0	-30.9	
8.750	-16.2	V	3.0	35.6	1.0	-50.8	-13.0	-37.8	
3.500	-4.4	H	3.0	35.4	1.0	-38.9	-13.0	-25.9	
5.250	6.3	H	3.0	35.3	1.0	-28.1	-13.0	-15.1	
7.000	-4.5	H	3.0	35.7	1.0	-39.2	-13.0	-26.2	
8.750	-13.9	H	3.0	35.6	1.0	-48.6	-13.0	-35.6	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

LTE Band 4, QPSK (15MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14990
Date: 05/09/13
Test Engineer: Kiya Kedida
Configuration: EUT and AC Adapter
Mode: TX, LTE Band 4 15 MHz Bw, QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1712.5MHz)									
3.425	-8.5	V	3.0	35.5	1.0	-43.0	-13.0	-30.0	
5.135	-0.3	V	3.0	35.3	1.0	-34.6	-13.0	-21.6	
6.845	-11.0	V	3.0	35.7	1.0	-45.7	-13.0	-32.7	
8.555	-14.8	V	3.0	35.6	1.0	-49.5	-13.0	-36.5	
3.425	-1.2	H	3.0	35.5	1.0	-35.7	-13.0	-22.7	
5.135	5.4	H	3.0	35.3	1.0	-28.9	-13.0	-15.9	
6.845	-0.9	H	3.0	35.7	1.0	-35.6	-13.0	-22.6	
8.555	-14.0	H	3.0	35.6	1.0	-48.7	-13.0	-35.7	
Mid Ch, (1732.5MHz)									
3.465	-12.1	V	3.0	35.5	1.0	-46.6	-13.0	-33.6	
5.198	-5.4	V	3.0	35.3	1.0	-39.7	-13.0	-26.7	
6.930	-8.0	V	3.0	35.7	1.0	-42.7	-13.0	-29.7	
8.663	-15.2	V	3.0	35.6	1.0	-49.8	-13.0	-36.8	
3.465	-4.3	H	3.0	35.5	1.0	-38.7	-13.0	-25.7	
5.198	5.2	H	3.0	35.3	1.0	-29.1	-13.0	-16.1	
6.930	-1.9	H	3.0	35.7	1.0	-36.6	-13.0	-23.6	
8.663	-10.4	H	3.0	35.6	1.0	-45.0	-13.0	-32.0	
High Ch, (1752.5MHz)									
3.495	-8.3	V	3.0	35.5	1.0	-42.8	-13.0	-29.8	
5.242	-3.8	V	3.0	35.3	1.0	-38.2	-13.0	-25.2	
6.989	-7.7	V	3.0	35.7	1.0	-42.4	-13.0	-29.4	
8.736	-14.5	V	3.0	35.6	1.0	-49.2	-13.0	-36.2	
3.495	-5.6	H	3.0	35.5	1.0	-40.1	-13.0	-27.1	
5.242	6.4	H	3.0	35.3	1.0	-28.0	-13.0	-15.0	
6.989	-5.7	H	3.0	35.7	1.0	-40.5	-13.0	-27.5	
8.736	-13.5	H	3.0	35.6	1.0	-48.1	-13.0	-35.1	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

LTE Band 4, 16QAM (15MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14990
Date: 05/08/13
Test Engineer: Kiya Kedida
Configuration: EUT and AC Adapter
Mode: TX, LTE Band 4 15 MHz Bw, 16 QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1717.5MHz)									
3.425	-8.8	V	3.0	35.5	1.0	-43.2	-13.0	-30.2	
5.135	-0.1	V	3.0	35.3	1.0	-34.4	-13.0	-21.4	
6.845	-11.8	V	3.0	35.7	1.0	-46.5	-13.0	-33.5	
8.555	-16.7	V	3.0	35.6	1.0	-51.3	-13.0	-38.3	
3.425	-4.4	H	3.0	35.5	1.0	-38.9	-13.0	-25.9	
5.135	4.5	H	3.0	35.3	1.0	-29.8	-13.0	-16.8	
6.845	-2.4	H	3.0	35.7	1.0	-37.1	-13.0	-24.1	
8.555	-15.8	H	3.0	35.6	1.0	-50.4	-13.0	-37.4	
Mid Ch, (1732.5MHz)									
3.465	-13.6	V	3.0	35.5	1.0	-48.0	-13.0	-35.0	
5.198	-0.2	V	3.0	35.3	1.0	-34.5	-13.0	-21.5	
6.930	-4.8	V	3.0	35.7	1.0	-39.5	-13.0	-26.5	
8.663	-15.8	V	3.0	35.6	1.0	-50.5	-13.0	-37.5	
3.465	-5.3	H	3.0	35.5	1.0	-39.7	-13.0	-26.7	
5.198	3.5	H	3.0	35.3	1.0	-30.8	-13.0	-17.8	
6.930	7.1	H	3.0	35.7	1.0	-27.6	-13.0	-14.6	
8.663	-12.2	H	3.0	35.6	1.0	-46.8	-13.0	-33.8	
High Ch, (1747.5MHz)									
3.495	-12.0	V	3.0	35.5	1.0	-46.5	-13.0	-33.5	
5.242	-1.7	V	3.0	35.3	1.0	-36.0	-13.0	-23.0	
6.989	-9.1	V	3.0	35.7	1.0	-43.8	-13.0	-30.8	
8.736	-14.6	V	3.0	35.6	1.0	-49.2	-13.0	-36.2	
3.495	-12.1	H	3.0	35.5	1.0	-46.5	-13.0	-33.5	
5.242	-3.2	H	3.0	35.3	1.0	-37.6	-13.0	-24.6	
6.989	-9.7	H	3.0	35.7	1.0	-44.4	-13.0	-31.4	
8.736	-17.7	H	3.0	35.6	1.0	-52.3	-13.0	-39.3	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

LTE Band 4, QPSK (20 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14990
Date: 05/09/13
Test Engineer: Kiya Kedida
Configuration: EUT and AC Adapter
Mode: TX, LTE Band 4 20 MHz Bw, QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1720MHz)									
3.440	-9.1	V	3.0	35.5	1.0	-43.5	-13.0	-30.5	
5.160	-5.1	V	3.0	35.3	1.0	-39.4	-13.0	-26.4	
6.880	-9.5	V	3.0	35.7	1.0	-44.2	-13.0	-31.2	
8.600	-17.6	V	3.0	35.6	1.0	-52.2	-13.0	-39.2	
3.440	-3.6	H	3.0	35.5	1.0	-38.1	-13.0	-25.1	
5.160	2.1	H	3.0	35.3	1.0	-32.3	-13.0	-19.3	
6.880	-5.3	H	3.0	35.7	1.0	-40.0	-13.0	-27.0	
8.600	-13.2	H	3.0	35.6	1.0	-47.8	-13.0	-34.8	
Mid Ch, (1732.5MHz)									
3.465	-4.2	V	3.0	35.5	1.0	-38.6	-13.0	-25.6	
5.198	1.8	V	3.0	35.3	1.0	-32.5	-13.0	-19.5	
6.930	-4.0	V	3.0	35.7	1.0	-38.7	-13.0	-25.7	
8.663	-12.9	V	3.0	35.6	1.0	-47.5	-13.0	-34.5	
3.465	-4.2	H	3.0	35.5	1.0	-38.7	-13.0	-25.7	
5.198	2.5	H	3.0	35.3	1.0	-31.9	-13.0	-18.9	
6.930	-2.3	H	3.0	35.7	1.0	-37.1	-13.0	-24.1	
8.663	-11.4	H	3.0	35.6	1.0	-46.0	-13.0	-33.0	
High Ch, (1745.0MHz)									
3.490	101.3	V	3.0	35.5	1.0	66.8	-13.0	79.8	
5.235	-9.1	V	3.0	35.3	1.0	-43.5	-13.0	-30.5	
6.980	-10.9	V	3.0	35.7	1.0	-45.7	-13.0	-32.7	
8.725	-15.7	V	3.0	35.6	1.0	-50.3	-13.0	-37.3	
3.490	-4.7	H	3.0	35.5	1.0	-39.1	-13.0	-26.1	
5.235	3.0	H	3.0	35.3	1.0	-31.4	-13.0	-18.4	
6.980	-4.0	H	3.0	35.7	1.0	-38.8	-13.0	-25.8	
8.725	-13.0	H	3.0	35.6	1.0	-47.6	-13.0	-34.6	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

LTE Band 4, 16QAM (20MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14990
Date: 05/09/13
Test Engineer: Kiya Kedida
Configuration: EUT and AC Adapter
Mode: TX, LTE Band 4 20 MHz Bw, 16 QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1720.0MHz)									
3.440	-9.2	V	3.0	35.5	1.0	-43.7	-13.0	-30.7	
5.160	3.3	V	3.0	35.3	1.0	-31.0	-13.0	-18.0	
6.880	-9.5	V	3.0	35.7	1.0	-44.2	-13.0	-31.2	
8.600	-21.1	V	3.0	35.6	1.0	-55.8	-13.0	-42.8	
3.440	-4.9	H	3.0	35.5	1.0	-39.4	-13.0	-26.4	
5.160	3.1	H	3.0	35.3	1.0	-31.2	-13.0	-18.2	
6.880	-1.7	H	3.0	35.7	1.0	-36.4	-13.0	-23.4	
8.600	-14.7	H	3.0	35.6	1.0	-49.3	-13.0	-36.3	
Mid Ch, (1732.5MHz)									
3.465	-11.6	V	3.0	35.5	1.0	-46.0	-13.0	-33.0	
5.198	-1.6	V	3.0	35.3	1.0	-35.9	-13.0	-22.9	
6.930	-8.9	V	3.0	35.7	1.0	-43.6	-13.0	-30.6	
8.663	-17.8	V	3.0	35.6	1.0	-52.4	-13.0	-39.4	
3.465	-3.9	H	3.0	35.5	1.0	-38.4	-13.0	-25.4	
5.198	4.1	H	3.0	35.3	1.0	-30.2	-13.0	-17.2	
6.930	6.3	H	3.0	35.7	1.0	-28.4	-13.0	-15.4	
8.663	-10.2	H	3.0	35.6	1.0	-44.8	-13.0	-31.8	
High Ch, (1745.0MHz)									
3.490	-15.2	V	3.0	35.5	1.0	-49.7	-13.0	-36.7	
5.235	-5.8	V	3.0	35.3	1.0	-40.2	-13.0	-27.2	
6.980	-8.0	V	3.0	35.7	1.0	-42.7	-13.0	-29.7	
8.725	-19.3	V	3.0	35.6	1.0	-53.9	-13.0	-40.9	
3.490	-5.3	H	3.0	35.5	1.0	-39.7	-13.0	-26.7	
5.235	2.4	H	3.0	35.3	1.0	-32.0	-13.0	-19.0	
6.980	-3.8	H	3.0	35.7	1.0	-38.6	-13.0	-25.6	
8.725	-14.1	H	3.0	35.6	1.0	-48.8	-13.0	-35.8	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

LTE Band 17, QPSK (5.0 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14916
Date: 03/14/13
Test Engineer: Mona Hua
Configuration: EUT with AC adapter
Mode: LTE Band 17, 5MHz QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (706.5MHz)									
1.413	-15.5	V	3.0	35.8	1.0	-50.2	-13.0	-37.2	
1.413	-18.6	H	3.0	35.8	1.0	-53.4	-13.0	-40.4	
Mid Ch, (710MHz)									
1.420	-15.5	V	3.0	35.7	1.0	-50.3	-13.0	-37.3	
1.420	-15.3	H	3.0	35.7	1.0	-50.1	-13.0	-37.1	
High Ch, (713.5MHz)									
1.427		V	3.0	35.7	1.0	-34.7	-13.0	-21.7	
1.427	-13.6	H	3.0	35.7	1.0	-48.4	-13.0	-35.4	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

LTE Band 17, 16QAM (5.0 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company:	LG
Project #:	13U14916
Date:	03/14/13
Test Engineer:	Mona Hua
Configuration:	EUT with AC adapter
Mode:	LTE Band 17, 5MHz 16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B		Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (706.5MHz)									
1.413	-16.4	V	3.0	35.8		-52.1	-13.0	-39.1	
1.413	-20.3	H	3.0	35.8		-56.1	-13.0	-43.1	
Mid Ch, (710MHz)									
1.420	-18.7	V	3.0	35.7		-54.5	-13.0	-41.5	
1.420	-18.1	H	3.0	35.7		-53.9	-13.0	-40.9	
High Ch, (713.5MHz)									
1.427	-15.7	V	3.0	35.7		-51.4	-13.0	-38.4	
1.427	-15.1	H	3.0	35.7		-50.8	-13.0	-37.8	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

LTE Band 17, QPSK (10.0 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14916
Date: 03/14/13
Test Engineer: Mona Hua
Configuration: EUT with AC adapter
Mode: LTE Band 17, 10MHz QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B		Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (709MHz)									
1.418	-15.6	V	3.0	35.7		-51.4	-13.0	-38.4	
1.418	-22.1	H	3.0	35.7		-57.9	-13.0	-44.9	
Mid Ch, (710MHz)									
1.420	-15.5	V	3.0	35.7		-51.3	-13.0	-38.3	
1.420	-17.4	H	3.0	35.7		-53.2	-13.0	-40.2	
High Ch, (711MHz)									
1.422	-18.5	V	3.0	35.7		-54.2	-13.0	-41.2	
1.422	-17.4	H	3.0	35.7		-53.1	-13.0	-40.1	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

LTE Band 17, 16QAM (10.0 MHz BANDWIDTH)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 13U14916
Date: 03/14/13
Test Engineer: Mona Hua
Configuration: EUT with AC adapter
Mode: LTE Band 17, 10MHz 16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B		Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (709MHz)									
1.418	-17.0	V	3.0	35.7		-52.7	-13.0	-39.7	
1.418	-22.2	H	3.0	35.7		-58.0	-13.0	-45.0	
Mid Ch, (710MHz)									
1.420	-17.7	V	3.0	35.7		-53.5	-13.0	-40.5	
1.420	-19.7	H	3.0	35.7		-55.4	-13.0	-42.4	
High Ch, (711MHz)									
1.422	-19.5	V	3.0	35.7		-55.2	-13.0	-42.2	
1.422	-18.5	H	3.0	35.7		-54.2	-13.0	-41.2	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.