FCC CFR47 PART 22 SUBPART H
FCC CFR47 PART 24 SUBPART E
FCC CFR47 PART 27 SUBPART L

C2PC CERTIFICATION TEST REPORT

FOR

CDMA/LTE PHONE WITH BT + DTS WLAN b/g/n

MODEL NUMBER: LGL62VL, L62VL, LG-L62VL

FCC ID: ZNFL62VL

REPORT NUMBER: 16I22653-E1V2

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Prepared for
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	1/29/2016	Initial issue	D. CORONIA
V2	2/8/2016	Updated Section 9.1.1	D. CORONIA

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	LG ELECTRONICS MOBILECOMM U.S.A., INC.
EUT DESCRIPTION:	CDMA/LTE PHONE WITH BT + DTS WLAN b/g/n
MODEL:	LGL62VL, L62VL, LG-L62VL
SERIAL NUMBER:	601KPYR000746, 601KPHG000745
DATE TESTED:	JANUARY 14-23, 2016

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 22H, 24E & 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 revision 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.

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2. TEST METHODOLOGY

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

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
☒ Chamber A	☐ Chamber D
☐ Chamber B	☐ Chamber E
☒ Chamber C	☐ Chamber F
	☐ Chamber G
	☐ Chamber H

The above test sites and facilities are covered under FCC Test Firm Registration # 208313.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.

Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively.

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:

EIRP = PSA reading with EUT worst orientation (dBm) + Path loss (dB) – cable loss(between the SG and substitution antenna) + Substitution Antenna Factor (dBi)

ERP = PSA reading with EUT worst orientation (dBm) + Path loss (dB) – cable loss(between the SG and substitution antenna)

(Path loss = Signal generator output – PSA reading with substitution antenna)

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 9KHz to 30 MHz	2.14 dB
Radiated Disturbance, 30 to 1000 MHz	4.98 dB
Radiated Disturbance,1000 to 6000 MHz	3.86 dB
Radiated Disturbance,6000 to 18000 MHz	4.23 dB
Radiated Disturbance,18000 to 26000 MHz	5.30 dB
Radiated Disturbance,26000 to 40000 MHz	5.23 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

This EUT is a CDMA/LTE PHONE WITH BT + DTS WLAN b/g/n

5.2. MAXIMUM OUTPUT POWER (CDMA)

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

FCC Part 22/24						
Band	Frequency Range(MHz)	Modulation	Conducted		Radiated	
			AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
BC0	824~849	1xRTT	24.2	263.03	23.02	200.45
	824~849	EVDO REL. 0	24.2	263.03	23.06	202.30
	824~849	EVDO REV. A	24.2	263.03		
BC1	1850~1910	1xRTT	24.7	295.12	25.41	347.54
	1850~1910	EVDO REL. 0	24.7	295.12	25.34	341.98
	1850~1910	EVDO REV. A	24.7	295.12		

5.3. MAXIMUM OUTPUT POWER (LTE)

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

FCC Part 24							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE2	1850~1910	1.4MHz	QPSK	24.0	251.19	24.26	266.69
			16QAM	23.2	208.93	23.73	236.05
		3MHz	QPSK	24.0	251.19	24.16	260.62
			16QAM	23.2	208.93	23.76	237.68
		5MHz	QPSK	23.9	245.47	24.35	272.27
			16QAM	23.2	208.93	24.26	266.69
		10MHz	QPSK	23.9	245.47	24.60	288.40
			16QAM	23.2	208.93	24.01	251.77
		15MHz	QPSK	24.2	263.03	23.97	249.46
			16QAM	23.2	208.93	23.46	221.82
		20MHz	QPSK	24.2	263.03	23.76	237.68
			16QAM	23.2	208.93	23.16	207.01

FCC Part 27							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE4	1710~1755	1.4MHz	QPSK	23.8	239.88	23.81	240.44
			16QAM	23.4	218.78	23.52	224.91
		3MHz	QPSK	23.8	239.88	23.95	248.31
			16QAM	23.4	218.78	23.62	230.14
		5MHz	QPSK	23.9	245.47	23.68	233.35
			16QAM	23.2	208.93	23.32	214.78
		10MHz	QPSK	23.9	245.47	24.17	261.22
			16QAM	23.4	218.78	23.52	224.91
		15MHz	QPSK	23.8	239.88	23.92	246.60
			16QAM	23.4	218.78	23.43	220.29
		20MHz	QPSK	24.3	269.15	23.97	249.46
			16QAM	23.4	218.78	23.56	226.99

FCC Part 27							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE13	777~787	5MHz	QPSK	24.2	263.03	21.86	153.46
			16QAM	22.7	186.21	21.24	133.05
		10MHz	QPSK	24.0	251.19	22.04	159.96
			16QAM	23.2	208.93	21.49	140.93

5.4. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PIFA antenna for the [List the bands supported] with a maximum peak gain as follow:

Frequency (MHz)	Peak Gain (dBi)
LTE B2, 1850~1910MHz	-0.62
LTE B4, 1710~1755MHz	-1.24
LTE B13, 777~787MHz	-6.66
BC0, 824~849MHz	-2.41
BC1, 1850~1910MHz	-0.62

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	MMCS-02WRE	N/A	N/A
Earphone	LG	N/A	N/A	N/A

I/O CABLES (CONDUCTED SETUP)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	RF Out	1	Spectrum Analyzer	Shielded	None	NA
2	Antenna Port	1	EUT	Shielded	0.1m	NA
3	RF In/Out	1	Communication Test Set	Shielded	1m	NA

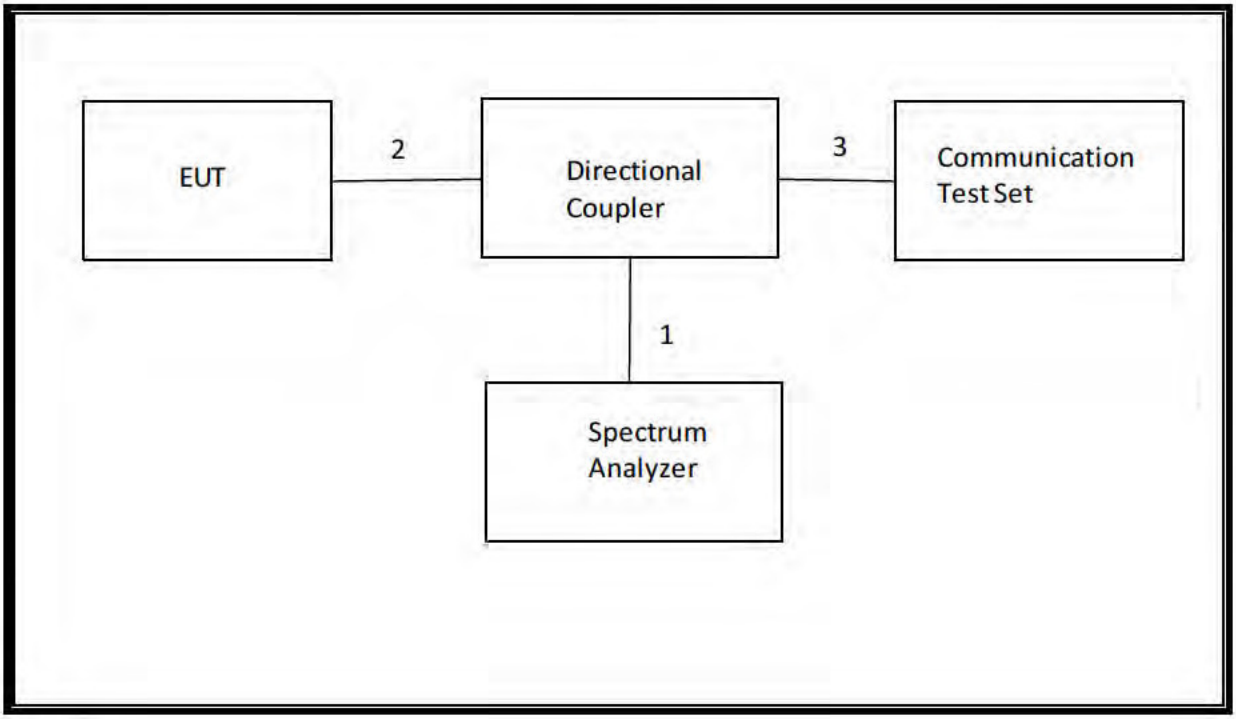
I/O CABLES (RADIATED SETUP)

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	USB	1	AC Adapter	Un-shielded	1.2m	No
2	Jack	1	Headset	Shielded	1m	No
3	RF In/out	1	Communication Test Set	Un-shielded	2m	Yes

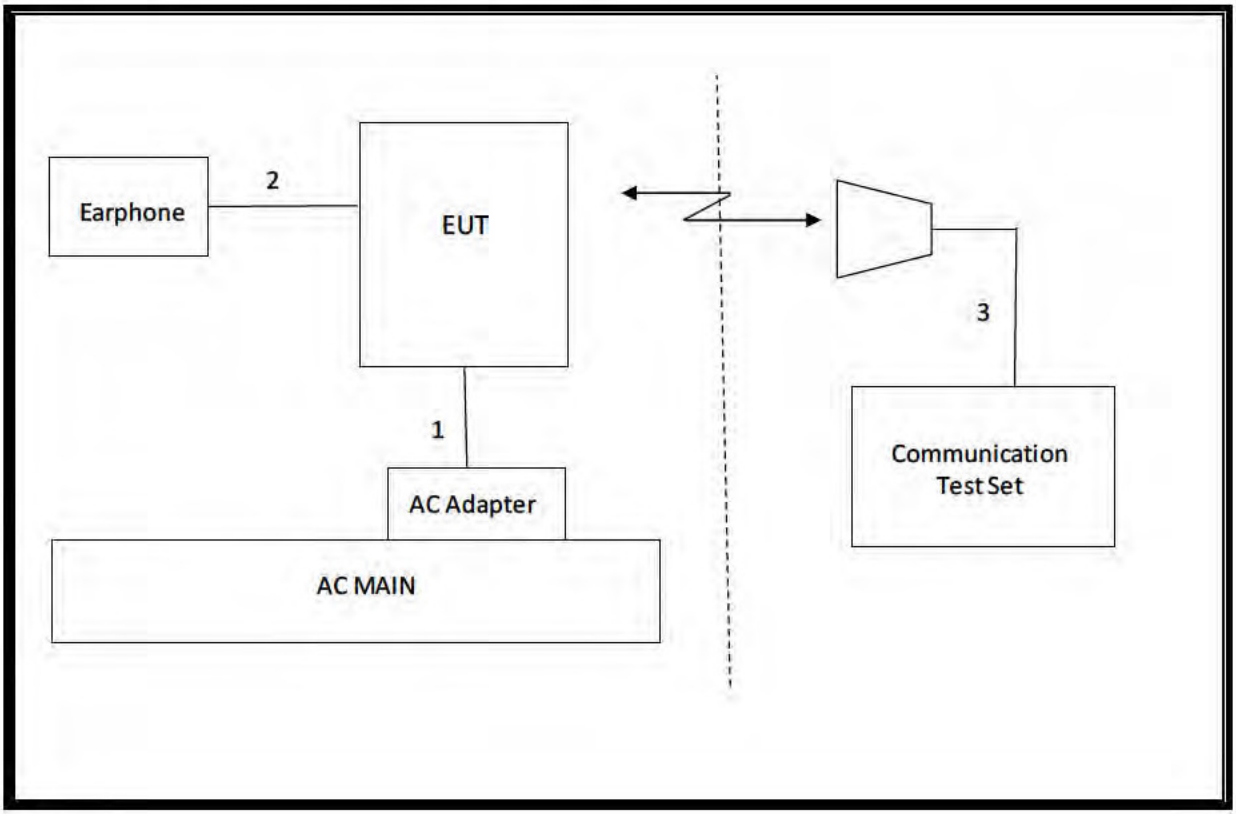
TEST SETUP

The EUT is continuously communicated to the call box during the tests.

SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



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	T Number	Cal Due
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	123	10/22/16
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	130	06/10/16
Antenna, Horn, 18 GHz	EMCO	3115	59	11/18/16
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	151	CNR
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	153	CNR
Temperature / Humidity Chamber	Thermotron	SE 600-10-10	80	05/15/16
Communications Test Set	R&S	CMW500	159	07/10/16
DC power supply, 8 V @ 3 A or 15 V	Agilent / HP	E3610A	None	CNR
Vector signal generator, 6 GHz	Agilent / HP	E4438C	None	06/16/16
Antenna, Tuned Dipole 400~1000	ETS	3121C DB4	273	05/05/16
Directional Coupler	RF-Lambda	RFDC5M06G15	None	CNR
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	447	05/18/16

Test Software List			
Description	Manufacturer	Model	Version
Radiated Software	UL	UL EMC	Ver 9.5, June 24, 2015
Conducted Software	UL	UL EMC	Ver 9.5, May 26, 2015
CLT Software	UL	UL RF	Ver 1.0, Feb 2, 2015
Antenna Port Software	UL	UL RF	Ver 3.7, Nov 12, 2015

7. SUMMARY TABLE

C2PC Reason: Please see LGL62VL FCC Class II change description for details.

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result
2.1049	N/A	Occupied Bandwidth (99%)	N/A	Conducted	Refer to Original
22.917(a) 24.238(a) 27.53(g)	RSS-132(4.5.1) RSS-133(6.5.1) RSS-139(6.5.1)	Band Edge / Conducted Spurious Emission	-13dBm		Refer to Original
2.1046	N/A	Conducted output power	N/A		Pass
22.355 24.235 27.54	RSS-132(4.3) RSS-133(6.3) RSS-139(6.3)	Frequency Stability	2.5PPM		Refer to Original
22.913(a)(2)	RSS-132(4.4)	Effective Radiated Power	38 dBm	Radiated	Pass
27.50(c)(10)	N/A		34.77 dBm		Pass
24.232(c) 27.50(h)(2)	RSS-133(6.4)	Equivalent Isotropic Radiated Power	33dBm		Pass
27.50(d)(4)	RSS-139(6.4)		30dBm		Pass
22.917(a) 24.238(a) 27.53(g)	RSS-132(4.5.1) RSS-133(6.5.1) RSS-139(6.5.1)	Radiated Spurious Emission	-13dBm		Pass

8. RF POWER OUTPUT VERIFICATION

8.1. CDMA2000

8.1.1. 1xRTT

TEST PROCEDURE

This procedure assumes the Agilest 8960 Test Set has the following applications installed and with valid license.

Application	Rev, License
CDMA2000 Mobile Test	B.13.08, L

- Call Setup > Shift & Preset
- Cell Info > Cell Parameters > System ID (SID) > 7
  > Network ID (NID) > 1
- Protocol Rev > 6 (IS-2000-0)
- Radio Config (RC) > Please see following table or details
- FCH Service Option (SO) Setup > Please see following table or details
- Traffic Data Rate > Full
- TDSO SCH Info > F-SCH Parameters > F-SCH Data Rate > 153.6 kbps
  > R-SCH Parameters > R-SCH Data Rate > 153.6 kbps
- Rvs Power Ctrl > Active bits
  - Rvs Power Ctrl > All Up bits (Maximum TxPout)

8.1.2. CDMA2000 OUTPUT POWER RESULT

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC0	RC1, SO55 (Loopback)	1013	824.70	24.0
		384	836.52	24.1
		777	848.31	24.2
	RC3, SO55 (Loopback)	1013	824.70	24.0
		384	836.52	24.1
		777	848.31	24.2
	RC3, SO32 (+F-SCH)	1013	824.70	24.0
		384	836.52	24.1
		777	848.31	24.2

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC1	RC1, SO55 (Loopback)	25	1851.25	24.7
		600	1880.00	24.5
		1175	1908.75	24.4
	RC3, SO55 (Loopback)	25	1851.25	24.7
		600	1880.00	24.6
		1175	1908.75	24.4
	RC3, SO32 (+F-SCH)	25	1851.25	24.7
		600	1880.00	24.7
		1175	1908.75	24.5

8.1.1. 1xEV-DO Release 0

TEST PROCEDURE

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

Application	Rev, License
1xEV-DO Terminal Test	A.09.13

EVDO Release 0 - RTAP

- Call Setup > Shift & Preset
- Call Control:
  - Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
  - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Parms:
  - Cell Power > -105.5 dBm/1.23 MHz
  - Cell Band > (Select US Cellular or US PCS)
  - Channel > (Enter channel number)
  - Application Config > Enhanced Test Application Protocol > RTAP
  - RTAP Rate > 153.6 kbps
  - Rvs Power Ctrl > Active bits
  - Protocol Rel > 0 (1xEV-DO)
- Press “Start Data Connection” when “Session Open” appear in “Active Cell”
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

EVDO Release 0 - FTAP

- Call Setup > Shift & Preset
- Call Control:
  - Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
  - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Parms:
  - Cell Power > -105.5 dBm/1.23 MHz
  - Cell Band > (Select US Cellular or US PCS)
  - Channel > (Enter channel number)
  - Application Config > Enhanced Test Application Protocol > FTAP (default)
  - FTAP Rate > 307.2 kbps (2 Slot, QPSK)
  - Rvs Power Ctrl > Active bits
  - Protocol Rel > 0 (1xEV-DO)
- Press “Start Data Connection” when “Session Open” appear in “Active Cell”
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

8.1.2. 1XEVDO REL 0 OUTPUT POWER RESULT

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC0	Fwd11/Rvs8 SO75 (Loopback)	1013	824.70	24.0
		384	836.52	24.1
		777	848.31	24.2

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC1	Fwd11/Rvs8 SO75 (Loopback)	25	1851.25	24.7
		600	1880.00	24.6
		1175	1908.75	24.5

8.1.1. 1xEV-DO Rev. A

TEST PROCEDURE

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

Application	Rev, License
1xEV-DO Terminal Test	A.09.13

EVDO Release A – RETAP

- Call Setup > Shift & Preset
- Cell Power > -60 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > RETAP
- R-Data Pkt Size > 4096
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2

> PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)

- Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots > ACK R-Data After > Subpacket 0 (All ACK)
- Rvs Power Ctrl > All Up bits (to get the maximum power)

EVDO Release A - FETAP

- Call Setup > Shift & Preset
- Cell Power > -60 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > FETAP
- F-Traffic Format > 4 (1024, 2,128) Canonical (307.2k, QPSK)
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2

> PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)

- Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots > ACK R-Data After > Subpacket 0 (All ACK)
- Rvs Power Ctrl > All Up bits (to get the maximum power)

8.1.2. 1xEVDO REV A OUTPUT RESULT

Band	FETAP Traffic Format	Channel	f (MHz)	Avg Pwr (dBm)
BC0	307.2k, QPSK/ ACK channel is transmitted at all the slots	1013	824.70	24.0
		384	836.52	24.1
		777	848.31	24.2

Band	FETAP Traffic Format	Channel	f (MHz)	Avg Pwr (dBm)
BC1	307.2k, QPSK/ ACK channel is transmitted at all the slots	25	1851.25	24.7
		600	1880.00	24.6
		1175	1908.75	24.5

8.2. LTE OUTPUT POWER RESULT

LTE Band 2

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						18607	18900	19193
						1850.7 MHz	1880 MHz	1909.3 MHz
LTE Band 2	1.4	QPSK	1	0	0	23.8	23.8	23.7
			1	2	0	23.7	23.9	23.7
			1	5	0	23.7	24.0	23.7
			3	0	0	23.9	23.8	23.7
			3	2	0	23.8	23.9	23.8
			3	3	0	23.9	23.9	23.9
			6	0	1	22.9	23.1	23.0
		16QAM	1	0	1	23.2	23.2	23.1
			1	2	1	23.2	23.2	23.1
			1	5	1	23.2	23.2	23.1
			3	0	1	23.2	22.8	23.2
			3	2	1	23.0	22.9	23.2
			3	3	1	22.9	23.1	23.2
			6	0	2	21.9	21.7	22.0
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						18615	18900	19185
						1851.5 MHz	1880 MHz	1908.5 MHz
LTE Band 2	3	QPSK	1	0	0	23.8	23.9	23.5
			1	7	0	23.7	24.0	23.9
			1	14	0	23.7	23.7	23.8
			8	0	1	23.0	22.9	23.0
			8	4	1	22.9	23.0	22.9
			8	7	1	22.9	23.0	23.0
			15	0	1	22.9	23.0	23.0
		16QAM	1	0	1	23.2	23.1	23.2
			1	7	1	23.2	23.2	23.2
			1	14	1	23.1	23.2	23.2
			8	0	2	22.1	22.1	22.0
			8	4	2	22.1	22.1	21.9
			8	7	2	22.1	22.2	21.9
			15	0	2	21.9	21.9	22.0

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						18625	18900	19175
						1852.5 MHz	1880 MHz	1907.5 MHz
LTE Band 2	5	QPSK	1	0	0	23.9	23.8	23.6
			1	12	0	23.8	23.9	23.8
			1	24	0	23.7	23.8	23.7
			12	0	1	23.0	23.0	23.0
			12	6	1	22.9	23.1	23.0
			12	13	1	22.9	23.1	23.0
			25	0	1	23.0	23.0	23.0
		16QAM	1	0	1	23.1	22.8	23.0
			1	12	1	23.1	22.7	23.0
			1	24	1	23.2	22.8	23.0
			12	0	2	21.9	21.8	22.1
			12	6	2	21.8	21.9	22.1
			12	13	2	22.0	22.0	22.1
			25	0	2	22.0	22.1	22.1

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						18650	18900	19150
						1855 MHz	1880 MHz	1905 MHz
LTE Band 2	10	QPSK	1	0	0	23.9	23.9	23.8
			1	25	0	23.8	23.8	23.9
			1	49	0	23.9	23.9	23.7
			25	0	1	23.0	23.0	22.9
			25	12	1	23.0	23.0	23.0
			25	25	1	23.0	23.1	23.0
			50	0	1	23.1	23.1	22.9
		16QAM	1	0	1	23.0	23.2	23.2
			1	25	1	23.2	23.2	23.2
			1	49	1	23.2	23.2	23.2
			25	0	2	22.2	22.1	22.0
			25	12	2	22.1	22.0	22.1
			25	25	2	22.1	22.1	22.0
			50	0	2	22.1	21.9	22.0

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						18675	18900	19125
						1857.5 MHz	1880 MHz	1902.5 MHz
LTE Band 2	15	QPSK	1	0	0	24.2	24.2	24.1
			1	36	0	24.2	24.1	23.9
			1	74	0	24.0	24.1	23.9
			36	0	1	23.1	23.1	22.9
			36	18	1	23.1	23.1	23.0
			36	37	1	23.1	23.0	23.0
			75	0	1	23.1	23.0	22.9
		16QAM	1	0	1	23.2	23.0	23.2
			1	36	1	23.2	23.2	23.2
			1	74	1	23.2	23.2	23.2
			36	0	2	22.1	22.0	21.9
			36	18	2	22.1	22.1	22.0
			36	37	2	22.0	22.0	22.1
			75	0	2	22.1	22.0	21.9

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						18700	18900	19100
						1860 MHz	1880 MHz	1900 MHz
LTE Band 2	20	QPSK	1	0	0	24.2	24.2	24.2
			1	50	0	24.2	24.2	24.2
			1	99	0	23.9	24.0	23.8
			50	0	1	23.1	23.2	23.1
			50	25	1	23.1	23.2	23.0
			50	50	1	23.1	23.1	23.0
			100	0	1	23.2	23.2	23.0
		16QAM	1	0	1	23.2	23.2	23.2
			1	50	1	23.2	23.1	23.2
			1	99	1	23.2	23.0	22.9
			50	0	2	22.1	22.1	22.0
			50	25	2	22.1	22.1	21.9
			50	50	2	22.1	22.0	22.0
			100	0	2	22.2	22.2	22.0

LTE Band 4

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						19957	20175	20393
						1710.7 MHz	1732.5 MHz	1754.3 MHz
LTE Band 4	1.4	QPSK	1	0	0	23.4	23.5	23.4
			1	2	0	23.4	23.5	23.7
			1	5	0	23.4	23.3	23.6
			3	0	0	23.5	23.4	23.7
			3	2	0	23.5	23.5	23.8
			3	3	0	23.5	23.5	23.7
			6	0	1	22.7	22.8	23.0
		16QAM	1	0	1	22.8	23.3	23.1
			1	2	1	23.0	23.4	23.3
			1	5	1	22.9	23.4	23.2
			3	0	1	22.6	23.1	23.1
			3	2	1	22.5	22.6	23.4
			3	3	1	22.5	22.6	23.3
			6	0	2	21.8	21.6	22.1
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						19965	20175	20385
						1711.5 MHz	1732.5 MHz	1753.5 MHz
LTE Band 4	3	QPSK	1	0	0	23.8	23.5	23.7
			1	7	0	23.7	23.4	23.7
			1	14	0	23.8	23.4	23.7
			8	0	1	22.9	22.8	23.0
			8	4	1	22.8	22.9	23.1
			8	7	1	23.0	23.0	23.0
			15	0	1	22.9	22.8	23.1
		16QAM	1	0	1	23.4	23.0	23.4
			1	7	1	23.4	23.1	23.3
			1	14	1	23.4	22.9	23.4
			8	0	2	21.9	21.9	22.1
			8	4	2	21.9	22.0	22.2
			8	7	2	21.9	21.9	21.8
			15	0	2	21.9	21.8	22.1

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						19975	20175	20375
						1712.5 MHz	1732.5 MHz	1752.5 MHz
LTE Band 4	5	QPSK	1	0	0	23.6	23.7	23.5
			1	12	0	23.9	23.8	23.6
			1	24	0	23.4	23.5	23.7
			12	0	1	22.9	22.9	23.0
			12	6	1	22.9	22.9	23.0
			12	13	1	22.9	22.9	23.1
			25	0	1	22.9	22.9	23.0
		16QAM	1	0	1	23.0	22.8	23.4
			1	12	1	23.1	22.4	22.9
			1	24	1	23.2	22.6	22.8
			12	0	2	22.0	21.8	21.9
			12	6	2	21.8	21.8	21.9
			12	13	2	21.9	21.9	22.2
			25	0	2	22.0	22.0	22.2

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						20000	20175	20350
						1715 MHz	1732.5 MHz	1750 MHz
LTE Band 4	10	QPSK	1	0	0	23.9	23.5	23.6
			1	25	0	23.7	23.6	23.5
			1	49	0	23.7	23.4	23.7
			25	0	1	22.9	22.9	22.9
			25	12	1	22.9	22.9	22.9
			25	25	1	23.0	22.8	23.0
			50	0	1	23.0	22.9	23.0
		16QAM	1	0	1	23.1	23.1	23.1
			1	25	1	23.2	23.1	23.4
			1	49	1	23.4	23.0	23.4
			25	0	2	22.0	22.1	22.0
			25	12	2	22.1	22.0	21.8
			25	25	2	21.9	21.9	21.8
			50	0	2	22.1	21.8	21.8

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						20025	20175	20325
						1717.5 MHz	1732.5 MHz	1747.5 MHz
LTE Band 4	15	QPSK	1	0	0	23.8	23.8	23.8
			1	36	0	23.6	23.7	23.4
			1	74	0	23.7	23.7	23.5
			36	0	1	23.0	23.0	23.1
			36	18	1	23.0	23.0	22.9
			36	37	1	22.8	22.8	23.0
			75	0	1	22.8	22.9	23.0
		16QAM	1	0	1	23.4	23.4	23.4
			1	36	1	23.3	23.4	23.4
			1	74	1	23.3	23.4	23.4
			36	0	2	22.1	22.1	21.9
			36	18	2	22.1	22.1	21.8
			36	37	2	21.9	21.9	21.8
			75	0	2	21.9	21.9	21.9

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						20050	20175	20300
						1720 MHz	1732.5 MHz	1745 MHz
LTE Band 4	20	QPSK	1	0	0		24.2	
			1	50	0		24.3	
			1	99	0		24.2	
			50	0	1		23.0	
			50	25	1		23.0	
			50	50	1		23.0	
			100	0	1		23.0	
		16QAM	1	0	1		23.4	
			1	50	1		23.3	
			1	99	1		23.2	
			50	0	2		22.1	
			50	25	2		22.0	
			50	50	2		21.7	
			100	0	2		21.9	

LTE Band 13

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm) 23230 782 MHz
LTE Band 13	5	QPSK	1	0	0	23.8
			1	12	0	24.2
			1	24	0	24.0
			12	0	1	22.9
			12	6	1	22.9
			12	13	1	22.9
			25	0	1	22.8
		16QAM	1	0	1	22.7
			1	12	1	22.5
			1	24	1	22.6
			12	0	2	21.7
			12	6	2	21.9
			12	13	2	21.9
			25	0	2	22.1

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm) 23230 782 MHz
LTE Band 13	10	QPSK	1	0	0	23.8
			1	25	0	24.0
			1	49	0	24.0
			25	0	1	22.9
			25	12	1	22.9
			25	25	1	22.9
			50	0	1	22.9
		16QAM	1	0	1	22.7
			1	25	1	23.2
			1	49	1	23.1
			25	0	2	22.0
			25	12	2	21.9
			25	25	2	22.0
			50	0	2	22.0

9. RADIATED TEST RESULTS

9.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2. 1046, §22. 913, §24. 232, §27

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 (b) - (10) Portable stations (handheld devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP. (LTE B13)

27.50 (c) - (10) Portable stations (handheld devices) are limited to 3 watts ERP; (LTE B17)

27.50 (d) - (4) Fixed, mobile, and portable (handheld) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.(Band 4)

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13dB.

TEST PROCEDURE

ANSI / TIA / EIA 603D Clause 2.2.17; PSA setting reference to 971168 D01 v02r02

For peak power measurement with a PSA:

a) Set the RBW ≥ OBW; b) Set VBW ≥ 3 × RBW; c) Set span ≥ 2 x RBW; d) Sweep time = auto couple; e) Detector = peak; f) Ensure that the number of measurement points ≥ span/RBW; g) Trace mode = max hold;

For average power measurement with a PSA:

a) Set span to at least 1.5 times the OBW; b) Set RBW = 1-5% of the OBW, not to exceed 1 MHz; c) Set VBW ≥ 3 x RBW; d) Set number of points in sweep ≥ 2 × span / RBW; e) Sweep time = auto-couple; f) Detector = RMS (power averaging); g) Use free run trigger If burst duty cycle ≥ 98; h) Use trigger to capture bursts If burst duty cycle < 98; i) Trace average at least 100 traces in power averaging (*i.e.*, RMS) mode. j) Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function.

9.1.1. ERP/EIRP RESULTS AND TABLE

CDMA

Band	Mode	Channel	f(MHz)	ERP/EIRP	
				dBm	mW
BC0	1xRTT	1013	824.7	23.02	200.45
		384	836.52	22.77	189.23
		777	848.31	21.97	157.40
	EVDO REL. 0	1013	824.7	23.06	202.30
		384	836.52	22.96	197.70
		777	848.31	22.00	158.49
BC1	1xRTT	25	1851.25	25.04	319.15
		600	1880.0	25.41	347.54
		1175	1908.75	25.04	319.15
	EVDO REL. 0	25	1851.25	25.34	341.98
		600	1880.0	25.33	341.19
		1175	1908.75	25.11	324.34

BC0 1xRTT

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/14/2016
Test Engineer:	R.Alegre
Configuration:	Z-pos EUT Only
Location:	Chamber A
Mode:	RTT BC0 Fundamentals

Test Equipment:
Receiving: Hybrid T130, and Chamber A SMA Cables
Substitution: Dipole T416, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
824.70	23.92	V	0.9	0.0	23.02	38.5	-15.5	
824.70	7.86	H	0.9	0.0	6.96	38.5	-31.5	
Mid Ch								
836.52	23.67	V	0.9	0.0	22.77	38.5	-15.7	
836.52	9.17	H	0.9	0.0	8.27	38.5	-30.2	
High Ch								
848.31	22.87	V	0.9	0.0	21.97	38.5	-16.5	
848.31	8.43	H	0.9	0.0	7.53	38.5	-31.0	

BC0 EVDO Rel.0

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/14/2016
Test Engineer:	R.Alegre
Configuration:	Z-pos EUT Only
Location:	Chamber A
Mode:	EVDO BC0 Fundamentals

Test Equipment:
Receiving: Hybrid T130, and Chamber A SMA Cables
Substitution: Dipole T416, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
824.70	23.96	V	0.9	0.0	23.06	38.5	-15.4	
824.70	7.93	H	0.9	0.0	7.03	38.5	-31.5	
Mid Ch								
836.52	23.86	V	0.9	0.0	22.96	38.5	-15.5	
836.52	9.03	H	0.9	0.0	8.13	38.5	-30.4	
High Ch								
848.31	22.90	V	0.9	0.0	22.00	38.5	-16.5	
848.31	8.41	H	0.9	0.0	7.51	38.5	-31.0	

BC1 1xRTT

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/14/2016
Test Engineer:	R.Alegre
Configuration:	X-pos EUT Only
Location:	Chamber A
Mode:	RTT BC1 Fundamentals

Test Equipment:
Receiving: Horn T136, and Chamber A SMA Cables
Substitution: Horn T59, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1851.25	14.60	V	0.9	8.6	22.30	33.0	-10.7	
1851.25	17.34	H	0.9	8.6	25.04	33.0	-8.0	
Mid Ch								
1880.00	14.50	V	0.9	8.6	22.21	33.0	-10.8	
1880.00	17.70	H	0.9	8.6	25.41	33.0	-7.6	
High Ch								
1908.75	14.45	V	0.9	8.6	22.17	33.0	-10.8	
1908.75	17.32	H	0.9	8.6	25.04	33.0	-8.0	

BC1 EVDO Rel.0

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/14/2016
Test Engineer:	R.Alegre
Configuration:	X-pos EUT Only
Location:	Chamber A
Mode:	EVDO BC1 Fundamentals

Test Equipment:
Receiving: Horn T136, and Chamber A SMA Cables
Substitution: Horn T59, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1851.25	14.79	V	0.9	8.6	22.48	33.0	-10.5	
1851.25	17.54	H	0.9	8.6	25.34	33.0	-7.7	
Mid Ch								
1880.00	14.56	V	0.9	8.6	22.27	33.0	-10.7	
1880.00	17.62	H	0.9	8.6	25.33	33.0	-7.7	
High Ch								
1908.75	14.44	V	0.9	8.6	22.16	33.0	-10.8	
1908.75	17.39	H	0.9	8.6	25.11	33.0	-7.9	

LTE Band 2

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	mW
1.4	QPSK	1/0	1850.7	23.76	237.68
		1/0	1880	23.58	228.03
		1/0	1909.3	24.26	266.69
	16QAM	1/0	1850.7	23.21	209.41
		1/0	1880	23.36	216.77
		1/0	1909.3	23.73	236.05
3	QPSK	1/0	1851.5	23.86	243.22
		1/0	1880	24.16	260.62
		1/0	1908.5	22.69	185.78
	16QAM	1/0	1851.5	23.41	219.28
		1/0	1880	23.76	237.68
		1/0	1908.5	21.96	157.04
5	QPSK	1/0	1852.5	24.35	272.27
		1/0	1880	23.91	246.04
		1/0	1907.5	23.35	216.27
	16QAM	1/0	1852.5	23.21	209.41
		1/0	1880	22.86	193.20
		1/0	1907.5	24.26	266.69
10	QPSK	1/0	1855	24.52	283.14
		1/0	1880	24.60	288.40
		1/0	1905	24.10	257.04
	16QAM	1/0	1855	24.01	251.77
		1/0	1880	23.73	236.05
		1/0	1905	22.73	187.50
15	QPSK	1/0	1857.5	22.96	197.70
		1/0	1880	23.97	249.46
		1/0	1902.5	23.21	209.41
	16QAM	1/0	1857.5	22.06	160.69
		1/0	1880	23.46	221.82
		1/0	1902.5	22.61	182.39
20	QPSK	1/0	1860	22.57	180.72
		1/0	1880	23.11	204.64
		1/0	1900	23.76	237.68
	16QAM	1/0	1860	21.36	136.77
		1/0	1880	22.03	159.59
		1/0	1900	23.16	207.01

1.4MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/19/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 2 Fundamentals, 1.4MHz Bandwidth

Test Equpment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1850.70	10.51	V	0.9	8.0	17.62	33.0	-15.4	
1850.70	16.65	H	0.9	8.0	23.76	33.0	-9.2	
Mid Ch								
1880.00	8.19	V	0.9	8.0	15.30	33.0	-17.7	
1880.00	16.47	H	0.9	8.0	23.58	33.0	-9.4	
High Ch								
1909.30	14.78	V	0.9	8.0	21.89	33.0	-11.1	
1909.30	17.15	H	0.9	8.0	24.26	33.0	-8.7	

1.4MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/19/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 2 Fundamentals, 1.4MHz Bandwidth

Test Equpment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1850.70	10.38	V	0.9	8.0	17.49	33.0	-15.5	
1850.70	16.10	H	0.9	8.0	23.21	33.0	-9.8	
Mid Ch								
1880.00	7.70	V	0.9	8.0	14.81	33.0	-18.2	
1880.00	16.25	H	0.9	8.0	23.36	33.0	-9.6	
High Ch								
1909.30	14.45	V	0.9	8.0	21.56	33.0	-11.4	
1909.30	16.62	H	0.9	8.0	23.73	33.0	-9.3	

3MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/19/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 2 Fundamentals, 3MHz Bandwidth

Test Equpment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1851.50	16.75	V	0.9	8.0	23.86	33.0	-9.1	
1851.50	16.43	H	0.9	8.0	23.54	33.0	-9.5	
Mid Ch								
1880.00	15.30	V	0.9	8.0	22.41	33.0	-10.6	
1880.00	17.05	H	0.9	8.0	24.16	33.0	-8.8	
High Ch								
1908.50	11.10	V	0.9	8.0	18.21	33.0	-14.8	
1908.50	15.58	H	0.9	8.0	22.69	33.0	-10.3	

3MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/19/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 2 Fundamentals, 3MHz Bandwidth

Test Equpment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1851.50	16.30	V	0.9	8.0	23.41	33.0	-9.6	
1851.50	16.08	H	0.9	8.0	23.19	33.0	-9.8	
Mid Ch								
1880.00	14.93	V	0.9	8.0	22.04	33.0	-11.0	
1880.00	16.65	H	0.9	8.0	23.76	33.0	-9.2	
High Ch								
1908.50	10.68	V	0.9	8.0	17.79	33.0	-15.2	
1908.50	14.85	H	0.9	8.0	21.96	33.0	-11.0	

5MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/19/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 2 Fundamentals, 5MHz Bandwidth

Test Equpment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1852.50	10.10	V	0.9	8.0	17.21	33.0	-15.8	
1852.50	17.24	H	0.9	8.0	24.35	33.0	-8.7	
Mid Ch								
1880.00	8.99	V	0.9	8.0	16.10	33.0	-16.9	
1880.00	16.80	H	0.9	8.0	23.91	33.0	-9.1	
High Ch								
1907.50	14.05	V	0.9	8.0	21.16	33.0	-11.8	
1907.50	16.24	H	0.9	8.0	23.35	33.0	-9.7	

5MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/19/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 2 Fundamentals, 5MHz Bandwidth

Test Equpment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1852.50	9.10	V	0.9	8.0	16.21	33.0	-16.8	
1852.50	16.10	H	0.9	8.0	23.21	33.0	-9.8	
Mid Ch								
1880.00	8.20	V	0.9	8.0	15.31	33.0	-17.7	
1880.00	15.75	H	0.9	8.0	22.86	33.0	-10.1	
High Ch								
1907.50	13.20	V	0.9	8.0	20.31	33.0	-12.7	
1907.50	17.15	H	0.9	8.0	24.26	33.0	-8.7	

10MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/19/2016
Test Engineer:	Lieu Nguyen
Configuration:	EUT Only
Location:	Chamber C
Mode:	LTE_QPSK Band 2 Fundamentals, 10MHz Bandwidth

Test Equpment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1855.00	11.37	V	0.9	8.0	18.48	33.0	-14.5	
1855.00	17.41	H	0.9	8.0	24.52	33.0	-8.5	
Mid Ch								
1880.00	13.98	V	0.9	8.0	21.09	33.0	-11.9	
1880.00	17.49	H	0.9	8.0	24.60	33.0	-8.4	
High Ch								
1905.00	11.50	V	0.9	8.0	18.61	33.0	-14.4	
1905.00	16.99	H	0.9	8.0	24.10	33.0	-8.9	

10MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/19/2016
Test Engineer:	Lieu Nguyen
Configuration:	EUT Only
Location:	Chamber C
Mode:	LTE_16QAM Band 2 Fundamentals, 10MHz Bandwidth

Test Equpment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1855.00	10.52	V	0.9	8.0	17.63	33.0	-15.4	
1855.00	16.90	H	0.9	8.0	24.01	33.0	-9.0	
Mid Ch								
1880.00	13.21	V	0.9	8.0	20.22	33.0	-12.7	
1880.00	16.62	H	0.9	8.0	23.73	33.0	-9.3	
High Ch								
1905.00	10.70	V	0.9	8.0	17.81	33.0	-15.2	
1905.00	15.62	H	0.9	8.0	22.73	33.0	-10.3	

15MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/19/2016
Test Engineer:	Lieu Nguyen
Configuration:	EUT Only
Location:	Chamber C
Mode:	LTE_QPSK Band 2 Fundamentals, 15MHz Bandwidth

Test Equpment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1857.50	13.90	V	0.9	8.0	21.01	33.0	-12.0	
1857.50	15.85	H	0.9	8.0	22.96	33.0	-10.0	
Mid Ch								
1880.00	4.34	V	0.9	8.0	11.45	33.0	-21.6	
1880.00	16.86	H	0.9	8.0	23.97	33.0	-9.0	
High Ch								
1902.50	5.75	V	0.9	8.0	12.86	33.0	-20.1	
1902.50	16.10	H	0.9	8.0	23.21	33.0	-9.8	

15MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/19/2016
Test Engineer:	Lieu Nguyen
Configuration:	EUT Only
Location:	Chamber C
Mode:	LTE_16QAM Band 2 Fundamentals, 15MHz Bandwidth

Test Equpment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1857.50	13.25	V	0.9	8.0	20.36	33.0	-12.6	
1857.50	14.95	H	0.9	8.0	22.06	33.0	-10.9	
Mid Ch								
1880.00	3.81	V	0.9	8.0	10.92	33.0	-22.1	
1880.00	16.35	H	0.9	8.0	23.46	33.0	-9.5	
High Ch								
1902.50	5.27	V	0.9	8.0	12.38	33.0	-20.6	
1902.50	15.50	H	0.9	8.0	22.61	33.0	-10.4	

20MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/20/2016
Test Engineer:	Lieu Nguyen
Configuration:	EUT Only
Location:	Chamber C
Mode:	LTE_QPSK Band 2 Fundamentals, 20MHz Bandwidth

Test Equpment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1860.00	13.68	V	0.9	8.0	20.79	33.0	-12.2	
1860.00	15.46	H	0.9	8.0	22.57	33.0	-10.4	
Mid Ch								
1880.00	12.22	V	0.9	8.0	19.33	33.0	-13.7	
1880.00	16.00	H	0.9	8.0	23.11	33.0	-9.9	
High Ch								
1900.00	11.97	V	0.9	8.0	19.08	33.0	-13.9	
1900.00	16.65	H	0.9	8.0	23.76	33.0	-9.2	

20MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/20/2016
Test Engineer:	Lieu Nguyen
Configuration:	EUT Only
Location:	Chamber C
Mode:	LTE_16QAM Band 2 Fundamentals, 20MHz Bandwidth

Test Equpment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1860.00	11.85	V	0.9	8.0	18.96	33.0	-14.0	
1860.00	14.25	H	0.9	8.0	21.36	33.0	-11.6	
Mid Ch								
1880.00	12.90	V	0.9	8.0	20.01	33.0	-13.0	
1880.00	14.92	H	0.9	8.0	22.03	33.0	-11.0	
High Ch								
1900.00	11.75	V	0.9	8.0	18.36	33.0	-14.6	
1900.00	16.05	H	0.9	8.0	23.16	33.0	-9.8	

LTE Band 4

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	mW
1.4	QPSK	1/0	1710.7	23.25	211.35
		1/0	1732.5	23.81	240.44
		1/0	1754.3	23.34	215.77
	16QAM	1/0	1710.7	22.73	187.50
		1/0	1732.5	23.52	224.91
		1/0	1754.3	22.93	196.34
3	QPSK	1/0	1711.5	23.57	227.51
		1/0	1732.5	23.95	248.31
		1/0	1753.5	23.69	233.88
	16QAM	1/0	1711.5	22.92	195.88
		1/0	1732.5	23.62	230.14
		1/0	1753.5	23.02	200.45
5	QPSK	1/0	1712.5	23.22	209.89
		1/0	1732.5	23.39	218.27
		1/0	1752.5	23.68	233.35
	16QAM	1/0	1712.5	22.99	199.07
		1/0	1732.5	23.02	200.45
		1/0	1752.5	23.32	214.78
10	QPSK	1/0	1715	23.55	226.46
		1/0	1732.5	24.17	261.22
		1/0	1750	23.91	246.04
	16QAM	1/0	1715	23.12	205.12
		1/0	1732.5	23.52	224.91
		1/0	1750	23.44	220.80
15	QPSK	1/0	1717.5	23.53	225.42
		1/0	1732.5	23.79	239.33
		1/0	1747.5	23.92	246.60
	16QAM	1/0	1717.5	23.18	207.97
		1/0	1732.5	23.32	214.78
		1/0	1747.5	23.43	220.29
20	QPSK	1/0	1720	23.97	249.46
		1/0	1732.5	23.84	242.10
		1/0	1745	23.80	239.88
	16QAM	1/0	1720	23.56	226.99
		1/0	1732.5	23.50	223.87
		1/0	1745	23.16	207.01

1.4MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/20/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only (X-Position)
Location: Chamber C
Mode: LTE_QPSK Band 4 Fundamentals, 1.4MHz Bandwidth

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1710.70	11.80	V	0.9	8.2	19.07	30.0	-10.9	
1710.70	15.98	H	0.9	8.2	23.25	30.0	-6.7	
Mid Ch								
1732.50	13.65	V	0.9	8.2	20.92	30.0	-9.1	
1732.50	16.54	H	0.9	8.2	23.81	30.0	-6.2	
High Ch								
1754.30	12.08	V	0.9	8.1	19.27	30.0	-10.7	
1754.30	16.15	H	0.9	8.1	23.34	30.0	-6.7	

1.4MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/20/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only (X-Position)
Location: Chamber C
Mode: LTE_16QAM Band 4 Fundamentals, 1.4MHz Bandwidth

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1710.70	11.95	V	0.9	8.2	19.22	30.0	-10.8	
1710.70	15.46	H	0.9	8.2	22.73	30.0	-7.3	
Mid Ch								
1732.50	13.22	V	0.9	8.2	20.49	30.0	-9.5	
1732.50	16.25	H	0.9	8.2	23.52	30.0	-6.5	
High Ch								
1754.30	11.62	V	0.9	8.1	18.81	30.0	-11.2	
1754.30	15.74	H	0.9	8.1	22.93	30.0	-7.1	

3MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/20/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 4 Fundamentals, 3MHz Bandwidth

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1711.50	12.35	V	0.9	8.2	19.76	30.0	-10.3	
1711.50	16.22	H	0.9	8.2	23.57	30.0	-6.4	
Mid Ch								
1732.50	13.77	V	0.9	8.2	21.04	30.0	-9.0	
1732.50	16.68	H	0.9	8.2	23.95	30.0	-6.0	
High Ch								
1753.50	13.45	V	0.9	8.1	20.64	30.0	-9.4	
1753.50	16.50	H	0.9	8.1	23.69	30.0	-6.3	

3MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/20/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 4 Fundamentals, 3MHz Bandwidth

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1711.50	11.67	V	0.9	8.2	19.02	30.0	-11.0	
1711.50	15.57	H	0.9	8.2	22.92	30.0	-7.1	
Mid Ch								
1732.50	13.02	V	0.9	8.2	20.29	30.0	-9.7	
1732.50	16.35	H	0.9	8.2	23.62	30.0	-6.4	
High Ch								
1753.50	12.65	V	0.9	8.1	19.84	30.0	-10.2	
1753.50	15.83	H	0.9	8.1	23.02	30.0	-7.0	

5MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/20/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 4 Fundamentals, 5MHz Bandwidth

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1712.50	12.02	V	0.9	8.2	19.36	30.0	-10.6	
1712.50	15.88	H	0.9	8.2	23.22	30.0	-6.8	
Mid Ch								
1732.50	13.38	V	0.9	8.2	20.65	30.0	-9.3	
1732.50	16.12	H	0.9	8.2	23.39	30.0	-6.6	
High Ch								
1752.50	13.77	V	0.9	8.1	20.97	30.0	-9.0	
1752.50	16.48	H	0.9	8.1	23.68	30.0	-6.3	

5MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/20/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 4 Fundamentals, 5MHz Bandwidth

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1712.50	10.75	V	0.9	8.2	18.09	30.0	-11.9	
1712.50	15.65	H	0.9	8.2	22.99	30.0	-7.0	
Mid Ch								
1732.50	12.75	V	0.9	8.2	20.02	30.0	-10.0	
1732.50	15.75	H	0.9	8.2	23.02	30.0	-7.0	
High Ch								
1752.50	12.55	V	0.9	8.1	19.75	30.0	-10.3	
1752.50	16.12	H	0.9	8.1	23.32	30.0	-6.7	

10MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/20/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 4 Fundamentals, 10MHz Bandwidth

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1715.00	11.96	V	0.9	8.2	19.23	30.0	-10.8	
1715.00	16.28	H	0.9	8.2	23.55	30.0	-6.4	
Mid Ch								
1732.50	13.56	V	0.9	8.2	20.83	30.0	-9.2	
1732.50	16.90	H	0.9	8.2	24.17	30.0	-5.8	
High Ch								
1750.00	13.85	V	0.9	8.1	21.04	30.0	-9.0	
1750.00	16.72	H	0.9	8.1	23.91	30.0	-6.1	

10MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/20/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 4 Fundamentals, 10MHz Bandwidth

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1715.00	11.78	V	0.9	8.2	19.05	30.0	-10.9	
1715.00	15.85	H	0.9	8.2	23.12	30.0	-6.9	
Mid Ch								
1732.50	13.13	V	0.9	8.2	20.40	30.0	-9.6	
1732.50	16.25	H	0.9	8.2	23.52	30.0	-6.5	
High Ch								
1750.00	12.52	V	0.9	8.1	19.71	30.0	-10.3	
1750.00	16.25	H	0.9	8.1	23.44	30.0	-6.6	

15MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/20/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 4 Fundamentals, 15MHz Bandwidth

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1717.50	11.91	V	0.9	8.2	19.26	30.0	-10.7	
1717.50	16.18	H	0.9	8.2	23.53	30.0	-6.5	
Mid Ch								
1732.50	13.73	V	0.9	8.2	21.00	30.0	-9.0	
1732.50	16.52	H	0.9	8.2	23.79	30.0	-6.2	
High Ch								
1747.50	14.14	V	0.9	8.1	21.33	30.0	-8.7	
1747.50	16.73	H	0.9	8.1	23.92	30.0	-6.1	

15MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/20/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 4 Fundamentals, 15MHz Bandwidth

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1717.50	11.36	V	0.9	8.2	18.71	30.0	-11.3	
1717.50	15.83	H	0.9	8.2	23.18	30.0	-6.8	
Mid Ch								
1732.50	13.25	V	0.9	8.2	20.52	30.0	-9.5	
1732.50	16.05	H	0.9	8.2	23.32	30.0	-6.7	
High Ch								
1747.50	13.78	V	0.9	8.1	20.47	30.0	-9.5	
1747.50	16.24	H	0.9	8.1	23.43	30.0	-6.6	

20MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/20/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 4 Fundamentals, 20MHz Bandwidth

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1720.00	12.75	V	0.9	8.2	20.09	30.0	-9.9	
1720.00	16.63	H	0.9	8.2	23.97	30.0	-6.0	
Mid Ch								
1732.50	13.67	V	0.9	8.2	20.94	30.0	-9.1	
1732.50	16.57	H	0.9	8.2	23.84	30.0	-6.2	
High Ch								
1745.00	13.70	V	0.9	8.1	20.40	30.0	-9.6	
1745.00	16.60	H	0.9	8.1	23.80	30.0	-6.2	

20MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 16I22653
Date: 1/20/2016
Test Engineer: Lieu Nguyen
Configuration: EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 4 Fundamentals, 20MHz Bandwidth

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1720.00	12.58	V	0.9	8.2	19.92	30.0	-10.1	
1720.00	16.22	H	0.9	8.2	23.56	30.0	-6.4	
Mid Ch								
1732.50	12.84	V	0.9	8.2	20.11	30.0	-9.9	
1732.50	16.23	H	0.9	8.2	23.50	30.0	-6.5	
High Ch								
1745.00	12.78	V	0.9	8.1	19.98	30.0	-10.0	
1745.00	15.96	H	0.9	8.1	23.16	30.0	-6.8	

LTE Band 13

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	mW
5	QPSK	1/0	779.5	21.31	135.21
		1/0	782	21.86	153.46
		1/0	784.5	21.43	139.00
	16QAM	1/0	779.5	20.77	119.40
		1/0	782	21.24	133.05
		1/0	784.5	21.10	128.82
10	QPSK				
		1/0	782.00	22.04	159.96
	16QAM				
		1/0	782.00	21.49	140.93

5MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/21/2016
Test Engineer:	Lieu Nguyen
Configuration:	EUT Only
Location:	Chamber C
Mode:	LTE_QPSK Band 13 Fundamentals, 5MHz Bandwidth

Test Equipment:
Receiving: Dipole T185, and Chamber C SMA Cables
Substitution: Horn T416 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
779.50	14.77	V	0.9	0.0	13.87	34.8	-20.9	
779.50	22.21	H	0.9	0.0	21.31	34.8	-13.5	
Mid Ch								
782.00	15.24	V	0.9	0.0	14.34	34.8	-20.4	
782.00	22.76	H	0.9	0.0	21.86	34.8	-12.9	
High Ch								
784.50	14.53	V	0.9	0.0	13.63	34.8	-21.1	
784.50	22.33	H	0.9	0.0	21.43	34.8	-13.3	

5MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/21/2016
Test Engineer:	Lieu Nguyen
Configuration:	EUT Only
Location:	Chamber C
Mode:	LTE_16QAM Band 13 Fundamentals, 5MHz Bandwidth

Test Equipment:
Receiving: Dipole T185, and Chamber C SMA Cables
Substitution: Horn T416 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
779.50	14.50	V	0.9	0.0	13.60	34.8	-21.2	
779.50	21.67	H	0.9	0.0	20.77	34.8	-14.0	
Mid Ch								
782.00	14.67	V	0.9	0.0	13.77	34.8	-21.0	
782.00	22.14	H	0.9	0.0	21.24	34.8	-13.5	
High Ch								
784.50	14.03	V	0.9	0.0	13.13	34.8	-21.6	
784.50	22.00	H	0.9	0.0	21.10	34.8	-13.7	

10MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/21/2016
Test Engineer:	Lieu Nguyen
Configuration:	EUT Only
Location:	Chamber C
Mode:	LTE_QPSK Band 13 Fundamentals, 10MHz Bandwidth

Test Equipment:
Receiving: Dipole T185, and Chamber C SMA Cables
Substitution: Horn T416 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Mid Ch								
782.00	15.00	V	0.9	0.0	14.10	34.8	-20.7	
782.00	22.94	H	0.9	0.0	22.04	34.8	-12.7	

10MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG Electronics
Project #:	16I22653
Date:	1/21/2016
Test Engineer:	Lieu Nguyen
Configuration:	EUT Only
Location:	Chamber C
Mode:	LTE_16QAM Band 13 Fundamentals, 10MHz Bandwidth

Test Equipment:
Receiving: Dipole T185, and Chamber C SMA Cables
Substitution: Horn T416 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Mid Ch								
782.00	14.54	V	0.9	0.0	13.64	34.8	-21.1	
782.00	22.39	H	0.9	0.0	21.49	34.8	-13.3	

9.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

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

LIMIT

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.

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.

9.2.1. SPURIOUS EMISSION TEST DATA

CDMA

BC0 1xRTT

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/23/2016
Test Engineer: Lieu Nguyen
Configuration: EUT withAC Adapter (Z Position)
Location: Chamber C
Mode: CDMA 1xRTT BC0 Harmonics

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7									
1649.40	-26.5	V	3.0	37.4	1.0	-82.9	-13.0	-69.9	
2474.10	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3298.80	-20.5	V	3.0	35.8	1.0	-55.3	-13.0	-42.3	
1649.40	-28.2	H	3.0	37.4	1.0	-84.6	-13.0	-71.6	
2474.10	-20.4	H	3.0	36.4	1.0	-55.8	-13.0	-42.8	
3298.80	-21.0	H	3.0	35.8	1.0	-55.8	-13.0	-42.8	
Mid Ch, 836.52									
1673.04	-25.2	V	3.0	37.3	1.0	-81.6	-13.0	-68.6	
2509.56	-23.4	V	3.0	36.4	1.0	-58.8	-13.0	-45.8	
3346.08	-20.6	V	3.0	35.8	1.0	-55.4	-13.0	-42.4	
1673.04	-27.3	H	3.0	37.3	1.0	-83.6	-13.0	-70.6	
2509.56	-21.1	H	3.0	36.4	1.0	-56.5	-13.0	-43.5	
3346.08	-21.5	H	3.0	35.8	1.0	-56.3	-13.0	-43.3	
High Ch, 848.31									
1696.62	-25.8	V	3.0	37.3	1.0	-82.1	-13.0	-69.1	
2544.93	-23.8	V	3.0	36.3	1.0	-59.1	-13.0	-46.1	
3393.24	-21.2	V	3.0	35.7	1.0	-55.9	-13.0	-42.9	
1696.62	-27.0	H	3.0	37.3	1.0	-83.3	-13.0	-70.3	
2544.93	-21.3	H	3.0	36.3	1.0	-56.6	-13.0	-43.6	
3393.24	-21.2	H	3.0	35.7	1.0	-55.9	-13.0	-42.9	

BC0 EVDO Rel.0

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1.22.2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter
Location: Chamber C
Mode: CDMA EVDO BC0 Harmonics

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7									
1649.40	-21.9	V	3.0	37.4	1.0	-58.3	-13.0	-45.3	
2474.10	-20.3	V	3.0	36.4	1.0	-55.7	-13.0	-42.7	
3298.80	-18.5	V	3.0	35.8	1.0	-53.3	-13.0	-40.3	
1649.40	-20.9	H	3.0	37.4	1.0	-57.3	-13.0	-44.3	
2474.10	-17.7	H	3.0	36.4	1.0	-53.1	-13.0	-40.1	
3298.80	-16.1	H	3.0	35.8	1.0	-50.9	-13.0	-37.9	
Mid Ch, 836.52									
1673.04	-21.4	V	3.0	37.3	1.0	-57.7	-13.0	-44.7	
2509.56	-20.1	V	3.0	36.4	1.0	-55.5	-13.0	-42.5	
3346.08	-17.3	V	3.0	35.8	1.0	-52.1	-13.0	-39.1	
1673.04	-21.3	H	3.0	37.3	1.0	-57.6	-13.0	-44.6	
2509.56	-17.1	H	3.0	36.4	1.0	-52.5	-13.0	-39.5	
3346.08	-16.9	H	3.0	35.8	1.0	-50.8	-13.0	-37.8	
High Ch, 848.31									
1696.62	-20.7	V	3.0	37.3	1.0	-57.0	-13.0	-44.0	
2544.93	-19.2	V	3.0	36.3	1.0	-54.5	-13.0	-41.5	
3393.24	-17.4	V	3.0	35.7	1.0	-52.1	-13.0	-39.1	
1696.62	-20.5	H	3.0	37.3	1.0	-56.8	-13.0	-43.8	
2544.93	-18.4	H	3.0	36.3	1.0	-53.7	-13.0	-40.7	
3393.24	-16.5	H	3.0	35.7	1.0	-51.2	-13.0	-38.2	

BC1 1xRTT

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/23/2016
Test Engineer: Lieu Nguyen
Configuration: EUTwith AC Adapter
Location: Chamber C
Mode: CDMA 1xRTT BC1 Harmonics

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.25									
3702.50	-18.0	V	3.0	35.9	1.0	-52.9	-13.0	-39.9	
5553.75	-13.5	V	3.0	35.5	1.0	-48.0	-13.0	-35.0	
7405.00	-12.0	V	3.0	35.7	1.0	-46.7	-13.0	-33.7	
3702.50	-18.8	H	3.0	35.9	1.0	-53.6	-13.0	-40.6	
5553.75	-12.7	H	3.0	35.5	1.0	-47.1	-13.0	-34.1	
7405.00	-11.3	H	3.0	35.7	1.0	-46.1	-13.0	-33.1	
Mid Ch, 1880									
3760.00	-17.3	V	3.0	35.8	1.0	-52.1	-13.0	-39.1	
5640.00	-14.5	V	3.0	35.5	1.0	-49.0	-13.0	-36.0	
7520.00	-11.4	V	3.0	35.7	1.0	-46.1	-13.0	-33.1	
3760.00	-18.7	H	3.0	35.8	1.0	-53.5	-13.0	-40.5	
5640.00	-13.7	H	3.0	35.5	1.0	-48.1	-13.0	-35.1	
7520.00	-11.1	H	3.0	35.7	1.0	-45.9	-13.0	-32.9	
High Ch, 1908.75									
3026.50	-18.0	V	3.0	35.8	1.0	-52.7	-13.0	-39.7	
5528.25	-15.1	V	3.0	35.5	1.0	-49.6	-13.0	-36.6	
7636.00	-13.7	V	3.0	35.8	1.0	-48.5	-13.0	-35.5	
3819.62	-19.2	H	3.0	35.8	1.0	-54.0	-13.0	-41.0	
5726.30	-13.8	H	3.0	35.5	1.0	-48.3	-13.0	-35.3	
7638.00	-11.9	H	3.0	35.8	1.0	-46.6	-13.0	-33.6	

BC1 EVDO Rel.0

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/22/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X Position)
Location: Chamber C
Mode: CDMA EVDO BC1 Harmonics

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.25									
3702.50	-14.5	V	3.0	35.9	1.0	-46.3	-13.0	-33.3	
5553.75	-7.5	V	3.0	35.5	1.0	-42.0	-13.0	-29.0	
7405.00	-3.2	V	3.0	35.7	1.0	-37.9	-13.0	-24.9	
3702.50	-8.3	H	3.0	35.9	1.0	-43.1	-13.0	-30.1	
5553.75	-5.2	H	3.0	35.5	1.0	-39.6	-13.0	-26.6	
7405.00	-1.3	H	3.0	35.7	1.0	-36.0	-13.0	-23.0	
Mid Ch, 1880									
3760.00	-14.2	V	3.0	35.8	1.0	-46.0	-13.0	-33.0	
5640.00	-7.4	V	3.0	35.5	1.0	-41.9	-13.0	-28.9	
7520.00	-3.6	V	3.0	35.7	1.0	-38.4	-13.0	-25.4	
3760.00	-8.3	H	3.0	35.8	1.0	-43.1	-13.0	-30.1	
5640.00	-5.8	H	3.0	35.5	1.0	-40.3	-13.0	-27.3	
7520.00	-2.2	H	3.0	35.7	1.0	-36.9	-13.0	-23.9	
High Ch, 1908.75									
3817.50	-10.9	V	3.0	35.8	1.0	-45.7	-13.0	-32.7	
5726.25	-6.0	V	3.0	35.5	1.0	-40.5	-13.0	-27.5	
7635.00	-3.4	V	3.0	35.8	1.0	-38.1	-13.0	-25.1	
3817.50	-8.3	H	3.0	35.8	1.0	-43.0	-13.0	-30.0	
5726.25	-5.1	H	3.0	35.5	1.0	-39.6	-13.0	-26.6	
7635.00	-1.5	H	3.0	35.8	1.0	-36.3	-13.0	-23.3	

LTE Band 2

1.4MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Eletronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X- Position)
Location: Chamber C
Mode: LTE_QPSK Band 2 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.7									
3701.40	-18.9	V	3.0	35.9	1.0	-53.8	-13.0	-40.8	
5552.10	-16.7	V	3.0	35.5	1.0	-51.2	-13.0	-38.2	
7402.80	-14.0	V	3.0	35.7	1.0	-48.7	-13.0	-35.7	
3701.40	-19.6	H	3.0	35.9	1.0	-54.4	-13.0	-41.4	
5552.10	-14.0	H	3.0	35.5	1.0	-48.4	-13.0	-35.4	
7402.80	-14.0	H	3.0	35.7	1.0	-48.7	-13.0	-35.7	
Mid Ch, 1880									
3760.00	-19.2	V	3.0	35.8	1.0	-54.0	-13.0	-41.0	
5640.00	-15.5	V	3.0	35.5	1.0	-50.0	-13.0	-37.0	
7520.00	-14.9	V	3.0	35.7	1.0	-49.6	-13.0	-36.6	
3760.00	-19.1	H	3.0	35.8	1.0	-53.9	-13.0	-40.9	
5640.00	-16.4	H	3.0	35.5	1.0	-50.8	-13.0	-37.8	
7520.00	-13.5	H	3.0	35.7	1.0	-48.3	-13.0	-35.3	
High Ch, 1909.3									
3818.60	-17.8	V	3.0	35.8	1.0	-52.6	-13.0	-39.6	
5727.90	-15.6	V	3.0	35.5	1.0	-50.1	-13.0	-37.1	
7637.20	-14.4	V	3.0	35.8	1.0	-49.1	-13.0	-36.1	
3818.60	-17.4	H	3.0	35.8	1.0	-52.2	-13.0	-39.2	
5727.90	-15.0	H	3.0	35.5	1.0	-49.5	-13.0	-36.5	
7637.20	-12.9	H	3.0	35.8	1.0	-47.7	-13.0	-34.7	

1.4MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X- Position)
Location: Chamber C
Mode: LTE_16QAM Band 2 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.7									
3701.40	-19.3	V	3.0	35.9	1.0	-54.2	-13.0	-41.2	
5552.10	-15.9	V	3.0	35.5	1.0	-50.4	-13.0	-37.4	
7402.80	-14.7	V	3.0	35.7	1.0	-49.4	-13.0	-36.4	
3701.40	-18.5	H	3.0	35.9	1.0	-53.3	-13.0	-40.3	
5552.10	-12.8	H	3.0	35.5	1.0	-47.3	-13.0	-34.3	
7402.80	-14.0	H	3.0	35.7	1.0	-48.7	-13.0	-35.7	
Mid Ch, 1880									
3760.00	-19.0	V	3.0	35.8	1.0	-53.8	-13.0	-40.8	
5640.00	-16.4	V	3.0	35.5	1.0	-50.9	-13.0	-37.9	
7520.00	-14.8	V	3.0	35.7	1.0	-49.5	-13.0	-36.5	
3760.00	-18.7	H	3.0	35.8	1.0	-53.5	-13.0	-40.5	
5640.00	-13.5	H	3.0	35.5	1.0	-48.0	-13.0	-35.0	
7520.00	-13.8	H	3.0	35.7	1.0	-48.5	-13.0	-35.5	
High Ch, 1909.3									
3818.60	-19.3	V	3.0	35.8	1.0	-54.1	-13.0	-41.1	
5727.90	-15.7	V	3.0	35.5	1.0	-50.2	-13.0	-37.2	
7637.20	-14.7	V	3.0	35.8	1.0	-49.4	-13.0	-36.4	
3818.60	-18.8	H	3.0	35.8	1.0	-53.5	-13.0	-40.5	
5727.90	-15.2	H	3.0	35.5	1.0	-49.7	-13.0	-36.7	
7637.20	-13.7	H	3.0	35.8	1.0	-48.4	-13.0	-35.4	

3MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_QPSK Band 2 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.5									
3703.00	-16.9	V	3.0	35.9	1.0	-51.8	-13.0	-38.8	
5554.50	-16.0	V	3.0	35.5	1.0	-50.4	-13.0	-37.4	
7406.00	-10.3	V	3.0	35.7	1.0	-45.0	-13.0	-32.0	
3703.00	-16.5	H	3.0	35.9	1.0	-51.4	-13.0	-38.4	
5554.50	-14.5	H	3.0	35.5	1.0	-49.0	-13.0	-36.0	
7406.00	-9.8	H	3.0	35.7	1.0	-44.5	-13.0	-31.5	
Mid Ch, 1880									
3760.00	-18.0	V	3.0	35.8	1.0	-52.8	-13.0	-39.8	
5640.00	-16.7	V	3.0	35.5	1.0	-51.2	-13.0	-38.2	
7520.00	-9.6	V	3.0	35.7	1.0	-44.3	-13.0	-31.3	
3760.00	-16.6	H	3.0	35.8	1.0	-51.4	-13.0	-38.4	
5640.00	-17.0	H	3.0	35.5	1.0	-51.5	-13.0	-38.5	
7520.00	-8.2	H	3.0	35.7	1.0	-43.0	-13.0	-30.0	
High Ch, 1908.5									
3817.00	-17.2	V	3.0	35.8	1.0	-52.0	-13.0	-39.0	
5725.50	-16.9	V	3.0	35.5	1.0	-51.4	-13.0	-38.4	
7634.00	-10.1	V	3.0	35.8	1.0	-44.8	-13.0	-31.8	
3817.00	-17.4	H	3.0	35.8	1.0	-52.2	-13.0	-39.2	
5725.50	-11.7	H	3.0	35.5	1.0	-46.2	-13.0	-33.2	
7634.00	-12.9	H	3.0	35.8	1.0	-47.6	-13.0	-34.6	

3MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_16QAM Band 2 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.5									
3703.00	-17.4	V	3.0	35.9	1.0	-52.2	-13.0	-39.2	
5554.50	-16.5	V	3.0	35.5	1.0	-51.0	-13.0	-38.0	
7406.00	-10.3	V	3.0	35.7	1.0	-45.1	-13.0	-32.1	
3703.00	-16.3	H	3.0	35.9	1.0	-51.1	-13.0	-38.1	
5554.50	-15.2	H	3.0	35.5	1.0	-49.7	-13.0	-36.7	
7406.00	-9.3	H	3.0	35.7	1.0	-44.0	-13.0	-31.0	
Mid Ch, 1880									
3760.00	-18.2	V	3.0	35.8	1.0	-53.0	-13.0	-40.0	
5640.00	-17.5	V	3.0	35.5	1.0	-51.9	-13.0	-38.9	
7520.00	-10.3	V	3.0	35.7	1.0	-45.0	-13.0	-32.0	
3760.00	-17.1	H	3.0	35.8	1.0	-51.9	-13.0	-38.9	
5640.00	-17.3	H	3.0	35.5	1.0	-51.8	-13.0	-38.8	
7520.00	-8.0	H	3.0	35.7	1.0	-42.7	-13.0	-29.7	
High Ch, 1908.5									
3817.00	-16.9	V	3.0	35.8	1.0	-51.6	-13.0	-38.6	
5725.50	-16.7	V	3.0	35.5	1.0	-51.2	-13.0	-38.2	
7634.00	-9.7	V	3.0	35.8	1.0	-44.5	-13.0	-31.5	
3817.00	-17.3	H	3.0	35.8	1.0	-52.1	-13.0	-39.1	
5725.50	-11.4	H	3.0	35.5	1.0	-45.9	-13.0	-32.9	
7634.00	-13.2	H	3.0	35.8	1.0	-47.9	-13.0	-34.9	

5MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_QPSK Band 2 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1852.5									
3705.00	-18.3	V	3.0	35.9	1.0	-53.2	-13.0	-40.2	
5557.50	-16.9	V	3.0	35.5	1.0	-51.4	-13.0	-38.4	
7410.00	-9.7	V	3.0	35.7	1.0	-44.5	-13.0	-31.5	
3705.00	-15.5	H	3.0	35.9	1.0	-50.4	-13.0	-37.4	
5557.50	-17.5	H	3.0	35.5	1.0	-52.0	-13.0	-39.0	
7410.00	-13.4	H	3.0	35.7	1.0	-48.1	-13.0	-35.1	
Mid Ch, 1880									
3760.00	-18.0	V	3.0	35.8	1.0	-52.8	-13.0	-39.8	
5640.00	-17.2	V	3.0	35.5	1.0	-51.7	-13.0	-38.7	
7520.00	-9.2	V	3.0	35.7	1.0	-44.0	-13.0	-31.0	
3760.00	-15.4	H	3.0	35.8	1.0	-50.2	-13.0	-37.2	
5640.00	-12.1	H	3.0	35.5	1.0	-46.6	-13.0	-33.6	
7520.00	-8.6	H	3.0	35.7	1.0	-43.4	-13.0	-30.4	
High Ch, 1907.5									
3815.00	-16.8	V	3.0	35.8	1.0	-51.6	-13.0	-38.6	
5722.50	-15.1	V	3.0	35.5	1.0	-49.6	-13.0	-36.6	
7630.00	-8.1	V	3.0	35.8	1.0	-42.9	-13.0	-29.9	
3815.00	-16.4	H	3.0	35.8	1.0	-51.2	-13.0	-38.2	
5722.50	-12.3	H	3.0	35.5	1.0	-46.7	-13.0	-33.7	
7630.00	-8.5	H	3.0	35.8	1.0	-43.3	-13.0	-30.3	

5MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter
Location: Chamber C
Mode: LTE_16QAM Band 2 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1852.5									
3705.00	-19.4	V	3.0	35.9	1.0	-54.2	-13.0	-41.2	
5557.50	-17.3	V	3.0	35.5	1.0	-51.8	-13.0	-38.8	
7410.00	-10.0	V	3.0	35.7	1.0	-44.8	-13.0	-31.8	
3705.00	-15.8	H	3.0	35.9	1.0	-50.6	-13.0	-37.6	
5557.50	-19.0	H	3.0	35.5	1.0	-53.5	-13.0	-40.5	
7410.00	-14.3	H	3.0	35.7	1.0	-49.0	-13.0	-36.0	
Mid Ch, 1880									
3760.00	-18.1	V	3.0	35.8	1.0	-52.9	-13.0	-39.9	
5640.00	-18.6	V	3.0	35.5	1.0	-53.1	-13.0	-40.1	
7520.00	-9.4	V	3.0	35.7	1.0	-44.2	-13.0	-31.2	
3760.00	-15.6	H	3.0	35.8	1.0	-50.4	-13.0	-37.4	
5640.00	-12.4	H	3.0	35.5	1.0	-46.9	-13.0	-33.9	
7520.00	-8.9	H	3.0	35.7	1.0	-43.6	-13.0	-30.6	
High Ch, 1907.5									
3815.00	-16.9	V	3.0	35.8	1.0	-51.7	-13.0	-38.7	
5722.50	-15.1	V	3.0	35.5	1.0	-49.6	-13.0	-36.6	
7630.00	-8.3	V	3.0	35.8	1.0	-43.1	-13.0	-30.1	
3815.00	-16.5	H	3.0	35.8	1.0	-51.3	-13.0	-38.3	
5722.50	-12.6	H	3.0	35.5	1.0	-47.1	-13.0	-34.1	
7630.00	-8.8	H	3.0	35.8	1.0	-43.6	-13.0	-30.6	

10MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter(X-Position)
Location: Chamber C
Mode: LTE_QPSK Band 2 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1855									
3710.00	-17.1	V	3.0	35.9	1.0	-51.9	-13.0	-38.9	
5565.00	-15.0	V	3.0	35.5	1.0	-49.5	-13.0	-36.5	
7420.00	-11.0	V	3.0	35.7	1.0	-45.7	-13.0	-32.7	
3710.00	-16.7	H	3.0	35.9	1.0	-51.6	-13.0	-38.6	
5565.00	-13.2	H	3.0	35.5	1.0	-47.7	-13.0	-34.7	
7420.00	-12.6	H	3.0	35.7	1.0	-47.4	-13.0	-34.4	
Mid Ch, 1880									
3760.00	-17.0	V	3.0	35.8	1.0	-51.9	-13.0	-38.9	
5640.00	-14.9	V	3.0	35.5	1.0	-49.4	-13.0	-36.4	
7520.00	-12.6	V	3.0	35.7	1.0	-47.3	-13.0	-34.3	
3760.00	-15.9	H	3.0	35.8	1.0	-50.7	-13.0	-37.7	
5640.00	-14.3	H	3.0	35.5	1.0	-48.8	-13.0	-35.8	
7520.00	-11.7	H	3.0	35.7	1.0	-46.4	-13.0	-33.4	
High Ch, 1905									
3810.00	-16.6	V	3.0	35.8	1.0	-51.4	-13.0	-38.4	
5715.00	-14.8	V	3.0	35.5	1.0	-49.3	-13.0	-36.3	
7620.00	-12.9	V	3.0	35.8	1.0	-47.7	-13.0	-34.7	
3810.00	-16.1	H	3.0	35.8	1.0	-50.9	-13.0	-37.9	
5715.00	-13.9	H	3.0	35.5	1.0	-48.4	-13.0	-35.4	
7620.00	-11.9	H	3.0	35.8	1.0	-46.6	-13.0	-33.6	

10MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter(X-Position)
Location: Chamber C
Mode: LTE_16QAM Band 2 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1855									
3710.00	-17.6	V	3.0	35.9	1.0	-52.4	-13.0	-39.4	
5565.00	-15.6	V	3.0	35.5	1.0	-50.0	-13.0	-37.0	
7420.00	-11.3	V	3.0	35.7	1.0	-46.0	-13.0	-33.0	
3710.00	-16.7	H	3.0	35.9	1.0	-51.5	-13.0	-38.5	
5565.00	-13.5	H	3.0	35.5	1.0	-48.0	-13.0	-35.0	
7420.00	-13.6	H	3.0	35.7	1.0	-48.4	-13.0	-35.4	
Mid Ch, 1880									
3760.00	-17.1	V	3.0	35.8	1.0	-52.0	-13.0	-39.0	
5640.00	-15.3	V	3.0	35.5	1.0	-49.7	-13.0	-36.7	
7520.00	-12.9	V	3.0	35.7	1.0	-47.7	-13.0	-34.7	
3760.00	-15.7	H	3.0	35.8	1.0	-50.5	-13.0	-37.5	
5640.00	-14.5	H	3.0	35.5	1.0	-49.0	-13.0	-36.0	
7520.00	-12.1	H	3.0	35.7	1.0	-46.8	-13.0	-33.8	
High Ch, 1905									
3810.00	-16.0	V	3.0	35.8	1.0	-50.8	-13.0	-37.8	
5715.00	-14.9	V	3.0	35.5	1.0	-49.4	-13.0	-36.4	
7620.00	-12.7	V	3.0	35.8	1.0	-47.5	-13.0	-34.5	
3810.00	-16.4	H	3.0	35.8	1.0	-51.1	-13.0	-38.1	
5715.00	-14.1	H	3.0	35.5	1.0	-48.6	-13.0	-35.6	
7620.00	-12.4	H	3.0	35.8	1.0	-47.1	-13.0	-34.1	

15MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_QPSK Band 2 Harmonics, 15MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1857.5									
3715.00	-17.2	V	3.0	35.8	1.0	-52.0	-13.0	-39.0	
5572.50	-13.9	V	3.0	35.5	1.0	-48.4	-13.0	-35.4	
7430.00	-11.0	V	3.0	35.7	1.0	-45.8	-13.0	-32.8	
3715.00	-16.5	H	3.0	35.8	1.0	-51.4	-13.0	-38.4	
5572.50	-13.7	H	3.0	35.5	1.0	-48.1	-13.0	-35.1	
7430.00	-12.0	H	3.0	35.7	1.0	-46.7	-13.0	-33.7	
Mid Ch, 1880									
3760.00	-16.2	V	3.0	35.8	1.0	-51.1	-13.0	-38.1	
5640.00	-13.9	V	3.0	35.5	1.0	-48.4	-13.0	-35.4	
7520.00	-12.2	V	3.0	35.7	1.0	-46.9	-13.0	-33.9	
3760.00	-16.0	H	3.0	35.8	1.0	-50.9	-13.0	-37.9	
5640.00	-14.3	H	3.0	35.5	1.0	-48.8	-13.0	-35.8	
7520.00	-11.9	H	3.0	35.7	1.0	-46.6	-13.0	-33.6	
High Ch, 1902.5									
3805.00	-16.1	V	3.0	35.8	1.0	-50.8	-13.0	-37.8	
5707.50	-14.6	V	3.0	35.5	1.0	-49.0	-13.0	-36.0	
7610.00	-12.5	V	3.0	35.8	1.0	-47.2	-13.0	-34.2	
3805.00	-16.5	H	3.0	35.8	1.0	-51.2	-13.0	-38.2	
5707.50	-14.2	H	3.0	35.5	1.0	-48.7	-13.0	-35.7	
7610.00	-11.5	H	3.0	35.8	1.0	-46.3	-13.0	-33.3	

15MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_16QAM Band 2 Harmonics, 15MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1857.5									
3715.00	-17.6	V	3.0	35.8	1.0	-52.4	-13.0	-39.4	
5572.50	-14.2	V	3.0	35.5	1.0	-48.7	-13.0	-35.7	
7430.00	-11.8	V	3.0	35.7	1.0	-46.5	-13.0	-33.5	
3715.00	-16.5	H	3.0	35.8	1.0	-51.4	-13.0	-38.4	
5572.50	-13.6	H	3.0	35.5	1.0	-48.1	-13.0	-35.1	
7430.00	-12.4	H	3.0	35.7	1.0	-47.1	-13.0	-34.1	
Mid Ch, 1880									
3760.00	-16.6	V	3.0	35.8	1.0	-51.5	-13.0	-38.5	
5640.00	-14.5	V	3.0	35.5	1.0	-48.9	-13.0	-35.9	
7520.00	-12.9	V	3.0	35.7	1.0	-47.6	-13.0	-34.6	
3760.00	-16.0	H	3.0	35.8	1.0	-50.8	-13.0	-37.8	
5640.00	-14.4	H	3.0	35.5	1.0	-48.9	-13.0	-35.9	
7520.00	-12.2	H	3.0	35.7	1.0	-47.0	-13.0	-34.0	
High Ch, 1902.5									
3805.00	-16.4	V	3.0	35.8	1.0	-51.2	-13.0	-38.2	
5707.50	-14.7	V	3.0	35.5	1.0	-49.2	-13.0	-36.2	
7610.00	-12.8	V	3.0	35.8	1.0	-47.6	-13.0	-34.6	
3805.00	-16.3	H	3.0	35.8	1.0	-51.0	-13.0	-38.0	
5707.50	-14.3	H	3.0	35.5	1.0	-48.8	-13.0	-35.8	
7610.00	-11.9	H	3.0	35.8	1.0	-46.7	-13.0	-33.7	

20MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_16QAM Band 2 Harmonics, 20MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1860									
3720.00	-17.8	V	3.0	35.8	1.0	-52.6	-13.0	-39.6	
5580.00	-14.3	V	3.0	35.5	1.0	-48.8	-13.0	-35.8	
7440.00	-10.8	V	3.0	35.7	1.0	-45.5	-13.0	-32.5	
3720.00	-16.7	H	3.0	35.8	1.0	-51.6	-13.0	-38.6	
5580.00	-12.6	H	3.0	35.5	1.0	-47.0	-13.0	-34.0	
7440.00	-12.0	H	3.0	35.7	1.0	-46.8	-13.0	-33.8	
Mid Ch, 1880									
3760.00	-17.0	V	3.0	35.8	1.0	-51.8	-13.0	-38.8	
5640.00	-14.8	V	3.0	35.5	1.0	-49.3	-13.0	-36.3	
7520.00	-12.9	V	3.0	35.7	1.0	-47.6	-13.0	-34.6	
3760.00	-16.1	H	3.0	35.8	1.0	-50.9	-13.0	-37.9	
5640.00	-14.3	H	3.0	35.5	1.0	-48.8	-13.0	-35.8	
7520.00	-12.6	H	3.0	35.7	1.0	-47.4	-13.0	-34.4	
High Ch, 1900									
3800.00	-15.2	V	3.0	35.8	1.0	-50.0	-13.0	-37.0	
5700.00	-15.4	V	3.0	35.5	1.0	-49.9	-13.0	-36.9	
7600.00	-12.9	V	3.0	35.8	1.0	-47.6	-13.0	-34.6	
3800.00	-16.5	H	3.0	35.8	1.0	-51.2	-13.0	-38.2	
5700.00	-14.3	H	3.0	35.5	1.0	-48.8	-13.0	-35.8	
7600.00	-12.1	H	3.0	35.8	1.0	-46.8	-13.0	-33.8	

20MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_16QAM Band 2 Harmonics, 20MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1860									
3720.00	-17.8	V	3.0	35.8	1.0	-52.6	-13.0	-39.6	
5580.00	-14.3	V	3.0	35.5	1.0	-48.8	-13.0	-35.8	
7440.00	-10.8	V	3.0	35.7	1.0	-45.5	-13.0	-32.5	
3720.00	-16.7	H	3.0	35.8	1.0	-51.6	-13.0	-38.6	
5580.00	-12.6	H	3.0	35.5	1.0	-47.0	-13.0	-34.0	
7440.00	-12.0	H	3.0	35.7	1.0	-46.8	-13.0	-33.8	
Mid Ch, 1880									
3760.00	-17.0	V	3.0	35.8	1.0	-51.8	-13.0	-38.8	
5640.00	-14.8	V	3.0	35.5	1.0	-49.3	-13.0	-36.3	
7520.00	-12.9	V	3.0	35.7	1.0	-47.6	-13.0	-34.6	
3760.00	-16.1	H	3.0	35.8	1.0	-50.9	-13.0	-37.9	
5640.00	-14.3	H	3.0	35.5	1.0	-48.8	-13.0	-35.8	
7520.00	-12.6	H	3.0	35.7	1.0	-47.4	-13.0	-34.4	
High Ch, 1900									
3800.00	-15.2	V	3.0	35.8	1.0	-50.0	-13.0	-37.0	
5700.00	-15.4	V	3.0	35.5	1.0	-49.9	-13.0	-36.9	
7600.00	-12.9	V	3.0	35.8	1.0	-47.6	-13.0	-34.6	
3800.00	-16.5	H	3.0	35.8	1.0	-51.2	-13.0	-38.2	
5700.00	-14.3	H	3.0	35.5	1.0	-48.8	-13.0	-35.8	
7600.00	-12.1	H	3.0	35.8	1.0	-46.8	-13.0	-33.8	

LTE Band 4

1.4MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/22/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_QPSK Band 4 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1710.7									
3421.40	-14.9	V	3.0	36.1	1.0	-50.0	-13.0	-37.0	
5132.10	-11.5	V	3.0	35.4	1.0	-46.0	-13.0	-33.0	
6842.80	-11.7	V	3.0	35.7	1.0	-46.3	-13.0	-33.3	
3421.40	-14.5	H	3.0	36.1	1.0	-49.6	-13.0	-36.6	
5132.10	-11.9	H	3.0	35.4	1.0	-46.3	-13.0	-33.3	
6842.80	-11.2	H	3.0	35.7	1.0	-45.8	-13.0	-32.8	
Mid Ch, 1732.5									
3465.00	-12.9	V	3.0	36.0	1.0	-48.0	-13.0	-35.0	
5197.50	-13.3	V	3.0	35.4	1.0	-47.7	-13.0	-34.7	
6930.00	-12.4	V	3.0	35.7	1.0	-47.0	-13.0	-34.0	
3465.00	-13.1	H	3.0	36.0	1.0	-48.1	-13.0	-35.1	
5197.50	-12.2	H	3.0	35.4	1.0	-46.6	-13.0	-33.6	
6930.00	-12.0	H	3.0	35.7	1.0	-46.6	-13.0	-33.6	
High Ch, 1754.3									
3508.60	-13.0	V	3.0	36.0	1.0	-48.0	-13.0	-35.0	
5262.90	-12.7	V	3.0	35.4	1.0	-47.1	-13.0	-34.1	
7017.20	-11.9	V	3.0	35.7	1.0	-46.5	-13.0	-33.5	
3508.60	-13.4	H	3.0	36.0	1.0	-48.4	-13.0	-35.4	
5262.90	-11.5	H	3.0	35.4	1.0	-46.0	-13.0	-33.0	
7017.20	-10.9	H	3.0	35.7	1.0	-45.6	-13.0	-32.6	

1.4MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/22/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_16QAM Band 4 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1710.7									
3421.40	-15.6	V	3.0	36.1	1.0	-50.6	-13.0	-37.6	
5132.10	-11.5	V	3.0	35.4	1.0	-46.0	-13.0	-33.0	
6842.80	-11.9	V	3.0	35.7	1.0	-46.5	-13.0	-33.5	
3421.40	-17.5	H	3.0	36.1	1.0	-52.6	-13.0	-39.6	
5132.10	-13.4	H	3.0	35.4	1.0	-47.8	-13.0	-34.8	
6842.80	-11.7	H	3.0	35.7	1.0	-46.4	-13.0	-33.4	
Mid Ch, 1732.5									
3465.00	-15.4	V	3.0	36.0	1.0	-50.4	-13.0	-37.4	
5197.50	-11.5	V	3.0	35.4	1.0	-45.9	-13.0	-32.9	
6930.00	-11.9	V	3.0	35.7	1.0	-46.6	-13.0	-33.6	
3465.00	-17.6	H	3.0	36.0	1.0	-52.7	-13.0	-39.7	
5197.50	-13.0	H	3.0	35.4	1.0	-47.5	-13.0	-34.5	
6930.00	-11.4	H	3.0	35.7	1.0	-46.0	-13.0	-33.0	
High Ch, 1754.3									
3508.60	-14.9	V	3.0	36.0	1.0	-49.9	-13.0	-36.9	
5262.90	-11.7	V	3.0	35.4	1.0	-46.1	-13.0	-33.1	
7017.20	-12.1	V	3.0	35.7	1.0	-46.8	-13.0	-33.8	
3508.60	-16.8	H	3.0	36.0	1.0	-51.8	-13.0	-38.8	
5262.90	-12.3	H	3.0	35.4	1.0	-46.8	-13.0	-33.8	
7017.20	-10.7	H	3.0	35.7	1.0	-45.3	-13.0	-32.3	

3MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/22/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_QPSK Band 4 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1711.5									
3423.00	-15.1	V	3.0	36.1	1.0	-50.1	-13.0	-37.1	
5134.50	-11.9	V	3.0	35.4	1.0	-46.4	-13.0	-33.4	
6846.00	-9.0	V	3.0	35.7	1.0	-43.7	-13.0	-30.7	
3423.00	-16.1	H	3.0	36.1	1.0	-51.2	-13.0	-38.2	
5134.50	-12.0	H	3.0	35.4	1.0	-46.4	-13.0	-33.4	
6846.00	-9.4	H	3.0	35.7	1.0	-44.1	-13.0	-31.1	
Mid Ch, 1732.5									
3465.00	-14.9	V	3.0	36.0	1.0	-49.9	-13.0	-36.9	
5197.50	-12.0	V	3.0	35.4	1.0	-46.4	-13.0	-33.4	
6930.00	-9.0	V	3.0	35.7	1.0	-43.7	-13.0	-30.7	
3465.00	-15.1	H	3.0	36.0	1.0	-50.1	-13.0	-37.1	
5197.50	-11.7	H	3.0	35.4	1.0	-46.1	-13.0	-33.1	
6930.00	-9.3	H	3.0	35.7	1.0	-44.0	-13.0	-31.0	
High Ch, 1753.5									
3507.00	-15.6	V	3.0	36.0	1.0	-50.6	-13.0	-37.6	
5260.50	-12.6	V	3.0	35.4	1.0	-47.0	-13.0	-34.0	
7014.00	-9.0	V	3.0	35.7	1.0	-43.7	-13.0	-30.7	
3507.00	-16.8	H	3.0	36.0	1.0	-51.8	-13.0	-38.8	
5260.50	-10.7	H	3.0	35.4	1.0	-45.2	-13.0	-32.2	
7014.00	-9.0	H	3.0	35.7	1.0	-43.7	-13.0	-30.7	

3MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/22/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_16QAM Band 4 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1711.5									
3423.00	-15.8	V	3.0	36.1	1.0	-50.9	-13.0	-37.9	
5134.50	-12.7	V	3.0	35.4	1.0	-47.2	-13.0	-34.2	
6846.00	-10.1	V	3.0	35.7	1.0	-44.8	-13.0	-31.8	
3423.00	-17.3	H	3.0	36.1	1.0	-52.4	-13.0	-39.4	
5134.50	-13.1	H	3.0	35.4	1.0	-47.5	-13.0	-34.5	
6846.00	-10.0	H	3.0	35.7	1.0	-44.7	-13.0	-31.7	
Mid Ch, 1732.5									
3465.00	-15.4	V	3.0	36.0	1.0	-50.4	-13.0	-37.4	
5197.50	-12.6	V	3.0	35.4	1.0	-47.1	-13.0	-34.1	
6930.00	-9.7	V	3.0	35.7	1.0	-44.3	-13.0	-31.3	
3465.00	-15.5	H	3.0	36.0	1.0	-50.5	-13.0	-37.5	
5197.50	-12.2	H	3.0	35.4	1.0	-46.6	-13.0	-33.6	
6930.00	-9.5	H	3.0	35.7	1.0	-44.2	-13.0	-31.2	
High Ch, 1753.5									
3507.00	-15.8	V	3.0	36.0	1.0	-50.8	-13.0	-37.8	
5260.50	-12.8	V	3.0	35.4	1.0	-47.2	-13.0	-34.2	
7014.00	-9.5	V	3.0	35.7	1.0	-44.1	-13.0	-31.1	
3507.00	-16.9	H	3.0	36.0	1.0	-51.9	-13.0	-38.9	
5260.50	-11.0	H	3.0	35.4	1.0	-45.4	-13.0	-32.4	
7014.00	-9.2	H	3.0	35.7	1.0	-43.9	-13.0	-30.9	

5MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/22/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_QPSK Band 4 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.5									
3425.00	-15.8	V	3.0	36.1	1.0	-50.9	-13.0	-37.9	
5137.50	-11.7	V	3.0	35.4	1.0	-46.2	-13.0	-33.2	
6850.00	-10.9	V	3.0	35.7	1.0	-45.5	-13.0	-32.5	
3425.00	-15.0	H	3.0	36.1	1.0	-50.1	-13.0	-37.1	
5137.50	-11.2	H	3.0	35.4	1.0	-45.6	-13.0	-32.6	
6850.00	-9.3	H	3.0	35.7	1.0	-44.0	-13.0	-31.0	
Mid Ch, 1732.5									
3465.00	-15.0	V	3.0	36.0	1.0	-50.1	-13.0	-37.1	
5197.50	-12.3	V	3.0	35.4	1.0	-46.7	-13.0	-33.7	
6930.00	-9.6	V	3.0	35.7	1.0	-44.2	-13.0	-31.2	
3465.00	-15.1	H	3.0	36.0	1.0	-50.1	-13.0	-37.1	
5197.50	-11.0	H	3.0	35.4	1.0	-45.4	-13.0	-32.4	
6930.00	-8.3	H	3.0	35.7	1.0	-43.0	-13.0	-30.0	
High Ch, 1752.5									
3505.00	-15.2	V	3.0	36.0	1.0	-50.2	-13.0	-37.2	
5257.50	-11.9	V	3.0	35.4	1.0	-46.3	-13.0	-33.3	
7010.00	-8.6	V	3.0	35.7	1.0	-43.2	-13.0	-30.2	
3505.00	-15.9	H	3.0	36.0	1.0	-50.9	-13.0	-37.9	
5257.50	-10.2	H	3.0	35.4	1.0	-44.6	-13.0	-31.6	
7010.00	-7.5	H	3.0	35.7	1.0	-42.2	-13.0	-29.2	

5MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/22/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_16QAM Band 4 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.5									
3425.00	-16.4	V	3.0	36.1	1.0	-51.4	-13.0	-38.4	
5137.50	-12.2	V	3.0	35.4	1.0	-46.6	-13.0	-33.6	
6850.00	-11.1	V	3.0	35.7	1.0	-45.7	-13.0	-32.7	
3425.00	-16.1	H	3.0	36.1	1.0	-51.2	-13.0	-38.2	
5137.50	-11.5	H	3.0	35.4	1.0	-45.9	-13.0	-32.9	
6850.00	-9.4	H	3.0	35.7	1.0	-44.1	-13.0	-31.1	
Mid Ch, 1732.5									
3465.00	-15.5	V	3.0	36.0	1.0	-50.5	-13.0	-37.5	
5197.50	-12.6	V	3.0	35.4	1.0	-47.0	-13.0	-34.0	
6930.00	-9.4	V	3.0	35.7	1.0	-44.1	-13.0	-31.1	
3465.00	-15.5	H	3.0	36.0	1.0	-50.5	-13.0	-37.5	
5197.50	-11.5	H	3.0	35.4	1.0	-46.0	-13.0	-33.0	
6930.00	-8.1	H	3.0	35.7	1.0	-42.8	-13.0	-29.8	
High Ch, 1752.5									
3505.00	-15.6	V	3.0	36.0	1.0	-50.6	-13.0	-37.6	
5257.50	-11.6	V	3.0	35.4	1.0	-46.0	-13.0	-33.0	
7010.00	-8.6	V	3.0	35.7	1.0	-43.3	-13.0	-30.3	
3505.00	-16.0	H	3.0	36.0	1.0	-51.0	-13.0	-38.0	
5257.50	-10.8	H	3.0	35.4	1.0	-45.2	-13.0	-32.2	
7010.00	-8.3	H	3.0	35.7	1.0	-42.9	-13.0	-29.9	

10MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/22/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_QPSK Band 4 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1715									
3430.00	-15.3	V	3.0	36.1	1.0	-50.4	-13.0	-37.4	
5145.00	-10.7	V	3.0	35.4	1.0	-45.1	-13.0	-32.1	
6860.00	-10.7	V	3.0	35.7	1.0	-45.3	-13.0	-32.3	
3430.00	-15.2	H	3.0	36.1	1.0	-50.3	-13.0	-37.3	
5145.00	-11.1	H	3.0	35.4	1.0	-45.5	-13.0	-32.5	
6860.00	-8.2	H	3.0	35.7	1.0	-42.9	-13.0	-29.9	
Mid Ch, 1732.5									
3465.00	-15.2	V	3.0	36.0	1.0	-50.2	-13.0	-37.2	
5197.50	-11.1	V	3.0	35.4	1.0	-45.5	-13.0	-32.5	
6930.00	-10.4	V	3.0	35.7	1.0	-45.1	-13.0	-32.1	
3465.00	-15.2	H	3.0	36.0	1.0	-50.3	-13.0	-37.3	
5197.50	-10.5	H	3.0	35.4	1.0	-44.9	-13.0	-31.9	
6930.00	-8.4	H	3.0	35.7	1.0	-43.0	-13.0	-30.0	
High Ch, 1750									
3500.00	-15.6	V	3.0	36.0	1.0	-50.6	-13.0	-37.6	
5250.00	-10.6	V	3.0	35.4	1.0	-45.0	-13.0	-32.0	
7000.00	-8.1	V	3.0	35.7	1.0	-42.8	-13.0	-29.8	
3500.00	-15.9	H	3.0	36.0	1.0	-50.9	-13.0	-37.9	
5250.00	-10.3	H	3.0	35.4	1.0	-44.8	-13.0	-31.8	
7000.00	-7.7	H	3.0	35.7	1.0	-42.4	-13.0	-29.4	

10MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/22/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_16QAM Band 4 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1715									
3430.00	-16.1	V	3.0	36.1	1.0	-51.2	-13.0	-38.2	
5145.00	-12.4	V	3.0	35.4	1.0	-46.8	-13.0	-33.8	
6860.00	-10.7	V	3.0	35.7	1.0	-45.3	-13.0	-32.3	
3430.00	-16.3	H	3.0	36.1	1.0	-51.4	-13.0	-38.4	
5145.00	-12.3	H	3.0	35.4	1.0	-46.7	-13.0	-33.7	
6860.00	-9.6	H	3.0	35.7	1.0	-44.2	-13.0	-31.2	
Mid Ch, 1732.5									
3465.00	-15.9	V	3.0	36.0	1.0	-50.9	-13.0	-37.9	
5197.50	-12.2	V	3.0	35.4	1.0	-46.6	-13.0	-33.6	
6930.00	-10.1	V	3.0	35.7	1.0	-44.8	-13.0	-31.8	
3465.00	-15.5	H	3.0	36.0	1.0	-50.6	-13.0	-37.6	
5197.50	-10.9	H	3.0	35.4	1.0	-45.3	-13.0	-32.3	
6930.00	-9.3	H	3.0	35.7	1.0	-43.9	-13.0	-30.9	
High Ch, 1750									
3500.00	-15.8	V	3.0	36.0	1.0	-50.8	-13.0	-37.8	
5250.00	-11.8	V	3.0	35.4	1.0	-46.2	-13.0	-33.2	
7000.00	-10.2	V	3.0	35.7	1.0	-44.9	-13.0	-31.9	
3500.00	-15.9	H	3.0	36.0	1.0	-50.9	-13.0	-37.9	
5250.00	-11.9	H	3.0	35.4	1.0	-46.3	-13.0	-33.3	
7000.00	-9.1	H	3.0	35.7	1.0	-43.8	-13.0	-30.8	

15MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/22/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_QPSK Band 4 Harmonics, 15MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1717.5									
3435.00	-13.0	V	3.0	36.1	1.0	-48.1	-13.0	-35.1	
5152.50	-11.5	V	3.0	35.4	1.0	-45.9	-13.0	-32.9	
6870.00	-12.1	V	3.0	35.7	1.0	-46.8	-13.0	-33.8	
3435.00	-12.5	H	3.0	36.1	1.0	-47.6	-13.0	-34.6	
5152.50	-10.3	H	3.0	35.4	1.0	-44.7	-13.0	-31.7	
6870.00	-11.1	H	3.0	35.7	1.0	-45.8	-13.0	-32.8	
Mid Ch, 1732.5									
3465.00	-12.1	V	3.0	36.0	1.0	-47.1	-13.0	-34.1	
5197.50	-11.8	V	3.0	35.4	1.0	-46.3	-13.0	-33.3	
6930.00	-9.6	V	3.0	35.7	1.0	-44.2	-13.0	-31.2	
3465.00	-12.5	H	3.0	36.0	1.0	-47.5	-13.0	-34.5	
5197.50	-12.0	H	3.0	35.4	1.0	-46.5	-13.0	-33.5	
6930.00	-9.1	H	3.0	35.7	1.0	-43.7	-13.0	-30.7	
High Ch, 1747.5									
3495.00	-12.3	V	3.0	36.0	1.0	-47.3	-13.0	-34.3	
5242.50	-11.6	V	3.0	35.4	1.0	-46.0	-13.0	-33.0	
6990.00	-10.2	V	3.0	35.7	1.0	-44.9	-13.0	-31.9	
3495.00	-12.6	H	3.0	36.0	1.0	-47.6	-13.0	-34.6	
5242.50	-10.8	H	3.0	35.4	1.0	-45.2	-13.0	-32.2	
6990.00	-9.2	H	3.0	35.7	1.0	-43.8	-13.0	-30.8	

15MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/22/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X-Position)
Location: Chamber C
Mode: LTE_16QAM Band 4 Harmonics, 15MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1717.5									
3435.00	-13.5	V	3.0	36.1	1.0	-48.6	-13.0	-35.6	
5152.50	-12.4	V	3.0	35.4	1.0	-46.8	-13.0	-33.8	
6870.00	-10.7	V	3.0	35.7	1.0	-45.3	-13.0	-32.3	
3435.00	-12.9	H	3.0	36.1	1.0	-47.9	-13.0	-34.9	
5152.50	-11.1	H	3.0	35.4	1.0	-45.5	-13.0	-32.5	
6870.00	-10.9	H	3.0	35.7	1.0	-45.6	-13.0	-32.6	
Mid Ch, 1732.5									
3465.00	-12.5	V	3.0	36.0	1.0	-47.6	-13.0	-34.6	
5197.50	-12.1	V	3.0	35.4	1.0	-46.5	-13.0	-33.5	
6930.00	-9.4	V	3.0	35.7	1.0	-44.0	-13.0	-31.0	
3465.00	-13.0	H	3.0	36.0	1.0	-48.0	-13.0	-35.0	
5197.50	-12.3	H	3.0	35.4	1.0	-46.8	-13.0	-33.8	
6930.00	-9.8	H	3.0	35.7	1.0	-44.5	-13.0	-31.5	
High Ch, 1747.5									
3495.00	-12.5	V	3.0	36.0	1.0	-47.5	-13.0	-34.5	
5242.50	-11.5	V	3.0	35.4	1.0	-45.9	-13.0	-32.9	
6990.00	-10.3	V	3.0	35.7	1.0	-44.9	-13.0	-31.9	
3495.00	-12.2	H	3.0	36.0	1.0	-47.2	-13.0	-34.2	
5242.50	-11.1	H	3.0	35.4	1.0	-45.5	-13.0	-32.5	
6990.00	-9.8	H	3.0	35.7	1.0	-44.5	-13.0	-31.5	

20MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/22/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X_Position)
Location: Chamber C
Mode: LTE_QPSK Band 4 Harmonics, 20MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1720									
3440.00	-12.0	V	3.0	36.0	1.0	-47.1	-13.0	-34.1	
5160.00	-11.1	V	3.0	35.4	1.0	-45.5	-13.0	-32.5	
6880.00	-9.4	V	3.0	35.7	1.0	-44.1	-13.0	-31.1	
3440.00	-11.7	H	3.0	36.0	1.0	-46.7	-13.0	-33.7	
5160.00	-10.0	H	3.0	35.4	1.0	-44.4	-13.0	-31.4	
6880.00	-8.3	H	3.0	35.7	1.0	-42.9	-13.0	-29.9	
Mid Ch, 1732.5									
3465.00	-12.4	V	3.0	36.0	1.0	-47.4	-13.0	-34.4	
5197.50	-11.9	V	3.0	35.4	1.0	-46.3	-13.0	-33.3	
6930.00	-9.1	V	3.0	35.7	1.0	-43.8	-13.0	-30.8	
3465.00	-13.0	H	3.0	36.0	1.0	-48.0	-13.0	-35.0	
5197.50	-11.3	H	3.0	35.4	1.0	-45.7	-13.0	-32.7	
6930.00	-8.3	H	3.0	35.7	1.0	-42.9	-13.0	-29.9	
High Ch, 1745									
3490.00	-11.9	V	3.0	36.0	1.0	-47.0	-13.0	-34.0	
5235.00	-11.4	V	3.0	35.4	1.0	-45.9	-13.0	-32.9	
6980.00	-8.9	V	3.0	35.7	1.0	-43.5	-13.0	-30.5	
3490.00	-12.5	H	3.0	36.0	1.0	-47.5	-13.0	-34.5	
5235.00	-10.5	H	3.0	35.4	1.0	-45.0	-13.0	-32.0	
6980.00	-8.2	H	3.0	35.7	1.0	-42.9	-13.0	-29.9	

20MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/22/2016
Test Engineer: Lieu Nguyen
Configuration: EUT with AC Adapter (X_Position)
Location: Chamber C
Mode: LTE_16QAM Band 4 Harmonics, 20MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1720									
3440.00	-12.5	V	3.0	36.0	1.0	-47.5	-13.0	-34.5	
5160.00	-11.8	V	3.0	35.4	1.0	-46.3	-13.0	-33.3	
6880.00	-9.6	V	3.0	35.7	1.0	-44.3	-13.0	-31.3	
3440.00	-11.8	H	3.0	36.0	1.0	-46.9	-13.0	-33.9	
5160.00	-11.0	H	3.0	35.4	1.0	-45.4	-13.0	-32.4	
6880.00	-9.0	H	3.0	35.7	1.0	-43.6	-13.0	-30.6	
Mid Ch, 1732.5									
3465.00	-12.5	V	3.0	36.0	1.0	-47.5	-13.0	-34.5	
5197.50	-12.1	V	3.0	35.4	1.0	-46.6	-13.0	-33.6	
6930.00	-10.2	V	3.0	35.7	1.0	-44.9	-13.0	-31.9	
3465.00	-12.7	H	3.0	36.0	1.0	-47.7	-13.0	-34.7	
5197.50	-11.4	H	3.0	35.4	1.0	-45.8	-13.0	-32.8	
6930.00	-9.0	H	3.0	35.7	1.0	-43.6	-13.0	-30.6	
High Ch, 1745									
3490.00	-11.8	V	3.0	36.0	1.0	-46.8	-13.0	-33.8	
5235.00	-11.5	V	3.0	35.4	1.0	-45.9	-13.0	-32.9	
6980.00	-10.3	V	3.0	35.7	1.0	-44.9	-13.0	-31.9	
3490.00	-12.0	H	3.0	36.0	1.0	-47.0	-13.0	-34.0	
5235.00	-11.0	H	3.0	35.4	1.0	-45.5	-13.0	-32.5	
6980.00	-8.9	H	3.0	35.7	1.0	-43.6	-13.0	-30.6	

LTE Band 13

5MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT + AC Adapter
Location: Chamber C
Mode: LTE_QPSK Band 13 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 779.5									
1559.00	-30.9	V	3.0	37.1	1.0	-67.0	-13.0	-54.0	
2338.50	-25.4	V	3.0	36.5	1.0	-60.9	-13.0	-47.9	
3118.00	-22.9	V	3.0	36.3	1.0	-58.2	-13.0	-45.2	
1559.00	-30.0	H	3.0	37.1	1.0	-66.1	-13.0	-53.1	
2338.50	-24.5	H	3.0	36.5	1.0	-60.0	-13.0	-47.0	
3118.00	-21.3	H	3.0	36.3	1.0	-56.6	-13.0	-43.6	
Mid Ch, 782									
1564.00	-28.3	V	3.0	37.1	1.0	-64.4	-13.0	-51.4	
2346.00	-22.4	V	3.0	36.5	1.0	-57.9	-13.0	-44.9	
3128.00	-18.3	V	3.0	36.3	1.0	-53.5	-13.0	-40.5	
1564.00	-26.4	H	3.0	37.1	1.0	-62.5	-13.0	-49.5	
2346.00	-21.6	H	3.0	36.5	1.0	-57.1	-13.0	-44.1	
3128.00	-18.9	H	3.0	36.3	1.0	-54.2	-13.0	-41.2	
High Ch, 784.5									
1569.00	-30.1	V	3.0	37.1	1.0	-66.2	-13.0	-53.2	
2353.50	-23.1	V	3.0	36.5	1.0	-58.6	-13.0	-45.6	
3138.00	-21.9	V	3.0	36.3	1.0	-57.1	-13.0	-44.1	
1569.00	-28.9	H	3.0	37.1	1.0	-65.0	-13.0	-52.0	
2353.50	-23.2	H	3.0	36.5	1.0	-58.7	-13.0	-45.7	
3138.00	-20.2	H	3.0	36.3	1.0	-55.5	-13.0	-42.5	

5MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT + AC Adapter
Location: Chamber C
Mode: LTE_16QAM Band 13 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 779.5									
1559.00	-29.9	V	3.0	37.1	1.0	-66.1	-13.0	-53.1	
2338.50	-24.4	V	3.0	36.5	1.0	-59.9	-13.0	-46.9	
3118.00	-22.0	V	3.0	36.3	1.0	-57.3	-13.0	-44.3	
1559.00	-30.5	H	3.0	37.1	1.0	-66.7	-13.0	-53.7	
2338.50	-25.4	H	3.0	36.5	1.0	-60.9	-13.0	-47.9	
3118.00	-22.4	H	3.0	36.3	1.0	-57.7	-13.0	-44.7	
Mid Ch, 782									
1564.00	-28.1	V	3.0	37.1	1.0	-64.3	-13.0	-51.3	
2346.00	-25.8	V	3.0	36.5	1.0	-61.3	-13.0	-48.3	
3128.00	-19.5	V	3.0	36.3	1.0	-54.8	-13.0	-41.8	
1564.00	-28.1	H	3.0	37.1	1.0	-64.2	-13.0	-51.2	
2346.00	-24.5	H	3.0	36.5	1.0	-60.0	-13.0	-47.0	
3128.00	-21.2	H	3.0	36.3	1.0	-56.5	-13.0	-43.5	
High Ch, 784.5									
1569.00	-30.5	V	3.0	37.1	1.0	-66.7	-13.0	-53.7	
2353.50	-23.1	V	3.0	36.5	1.0	-58.6	-13.0	-45.6	
3138.00	-22.8	V	3.0	36.3	1.0	-58.1	-13.0	-45.1	
1569.00	-28.7	H	3.0	37.1	1.0	-64.8	-13.0	-51.8	
2353.50	-24.0	H	3.0	36.5	1.0	-59.5	-13.0	-46.5	
3138.00	-21.6	H	3.0	36.3	1.0	-56.8	-13.0	-43.8	

10MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT + AC Adapter
Location: Chamber C
Mode: LTE_QPSK Band 13 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Mid Ch, 782									
1564.00	-22.4	V	3.0	37.1	1.0	-58.6	-13.0	-45.6	
2346.00	-19.9	V	3.0	36.5	1.0	-55.3	-13.0	-42.3	
3128.00	-14.1	V	3.0	36.3	1.0	-49.4	-13.0	-36.4	
1564.00	-22.3	H	3.0	37.1	1.0	-58.4	-13.0	-45.4	
2346.00	-19.3	H	3.0	36.5	1.0	-54.8	-13.0	-41.8	
3128.00	-15.3	H	3.0	36.3	1.0	-50.5	-13.0	-37.5	

10MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22653
Date: 1/21/2016
Test Engineer: Lieu Nguyen
Configuration: EUT + AC Adapter
Location: Chamber C
Mode: LTE_16QAM Band 13 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Mid Ch, 782									
1564.00	-22.7	V	3.0	37.1	1.0	-58.9	-13.0	-45.9	
2346.00	-20.1	V	3.0	36.5	1.0	-55.6	-13.0	-42.6	
3128.00	-14.5	V	3.0	36.3	1.0	-49.8	-13.0	-36.8	
1564.00	-22.6	H	3.0	37.1	1.0	-58.7	-13.0	-45.7	
2346.00	-19.4	H	3.0	36.5	1.0	-54.9	-13.0	-41.9	
3128.00	-15.7	H	3.0	36.3	1.0	-51.0	-13.0	-38.0	